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Taxonomic Catalogs for the Recent Terrestrial Vertebrates (Species and Subspecies) Described from Texas

Edited by
David J. Schmidly, Robert D. Bradley, Lisa C. Bradley, and Franklin D. Yancey, II

Front cover: Top row, mammals endemic to Texas: Holzner's Mountain Cottontail, *Sylvilagus holzneri robustus*, photo by Mark W. Lockwood; Llano Pocket Gopher, *Geomys texensis bakeri*, photo by Robert D. Bradley; Texas Kangaroo Rat, *Dipodomys elator*, photo by Franklin D. Yancey, II. Middle row: Woodhouse's Scrub-Jay, *Aphelocoma woodhouseii texana* (endemic); Lesser Prairie-Chicken, *Tympanuchus pallidicinctus* (endangered); Seaside Sparrow, *Ammospiza maritima sennetti* (occurs only in Texas within the US), all photos by Mark W. Lockwood. Bottom row, reptiles endemic to Texas: Texas Alligator Lizard, *Gerrhonotus infernalis*; Texas Map Turtle, *Graptemys versa*; Concho Water Snake, *Nerodia paucimaculata*, all photos by Carl S. Lieb.

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Dedication

Brian R. Chapman, Ph.D.
(1946–2021)

During the preparation of this manuscript, Dr. Brian R. Chapman, co-author of the bird catalog, suddenly and tragically passed away on 5 June 2021. In recognition of his contribution to the catalog and his many professional accomplishments as a naturalist, we are pleased to dedicate this volume to Brian's memory and career achievements.

Brian was born in 1946 in Corpus Christi, Texas. He obtained his B.S. degree from Texas A&M University-Kingsville (formerly known as Texas A&I University) in 1967; his M.S. degree from Texas Tech University in 1970; and his Ph.D. from Texas Tech University in 1973. Brian was an accomplished academician and administrator throughout his 54-year career. He served on the faculty of the Department of Biology at Texas A&M University-Corpus Christi (formerly known as Corpus Christi State University) from 1973 to 1990, during which time he also served as Acting Chairperson of the Division of Science (1973–1978) and Chairperson of the Division of Graduate Studies, College of Science and Technology (1981–1990). He served for one year (1990–1991) as Research Zoologist and Visiting Professor in the Department of Zoology at the University of Oklahoma, then served as Professor of Wildlife Management in the School of Forest Resources at the University of Georgia (1991–2000). He was Dean of the College of Arts and Sciences and Professor of Zoology at Sam Houston State University from 2000 to 2005. In 2005, he became Provost and Vice President for Academic Affairs at West Texas A&M University. Brian returned to Sam Houston State University in 2013 as a Senior Research Scientist and Scholar and served as a Research Mentor prior to his retirement in 2018. During this period, he established the Integrative Natural History book series, which publishes important works about the natural history and wildlife diversity of Texas.

Brian's research interests included vertebrate ecology and management of endangered species with emphasis on birds, bats, and rare or protected species; animal distributions; and habitat use. He was an active member of numerous ornithological and mammalogical societies, including the American Society of Mammalogists (Emeritus Member), The Wildlife Society, American Ornithologists' Union, Wilson Ornithological Society, Cooper Ornithological Society, The Waterbird Society (Founding Member), the Texas Academy of Science (Fellow), and the Texas Society of Mammalogists (Charter Member). He served as President of the Southwestern Association of Naturalists from 1987 to 1989. Among his academic awards, Brian received the Donovan Stewart Correll Memorial Award, 2019, given by the Natural Plant Society of Texas for scientific writing in the field of native flora of Texas in his book *The Natural History of Texas*. In 2018, he was recognized with the Robert L. Packard Outstanding Educator Award by the Southwestern Association of Naturalists.

Among his many published works, Brian authored 94 scientific articles (80 journal articles, four book reviews, and 10 edited technical reports), two peer reviewed monographs, seven edited and/or authored special publications, 16 book contributions (articles or chapters), and he co-authored three books (*Ecology of North America*, 2015; *The Natural History of Texas*, 2019, with E. G. Bolen; and *Texans on the Brink*: *Threatened and Endangered Animals*, 2019, with W. I. Lutterschmidt).

Brian had a deep love and passion for natural history, which he used to educate students and the public. During his career, he served as thesis advisor for 53 M.S. students and as dissertation advisor or co-advisor to five Ph.D. students. Many of his books and publications were designed to educate the public about Texas wildlife and the need for effective conservation and management. Brian will be missed by family, friends, and hundreds of students and colleagues who had the pleasure of knowing him as both a gentleman, with a great sense of humor, and a true scholar. With his passing, Texas has lost one of its foremost naturalists and educators.

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Table of Contents

Introduction

David J. Schmidly, Robert D. Bradley, Lisa C. Bradley, and Franklin D. Yancey, II

Abstract

This volume presents pertinent information (original scientific names, presently used names, common names, synonymies, type specimens, type localities, topotypes and near topotypes, date of most recently collected topotype and near topotype specimen(s), tissue availability, and remarks) in the form of three catalogs (one each for mammals and birds, and one for amphibians and reptiles combined) for species and subspecies of terrestrial vertebrates known to have been named based on specimens obtained or collected from localities within the State of Texas as now politically bounded. There are 431 entries in the three catalogs: 33.2% are mammals; 27.1% are birds; 29.2% are reptiles; and 10.4% are amphibians. Collectively, 151 (35%) of the name combinations applied to terrestrial vertebrates described from Texas are now in synonymy and presently unavailable for taxonomic designation. The peak period of discovery and description of these taxa occurred in the latter half of the 19th century, with 47.1% described between 1851 and 1900. Type materials have been recorded from about one-third (87/254) of Texas counties; 46% of these types were described from counties that border Mexico, with the remainder scattered across the state. Of the taxa described from Texas, 78.2% are represented by holotype specimens. A total of 207 naturalists were involved in collecting type specimens for these taxa, and 143 naturalists (68 herpetologists, 37 mammalogists, and 38 ornithologists) were senior authors of publications describing them. Biographical information is included about the most prolific describers and collectors of Texas taxa. Type specimens for these taxa are held by 77 museums and collections, including 19 in Texas, 50 institutions in 23 other US states and the District of Columbia, and 8 international institutions. We discuss the special importance of type localities and topotype specimens, including the importance of nucleic acid sequences (DNA, RNA) as a data source, relative to resolving taxonomic problems, and we propose a Type Locality Project designed to collect voucher specimens and genomic-grade samples from terrestrial vertebrate type localities in Texas, USA. The implications of the proposed project on the taxonomic correction process and conservation efforts in Texas are discussed.

Key words: collections, genotopotypes, museums, near topotypes, taxa described from Texas, taxonomic catalogs, taxonomic correction, taxonomic synonymies, topotypes, type localities, type locality project, type specimens

Introduction

Texas is home to more than 1,000 taxa (species and subspecies) of terrestrial vertebrates (mammals, birds, amphibians, and reptiles). Many of them were described by naturalists/taxonomists based on specimens obtained or collected from localities within the State. Although one-third of the described taxa are now in synonymy and no longer considered valid, the other two-thirds continue to be recognized as part of the current fauna. This volume presents taxonomic catalogs for terrestrial vertebrate taxa described from localities in Texas, although there are a few syntypes from outside Texas. Only Recent (non-fossil) taxa are included in the catalogs.

The catalogs are presented as three separate parts: Catalog 1 is the compilation for mammals; Catalog 2 is the compilation for birds; and Catalog 3 is the compilation for amphibians and reptiles (note: a few of the tabulations for Catalog 3 taxa have been combined under the category "herptiles" in reference to amphibians and reptiles, collectively). Each section has been prepared by experts on the Texas fauna for that particular group

of vertebrate organisms. No comprehensive review of taxonomic descriptions, such as included in these catalogs, has been compiled previously for the state.

The mammal catalog was developed by David J. Schmidly, Robert D. Bradley, Lisa C. Bradley, Franklin D. Yancey, II, and Joanna Bateman. Schmidly and Bradley are authors of two recent books, *The Mammals of Texas* (2016) and *Texas Natural History in the 21st Century* (2022), that chronicle the status of mammals in the state. David Schmidly is a retired Professor Emeritus of both Texas Tech University and the University of New Mexico. Robert Bradley is a Professor of Biological Sciences at Texas Tech University where he also serves as Director and Curator of Mammals at the Natural Science Research Laboratory. Lisa Bradley is a research associate and the production editor for publications of the Natural Science Research Laboratory at the Museum of Texas Tech University. Frank Yancey is a Biology Professor at Madera College in California and a research associate of the Natural Science Research Laboratory at the Museum of Texas Tech University. Joanna Bateman is a Ph.D. student of Bradley.

The bird catalog was started by Brian R. Chapman of Sam Houston State University. Tragically, Chapman died before the catalog could be completed (see Dedication). He was senior research scientist at the Texas Research Institute for Environmental Sciences at Sam Houston State University. Chapman was a coauthor of *Ecology of North America* (2015) and the senior author of *The Natural History of Texas* (2018), which is a comprehensive compilation of the natural history of Texas and all of its biological diversity and geological variation. Much of his career was devoted to studying bird life in Texas. Following Chapman's death, several individuals collaborated to complete the bird catalog, including Frank Yancey, Keith Arnold, Mark Lockwood, and David Schmidly. Keith Arnold is Professor Emeritus of Texas A&M University, where he served as Curator of Birds at the Texas Cooperative Wildlife Collections. Arnold founded the Texas Bird Records Committee and the Texas Photo-Record File, both of which serve to document changes in the avifauna of Texas. Throughout his career, Arnold studied the taxonomy and distribution of Texas birds. Lockwood is a retired conservation biologist with the Texas Parks and Wildlife Department. He is a member of the Texas Bird Records Committee and the American Birding Association's Checklist Committee. He was awarded the Ludlow Grissom Award for Outstanding Contributions in Regional Ornithology from the American Birding Association in 2012. He is the author of eight books including the *Texas Onithological Society Handbook of Texas Birds*.

Carl S. Lieb, Professor Emeritus in the Department of Biological Sciences at the University of Texas at El Paso (UTEP), authored the catalog for amphibians and reptiles. Lieb served as Assistant Curator of the Herpetology Collection of UTEP's Biodiversity Collections. His research involves systematics, evolutionary genetics, and conservation biology of amphibians and reptiles, and he has extensive field experience collecting and studying amphibians and reptiles in Texas.

In the conclusion section, we stress the importance of taxonomic catalogs for providing basic information about the systematics of terrestrial vertebrate taxa in Texas that is vital to their conservation. In preparing this section, the editors of the volume have been joined by Rodney L. Honeycutt, Professor Emeritus at Pepperdine University in Malibu, California. Before Pepperdine, Honeycutt was a tenured professor in the Department of Wildlife and Fisheries Sciences at Texas A&M University (TAMU) for 18 years. He was Curator of Mammals in the Texas Cooperative Wildlife Collection at TAMU, and previously he served for five years as Curator of Mammals in the Museum of Comparative Zoology at Harvard University. While in Texas, he and his students published on the phylogeography, conservation genetics, phylogenetics, and ecology of mammals, birds, and reptiles.

COMPONENTS OF TAXONOMIC DESCRIPTIONS

Type specimens and their associated type localities are the most critical sources of information associated with the nomenclature and description of species and subspecies, particularly in vertebrate animals (Mayr 1969). Generally, when taxonomists describe a new species or subspecies, a single representative

specimen referred to as the "holotype" is recognized, and the details about that specimen are published in a scientifically recognized publication. The published scientific name and the official description that defines the characteristics of the taxon are then permanently associated with this type specimen.

Under the formal rules for naming species (as established by the International Commission on Zoological Nomenclature 1999), in addition to designating a holotype, a type description also must include the following: a diagnosis (typically, a discussion of similarities to and differences from closely related taxa); the designation of a type locality (the geographic location where the specimen was obtained); and an indication of where the type specimen or specimens are deposited (museum or university collection) for examination. Although there is only one holotype designated, there can be other "type" specimens, depending upon circumstances at the time when the taxon was described (see below).

The geographical place of collection of the name-bearing type of a species or subspecies is called the type locality, and it has special historical significance. The type locality is important because it roots the taxon to a specific geographic locality, which is particularly important for applying names in the subspecific category (Mayr 1969). Subspecies are geographic variants of a species, and characteristics of a subspecies may overlap with those of other subspecies. Therefore, a single specimen can be the name-bearer ("type") for a subspecies only to the extent that it helps to identify the population from which it was sampled. Where it fails to do this, a knowledge of the type locality becomes necessary (Mayr 1969).

Based on the rules of the *International Code of Zoological Nomenclature* (International Commission on Zoological Nomenclature 1999), specimens (excluding the holotype) from the type locality are called topotypes (see below). Topotypes are important because they represent specimens that belong to the population from which the type specimen was selected. These specimens may have been collected along with the holotype, or they may have been collected at a later date. In many cases, a good series of topotypes that show the range of individual variation as well as variation due to sex, age, season, and other modifying causes can be as, if not even more, important than the holotype specimen. Every field naturalist and museum taxonomist who has worked in a collection knows about dozens of specific cases in which series of specimens from type localities have cleared up doubtful nomenclature or established specific characters that better distinguish taxa. Much of the accuracy and stability of our present knowledge about specific characters and ranges of the various species and subspecies of Texas vertebrates depends upon adequate series of specimens from type localities.

A major problem with these concepts exists however, because many of the taxon descriptions for terrestrial vertebrates described from Texas localities were prepared in the early to mid-19th century. Thus, there can be instances where a current distribution is not similar to that documented when the taxon initially was described because the habitat at the original type locality has been altered or replaced with urban environments. Another issue frequently encountered is that the type locality is too vague to associate with a specific population among those in the designated area. All three of the catalogs contain examples of this situation. Additionally, there can be multiple type localities representing syntypes from several populations in which no lectotype (see definition below) has been designated and/or no credible type locality restriction has been proposed. Several examples of the latter situation appear in the amphibian and reptile catalog.

A major reason for a lack of topotypes is that no reasonable re-sampling efforts have been expended at the historical type locality because it is located in an area difficult to access and sample. Finally, the taxon may be so abundant in the area of the type locality that no one has seen any reason to collect topotypes from the verbatim location.

Early descriptions of species and subspecies often did not identify a primary type specimen, a problem that continues to produce taxonomic confusion today (Uetz et al. 2019). Before about 1850, it was rare for describers to designate or label type specimens or even to state exactly what specimens they had examined and exactly where they came from. After the description was completed, the material on which it was based

(if more than one specimen was involved) often was distributed to several museums. Thus, the practice of designating several type specimens of equal status (syntypes) often was used. This latter practice is discouraged today because of the confusion that can result if a series of syntypes is later determined to represent a composite of multiple species. The amphibian and reptile catalog contains a few examples of this problem.

Currently, the best taxonomic practice requires that a single specimen be designated as a holotype (typically a voucher specimen, ideally with a tissue sample for DNA analysis) and that the holotype be deposited in a public institution to guarantee easy scientific access (Uetz et al. 2019). Ideally, additional specimens (paratypes) representing ontogenetic, sexual, and intraspecific variation within a taxon should be designated. In some situations where holotypes were designated in older descriptions that were brief and insufficient by modern standards, the original types must be revisited and often require redescription (Uetz et al. 2019).

In the past several decades, and likely continuing into the future, molecular systematics has become an important "tool" for describing species and subspecies (see Bradley and Baker 2001; Baker and Bradley 2006; Bradley and Dowler 2019). Thus, incorporating topotypes in DNA taxonomy is crucial for matching traditional taxonomy with molecular data. The DNA sequence of a type specimen unequivocally relates to all similar haplotypes or genotypes with the species name. It provides a reliable identification method and the basis for hypotheses about their phylogenetic relationships. Genetic material from topotypes should be considered "genotopotypes" and used as genetic reference material (N. Gonzalez-Ruiz and T. Alvarez-Castaneda, unpublished manuscript). Good collections of types and additional specimens that capture the full variation within a taxon are critical to assessing morphological and genetic diversity across a taxon's distributional ranges (Uetz et al. 2019). However, care must be taken when closely related species are sympatric or when the type locality is unknown or imprecise.

While it is common in contemporary taxonomic studies to include DNA evidence to validate new taxa, many historical type specimens do not have genetic samples associated with them (Bell et al. 2020). This lack of tissues can limit the usefulness of type specimens in conservation and management decisions in cases where species or subspecies boundaries are contentious or challenging to delimit (Stuart and Fritz 2008). An increasing number of studies have successfully extracted and sequenced DNA from formalin-fixed and historical specimens (see Bell et al. 2020). Genetic data from name-bearing types represent an important reference for taxonomic and biogeographic research (see Roos et al. 2022). Still, these samples typically do not perform as well as tissue samples preserved explicitly for genetic analysis. Thus, as an alternative to extracting lower-quality genetic data from historical type specimens, collecting new data from type localities to serve as topotypic vouchers is highly preferable. These vouchers should be preserved following the holistic approach of obtaining and preserving both high-quality morphological specimens as well as high-quality tissue samples for genomic research (see Schindel and Cook 2018, Phillips et al. 2019, and Soniat et al. 2021).

CONTENTS OF THE TAXONOMIC CATALOGS

The catalogs included herein provide complete taxonomic synonymies, current taxonomic designations, type specimens, type localities, and the describers and collectors of the terrestrial vertebrate taxa described from Texas. This information is presented in the form of a variety of lists. The first and most extensive list, described in more detail below, is an account by taxon of species and subspecies described from Texas specimens and localities. For each catalog, this list is arranged by orders according to current phylogenetic order. Families and taxa within each family have been arranged alphabetically because many of the originally proposed names are not currently recognized. The second list provides all of the type localities in Texas with the names of the species and subspecies described from each locality and an accompanying map that shows the county location of these type localities. This is followed by third and fourth lists of the describers

(senior authors only) and collectors, respectively, of all the type specimens and the number of taxa described by each. A fifth list presents those museums or university collections that house the type specimens and indicates the total number of types contained in each collection. Finally, a sixth list includes the originally published name combinations that currently are in synonymy and considered invalid.

The first listing in each catalog provides the following information, when possible:

Original binomen or trinomen with name authority and date of description.—The specific or subspecific name is given in bold lettering exactly in its original form, followed by the name of the person who first published a description of the subspecies or species, which is called the author or authority of the name, and the date of publication. The citation for the original description is provided in the synonymy, including the date of publication. The name of a species is a binomial combination consisting of the generic and specific name, whereas that of a subspecies is a trinomial consisting of genus, species, and subspecies epithets. The "bible" for nomenclature is the *International Code of Zoological Nomenclature* (ICZN), referred to as the Code (see Gardner and Hayseen 2004 for detailed applications and examples). Since the inception of the modern Code, the name-bearing type specimen formally performs only a single function, being a nomenclatural designator of the species or subspecies name (Sluys 2021).

= *Presently used "valid" name*.—If an original name is no longer considered "valid" due to taxonomic revision or nomenclatural change, an equal sign (=) is included to designate an equivalent modern "valid" name. At any one time, one name and one name only is the proper one to be used for any given species or subspecies. That is the "valid" name in current use and all other names that have been applied to that taxon are "invalid". However, a "valid" name now may become "invalid" in the future, and names now "invalid" may become "valid" (Smith 1949). Any "available" name, with the exception of primary homonyms, may at some time become a "valid" name. With few exceptions, the "valid" name for any taxon is the oldest available name (Principle of Priority). This oldest name then becomes known as the valid name or senior synonym, while the younger names are assigned the status of junior synonyms, the usage of which is suppressed (Sluys 2021).

In the catalogs presented herein, the citation of the publication in which the "valid" name initially was used is provided in the synonymy, according to the best knowledge of the catalog authors. In these cases, the authors have cited the most descriptive source, to the best of their knowledge, in which this taxonomic revision took place.

Taxonomic designations are ephemeral and are contingent upon the best data available at a particular time; as new research is conducted, scientific names are subject to change. Further, different scientists may not agree with the conclusions of a published paper, and thus they may come to different judgments about the currently accepted name for any particular taxon. Publications that confirm taxonomic assignments and nomenclatural usage are provided in each of the three catalogs. The following electronic databases also were consulted: American Society of Mammalogists (ASM) Mammal Diversity Database (https://www.mammaldiversity.org), Amphibian Species of the World website (https://amphibiansoftheworld.amnh.org/), Reptile Database website (https://www.reptile-database/org/), Checklist of North American Birds (https://checklist.aou.org/taxa), and International Ornithological Congress (IOC) World Bird List Version 12.1 (https://www.worldbirdlist.org). In some cases, however, "choice" of the current scientific name for a taxon is based on personal experience of the catalog's author and their interpretation of the literature. The authors of this volume acknowledge that not all scientists may agree on the name usage presented herein.

Common names.—The common English name currently applied to the modern taxon (to the species level for mammals and birds; to the subspecies level for amphibians and reptiles) is presented in brackets under the valid scientific name. Common names of bird taxa are standardized and published by the IOC. Historical common names of birds also are provided for each holotype's original taxonomic assignment. Although mammal common names are not formally standardized, Wilson and Cole (2000) was followed to the extent possible, with some exceptions based on

Schmidly and Bradley (2016). Historical common names of mammals are provided to the subspecies level, when available. In the catalog of amphibians and reptiles, the 8th edition of the *Standard English Names of Amphibians and Reptiles* was used for current common names (Crother et al. 2017). Historical common names of amphibians and reptiles are not provided in that catalog.

Synonymy.—A synonymy gives a history of the nomenclature of a species. A species synonymy is a chronological listing of the first use of any name combination applied to that species, and the subspecies synonymy is a listing of the trinomials of each subspecies in the subject species (Gardner and Hayseen 2004). Any two given names may be regarded as synonyms for either nomenclatural or zoological reasons (see Smith 1949). "Nomenclatural" reasons arise whenever the same taxon is described and named more than once independently, resulting in the direct substitution of one name for another, in which the older name (unless ruled out for other reasons) is the valid one. No reference to the animals themselves is necessary in consideration of nomenclatural synonyms. Synonyms may also arise for "zoological" reasons when existing taxa are revised and changed, as when two taxa are "lumped" to become one, when one taxon is "split" into two, a species is moved to a different genus, or a scientific name was based on a type specimen that is later found to be a hybrid individual. This includes all names applied to the subject taxon even if these names were proposed for taxa (species and subspecies) originally believed to represent different species and subspecies, but now considered to represent the subject species (Gardner and Hayseen 2004).

This information in a synonymy is necessary for further taxonomic work and is often the only approach to the older literature of a species. If the scientific name assigned to a species 10 or 50 years ago is unknown to an investigator, they are denied access to the complete biological or ecological works and taxonomic literature pertaining to the species (Winston 1999). A synonymy also presents the author's conclusions as to taxonomic placement of the species and the validity of the names applied to the species in the past (Sohn 1994). Unfortunately, in many cases, detailed synonymies for Texas vertebrates are decades old and have not kept up with recent taxonomic revisions and changes.

The synonymies presented in the three catalogs herein include the properly published "valid" and "invalid" name combinations under which the species or subspecies has been listed in each synonymy, the date published, the name of the author of the publication, the publication title (stated in abbreviated format), and the page, figure, or plate number of the description, as appropriate. The inclusion of previously used names was left to the interpretation of the catalog authors, and in many cases, duplicate references to the same name have been eliminated. Furthermore, in some cases coverage extends beyond the taxon's occurrence in Texas to be as thorough and complete as necessary.

Type specimen.—The designation of the kind of type (holotype, syntype, etc.) is provided along with the following information (if known): the museum acronym and catalog number of the type specimen; the sex of the type specimen and its age (as recorded, or indicated by the nature of the specimen); the condition of the specimen; preparation of specimen (skin, skull, alcohol, etc.); the name of the collector; its date of collection; the original or collector's number; and such comments or remarks as might seem to bear on the significance of the type for any phase of taxonomy. The listing of the type specimen is restricted primarily to the holotype, although in a few cases in the herpetology and ornithology catalogs reference is made to syntypes, lectotypes, paralectotypes, neotypes, and other "type" specimens as defined below.

Type locality.—The exact collecting locality as originally designated is provided, including, where available, the county, collection site, and elevation. Authority for such additional facts or inferences is provided along with the evidence for the conclusion expressed. Earlier authors, not appreciating the need for exact type localities, often described new taxa from large geographic regions (e.g., "Texas" or "west Texas") or from vaguely designated places (e.g., "Presidio del Norte, on the Rio Grande"). In some cases, subsequent workers proved (or thought they proved) beyond doubt that the type(s) did not come from the locality given in the original description (owing to

some error or misinformation), and they chose to shift ("restrict") the type locality to the place from which the type really came. In reality, this was not a shift of the type locality but only the "stated" type locality, since the type never came from the originally restricted locality (Mayr 1969). Such fixations subsequently were followed in the literature unless it could be shown that the action of the reviser was erroneous.

Since there are no formal rules to guide the process, the importance of accuracy in the restriction of unknown, vague, or multiple type localities to more specific ones cannot be overstated (Dunn and Stuart 1951). In most instances, efforts to determine more exactly the sources of many of the older types involve investigations that are both historical and biological, including such activities as reexamination of the data accompanying the type specimen or related to it (e.g. original labels, collector's notes, or itineraries, etc.) that may add precision to or even alter the type locality as given in the original description (Dunn and Stuart 1951). In this regard, publications that list and document type specimens housed in specific museum collections, which have been carefully researched by the curator or collection manager, can be particularly valuable.

All three of the catalogs in this publication reveal type locality restrictions, some accurate and others later proven to be erroneous. In many cases, the errors in locality restrictions resulted in future taxonomic confusion (e.g., see the account of *Geomys clarkii* in the Mammal Catalog), illustrating the importance of accuracy in correcting or restricting type localities. The Amphibian and Reptile Catalog includes several instances where the designation of a lectotype was equivalent to a restriction of a type locality, especially in situations where the original syntypes came from multiple localities. If there was a conflict between lectotype selection and restriction of type locality, lectotypes took precedence (see Mayr 1969).

Most of the taxa in the three catalogs were described on the basis of specimens obtained exclusively from Texas, but there are situations in the bird and amphibian/reptile catalogs in which the descriptions were based on syntypes from at least one type locality in Texas and another locality in another state in the United States or in Mexico. The amphibian/reptile catalog includes two amphibians and six reptiles in this category, but in all eight cases the type locality ultimately was restricted to Texas in some credible way after the original description, and these restrictions subsequently have not been contested. Also, three taxa (a salamander and two lizards) with syntypes from Texas were not included in that catalog because they lacked a lectotype or any type locality restriction, or a flawed type locality restriction had been published without the restrictor's knowledge of subsequently found "lost" Texas syntypes. The bird catalog includes four taxa with syntypes from outside Texas, but there is no indication of a type locality restriction or lectotype selection published for any of them and the descriptions continue to be based on syntypes from multiple locations. The mammal catalog includes only two taxa with syntypes and both are from localities within Texas.

Topotypes and Near topotypes.—A list of topotype and "near topotype" specimens, with the museum or collection housing those specimens, is provided. See below for the definition of a near topotype and for several disclaimers regarding the designation of topotype and near topotype specimens in the catalogs.

Date and tissues.—The most recent collection year for a topotype or near topotype specimen (based on museum records) is provided. For mammals, an indication of whether tissue samples from topotype or near topotype specimens, herein referred to as genotopotypes, is included. Information about tissues has been more difficult to gather for specimens of birds and herptiles. For these two groups there is mention of tissues in only one of the bird accounts and a few of the herptile accounts, especially those of salamanders.

Remarks.—Comments are included for many entries to provide additional information or dispel potential sources of confusion. In some cases, additional comments regarding the systematic status or the history of the type specimen and type locality are provided. The status of currently recognized taxa listed as being of conservation concern by the Texas Parks and Wildlife Department (TPWD), United States Fish and Wildlife Service (USFWS), and NatureServe also is provided. NatureServe is the definitive source for information on rare and endangered species and sub-

species in the Americas, and the NatureServe Explorer provides search options for the conservation status of taxa in the United States.

In designating the type series, authors have followed the *International Code of Zoological Nomenclature* (International Commission on Zoological Nomenclature 1999) by incorporating the following definitions for various type specimens:

Holotype – a single specimen expressly designated as the name-bearing type by the original author of the species. When scientists refer to the "type," they are referring to this single specimen.

Syntype – one of several specimens in a series of equal rank used to describe the new species where the author has not designated a single holotype. Thus, each specimen in the series is known as a syntype (from which neither a holotype nor a lectotype has been designated).

Lectotype – a single specimen selected from a group of syntypes and designated as the name-bearing type by the author or a later worker sometime after the original description was published. The other syntype specimens after a lectotype has been designated are known as paralectotypes.

Neotype – a substitute specimen selected (and designated in a paper in the literature) to serve as a type when the original material has been lost or destroyed.

Paratype – a specimen that the person making the original description examined while carrying out the work. Paratypes may be from the same or a different locality, but they clearly (at least in the mind of the describer) are members of the new taxon. Although they are not types in a nomenclatural sense, they may have been distributed to other museums as vouchers for the new species.

Iconotype – an illustration on which a new species or subspecies was based.

Allotype – a designated paratype of a species (or lower-ordered taxon) that is the opposite sex of the holotype.

Topotype – a specimen collected from the same locality as the type material (although not necessarily at the same time) and believed to belong to that species or subspecies. Topotypes have no official standing, but when available they can be extremely useful for species describers and revisers to examine.

A special challenge is presented from the conceptual view of topotypes. From a purest perspective using a strict definition, a topotype specimen or topotypic series should come from the exact place as the type specimen. Practically, however, a problem can emerge with older type localities that were designated decades or in some cases more than a century ago. For example, El Paso and Brownsville, Texas, were designated as type localities for 28 taxa of mammals, 22 birds, and 19 amphibians and reptiles during the 19th and early 20th centuries. At that time, the populations and footprints of those cities were relatively small compared to today (e.g., in 1900, El Paso and Brownsville had 15,000 and 6,000 residents, respectively, as compared to about 600,000 and 180,000 residents today). Furthermore, when originally designated as type localities, both cities undoubtedly contained suitable habitat for wild vertebrates either directly in town or nearby. Today, these large places with high levels of development contain almost no habitat for wild animals. This begs the question of whether it is possible to designate or obtain topotypes from the original type locality. For this reason, the authors of this volume have added the category of "near topotypes" to include localities so near the type locality that they can safely be construed as emanating from the same panmictic population. Obviously, in this subjective exercise, one must consider the taxon's life history traits (e.g., vagility). For birds and large mammals, for example, it might be reasonable to include near topotypes from populations located within a 20-mile (32 km) radius of the original type locality. For less vagile species such as lizards, pocket gophers, mice, etc., a 5-mile (8 km) radius presumably would be more appropriate.

In all three of the catalogs herein, the information about the original taxonomic descriptions and historical synonymies for the taxa was obtained from the primary literature. Most major museums have prepared publications about their type specimen holdings, including catalog numbers, nature and condition

of the specimen, and locality information as provided on specimen tags or additional documentation in the museum holdings. These publications were consulted extensively in the preparation of the catalogs. In some cases, the authors of the catalogs had visited collections holding type specimens and personally examined and recorded the information from them. Information about specimens representing topotypes and near topotypes was taken from catalog data accessed via VertNet or from museum holdings and examined personally by the authors of the catalogs. In the case of the amphibian and reptile catalog, information about a few taxa was accessed via the iNaturalist website, but this source of information was not consulted in preparing the mammal and bird catalogs.

The data about topotypes and near topotypes included herein are only as accurate as what was available from VertNet and the few museum catalog records where the authors had direct access. The catalog authors do not claim that the lists of topotypes and near topotypes for each taxon are complete, for several reasons: 1) VertNet records may not be up to date with all cataloged specimens in a museum; 2) some museum collections are not available online via VertNet; 3) specimens may have been misidentified or miscataloged; 3) locality information may be incorrect or incomplete; and 4) specimens may be missing/lost, transferred to other institutional collections, or otherwise now unavailable for research. Further, in some cases judgment had to be used in determining if a specimen in a VertNet catalog qualified as a topotype or near topotype for a particular taxon because most VertNet entries are not listed to subspecies level, and in some cases the taxonomy may have changed and a specimen might be listed under an old name. Also, there can be cases where locality information may be entered online only to the county or city level, even though more specific locality information might exist on a specimen tag or in the collector's field notes, confirming a specimen as a topotype. In a few cases, where the collector's field notes were available or details about the locality were included in a literature publication, the catalog authors were able to take a more definitive view in designating topotypes versus near topotypes. For these reasons, the authors of the three catalogs used discretion in designating specimens as topotypes and near topotypes. The introduction of each catalog provides a brief explanation of how the authors made these decisions.

The total number of entries in the three catalogs is 431. Of these entries, 33.2% are mammals, 29.2% are reptiles, 27.1% are birds, and 10.4% are amphibians (Table 1). The three catalogs represent a wide variety of taxonomic categories for terrestrial vertebrates. The mammal catalog is represented by 8 orders, 22 families, 53 genera, 50 species, and 93 subspecies; 48 of

Table 1. Numbers of taxa described from Texas since 1825.

Timeframe	Mammals	Birds	Amphibians	Reptiles	Total	%
1825–1850	3	11	0	3	17	3.9
1851–1875	10	16	12	53	91	21.1
1876–1900	52	34	8	18	112	26.0
1901–1925	29	17	3	9	58	13.5
1926–1950	36	20	10	20	86	20.0
1951–1975	8	16	6	21	51	11.8
1976–2000	4	3	5	1	13	3.0
2001–2022	1	0	1	1	3	0.7
Total	143	117	45	126	431	100.0
%	33.2	27.1	10.4	29.2	100.0	

the taxa are now in synonymy and not presently valid. For birds, 12 orders, 34 families, 86 genera, 33 species, and 83 subspecies are represented, with 47 of the taxa now in synonymy and not presently valid. For reptiles and amphibians, the taxa included represent 4 orders, 26 families, 56 genera, 130 species, and 41 subspecies, with 56 taxa now in synonymy and not presently valid. Collectively, 151 of the terrestrial vertebrate taxa described from Texas (35%) are now in synonymy and not presently valid.

Most of the discoveries and descriptions of Texas' terrestrial vertebrates (47.1%) occurred during the latter half of the 19th century, a period termed "the great age of biological discovery," when museums, government agencies, and universities sent out collecting expeditions to conduct field surveys for months or years at a time (Coniff 2011). For all the terrestrial vertebrates described from Texas, the peak periods of description were 1876–1900 (26%) and 1851–1875 (21.1%) (Table 1). Another 20% were described from 1926 to 1950, when universities in Texas created research and teaching programs in natural history, and several universities and museums in the state established natural history collections. The periods 1901–1925 and 1951–1975 produced 13.5% and 11.8% of the catalog descriptions, respectively. Only 3.9% of the taxa in the three catalogs were described before 1851, and only 3.7% were described in the 46 years from 1976 to 2022.

Type materials have been recorded from 87 of the 254 Texas counties (34.2%), representing 54 counties where reptiles or amphibians were described, 47 for mammals, and 33 for birds (Table 2). It was not possible to assign county designations for 33 (7.6%) of the 431 taxa described from Texas. The counties with the most taxa described are Cameron (45), Bexar (35), Brewster (32), El Paso (24), Nueces (16), Jeff Davis (16), and Val Verde (13). Collectively, these seven counties accounted for 45.1% (181/401) of the taxa described that could be attributed to a single county. (Note that there are 434 total localities for 431 taxa; this is due to taxa that were described from syntypes collected from two or more localities in Texas.) Although 46.1% (185/401) were from the counties that constitute the border with Mexico, the remaining type localities are from counties distributed across the state (Fig. 1). Fifteen counties have at least one taxon of each of the major terrestrial vertebrate groups described within their boundaries.

Descriptions of terrestrial vertebrates from Texas encompass various type designations (Table 3). More than three-fourths (337/431, 78.2%) are represented by holotype specimens, whereas slightly less than one-fourth (94/431, 21.8%) encompass other types, including syntypes (13.7%), lectotypes (5.3%), neotypes (<1%), iconotypes (<1%), and 5 (1.2%) lack designated type specimens. There is one *nomen nudum* in the catalog (*Phasmornis mystica*, the Chisos Hummingbird, described by Oberholser in 1974); this proposed taxon was published without an adequate description but cannot be verified (in this case, because the specimen and neotype were lost), and therefore it is not recognized as a valid scientific name by the AOC checklist committee or the IOC. The type material has been lost, misplaced, or is currently unaccounted for in 19 (4.4%) of the described taxa (6 amphibians, 9 reptiles, 3 birds, and 1 mammal).

The taxonomic collections housing the type materials for terrestrial vertebrates described from Texas are listed in Table 4. They number 77, including leading university and museum collections. Nineteen of the collections are located in Texas, with the remainder located in 23 other states, the District of Columbia, and 8 different countries. The acronyms associated with these collections have been used to indicate the disposition of museum specimens listed in each catalog.

Changes in the validity of name combinations for terrestrial vertebrates described from Texas are summarized in Table 5. For the three catalogs collectively, 103/431 (23.9%) of the name combinations currently applied to the catalog entries remained unchanged from the original description (i.e., the present name is the same valid name as published by the describer). The name combinations have changed for the other 328 (76.1%) of the taxonomic entities in the catalogs. However, of these latter taxa, 183/431 (42.5%) of the name combinations remain "valid" and 145/431 (33.6%) are considered to represent currently "invalid" name combinations. Overall, approximately two-thirds of the name combinations applied to Texas' terrestrial vertebrates described from the state are presently considered valid and one-third are not.

Table 2. Number of taxa described from Texas counties.

County	Mammals	Birds*	Amphibians/Reptiles	Total
Anderson	0	0	1	1
Aransas	4	1	2	7
Armstrong	1	1	0	2
Atascosa	0	0	2	2
Bastrop	0	0	1	1
Bee	0	3	0	3
Bell	0	0	1	1
Bexar	6	7	22	35
Brazoria	3	0	0	3
Brazos	1	0	1	2
Brewster	7	13	12	32
Briscoe	2	0	0	2
Burnet	0	0	1	1
Calhoun	1	0	9	10
Cameron	13	19	13	45
Clay	1	0	0	1
Colorado	1	0	0	1
Coke	0	0	1	1
Comal	0	0	3	3
Concho	1	0	0	1
Cooke	2	2	2	6
Crockett	0	0	1	1
Culberson	4	3	3	10
Dallas	0	1	4	5
Deaf Smith	0	0	1	1
DeWitt	1	0	1	2
Dimmit	1	0	0	1
Donley	1	0	0	1
Duval	1	1	4	6
Edwards	0	1	0	1
El Paso	15	3	6	24
Fayette	0	0	1	1

Table 2. (cont.)

County	Mammals	Birds*	Amphibians/Reptiles	Total
Galveston	2	0	2	4
Grimes	1	0	0	1
Hardin	2	0	0	2
Harris	0	1	1	2
Hays	0	0	5	5
Hidalgo	0	9	1	10
Hudspeth	5	0	0	5
Jeff Davis	7	4	5	16
Jefferson	1	1	2	4
Jim Hogg	0	0	1	1
Kendall	0	1	2	3
Kenedy	0	0	1	1
Kerr	6	3	1	10
Kinney	8	1	0	9
Kleberg	2	0	1	3
La Salle	0	1	0	1
Leon	1	0	0	1
Liberty	1	0	0	1
Lipscomb	0	2	0	2
Llano	2	0	0	2
Lubbock	0	0	1	1
Martin	0	1	0	1
Mason	4	0	0	4
Maverick	4	0	6	10
Matagorda	0	1	0	1
McLennan	0	0	1	1
McMullen	0	0	1	1
Medina	3	0	2	5
Nacogdoches	1	0	0	1
Nueces	5	10	1	16
Oldham	1	0	0	1
Palo Pinto	0	1	2	3

Table 2. (cont.)

County	Mammals	Birds*	Amphibians/Reptiles	Total
Polk	0	0	1	1
Presidio	2	2	4	8
Randall	0	1	0	1
Refugio	0	1	0	1
Robertson	0	0	1	1
San Patricio	0	1	0	1
Starr	0	3	3	6
Sterling	1	0	0	1
Tarrant	0	0	1	1
Terrell	0	0	2	2
Travis	2	0	5	7
Upton	2	0	0	2
Uvalde	0	0	1	1
Val Verde	1	4	8	13
Victoria	0	0	1	1
Walker	1	0	0	1
Webb	2	2	1	5
Wharton	0	1	0	1
Wheeler	1	0	1	2
Williamson	0	0	1	1
Wilson	0	0	1	1
Winkler	1	0	0	1
Zapata	1	0	0	1
Total	136	106	159	401

*For birds, the number of taxa per county includes some situations where two or more syntypes in different counties were designated for a single taxon.

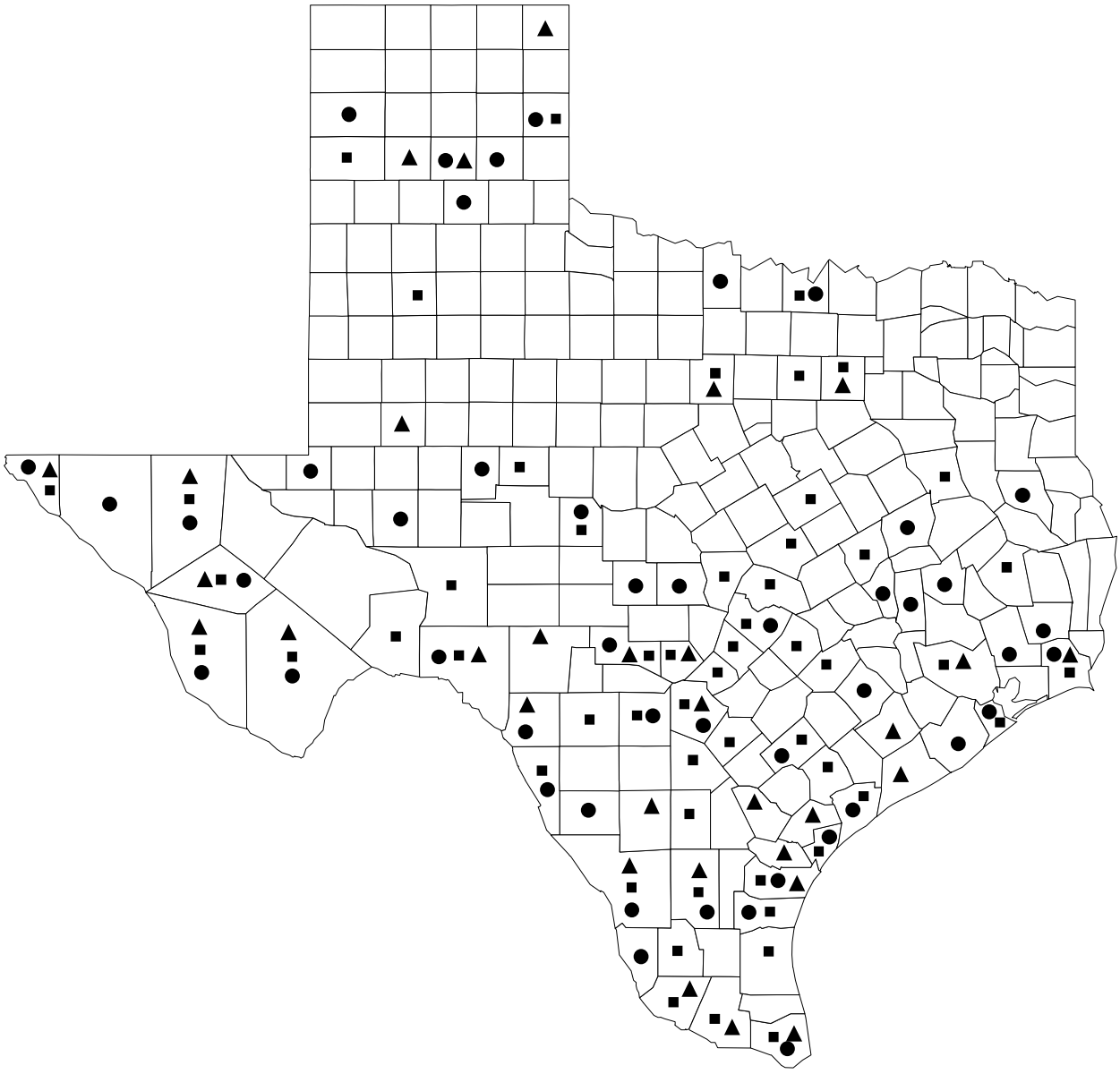

Figure 1. Distribution of Texas mammal (●), bird (▲), and amphibian/reptile (■) type specimens by county. Symbols indicate counties in which one or more type specimens were collected.

Table 3. Numbers of taxa described from Texas represented by various type specimen designations.

Type Designation	Mammals	Birds	Amphibians	Reptiles	Total
Holotype	136	85	29	87	337
Syntype	0	30	11	18	59
Lectotype	1	1	4	17	23
Neotype	0	0	1	3	4
Iconotype	4	0	0	0	4
None designated	2	1	0	1	4
Total	143	117	45	126	431

Table 4. Acronyms and the corresponding museums/collections holding type, topotype, and near topotype specimens of terrestrial vertebrates described from Texas. The bold letters **M** (mammals), **B** (birds), and **AR** (amphibians/reptiles) are used to indicate the various taxonomic categories of type specimens listed in this publication that are housed in each collection.

Acronym	Institution name and categories of type specimens held
AMNH	American Museum of Natural History, New York City. **M/B/AR**
ANSP	Academy of Natural Sciences of Philadelphia (now Academy of Natural Sciences of Drexel University). **M/B/AR**
ASNHC	Angelo State Natural History Collection, San Angelo, Texas. **M/B/AR**
ASUVC	Arizona State University, Vertebrate Collection, Tempe. **M**
BBNP	Big Bend National Park, Vertebrate Collection. **M**
BSNS	Buffalo Society of Natural Sciences, Buffalo, New York. **B**
BUMMC	Baylor University Mayborn Museum Complex, Waco, Texas (formerly Strecker Museum, Baylor University, SMBU). This museum includes specimens from the private collection of Bryce C. Brown. **B/AR**
BYU	Monte L. Bean Life Science Museum, Brigham Young University, Provo, Utah. **AR**
CAS	California Academy of Sciences (includes CAS-SU), San Francisco, California. **M/B/AR**
CHAS	Chicago Academy of Science, now the Peggy Notebaert Nature Museum, Chicago, Illinois. **M/B/AR**
CM	Carnegie Museum of Natural History, Pittsburgh, Pennsylvania. **M/B/AR**
CMNH	Cleveland Museum of Natural History, Cleveland, Ohio. **B**
CSULB	California State University, Long Beach, California. **M**
CUMV	Cornell University Museum of Vertebrates, Ithaca, New York. **M/B/AR**

Table 4. (cont.)

Acronym	Institution name and categories of type specimens held
DMNH	Delaware Museum of Natural History, New Castle, Delaware. **M/B**
DMNS	Denver Museum of Nature and Science, Denver, Colorado. **B**
FMNH	The Field Museum of Natural History, Chicago, Illinois. **M/B/AR**
ISM	Illinois State Museum, Springfield, Illinois. **M/AR**
IRSNB	Institut Royal des Sciences Naturelles de Belgique, Brussels (formerly RBINS). **AR**
KU	University of Kansas Biodiversity Institute (formerly University of Kansas Museum of Natural History), Lawrence, Kansas. **M/B/AR**
LACM	Natural History Museum of Los Angeles County, California. **M/B/AR**
LSUMZ	Louisiana State University Museum of Natural Science, Baton Rouge. This collection includes specimens of mammals and herptiles formerly housed at the Tulane University Museum of Natural History. **M/B/AR**
LTU	Louisiana Tech University Museum of Vertebrate Zoology, Ruston. **AR**
MCZ	Museum of Comparative Zoology, Harvard University, Boston, Massachusetts. **M/B/AR**
MMNH	James Ford Bell Museum of Natural History, University of Minnesota, Minneapolis. **B**
MNHN	Muséum National d'Histoire Naturelle, Paris, France. **AR**
MSB	Museum of Southwestern Biology, University of New Mexico, Albuquerque. This collection includes Texas mammal specimens formerly housed at the Museum of Natural History, University of Illinois. **M/B/AR**
MSUM	Michigan State University Museum (formerly MSU), East Lansing. **M/AR**
MVZ	Museum of Vertebrate Zoology, University of California Berkeley. **M/B/AR**
MWSU	Midwestern State University, Vertebrate Museum, Wichita Falls, Texas. **M**
NCSM	North Carolina Museum of Natural Sciences (formerly NC State Museum), Raleigh. **M/B/AR**
NHMUK	Natural History Museum, United Kingdom (formerly British Museum of Natural History, BMNH). **M/AR**
NMB	Naturhistorisches Museum Basel, Basel, Switzerland. **AR**
NMMNH	New Mexico Museum of Natural History and Science, Albuquerque. **M**
NMSU	New Mexico State University, Biology Department Vertebrate Collection, Las Cruces. **AR**
NMW	Naturhistoricsches Museum Wien, Vienna, Austria (formerly NHMW). **AR**
NTSU	North Texas State University, Denton. **M**
NYSM	New York State Museum, Albany. **B**

Table 4. (cont.)

Acronym	Institution name and categories of type specimens held
OMNH	Sam Noble Oklahoma Museum of Natural History (formerly Stovall Museum), University of Oklahoma, Norman. **M/B/AR**
OSUM	Ohio State University, Museum of Biological Diversity, Columbus. **M/B/AR**
PMNS	Perot Museum of Nature and Science, Dallas, Texas (formerly Dallas Museum of Natural History, DMNH). **M/B/AR**
PSM	Slater Museum of Natural History, University of Puget Sound, Tacoma, Washington. **M/B/AR**
ROM	Royal Ontario Museum, Department of Natural History, Toronto, Canada. **M/B/AR**
SBMNH	Santa Barbara Museum of Natural History, Santa Barbara, California. **M/B**
SDNHM	San Diego Natural History Museum, San Diego, California. **M/B/AR**
SFAVC	Stephen F. Austin University, Vertebrate Collection, Nacogdoches, Texas. Current status of collection unknown. **M/AR**
SHSU	Sam Houston State University, Vertebrate Natural History Collection, Huntsville, Texas. **B**
SLU	Southeast Louisiana University, Vertebrate Museum, Hammond, Louisiana. **AR**
SMU	Shuler Museum of Paleontology, Southern Methodist University, Dallas, Texas. **M/AR**
SRSU	Sul Ross State University, James Scudday Vertebrate Collection, Museum of the Big Bend, Alpine, Texas. **M/AR**
SUI	Museum of Natural History, University of Iowa, Iowa City. **M**
TAIC	Texas A&M University at Kingsville, Texas A&I Mammal Collection (formerly Texas A&I University Collection), Kingsville (herpetology collection now moved to AMNH). **M**
TAMUCC	Texas A&M University-Corpus Christi, Vertebrate Collection, Corpus Christi. **M/B**
TCWC	Texas Cooperative Wildlife Collection, now Biodiversity Research and Teaching Collection, Department of Wildlife and Fisheries Sciences, Texas A&M University, College Station. This collection includes specimens of mammals formerly housed at the University of North Texas. **M/B/AR**
TCU	Texas Christian University, Fort Worth. Current status of collection unknown. **AR**
TNHC	Texas Natural History Collection, now University of Texas Biodiversity Collections (UTBC), Austin. This collection includes many of the specimens from the Floyd E. Potter private collection as well as the herptile specimens formerly housed at Texas Tech University. **AR**
TTRS	Tall Timbers Research Station and Land Conservancy, Tallahassee, Florida. **M**
TTU	Museum of Texas Tech University, Lubbock. This collection includes mammal specimens previously housed at the Texas Natural History Collection, Texas Memorial Museum, University of Texas at Austin. **M/B**
UAZ	University of Arizona Museum of Natural History, Tucson. **M/ AR**

Table 4. (cont.)

Acronym	Institution name and categories of type specimens held
UBCBBM	University of British Columbia Beaty Biodiversity Museum, Vancouver, British Columbia, Canada. **B**
UCLA	University of California, Dickey Collection, Los Angeles. **M/B**
UCM	University Colorado Museum of Natural History, Boulder. **M/B/AR**
UCONN	University of Connecticut, Biodiversity Research Collections, Storrs. **M**
UF	Florida Museum of Natural History, University of Florida, Gainesville. **M/B/AR**
UIMNH	University of Illinois, Museum of Natural History, Champaign. These specimens are now housed at the Illinois Natural History Survey (INHS) Herpetology Collection, University of Illinois, but retain their original UIMNH catalogue numbers. **AR**
UMMZ	University of Michigan Museum of Zoology, Ann Arbor. **M/B/AR**
UMNH	Natural History Museum of Utah, University of Utah, Salt Lake City. **AR**
USNM	Smithsonian Institution, National Museum of Natural History, Washington, DC. **M/B/AR**
UTA	University of Texas at Arlington, Amphibian and Reptile Diversity Research Center, Arlington. **AR**
UTEP	University of Texas at El Paso Biodiversity Collections (formerly MALB), El Paso. **M/AR**
UWBM	Burke Museum, University of Washington, Seattle. **M/B**
UWYMV	University of Wyoming Museum of Vertebrates, Laramie. **M/B**
WFVZ	Western Foundation of Vertebrate Zoology, Camarillo, California. **B**
WMSA	The Witte Museum, San Antonio, Texas. **M**
WNMU	Western New Mexico University, Silver City. **M/B**
YPM	Yale University, Peabody Museum of Natural History, New Haven, Connecticut. **M/B/AR**
ZMB	Museum für Naturkunde, Berlin, Germany. **AR**

Table 5. Summary of name combinations that have either changed or remained unchanged for terrestrial vertebrates described from Texas. The unchanged category includes the number of name combinations in which the presently used name for a taxon is the same combination used in the original description. The changed category includes those name combinations now placed in synonymy either for "nomenclature" or "zoological" reasons as explained in the text. Some name combinations that have changed for zoological reasons are "valid" and others are "invalid" as described in the text. The "invalid" taxa are included in List 6 of each catalog.

Category	Mammals	Birds	Reptiles	Amphibians	Total
Name combination unchanged	27	30	31	15	103
Name combination changed					
Nomenclature reasons	2	3	1	1	7
In synonymy, valid	74	40	54	15	183
In synonymy, invalid	40	44	40	14	138
Total	143	117	126	45	431

ENDEMIC TAXA AND CONSERVATION CONCERNS

Each of the catalogs includes a section about the endemic taxa described from Texas that still are taxonomically valid today (see Tables 6–9 in the catalogs). Two kinds of endemics are considered—those taxa (species and subspecies) with distributions presently restricted entirely to Texas (Part A), and those that occur nowhere else in the United States other than Texas, although they may range to varying degrees into Mexico (Part B). The term "endemic" in this case is used to refer to a taxon whose current distribution is restricted to a specified geographic area, either Texas or the US The emphasis is on "current distribution" because there are species described from Texas that currently occur only in the state, but historically they occupied a small range in adjacent states. For example, Attwater's prairie chicken (*Tympanuchus cupido attwateri*) today is restricted to two populations along the Texas coast, but historically the species also was represented by a small population in southern Louisiana that is now extinct (Lehmann and Mauermann 1963). Similarly, the Texas kangaroo rat (*Dipodomys elator*) is restricted today to a small geographic area south of the Red River in northern Texas, although historically a population (now extinct) existed just across the river in southern Oklahoma (see Braun et al. 2021).

The conservation status of these so-called "endemics" is provided in each of the catalogs, according to the state status as determined by TPWD, the federal status as determined by the USFWS, and the global status as described in NatureServe (https://explorer.natureserve.org). The current conservation status and priority for some of these taxa in Texas is briefly discussed. These taxa are of higher conservation need because their entire range in the US is now restricted to Texas.

THE DESCRIBERS AND COLLECTORS OF TERRESTRIAL VERTEBRATE TAXA IN TEXAS

Because of its size and geographic location, Texas has an impressive wildlife heritage that has attracted many explorers and naturalists to describe and study the state's natural history. These individuals included government scientists and explorers on some of the early expeditions and surveys to discover Texas, members of the US military stationed at outposts in the frontier days, private citizens that served as early naturalists in the state, university faculty and museum curators who represented early scientific naturalists, and a few modern-day naturalists. Each catalog includes a list of the describers and collectors of taxa described from Texas with a brief historical account about some of the most important individuals who collected or described

Texas' terrestrial vertebrates. The naturalists on this list represent a "who's-who" of prominent historical figures in mammalogy, ornithology, and herpetology.

A total of 143 naturalists—37 mammalogists, 38 ornithologists, and 68 herpetologists—were senior authors of published descriptions of terrestrial vertebrate taxa from Texas. The leading describers, as reflected by senior authorship, were Spencer Fullerton Baird (43 taxa, representing 7 amphibians, 31 reptiles, 4 mammals, and 1 bird), Harry B. Oberholser (23 taxa, all birds), Edward D. Cope (20 taxa, representing 6 amphibians, 13 reptiles, and 1 mammal), Clinton H. Merriam (19 taxa, all mammals), Vernon Bailey (18 taxa, all mammals), and J. A. Allen (17 taxa, all mammals). Collectively, these naturalists were senior authors for 140 of the 431 terrestrial vertebrate taxa (32.5%) described from Texas. Four individuals (Spencer F. Baird, Elliott Coues, Joel A. Allen, and Edgar A. Mearns) described taxa of both mammals and birds. Two individuals (Edward D. Cope and William B. Davis) described taxa of amphibians and/or reptiles as well as mammals, and Charles F. Girard described taxa of birds, reptiles, and amphibians. Baird was the only person who senior authored descriptions of taxa in all four of the major categories, mammals, birds, reptiles, and amphibians.

A total of 207 naturalists—49 mammalogists, 47 ornithologists, and 111 herpetologists—were principal collectors of type specimens of taxa described from Texas. The leading collectors were Vernon Bailey (25 taxa, representing 21 mammals, 3 birds, and 1 reptile), John H. Clark (18 taxa, representing 14 reptiles and 4 mammals), Edgar A. Mearns (17 taxa, representing 16 mammals and 1 bird), Henry P. Attwater (17 taxa, representing 12 mammals and 5 birds), and George B. Sennett (9 taxa, all birds). These five naturalists collected 87 of the 431 terrestrial vertebrate taxa (20.2%) described from Texas. Six individuals (Vernon Bailey, William Lloyd, Henry P. Attwater, John A. Loring, Edgar A. Mearns, and J. O. Stevenson) collected type specimens of both mammals and birds. Four individuals (Vernon Bailey, Edward D. Cope, John H. Clark, and William Lloyd) collected type specimens of mammals and reptiles or amphibians, and Samuel W. Woodhouse collected type specimens of birds and reptiles. Vernon Bailey was the only naturalist to collect type specimens of mammals, birds, and reptiles.

Many of the naturalists who described Texas' taxa can be deemed "closet naturalists" because they never conducted fieldwork and never saw the animals they studied in their natural habitats. These describers left it to the field collectors to take risks and do the physical work of collecting, while they worked from their home base, generally a museum collection, to describe new taxa in scientific journals (Coniff 2011). In some cases, such as Joel A. Allen of the American Museum of Natural History, they hired local naturalists (e.g., Henry P. Attwater of San Antonio, Texas) to make collections. They then purchased specimens from them that were used to describe new species and subspecies of mammals. However, there are good examples of naturalists who did both the field collecting and the taxonomic descriptions. For example, Vernon Bailey, Chief Naturalist for the US Biological Survey, collected type specimens for more taxa of mammals described from Texas (21) than any other naturalist, and he authored the description for 18 of these. Only his boss, Clinton Hart Merriam, who never collected in the state, described more taxa of Texas mammals (19). Among the ornithologists, Harry C. Oberholser stands out as both a describer and collector of taxa described from Texas. He collected type specimens for 9 taxa and described 23. George B. Sennett, a prominent businessman and ornithologist who studied Texas birds in the lower Rio Grande, collected types for 9 taxa and described 9. Spencer F. Baird and Charles F. Girard stand out as describers among the herpetologists, although they never collected in the state. Baird, an American naturalist and vertebrate zoologist, was the first curator at the Smithsonian Institution and Girard was his assistant. Baird was the sole author of 11 published descriptions (3 amphibians, 3 reptiles, 4 mammals, and 1 bird), and Girard was sole author for 11 descriptions (3 amphibians, 1 reptile, and 7 birds). Girard coauthored with Baird as senior author descriptions of 4 amphibians and 28 reptiles. As noted above, Baird is the only naturalist to describe taxa in all the major vertebrate groups of Texas.

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Catalog 1: Type Specimens, Type Localities, Synonymies, and Authors/ Collectors of Recent Mammals Described from Texas

David J. Schmidly, Robert D. Bradley, Lisa C. Bradley, Franklin D. Yancey, II, and Joanna Bateman

Of the terrestrial vertebrates described from Texas, the Class Mammalia has the largest number of described taxa, constituting one-third of the total number (see Table 1 in Introduction). The first descriptions of mammals from Texas were published by J. E. Gray, a taxonomist with the British Museum of Natural History (now known as the Natural History Museum, United Kingdom), who in 1837 published descriptions of *Procyon nivea* and *Mephitis mephitis*. Type specimens were not designated for either of the taxa nor were specific type localities (both were listed only as "Texas"). Currently, the mammal catalog includes 143 types described from specimens and type localities in Texas. The taxa represented by these types encompass 8 orders, 22 families, and 53 genera of mammals. The largest number of types comes from the Orders Rodentia (95 taxa, including 38 geomyid and 30 cricetid rodents), Carnivora (22 taxa), and Lagomorpha (10 taxa). There are six types of shrews and moles (Order Eulipotyphla), five of bats (Order Chiroptera), three of artiodactyls (Order Artiodactyla), one opossum (Order Didelphimorphia), and one armadillo (Order Cingulata). To avoid unnecessary complexity, orders, families, and genera are the only ranks listed above the level of subspecies or species in the catalog.

Information on type specimens and type localities of mammals was verified by consulting the following references: Hooper (1941) for type localities of gophers of the genus *Thomomys*; Poole and Schantz (1942) and Fisher and Ludwig (2012, 2014, 2015, and 2016) for type specimens in the United States National Museum; Goodwin (1953) for types held at the American Museum of Natural History; Jones and Genoways (1969) for types at the University of Kansas, Museum of Natural History; Koopman (1976) for types at the Academy of Natural Sciences in Philadelphia; Hooper (1977) for types at the Museum of Zoology, University of Michigan; Schmidly and Jones (1984) for types in mammal collections located in Texas; and Helgen and McFadden (2001) for type specimens in the Museum of Comparative Zoology at Harvard. Bibliographic references for original descriptions and publication citations as well as current nomenclatural usage include Hall and Kelson (1959), Hall (1981), Wilson and Reeder (2005), Bradley et al. (2014), and Schmidly and Bradley (2016) along with the primary literature.

For each entry in the mammal catalog, the specific or subspecific scientific name is given in exactly its original form, followed by the name of the author and the date of publication. The citation of the original description is given in the synonomy. The presently recognized scientific name is listed below the original name, following an equal sign, for those taxa in which the original name no longer applies. The earliest applied vernacular English name (i.e., common name), as provided by the original describer of the taxon or as applied by Bailey (1905), is provided in brackets below the original scientific name. In most cases, these historic common names were assigned to the subspecific level. If neither the original describer nor Bailey proposed a common name for the taxon (species or subspecies), the category “none designated” is used in this catalog. Unlike birds, mammal common names have not been standardized, although Wilson and Cole (2000) proposed a list of standardized and unique vernacular English names for all of the then recognized mammal species of the world. However, that list has not been regularly updated as new species have been recognized nor has it ever been codified as “officially accepted” by professional organizations in mammalogy as is done in ornithology. Further, Wilson and Cole (2000) suggested names only to the species level and did not propose unique common names for subspecies. For each entry in this catalog, the current common name for the species, as proposed by Wilson and Cole (2000) but with a few exceptions as suggested by Schmidly and Bradley (2016) or Schmidly et al. (2022), is listed in brackets below the current scientific name. There are a few instances in which the original scientific name has not changed but the generally accepted common name has changed. In those cases, the current common name is listed below the original common name but without repeating the current scientific name.

The synonymies for the mammal catalog include reference to the actual usage of names applied to those elements of the Texas mammal fauna described from specimens with type localities in the state. Synonymies serve various purposes. A synonymy may be entirely nomenclatural or it may document the actual usage of names for some taxon or the fauna of some area (Anderson 1972). The catalog presented herein is faunal in orientation, and the nomenclatural objective is minimal and simply applied to document the origin of the name and its first use as here employed. Multiple objective or subjective synonyms may have been used for a taxon, but only those names applicable to taxa described from Texas specimens have been included in the synonymies. Synonymies are given for monotypic species and subspecies described from Texas specimens, but not for higher categories. Except for the use of the ordinal name Eulipotyphla for shrews and moles (formerly Soricomorpha), Wilson and Reeder (2005) were followed in the recognition of orders and families of mammals.

Each synonymy includes all scientific names used for specimens from Texas that, in our judgment, are referable to the taxon being documented and that have been used in the literature. These are listed in chronological order with the date and appropriate authority for any nomenclatural usage applied to Texas specimens. In all cases, the synonymies include the original publication source for the description of the taxon. In some situations, earlier entries are included if appropriate. The earliest reference to the presently used name for the taxon is included for each catalog entry, sometimes with other entries for authorities who recently re-confirmed that name. Thus, there often are multiple entries with the same name used in the synonymies, which is necessary to reflect historical back and forth changes in the taxonomic status of a particular taxon (e.g., species vs. subspecies).

Information for the synonymies come from a variety of sources. In addition to the primary literature containing the descriptions of taxa and documenting taxonomic changes, the major checklists (Strecker 1926; Jones et al. 1988; Manning et al. 2008) and compilations of Texas mammals (Bailey's 1905 *North American Fauna* 25 and the seven editions of *The Mammals of Texas*—Taylor and Davis 1947; Davis 1960, 1966, 1974; Davis and Schmidly 1994; Schmidly 2004; Schmidly and Bradley 2016) have been consulted and used as appropriate, such as in cases where the scientific name for a particular species or subspecies has experienced multiple back-and-forth nomenclatural changes. In the more complicated cases, nomenclatural and taxonomic changes are summarized and discussed in the Remarks section of the catalog entry with appropriate literature citations that emphasize recently published taxonomic studies or monographs, including genetic and molecular genetic studies based on Texas specimens that confirm usage of present names.

The category "type locality" is used and presented here in the usual fashion—the locality where the type specimen (or specimens, syntypes, etc.) was actually collected as provided in the original description of the taxon and/or derived from specimen labels, catalogs, and accession documents. Usually, but not always, this is given with accuracy and clarity in the original description. However, historical specimens often have only limited or general original data, and in some instances, localities or related information may be lacking altogether. In other cases, type localities may be given incorrectly or vaguely, such that the recorded or published statement has no validity compared to the actual provenance of the specimen as provided by more precise information, such as from recent publications, monographs, and field notes. For some accounts in this catalog, the authors have made appropriate corrections and restrictions for unknown, vague, or multiple type localities to more specific ones, and these have been justified and explained in the Remarks section of the various accounts.

Information about topotype and near topotype specimens and the various collections housing them was compiled from two sources. From 1971 until 1985, one of us (DJS), as part of a project on Texas mammals sponsored by the Texas Agricultural Experiment Station at Texas A&M University, visited all museum and university collections of mammals (large and small) that housed specimens of Texas mammals (see Table 4 in Introduction). During this effort, thousands of specimens and their localities were recorded, and the type specimens of mammals described from Texas were examined in this process. The information from these specimens and their localities were entered into

a computerized database known as the "spectabilis system" (see Folse and Cato 1985). Unfortunately, due to the untimely death of Folse, that database was not maintained. However, the original handwritten list of localities and specimens examined at each of these collections has been retained and is on file in the archives of the NSRL at Texas Tech University and is available for examination.

Following this effort, additional records of Texas specimens and localities were added by using the VertNet database. Where possible, the topotype and near topotype specimens documented during the 1971 to 1985 project and listed herein were subsequently confirmed using VertNet or online databases of the holding institutions during the preparation of the catalog. However, several of the collections visited during the 1971 to 1985 effort are not digitized nor available online. Thus, some specimens documented by Schmidly could not be confirmed using VertNet or electronic catalogs. It is possible, for example, that some of those specimens have since been transferred to other institutions or are otherwise unavailable for research purposes.

These two databases (the Schmidly effort and VertNet) represent the primary sources of information presented below in various lists and summaries of topotype and near topotype specimens. However, we acknowledge that our data are only as accurate as what was available to us. For example, determining if a specimen in a catalog/VertNet entry qualified as a topotype or near topotype often required judgment calls. The official designation of a topotype is a specimen collected at the exact locality as the type specimen. But this can be difficult to ascertain, especially for older type localities (from the 19th or early 20th centuries) recorded only as a city, such as Brownsville, El Paso, or San Antonio. Those cities had a different footprint when the type specimens were collected than they do today. For purposes of this catalog, those specimens with identical but non-specific locality information, as written on specimen labels or as available in VertNet, collected in the same year or within a few years of the holotype (when the city footprints would have been similar) were listed as topotypes. Specimens with non-specific locality information that is the same as the holotype but collected later—generally after 1950, when city boundaries had significantly expanded—have been listed as near topotypes.

We also encountered a few other inconsistencies and difficulties. For example, in a few cases, outdated taxonomic names or incorrect usage of names appeared in VertNet. When we could resolve these situations with confidence, we placed those specimens under the current and appropriate taxon. There are instances in VertNet where entries are not listed to subspecies level, and the taxonomy may have changed such that the specimen might still be listed under an old name. In these cases, if a specimen was from the holotype locality or nearby, we assumed that it was the correct taxon (same as holotype), even if it was cataloged as a different subspecies. Also, there are cases in which the same locality may be spelled differently in different museum catalogs. For example, there are several localities associated with the place name McKelligon in El Paso County (e.g., McKelligon Canyon, McKelligon Canyon Road, McKelligon Canyon Park). In many instances, McKelligon is misspelled as McKelligan. This appears to be the result of errors in specimen labeling by collectors/institutions, as this is how the locality spelling appears for some specimens in different databases. Lastly, specimen locality information available from VertNet may not be complete; for example, locality information may be entered only to the county level, even though more specific locality information might exist on a specimen tag or in the field notes of the collector but was unavailable to us. Once again, for the purposes of this catalog we included such specimens in the near topotype category.

Where possible, we have indicated whether genetic material was collected and preserved in association with traditional topotype or near topotype specimens. Further, the Remarks section of accounts for those species or subspecies listed as having critical conservation concerns (extinct, endangered, threatened, vulnerable, or under review) by TPWD, USFWS, and NatureServe includes a brief statement about their status in the state (see Table 6 later in this catalog). Species on the TPWD list of Species of Greatest Conservation Need (SGCN), as listed in NatureServe, that are endemic to Texas and considered as imperiled or critically imperiled also are included in Table 6 and discussed in the Remarks section.

List 1.1. Accounts for Mammal Taxa Described from Texas Localities

ORDER DIDELPHIMORPHIA
Family Didelphidae

Didelphis marsupialis texensis J. A. Allen, 1901
[Texas Opossum]
= ***Didelphis virginiana californica***
[Virginia Opossum]

1792. *Didelphis virginiana* Kerr, Anim. Kingd., p. 193.

1833. *Didelphis Californica* Bennett, Proc. Zool. Soc. London, p. 40.

1898. *Didelphis virginiana pigra* Bangs, Proc. Boston Soc. Nat. Hist. 28:172.

1901. *Didelphis marsupialis* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 14:166.

1901. *Didelphis marsupialis texensis* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 14:172.

1902. *Didelphis mes-americana texensis* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 16:256.

1926. *Didelphis virginiana virginiana* Strecker, Baylor Univ. Bull. 29(3):6.

1951. *Didelphis marsupialis californica* Hershkovitz, Field. Chicago. Mus. Nat. Hist. 31:548.

1973. *Didelphis virginiana californica* Gardner, Spec. Publ. Mus. Texas Tech Univ. 4:30.

1988. *Didelphis virginiana pigra* Jones et al., Occas. Pap. Mus. Texas Tech Univ. 119:2.

2016. *Didelphis virginiana virginiana* Schmidly and Bradley, Mammals of Texas, Univ. Texas Press, p. 57.

2022. *Didelphis virginiana californica* Schmidly et al., Texas Nat. Hist. 21st Century, Texas Tech Press, p. 124.

Type specimen.—Holotype, adult male, skin and skull, USNM 33133/45137, obtained by F. B. Armstrong on 13 April 1892, original number 12.

Type locality.—Brownsville, Cameron County, Texas.

Topotypes.—Cameron Co: Brownsville, 6 (USNM), 3 (KU), 2 (UCLA), 1 (AMNH). Last topotype collected 1938, no tissues available.

Near topotypes.—Cameron Co: near Brownsville, 5 (UMMZ); 5 mi S, 4.5 mi E Brownsville, 1 (MSB). Last near topotype collected 1969, no tissues available.

Remarks.—The UCLA near topotype specimens are erroneously recorded in VertNet as *Didelphis mesamericanus texensis*. There are two subspecies of Virginia Opossum in Texas (Schmidly et al. 2022)—*D. v. virginiana* throughout most of the state and *D. v. californica* in the Rio Grande Valley and Trans-Pecos. Some authors (Gardner 1973; Manning et al. 2008) have continued to apply the trinomial *D. v. pigra* for populations in the south and southeast of Texas, but Schmidly (1983) has shown there is no apparent basis for recognizing that subspecies in the state. We have followed Gardner (1973) in assigning the type specimen and other specimens from Cameron County to *D. v. californica*.

ORDER CINGULATA
Family Dasypodidae

Tatu novemcintum texanum Bailey, 1905
[Texas Armadillo]
= ***Dasypus novemcinctus mexicanus***
[Nine-banded Armadillo]

1758. *Dasypus novemcinctus* Linnaeus, Systema naturae per regna tria naturae, secundum classes, ordines, genera, species, cum characteribus, differentiis, synonymis, locis. 10th ed. Laurentii Salvii, Stockholm, 1:51.

1864. *Dasypus novemcinctus* var. *mexicanus* Peters, Monatsb. Preuss. Akad Wiss., Berlin, p. 180.

1905. *Tatu novemcinctum texanum* Bailey, N. Amer. Fauna 25:52.

1920. *D*[*asypus*]. *novemcinctus mexicanus* Goldman, Smiths. Misc. Coll. 69:66.

1926. *Dasypus novemcinctus texanus* Strecker, Baylor Univ. Bull. 29(3):36.

1988. *Dasypus novemcinctus mexicanus* Jones et al., Occas. Pap. Mus. Texas Tech 119:7.

Type specimen.—Holotype, adult male, skin and skull, USNM 34352/46438, obtained by F. B. Armstrong on 10 June 1892, original number 4.

Type locality.—Brownsville, Cameron County, Texas.

Topotypes.—Cameron Co: Brownsville, 11 (USNM), 1 (MCZ). Last topotype collected 1902, no tissues available.

Near topotypes.—None.

Remarks.—The use of the name combination *D. n. mexicanus* follows Hollister (1925) and McBee and Baker (1982).

ORDER LAGOMORPHA
Family Leporidae

Lepus aquaticus attwateri J. A. Allen, 1895
[Attwater's Swamp Rabbit]
= ***Sylvilagus aquaticus***
[Swamp Rabbit]

1837. *Lepus aquaticus* Bachman, J. Acad. Nat. Sci. Phil. 7:319.

1895. *Lepus aquaticus attwateri* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 7:327.

1909. *Sylvilagus aquaticus* Nelson, N. Amer. Fauna 29:270.

1909. *Sylvilagus aquaticus littoralis* Nelson, N. Amer. Fauna 29:273.

1926. *Sylvilagus aquaticus aquaticus* Strecker, Baylor Univ. Bull. 29(3):34.

1974. *Sylvilagus aquaticus* Lowery, Mammals of Louisiana, Louisiana State Univ. Press, p. 166.

Type specimen.—Holotype, adult female, skin and skull, AMNH 7744/6131, obtained by H. P. Attwater on 8 May 1894.

Type locality.—Medina River, 18 miles south of San Antonio, Bexar County, Texas.

Topotypes.—Bexar Co: Watson's Ranch, 18 mi S of San Antonio, 1 (UCM); Watson's Ranch, 15 mi S San Antonio, 1 (AMNH). Last topotype collected 1897, no tissues available.

Near topotypes.—Bexar Co: San Antonio Medina River, 1 (AMNH); San Antonio, 14 (AMNH), 1 (FMNH). Last near topotype collected 1938, no tissues available.

Remarks.—At one time, two subspecies of *Sylvilagus aquaticus* were recognized, *S. a. littoralis* in the tidal marshes and coastal prairies of southeastern Texas, and *S. a. aquaticus* over the rest of the species range in eastern and central Texas (Hall 1981). However, Lowery (1974) and Schmidly (1983) presented evidence against the recognition of *littoralis* as a subspecies, and the recognition of *S. aquaticus* as a monotypic species has now been accepted.

Lepus arizonae minor Mearns, 1896
[Desert Cottontail]
= ***Sylvilagus audubonii minor***
[Desert Cottontail]

1896. *Lepus arizonae minor* Mearns, Proc. U.S. Nat. Mus. 18:557.

1907. *S*[*ylvilagus*]. *a*[*udubonii*]. *minor* Nelson, Proc. Biol. Soc. Wash. 20:83.

1926. *Sylvilagus audubonii minor* Strecker, Baylor Univ. Bull. 29(3):33.

Type specimen.—Holotype, adult male, skin and skull, USNM 20104/37064, obtained by E. A. Mearns and F. X. Holzner on 6 February 1892, original number 1418.

Type locality.—El Paso, El Paso County, Texas.

Topotypes.—El Paso Co: El Paso, 2 (USNM). Last topotype collected 1892, no tissues available.

Near topotypes.—El Paso Co: El Paso, 2 (TTU); 0.5 mi N El Paso, 5 mi E Carlsbad Hwy, 1 (UTEP); El Paso, 1500 ft W Country Club Rd, 1 (UTEP); near El Paso, 1 (USNM). Last near topotype collected 1969, no tissues available.

Lepus floridanus caniclunis Miller, 1899
[None designated]
= ***Sylvilagus floridanus chapmani***
[Eastern Cottontail]

1899. *Lepus floridanus chapmani* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 12:12.

1899. *Lepus floridanus caniclunis* Miller, Proc. Acad. Nat. Sci. Phil. 51:388.

1902. *Lepus simplicicanus* Miller, Proc. Biol. Soc. Wash. 15:81.

1904. *Sylvilagus* (*Sylvilagus*) *floridanus chapmani* Lyon, Smiths. Misc. Coll. 45:336.

Type specimen.—Holotype, adult male, skin and skull, USNM 63137, obtained by E. A. Mearns on 27 December 1892, original number 2172.

Type locality.—Fort Clark, Kinney County, Texas.

Topotypes.—Kinney Co: Fort Clark, 10 (USNM), 2 (AMNH). Last topotype collected 1898, no tissues available.

Near topotypes.—Kinney Co: 4 mi W Brackettville, 1 (KU); mouth of Sycamore Creek, 2 (USNM). Last near topotype collected 1956, no tissues available.

Lepus floridanus chapmani J. A. Allen, 1899
[Chapman Cottontail]
= ***Sylvilagus floridanus chapmani***
[Eastern Cottontail]

1899. *Lepus floridanus chapmani* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 12:12.

1899. *Lepus floridanus caniclunis* Miller, Proc. Nat. Acad. Sci. Phil. 51:388.

1902. *Lepus simplicicanus* Miller, Proc. Biol. Soc. Wash. 15:81.

1904. *Sylvilagus* (*Sylvilagus*) *floridanus chapmani* Lyon, Smiths. Misc. Coll. 45:336.

Type specimen.—Holotype, adult male, skin and skull, AMNH 3909/2983, obtained by F. M. Chapman on 10 April 1891, original number 336.

Type locality.—Corpus Christi, Nueces County, Texas.

Topotypes.—Nueces Co: Corpus Christi, 15 (USNM), 11 (AMNH), 5 (FMNH), 1 (MCZ). Last topotype collected 1902, no tissues available.

Near topotypes.—Nueces Co: Corpus Christi, 2 (UMMZ); Corpus Christi, Nueces Bay, 2 (USNM); Perry Place, Corpus Christi, 1 (TAMUCC); 2 mi W Corpus Christi, FMR 666, 1 (TAMUCC); 5 mi W Corpus Christi, 1 (TAMUCC). Last near topotype collected 1938, no tissues available.

Lepus merriami Mearns, 1896
[Black-naped Jackrabbit]
= ***Lepus californicus merriami***
[Black-tailed Jackrabbit]

1896. *Lepus merriami* Mearns, Preliminary diagnoses of new mammals from the Mexican border of the United States, p. 2, March 25 (preprint of Proc. U.S. Nat. Mus. 18:444).

1909. *Lepus californicus merriami* Nelson, N. Amer. Fauna 29:148.

Type specimen.—Holotype, skin and skull, USNM 83797, obtained by E. A. Mearns on 6 April 1893, original number 2317.

Type locality.—Fort Clark, Kinney County, Texas.

Topotypes.—Kinney Co: Ft. Clark, 7 (USNM), 2 (AMNH). Last topotype collected 1939, no tissues available.

Near topotypes.—Kinney Co: 2.6 mi S, 2 mi W Brackettville, 1 (KU); Strickland Spring, 1 (USNM). Last near topotype collected 1956, no tissues available.

Remarks.—The type specimen is listed in VertNet as *Lepus californicus melanotis*. Some authors (e.g., Hoffmann and Smith 2005) recognize *merriami* as a synonym of *melanotis*, and this probably explains the mistaken assignment of *melanotis* for the type specimen in VertNet. However, Mearns' description of *L. merriami* clearly refers to this specimen, and many citations still recognize *merriami* as a valid subspecies; thus, we have chosen to retain this subspecific designation for the holotype specimen.

Lepus pinetis robustus Bailey, 1905
[Davis Mountain Cottontail]
= ***Sylvilagus holzneri robustus***
[Holzner's Mountain Cottontail]

1905. *Lepus pinetis robustus* Bailey, N. Amer. Fauna 25:159.

1909. *Sylvilagus robustus* Nelson, N. Amer. Fauna 29:194.

1947. *Sylvilagus robustus* Taylor and Davis, Mammals of Texas, Texas Game, Fish, Oyster Comm. Bull. 27:68.

1951. *Sylvilagus floridanus robustus* Hall and Kelson, Univ. Kans. Publ., Mus. Nat. Hist. 5:56.

1955. *Sylvilagus floridanus nelsoni* R. H. Baker, Univ. Kans. Publ., Mus. Nat. Hist. 7:611.

1960. *Sylvilagus robustus* Davis, Mammals of Texas, Texas Parks Wildl. Dept. Bull. 41:215.

1977. *Sylvilagus floridanus robustus* Schmidly, Mammals of Trans-Pecos Texas, Texas A&M Press, p. 61.

1998. *Sylvilagus robustus* Ruedas, J. Mamm. 79:1373.

2021. *Sylvilagus holzneri robustus* Diersing and Wilson, Proc. Biol. Soc. Wash. 134:63.

Type specimen.—Holotype, adult female, skin and skull, USNM 18262/25165, obtained by V. Bailey on 6 January 1890, original number 873.

Type locality.—Finleys Ranch, 15 miles west of Fort Davis, altitude 6,000 feet, Davis Mountains near Sawtooth Mountain, Jeff Davis County, Texas (see Remarks below).

Topotypes.—Jeff Davis Co: Finleys Ranch, Fort Davis, 1 (USNM); Sawtooth area, Davis Mtns, 4 (ASNHC), 1 (SRSU). Last topotype collected 1975, no tissues available.

Near topotypes.—Jeff Davis Co: 1 mi N Mt. Livermore, 1 (UMMZ); Mt. Livermore Preserve, 12 (TTU); 1 mi N Fort Davis Limpia Canyon, 2 (TCWC); 1 mi NW Fort Davis, 3 (UMMZ); 2 mi NW Fort Davis, 1 (TTU, UMMZ); Spring Mtn, Fort Davis, 1 (UMMZ); Fort Davis, 2 mi NW Limpia Canyon, 1 (KU); Fort Davis, 2.2 mi NW Limpia Canyon, 1 (KU); 5 mi E Mt. Livermore, 1 (UMMZ); 3 mi NW Fort Davis, 1 (SRSU); 1 mi S Rock Pile Park, 2 (ASNHC); 2 mi SW Rockpile Park, 5 (ASNHC); 2 mi N Rockpile Park, 1 (ASNHC); 3 mi N Rockpile Park, 1 (ASNHC); 1 mi W Rockpile Park Loop 166, 1 (ASNHC); Davis Mtns State Park, 4 (TTU), 1 (ASNHC); Hwy 118 near entrance to Davis Mtns State Park/3 mi NW of Fort Davis, 2 (MSB); Davis Mtns State Park Primitive Area, 2 (TTU); Davis Mtns, 1 (MSB, TCWC); Hwy 118 N ~6 mi NW Fort Davis, 1 (MSB); Hwy 118 N, 6 mi NW Fort Davis, 2 (TTU); Hwy 118 1 mi SE by road entrance to Davis Mtns Preserve, 1 (TTU); Hwy 118 at trash barrel closest to Davis Mountains State Park, 1 (TTU). Last near topotype collected 2001, tissues available.

Remarks.—The taxonomic status of this rare, mountain rabbit has been bantered back and forth over the past 75 years. It was originally described as a subspecies, *Lepus pinetis robustus*, by Bailey (1905),

but then designated as a distinct species, *Sylvilagus robustus*, by Nelson (1909). It was later relegated to a subspecies of *S. floridanus* (Hall and Kelson 1951; Schmidly 1977), although some taxonomists (e.g., Taylor and Davis 1947; Davis 1960, 1966, 1974) continued to recognize it as a distinct species. Ruedas (1998) demonstrated trenchant morphological differences between *robustus* and other subspecies of *S. floridanus*, and subsequent molecular genetic studies (Lee et al. 2010; Nalls et al. 2012) seemed to confirm its status as a separate species. Diersing and Wilson (2021), in a morphological study of specimens from mountain populations in the southwestern US and northern Mexico, arranged *robustus* as a subspecies of *Sylvilagus holzneri*. Unfortunately, these authors did not have any genetic data to confirm this taxonomic interpretation. Therefore, while we tentatively accept Diersing and Wilson's recent conclusion, we suggest that additional investigation is necessary to fully resolve the status of this rabbit.

The type locality, as originally given by Bailey (1905:159), was "Davis Mountains, Texas, 6,000 feet altitude" and was later emended by Fisher and Ludwig (2015:29) on the basis of the collector's field notes and information from the specimen tag to include "Finleys Ranch." Bailey prepared a physiographic report (US Biological Survey Report 0014) of his work on the ranch in January 1890 during which time he collected the type specimen, describing the area as follows: "From January 1st to 15th, I was most of the time at and near Mr. Finley's ranch, 15 miles west of Fort Davis and at an altitude of 6,000 feet. Most of the specimens were taken here. The ranch is in the canyon of Limpia Creek, which is now dry, and about 3 miles from the base of Boulder Peak" [= Mount Livermore]. According to Bailey's report, part of the surrounding area was open and grassy, but most of it was covered with various oaks, piñons, alligator juniper, and ponderosa pine. This represents a good description of the habitat where the type specimen must have been collected. A photograph of the Finley Ranch headquarters taken in the 1890s is published in Schmidly et al. (2022:47). According to Jacobson and Nored (1993), the Finley Ranch was headquartered at the western foot of Sawtooth Mountain, which is a distance of 4.7 miles from Mt. Livermore. So, as his notes suggest, if Bailey was about 3 miles from the latter location, then he would have certainly been close to Sawtooth Mountain. Thus, we have slightly emended the description of the type locality on the basis of this information.

Sylvilagus holzneri robustus is not listed as endangered or threatened by TPWD or USFWS, but NatureServe considers it to be critically imperiled.

Lepus simplicicanus Miller, 1902
[None designated]
= ***Sylvilagus floridanus chapmani***
[Eastern Cottontail]

1899. *Lepus floridanus chapmani* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 12:12.

1902. *Lepus simplicicanus* Miller, Proc. Biol. Soc. Wash. 15:81.

1904. *Sylvilagus* (*Sylvilagus*) *floridanus chapmani* Lyon, Smiths. Misc. Coll. 45:336.

Type specimen.—Holotype, adult female, skin and skull, USNM 21805/36508, obtained by F. B. Armstrong on 19 October 1891, purchased from C. K. Worthen, original number 1402.

Type locality.—Brownsville, Cameron County, Texas.

Topotypes.—Cameron Co: Brownsville, 5 (USNM), 2 (KU). Last topotype collected 1914, no tissues available.

Near topotypes.—Cameron Co: Brownsville, 2 (AMNH, USNM), 1 (UCLA); near Brownsville, 12 (UMMZ). Last near topotype collected 1939, no tissues available.

Lepus texianus Waterhouse, 1848
[Texas Jackrabbit]
= ***Lepus californicus texianus***
[Black-tailed Jackrabbit]

1848. *Lepus Texianus* Waterhouse, A natural history of the Mammalia 2:136.

1896. *Lepus texianus griseus* Mearns, Proc. U.S. Nat. Mus. 18:562.

1903. *Lepus* (*Macrotolagus*) *texianus micropus* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 19:605.

1909. *Lepus californicus texianus* Nelson, N. Amer. Fauna 29:142.

Type specimen.—There is no type specimen; however, Audubon and Bachman (1854) provided a description and artwork based on a living animal. Therefore, the artwork serves as an iconotype.

Type locality.—Type locality unknown, but probably in western Texas (Hall 1981)—but see Remarks section below.

Topotypes.—None. Given that "probably western Texas" is listed as the only locality, it is too vague to determine topotypes.

Near topotypes.—None. Given that "probably western Texas" is listed as the only locality, it is too vague to determine near topotypes.

Remarks.—The "type" appears to be the artwork in Audubon and Bachman (1854), and therefore the "type specimen" is an iconotype. Waterhouse (1848) indicated that the species inhabits Texas and provided no specific locality. However, his account had question marks after *Lepus Texianus* and Texian Hare. Waterhouse (1848) states: "A well-marked species of Hare, in the collection of the Zoological Society, of which the history is not known, is recognized by Mr. J. W. Audubon as a species with which he is well acquainted, and which that gentleman informs me will shortly be published in the great work on the North American Quadrupeds, which I have already frequently quoted. According to Mr. Audubon, to whom we are indebted for the splendid plates which illustrate the work alluded to, the animal inhabits Texas, and has been named *Lepus Texianus*." Audubon and Bachman (1854) reported: "This Hare received from the Texans, and from our troops in the Mexican war, the name of Jackass rabbit, in common with *Lepus callotis*, the Blacktailed Hare described in our second volume, p. 95." They describe the distribution of *Lepus texianus* as: "This Hare appears to inhabit the southern parts of New Mexico, the western parts of Texas, and the elevated lands westward of the tierras caliente (slow lands of the coast) of Mexico, and is found within a few miles of San Petruchio, forty miles from the coast. How near it approaches the seacoast we could not learn. It was not observed west of Ures in Sonora by J. W. Audubon and seems to be replaced by the Californian Hare on the Pacific coast. Its southern limit is unknown to us, but it probably extends some distance beyond the city of Mexico." Again, no mention of a type locality or a holotype or topotype specimen other than "in the collection of the Zoological Society". The artwork by Audubon was "drawn from nature."

Lepus texianus griseus Mearns, 1896
[Texas Jackrabbit]
= ***Lepus californicus texianus***
[Black-tailed Jackrabbit]

1848. *Lepus texianus* Waterhouse, A natural history of the Mammalia, 2:136.

1896. *Lepus texianus griseus* Mearns, Proc. U.S. Nat. Mus. 18:562.

1903. *Lepus* (*Macrotolagus*) *texianus micropus* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 19:605.

1909. *Lepus californicus texianus* Nelson, N. Amer. Fauna 29:142.

Type specimen.—Holotype, adult female skin and skull, USNM 21068/36108, obtained by E. A. Mearns on 22 June 1893, original number 2353.

Type locality.—Fort Hancock, Hudspeth County, Texas.

Topotypes.—None.

Near topotypes.—Hudspeth Co: 9 mi N Fort Hancock, 1 (TTU); 1 mi S Diablo #1, 11 mi NNE of McNary, 1 (UTEP); 1 mi S Diablo Lake, N of McNary, 1 (UTEP). Last near topotype collected 1990, no tissues available.

Remarks.—Fisher and Ludwig (2014) include *Lepus texianus* Waterhouse as part of *L. t. griseus*.

Sylvilagus floridanus llanensis Blair, 1938
[Staked Plains Cottontail]
[Eastern Cottontail]

1938. *Sylvilagus floridanus llanensis* Blair, Occas. Pap. Mus. Zool. Univ. Mich. 380:1.

Type specimen.—Holotype, adult male, skin and skull, UMMZ 66778, obtained W. F. Blair on 18 July 1932, original number 285.

Type locality.—6 miles south of Quitaque, Old "F" Ranch Headquarters, Briscoe County, Texas.

Topotypes.—Briscoe Co: 6 mi S Quitaque, Old F Ranch Headquarters, 4 (UMMZ). Last topotype collected 1932, no tissue available.

Near topotypes.—Briscoe Co: Quitaque, 4 (UMMZ). Last near topotype collected 1932, no tissues available.

ORDER EULIPOTYPHLA
Family Soricidae

Blarina brevicauda plumbea Davis, 1941
[Plumbeous Short-tailed Shrew]
= ***Blarina hylophaga plumbea***
[Elliott's Short-tailed Shrew]

1899. *Blarina brevicauda hylophaga* Elliot, Field Columb. Mus. Pub., Zool. Ser. 1:287.

1905. *Blarina brevicauda hylophaga* Elliot, Field Columb. Mus. Pub., Zool. Ser. 6:461.

1941. *Blarina brevicauda plumbea* Davis, J. Mamm. 22:317.

1981. *Blarina hylophaga* George et al., Ann. Carn. Mus. 50:504.

1981. *Blarina hylophaga plumbea* George et al., Ann. Carn. Mus. 50:510.

Type specimen.—Holotype, adult female, skin and skull, TCWC 1541, obtained 31 January 1941 by J. O. Stevenson, original number X26 (Schmidly and Jones 1984).

Type locality.—0.5 mile west of Marano Mill, Aransas National Wildlife Refuge, Aransas County, Texas.

Topotypes.—Aransas Co: Aransas Refuge, 1 (TCWC, USNM); Aransas Refuge near Dagger Point, 1 (TCWC); Aransas Refuge, 22 mi S Austwell, 7 (TCWC); Aransas Refuge Walker Mill Road, 4 (TTU); near HQ, Aransas National Wildlife Refuge, 1 (TTU). Last topotype collected 2003, no tissues available.

Near topotypes.—None. The taxon is known only from Aransas National Wildlife Refuge.

Remarks.—George et al. (1981) used karyotype evidence to demonstrate that *B. hylophaga* was a distinct species from *B. brevicauda* and assigned the race *plumbea* to the former and not the latter species. Reilly et al. (2005) confirmed this taxonomic assignment.

Sorex* (*Notiosorex*) *crawfordi Coues, 1877
[Crawford Shrew; Eared Shrew]
= ***Notiosorex crawfordi***
[Crawford's Desert Shrew]

1877. *Sorex* (*Notiosorex*) *crawfordi* Coues, Bull. U.S. Geol. and Geog. Surv. Terr. 3:651.

1890. *Notiosorex crawfordi crawfordi* Dobson, Mon. Insectivora, Part III, Pl. XXIII.

1895. *Notiosorex crawfordi* Merriam, N. Amer. Fauna 10:32.

1926. *Notiosorex crawfordi crawfordi* Strecker, Baylor Univ. Bull. 29(3):8.

2000. *Notiosorex crawfordi* Carraway and Timm, Proc. Biol. Soc. Wash. 113:311.

Type specimen.—Holotype, in alcohol, age and sex not given, skull removed, USNM 2653/4437, obtained by S. W. Crawford on unknown date. Alcohol specimen cataloged on 28 April 1857, skull September 1861, no original number.

Type locality.—Old Fort Bliss, about 2 miles above El Paso, El Paso County, Texas.

Topotypes.—None.

Near topotypes.—None.

Remarks.—The description of this taxon was first published as *Sorex* (*Notiosorex*) *crawfordi* in a manuscript authored by Coues (1877). In his paper, Coues recognized that the species originally was described and named in an unpublished manuscript generated by Baird in 1861. Consequently, Coues listed Baird as the authority of the taxon. In the same publication, Coues described and named a related new species from Mexico, *Sorex* (*Notiosorex*) *evotis*. Subsequently, Dobson (1890) elevated *Notiosorex* to full generic rank and recognized *evotis* as a subspecies of *Notiosorex crawfordi*. Later, because of the absence of sufficient *evotis* specimens for comparison, Merriam (1895a) considered it best to retain *crawfordi* and *evotis* as subspecies. Interestingly, Merriam (1895a) used the trinomial for *Notiosorex crawfordi evotis*, but referred to the subspecies *crawfordi* by its binomial, *Notiosorex crawfordi* (see synonymy above). In this publication, Merriam continued to recognize Baird as the authority of the species. Throughout the 20th century, *crawfordi* and *evotis* continued to be recognized as subspecies of *Notiosorex crawfordi*, but during most of this time Coues was regarded as the authority of the species by most major publications that addressed the topic (e.g., Miller and Kellog 1955; Hall and Kelson 1959; Armstrong and Jones 1972; Hall 1981; Hutterer 2005). Finally, Carraway and Timm (2000) re-elevated *evotis* and *crawfordi* to specific status, thus resulting in the current recognition of *Notiosorex crawfordi* as monotypic.

Family Talpidae

Scalops argentatus texanus J. A. Allen, 1891
[Texas Mole]
= ***Scalopus aquaticus texanus***
[Eastern Mole]

1891. *Scalops argentatus texanus* J. A. Allen, Bull. Amer. Mus. Mus. Nat. Hist. 3:221.

1893. *Scalops texanus* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 5:200.

1896. *Scalops aquaticus texanus* True, Proc. U.S. Nat. Mus. 19:21.

1901. [*Scalops*] [*aquaticus*] *texensis* (sic) Elliot, Field Columb. Mus. 45:390.

1905. *Scalopus aquaticus texensis* (sic) Elliot, Field Columb. Mus. 105:471.

1926. *Scalopus aquaticus texanus* Strecker, Baylor Univ. Bull. 29(3):8.

Type specimen.—Holotype, adult, sex unknown, skin and skull, AMNH 3488/2740, obtained by W. Lloyd in September 1887.

Type locality.—No specific locality, Presidio County, Texas. Not Rockport, Aransas County, as given in most textbooks published up to 1950.

Topotypes.—None.

Near topotypes.—None.

Remarks.—True (1896) believed that the holotype of *S. a. texanus* was collected in Aransas County rather than in Presidio County. The authenticity of the original locality record was discussed by Baker (1951), and at present, there is no evidence that the type locality, Presidio County, as originally recorded is incorrect. Unfortunately, the holotype is an imperfect specimen and data are missing from the tag, as well as most cranial measurements. Subsequently, Yates and Schmidly (1977) reaffirmed Baker's interpretation of the taxonomic status and the type locality. This subspecies is now considered extinct in Texas (Schmidly et al. 2022).

Scalopus aquaticus alleni Baker, 1951
[None designated]
[Eastern Mole]

1893. *Scalops texanus* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 5:200.

1896. *Scalops aquaticus texanus* True, Proc. U.S. Nat., Mus. 5:200.

1915. *Scalopus aquaticus texanus* Jackson, Proc. Biol. Soc. Wash. 38:50.

1951. *Scalopus aquaticus alleni* R. H. Baker, Univ. Kan. Pub. Mus. Nat. Hist. 5:22.

Type specimen.—Holotype, adult male, skin and skull, AMNH 7189/5788, obtained by H. P. Attwater on 29 January 1893, original number 51.

Type locality.—Rockport, Aransas County, Texas.

Topotypes.—Aransas Co: Rockport, 23 (AMNH), 7 (MSB), 4 (USNM), 3 (TCWC, UCM), 2 (MCZ), 1 (FMNH). Last topotype collected 1986, tissues available.

Near topotypes.—Aransas Co: 1.5 mi N Rockport, 1 (MSB); Fulton Beach, 1 (TCWC). Last near topotype collected 1969, no tissues available.

Remarks.—Yates and Schmidly (1977) reaffirmed the interpretation of Baker (1951) regarding the taxonomic status and the type locality of this taxon. True's (1896) erroneous interpretation of the type locality of *S. a. texanus* (see account above) as Aransas County instead of Presidio County caused much confusion in the synonymy of this taxon.

Scalopus aquaticus cryptus Davis, 1942
[Central Texas Mole]
[Eastern Mole]

1942. *Scalopus aquaticus nanus* Davis, Amer. Mid. Nat. 27:383.

1942. *Scalopus aquaticus cryptus* Davis, Amer. Mid. Nat. 27:384.

Type specimen.—Holotype, adult male, skin and skull, TCWC 1454, obtained by V. H. Williams on 23 November 1939, original number 8 (Schmidly and Jones 1984).

Type locality.—The exact locality on the specimen tag is given as "Empty lot N of Sergeant Jeegers, College Sta., Brazos County" (Schmidly and Jones 1984).

Topotypes.—Brazos Co: College Station, 8 (TCWC), 1 (KU, UMMZ). Last topotype collected 1945, no tissues available.

Near topotypes.—Brazos Co: College Station, 5 (TCWC); 0.25 mi N College Station, 1 (TCWC); 0.5 mi S A&M Consolidated High School College Station, 1 (TCWC); 1 mi W College Station, 1 (KU, TCWC); 1.5 mi W College Station, 1 (TCWC); 2 mi W College Station, 2 (TCWC); 3 mi SW College Station, 1 (TCWC); Bryan, 4 (TCWC); 2.5 mi S Bryan, 1 (MVZ); 1 mi S Bryan, 1 (TCWC); Bryan, Mary Lake Dr, 2 (TCWC). Last near topotype collected 1986, no tissues available.

Remarks.—Yates and Schmidly (1977) confirmed the taxonomic status of this subspecies.

Scalopus aquaticus nanus Davis, 1942
[Dwarf Mole]
= ***Scalopus aquaticus cryptus***
[Eastern Mole]

1942. *Scalopus aquaticus nanus* Davis, Amer. Mid. Nat. 27:383.

1942. *Scalopus aquaticus cryptus* Davis, Amer. Mid. Nat. 27:384.

1977. *Scalopus aquaticus cryptus* Yates and Schmidly, Occas. Pap. Mus. Texas Tech Univ. 45:30.

Type specimen.—Holotype, adult female, skin and skull, TCWC 1785, obtained by W. C. Parker on 28 June 1938, original number 3135 of W. B. Davis (Schmidly and Jones 1984).

Type locality.—13 miles east of Centerville, Leon County, Texas.

Topotypes.—None.

Near topotypes.—Leon Co: no specific locality, 1 (TTU). Near topotype collected 1999, tissues available.

Remarks.—Yates and Schmidly (1977) confirmed the status of *S. a cryptus* and placed *S. a. nanus* in synonymy of *S. a. cryptus*.

ORDER CHIROPTERA
Family Molossidae

Tadarida texana Stager, 1942
[Free-tailed Bat]
= ***Tadarida brasiliensis mexicana***
[Brazilian Free-tailed Bat]

1860. *Molossus mexicanus* Saussure, Revue et Mag. Zool., Paris, ser. 2, 12:283.

1894. *Nyctinomus brasiliensis californicus* H. Allen, Bull. U.S. Nat. Mus. 43:166.

1926. *Tadarida mexicana* Strecker, Baylor Univ. Bull. 29(3):11.

1942. *Tadarida texana* Stager, Bull. South. Cal. Acad. Sci. 41(pt.1):49.

1947. *Tadarida mexicana* Taylor and Davis, Mammals of Texas, Texas Game, Fish, Oyster Comm. Bull. 27:20.

1955. *Tadarida brasiliensis mexicana* Schwartz, J. Mamm. 36:108.

1960. *Tadarida mexicana* Davis, Mammals of Texas, Texas Parks Wildl. Dept. Bull. 41, p. 64.

1988. *Tadarida brasiliensis mexicana* Jones et al., Occas. Pap. Mus. Texas Tech Univ. 119:7.

Type specimen.—Holotype, adult female, skin and skull, LACM 6064, obtained by K. E. Stager on 5 August 1939, original number 759.

Type locality.—Ney Cave, 20 miles north of Hondo, Medina County, Texas (fide Blair 1952).

Topotypes.—Medina Co: Ney Cave, 20 (LACM), 22 (TTU), 2 (USNM); Ney Cave, 20 mi N Hondo, 23 (LACM); Ney Cave, 21 mi W of Bandera, 1 (SBMNH). Last topotype collected 1993, tissues available.

Near topotypes.—Medina Co: 12.4 mi S Bandera on Hwy 173, 1 (TCWC); specific locality unknown, 4 (TTU). Last near topotype collected 2012, tissues available.

Family Mormoopidae

Mormoops megalophylla senicula Rehn, 1902
[Rehn Bat]
= ***Mormoops megalophylla megalophylla***
[Ghost-faced Bat]

1864. *Mormops megalophylla* Peters, Monatsb. Preuss. Akad. Wiss., Berlin, p. 381.

1902. *Mormoops megalophylla senicula* Rehn, Proc. Acad. Nat. Sci., Phil. 54:169.

1962. *Mormoops megalophylla rufescens* Davis and Carter, Southwest. Nat. 7:65.

1972. *Mormoops megalophylla megalophylla* Smith, Misc. Publ., Univ. Kansas Mus. Nat. Hist. 56:115.

Type specimen.—Holotype, adult female, skin and skull, USNM 84801, obtained by E. A. Mearns on 3 December 1897, original number 4273.

Type locality.—Fort Clark, Kinney County, Texas.

Topotypes.—None.

Near topotypes.—None.

Family Vespertilionidae

Myotis magnamolaris Choate and Hall, 1967
[None designated]
= ***Myotis velifer magnamolaris***
[Cave Myotis]

1967. *Myotis magnamolaris* Choate and Hall, The Amer. Mid. Nat. 78:531.

1970. *Myotis velifer grandis* Hayward, West. New Mex. Univ. Res. Sci. 1:8.

1984. *Myotis velifer magnamolaris* Dalquest and Stangl, J. Mamm. 65:486.

Type specimen.—Holotype, left mandible and dentition, lacking incisors, Shuler Museum of Paleontology, SMU 61772. Obtained from cave deposits

by B. H. Slaughter (1966) and recorded as "*Myotis* sp. Extinct mouse-eared bat."

Type locality.—Laubach Cave (now Inner Space Caverns), Georgetown, Travis County, Texas. Inner Space Caverns is located 25.8 miles north of Austin on Interstate 35 within the city limits of Georgetown.

Topotypes.—Travis Co: 79 mandibles and 6 maxilli are considered topotypes of the fossil originally described (see Dorsey 1977), but apparently there are no topotypes of modern specimens from the type locality. No topotypes collected, no tissues available.

Near topotypes.—VertNet does list modern specimens of this taxon from several other localities in Travis County but all of these are near Austin, which is about 26 miles from Inner Space Cavern, or specific locality is unknown. No near topotypes collected, no tissues available.

Remarks.—*Myotis magnamolaris* was described from late Pleistocene deposits, primarily on the fact that it was larger than any other American species of the genus *Myotis* (Choate and Hall 1967). These authors noted that the type locality of *magnamolaris* was within the present range of an extant species, *M. velifer incautus*. Dorsey (1977) studied topotype material from Inner Space Caverns, comparing the fossil specimens with modern specimens of *M. velifer*, and concluded that *magnamolaris* was conspecific with *velifer*. Previously, Hayward (1970) had shown that specimens of *M. velifer* from the northern part of the range of the species, in Kansas, Oklahoma, and the Texas Panhandle, differed from other races of *velifer*, and he named the northern subspecies *M. v. grandis* (type locality Sun City, Kansas). Based on a comparison of modern specimens from across Texas (including specimens of *M. v. incautus* from the type locality at San Antonio), Dalquest and Stangl (1984) concluded that *grandis* was "a valid if not strongly marked subspecies." However, they concluded that the proper name for the taxon was *Myotis velifer magnamolaris* because "it had three years naming priority" and that *M. v. grandis* was a synonym. Modern taxonomic assignments of cave bats place all specimens from Travis County within the range of the subspecies *incautus* (see Schmidly 1991, Ammerman et al. 2012, and Schmidly and Bradley 2016), thus creating a situation whereby the current distribution of *magnamolaris* does not include its type locality. Further research will be needed to resolve this conundrum, but Dorsey (1977) has suggested the fossils could represent an extinct geographic race, or a temporal race ancestral to one or more modern subspecies.

Vespertilio incautus J. A. Allen, 1896
[House Bat]
= ***Myotis velifer incautus***
[Cave Myotis]

1896. *Vespertilio incautus* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 8:239.

1926. *Myotis incautus* Strecker, Baylor Univ. Bull. 29(3):9.

1928. *Myotis velifer incautus* Miller and G. M. Allen, Bull. U.S. Nat. Mus. 144:92.

Type specimen.—Holotype, adult male, skin and skull, AMNH 12214/10566, obtained by H. P. Attwater on 10 October 1896, original number 221.

Type locality.—San Antonio, Bexar County, Texas.

Topotypes.—Bexar Co: San Antonio, 4 (AMNH), 1 (USNM). Last topotype collected 1896, no tissues available.

Near topotypes.—Bexar Co: San Antonio, 5 (AMNH); NW San Antonio, 1 (UCM); Somerset, 1 (KU). Kendall Co: 4.8 mi SW Boerne, 1 (MVZ, TTU); 4.6 mi SW Boerne, 1 (TCWC). Comal Co: Bracken Cave, 12 (LSUMZ), 6 (TCWC), 2 (TTRS, USNM), 1 (AMNH, KU); Cibolo Cave, near Bracken, 5 (LACM). Last near topotype collected 1970, no tissues available.

Remarks.—According to Goodwin (1953), the skull of the type specimen of this taxon could not be found or otherwise accounted for in the American Museum of Natural History collection.

V*[*espertilio*]. *pallidus Le Conte, 1856
[Pale Bat]
= ***Antrozous pallidus pallidus***
[Pallid Bat]

1856. *V*[*espertilio*]. *pallidus* Le Conte, Proc. Acad. Nat. Sci. Phil. 7:437.

1864. *Antrozous pallidus* H. Allen, Smiths. Misc. Coll. 7 (Publ. 165):68.

1884. *Anthrozous* [sic] *pallidus* True, Proc. U.S. Nat. Mus. 7:602.

1982. *Antrozous pallidus pallidus* Martin and Schmidly, Spec. Publ. Mus. Texas Tech Univ. 18:28.

Type specimen.—Holotype, skin and skull, USNM 152 and 5467, obtained by J. H. Clark in 1851 during the United States and Mexican Boundary Survey.

Type locality.—El Paso, El Paso County, Texas.

Topotypes.—None.

Near topotypes.—El Paso Co: El Paso, 6 (UTEP), 2 (FMNH); El Paso Houses/Residential, 6 (UTEP); University of Texas El Paso Campus, 1 (UTEP); Canyon Hills School, 1 (UTEP); Ft. Bliss, 1 (KU, MSB); head of McKelligon Canyon, 4700 ft, 3 (KU); 1.5 mi N Venton Bridge on Dike Rd on W side of Rio Grande, 2 (UTEP); Tin Mines, 1 (UTEP); Fabeus, 1 (UTEP); Texas A&M Research and Extension Center, 1 (UTEP); 2 mi N and 5.5 mi E of North Mt Franklin, 1 (UTEP); E side North Mt Franklin, 1 (UTEP); 2.25 mi NW of Junction of FM 1109 and Island Guadalupe Rd on Island, 1 (UTEP); Canutillo Elementary School, 1 (UTEP); Helms West Well Ranchhouse, 2 (UTEP); Helms West Well, 1 (UTEP); empty house on island main lateral, 1 (UTEP); San Elizario, 1 (USNM); no specific locality within county, 8 (ASNHC). Last near topotype collected 2011, tissues available.

Remarks.—The type specimen skin was entered in the USNM catalog twice (for an explanation, see Poole and Schantz 1942). The skull that had been reported lost by Poole and Schantz (1942) was found in the collection in March 1980.

ORDER CARNIVORA
Family Canidae

Canis lupus monstrabilis Goldman, 1937
[Texas Gray Wolf]
= ***Canis lupus nubilus***
[Gray Wolf]

1823. *Canis nubilus* Say, in Long, Account of an expedition from Pittsburgh to the Rocky Mountains performed in the years 1819, 1820, I:169.

1829. *Canis lupus* var. *nubilus* Richardson, Fauna Boreali-Americana, p. 69.

1841. *Canis variabilis* Wied-Neuwied, Reise in das innere Nord-Amerika in…. 1832–34, 2:95.

1905. *Canis griseus* Bailey, N. Amer. Fauna 25:171.

1926. *Canis nubilus* Strecker, Baylor Univ. Bull. 29(3):16.

1937. *Canis lupus monstrabilis* Goldman, J. Mamm. 18:42.

1983. *Canis lupus nubilus* Bogan and Mehlop, Occas. Pap. Mus. Southwest. Biol. 1:17.

Type specimen.—Holotype, adult male, skin and skull, USNM 209497, obtained by W. F. DeLong on 3 September 1915, original number XC:1.

Type locality.—10 miles south of Rankin, Upton County, Texas.

Topotypes.—Upton Co: 10 mi S Rankin, 2 (USNM). Last topotype collected 1915, no tissues available.

Near topotypes.—Upton Co: Rankin, 8 (USNM). Last near topotype collected 1916, no tissues available.

Remarks.—*C. l. nubilus* is now extirpated in Texas and is considered endangered by the USFWS (Schmidly et al. 2022).

Canis lupus* var. *rufus Audubon and Bachman, 1851
[Texan Red Wolf]
= ***Canis rufus rufus***
[Red Wolf]

1851. *Canis lupus* var. *rufus* Audubon and Bachman, The viviparous quadrupeds of North America, 2:240.

1905. *Canis rufus* Bailey, N. Amer. Fauna 25:174.

1937. *Canis rufus rufus* Goldman, J. Mamm. 18:45.

1942. *Canis niger rufus* Harper, J. Mamm. 23:339.

1974. *Canis rufus* Davis, Mammals of Texas, Texas Parks Wildl. Dept. Bull. 41, p. 126.

1988. *Canis rufus rufus* Jones et al., Occas. Pap. Mus. Texas Tech Univ. 119:18.

Type specimen.—There is no type specimen; however, Audubon and Bachman (1851) provided a description and artwork based on a living animal. Therefore, the artwork serves as an iconotype.

Type locality.—Designated by Goldman (1937) as 15 miles west of Austin, Travis County, Texas.

Topotypes.—None. The type locality is right on the western edge of Travis County on the Travis/Hays County border. Goldman (1937) also noted that *C. l. rufus* is synonymous with *C. frustor*, whose type locality is in Oklahoma, but did not list a type specimen for either.

Near topotypes.—None.

Remarks.—Goldman (1937) based his designation of the type locality on a comment by Audubon and Bachman (1851) "of its [red wolf] occurrence 15 miles west of Austin, Texas, and for greater precision that place is fixed upon as the type locality." Wozencraft (2005) considered *Canis rufus* a hybrid between *C. lupus* and *C. latrans*. Although hybrids normally are not recognized as subspecies, they chose as a compromise to retain *rufus* because of its uncertain status. Further, they concluded that the taxonomy of *rufus* was controversial and by no means well established. The red wolf is now thought to be extirpated in Texas and over most of its range in the US (Schmidly et al. 2022). However, a recent article (Ladine 2022) revealed canids documented by camera traps near Marshall, Harrison County, Texas, that appeared more red wolf than coyote-like, leading to speculation that remnant red wolves might still remain in Texas. Genomic analysis would be needed to confirm this observation. Other studies (Heppenheimer et al 2018; Vanholdt et al. 2022) have revealed hybrid canids with red wolf "ghost" alleles.

Canis nebrascensis texensis Bailey, 1905
[Texas Coyote]
= ***Canis latrans texensis***
[Coyote]

1897. *Canis frustror* Merriam, Proc. Biol. Soc. Washington 11:26.

1905. *Canis nebrascensis texensis* Bailey, N. Amer. Fauna 25:175.

1932. *Canis latrans texensis* Nelson, Proc. Biol. Soc. Washington 45:224.

Type specimen.—Holotype, young adult male, skin and skull, USNM 116277, obtained by J. M Priour on 14 December 1901, original number 3478-X.

Type locality.—45 miles southwest of Corpus Christi at Santa Gertrudis, Kleberg County, Texas.

Topotypes.—Kleberg Co: 45 mi SW Corpus Christi, 3 (USNM). Last topotype collected 1901, no tissues available.

Near topotypes.—Kleberg Co: 35 mi S Corpus Christi, 1 (USNM); 30 mi S Corpus Christi, 1 (USNM); unspecified locality, 1 (USNM), 3 (FMNH); Padre Island National Seashore, 1 (TCWC). Last near topotype collected 1972, no tissues available.

Remarks.—Poole and Schantz (1942) listed the type locality in Nueces County, but we have followed Fisher and Ludwig (2016) in using Kleberg County. The assignment of the type specimen to *C. l. texensis* was confirmed by Hall and Kelson (1959).

Urocyon cinereoargenteus texensis Mearns, 1897
[Gray Fox]
= ***Urocyon cinereoargenteus scottii***
[Common Gray Fox]

1891. *Urocyon virginianus scottii* Mearns, Bull. Amer. Mus. Nat. Hist. 3:236.

1895. *Urocyon cinereo-argenteus scottii* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 7:253.

1897. *Urocyon cinereoargenteus texensis* Mearns, Preliminary diagnoses of new mammals of the genera *Lynx*, *Urocyon*, *Spilogale*, and *Mephitis*, from the Mexican boundary line, page 2, January 12 (preprint of Proc. U.S. Nat. Mus. 20:459).

1904. *Urocyon cinereo-argenteus inyoensis* Elliot, Field Columb. Mus. Publ. 90, Zool. Ser. 3:268.

1926. *Urocyon cinereoargenteus texensis* Strecker, Baylor Univ. Bull. 29(3):15**.**

1938. *Urocyon cinereoargenteus scottii* Goldman, J. Wash. Acad. Sci. 15:495.

Type specimen.—Holotype, adult skin and skull, sex not given, USNM 130/1116, obtained by A. Schott in January 1851 during the Mexican Boundary Survey, no original number.

Type locality.—San Pedro, near Eagle Pass, Maverick County, Texas.

Topotypes.—None.

Near topotypes.—Maverick Co: Eagle Pass, 1 (USNM). Date of collection not available in VertNet, but collector was A. Schott.

Remarks.—Goldman (1938b) explained the rationale for *U. c. texensis* being arranged as a synonym of *scottii*.

Family Felidae

Felis concolor youngi Goldman, 1936
[Mexican Cougar; Mountain Lion; Panther]
= ***Puma concolor couguar***
[Mountain Lion or Puma]

1792. *Felis couguar* Kerr, The animal kingdom or zoological system of the celebrated Sir Charles Linnaeus; Class 1 Mammalia…, p. 151.

1905. *Felis hippolestes aztecus* Bailey, N. Amer. Fauna 25:162.

1929. *Felis concolor couguar* Nelson and Goldman, J. Mamm. 10:347.

1936. *Felis concolor youngi* Goldman, Proc. Biol. Soc. Wash. 49:137.

1938. *Felis concolor stanleyana* Goldman, Proc. Biol. Soc. Wash. 51:63.

2003. *Puma concolor couguar* Pierce and Bleich, Wild Mammals of North America, p. 744.

Type specimen.—Holotype, young adult male, skin and skull, USNM 251419, obtained by I. Wood on 6 October 1934, original number 248.

Type locality.—Bruni Ranch, near Bruni, southeast Webb County, Texas.

Topotypes.—None.

Near topotypes.—Webb Co: 20 mi E Laredo, 1 (USNM); 30 mi E Laredo, 1 (USNM); Galvin Ranch, 1 (USNM); Soledad Ranch, 2 (USNM). Last near topotype collected 1938, no tissues available.

Remarks.—Goldman (1938a) renamed *F. c. youngi* to *F. c. stanleyana*, because, according to Fisher and Ludwig (2016), the former name was a primary junior homonym of *Felis youngi* Pei 1934. Culver et al. (2000), based on genetic analysis, concluded that mountains lions north of Nicaragua today represent a

single subspecies, and the name combination *Puma concolor couguar* subsequently was adopted by Pierce and Bleich (2003), Wozencraft (2005), and Kitchener et al. (2017). However, Holbrook et al. (2012) noted distinct genetic differences between mountain lion populations in southern and western Texas and recommended that these two populations be treated as different management units.

Felis limitis Mearns, 1901
[Ocelot; Leopard Cat]
= ***Leopardus pardalis albescens***
[Ocelot]

1855. *Felis albescens* Pucheran, *in* I. Geoffroy Saint-Hillaire, Mammiferes, *in* Petit-Thoaurs, Voyage autour du monde sur la frégate la Venus …, Zoologie, p. 149.

1901. *Felis limitis* Mearns, Proc. Biol. Soc. Wash. 14:146.

1906. *Felis pardalis albescens* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 22:219.

1911. *Felis ludoviciana* Brass, Aus dem Reiche der Pelze, p. 411.

1919. *Leopardus pardalis griffithii* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 41:345.

1926. *Felis pardalis griffithi* Strecker, Baylor Univ. Bull. 29(3):16.

1941. *Leopardus pardalis albescens* Pocock, Field Mus. Nat. Hist. Publ. 511, Zool. Ser. 27:350.

1947. *Felis pardalis* Taylor and Davis, Mammals of Texas, Texas Game, Fish, Oyster Comm. Bull. 27:35.

1988. *Felis pardalis albescens* Jones et al., Occas. Pap. Mus. Texas Tech Univ. 119:21.

2004. *Leopardus pardalis albescens* Schmidly, Mammals of Texas, Univ. Texas Press, p. 200.

Type specimen.—Holotype, adult male, skin and skull, USNM 32679/44602, obtained by F. B. Armstrong on 4 March 1892, original number 102.

Type locality.—Brownsville, Cameron County, Texas.

Topotypes.—Cameron Co: Brownsville, 14 (KU), 5 (USNM). Last topotype collected 1894, no tissues available.

Near topotypes.—Cameron Co: ~0.28 mi N Palo Alto Battlefield entrance on FM 1847, 1 (TCWC); Laguna Atascosa National Wildlife Refuge (LANWR) Unit 6 at Scum Pond Rd S of Island Fields Intersection, 1 (TCWC); LANWR, W side of Buena Vista Rd, 1 (TCWC); LANWR Unit 6 Nilgai Ditch, 1 (TCWC); LANWR, Unit 7 near intersection of Bayside Entrance Rd and Loop, 1 (TCWC); LANWR, Unit 7 Pelican Lake Rd between service rd and Resaca, 1 (TCWC); SH 100 just E of San Roman Rd, 1 (TCWC); SH 100 ~2.5 mi W of Laguna Vista, 1 (TCWC); SH 100 W of 4th Street in Port Isabel, 1 (TCWC); SH 100 ~3.4–4 mi E Los Fresnos, 1 (TCWC); on Bayside Dr at LANWR, ~0.25 mi from N entrance, 1 (TCWC); on FM 2925 btwn Arroyo City and Rio Hondo, 1 (TCWC); Combes, 1 (LACM). Last near topotype collected 2017, tissues available.

Remarks.—The ocelot is considered one of the most endangered species in Texas by both TPWD and USFWS (Schmidly et al. 2022). Genetic comparisons of ocelot from the two remaining populations in Texas and those from central Tamaulipas, Mexico, confirm that the populations in Texas represent the subspecies *L. pardalis albescens* (Janečka et al. 2007). See Kitchener et al. (2017) for a recent review of the taxonomy of Felidae.

Felis wiedii cooperi Goldman, 1943
[Texas Margay]
= ***Leopardus wiedii glauculus***
[Margay]

1821. *Felis wiedii* Schinz, *in* Cuvier, Das Thierreich, 1:235.

1917. *Leopardus wiedii* Pocock, Ann. Mag. Nat. Hist., Ser. 8, 20:345.

1943. *Felis wiedii cooperi* Goldman, J. Mamm. 24:384.

2004. *Leopardus wiedii cooperi* Schmidly, Mammals of Texas, Univ. Texas Press, p. 202.

2017. *Leopardus wiedii glauculus* Kitchener et al., Rev. Tax. Felidae, p. 49.

Type specimen.—Holotype, skin only, age and sex unknown, USNM 25, collected by S. Cooper on unknown date, cataloged 13 February 1852, no original number.

Type locality.—Eagle Pass, Maverick County, Texas.

Topotypes.—None. Known only from type locality.

Near topotypes.—None.

Remarks.—Wozencraft (2005) recognized the subspecies *L. w. cooperi*, but Kitchener et al. (2017) assigned the populations from Central America and Mexico (and presumably Texas) to *L. w. glauculus*, based on Eizirik et al. (1998). This species is now extirpated in Texas (Schmidly and Bradley 2016).

Lynx rufus* var. *maculatus Audubon and Bachman, 1851
[Texan Lynx]
= ***Lynx rufus rufus***
[Bobcat]

1792. *Felis* (*Lynx*) *vulgaris maculatus* Kerr, The animal kingdom …. 1:152.

1829. *Felis maculata* Horsfield and Vigors, Zool. Jour., 4:381, pl. 13, type from Mexico.

1851. *Lynx rufus* var. *maculatus* Audubon and Bachman, The viviparous quadrupeds of North America 2:293.

1884. *Lynx maculatus* True, Proc. U.S. Nat. Mus. 7:611.

1890. *Lynx baileyi* Merriam, N. Amer. Fauna 3:79.

1895. *Lynx texensis* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 7:188.

1897. *Lynx rufus texensis* Mearns, Preliminary diagnoses of new mammals from the Mexican border of the United States, p. 2, January 12 (preprint of Proc. U.S. Nat. Mus. 20:458).

1986. *Felis rufus texensis* Schmidly and Read, Occas. Pap. Mus. Texas Tech Univ. 101:34.

2008. *Lynx rufus texensis* Jones et al., Occas. Pap. Mus. Texas Tech Univ. 119:21.

2017. *Lynx rufus rufus* Kitchener et al., Rev. Tax. Felidae, p. 39.

Type specimen.—There is no type specimen. Audubon and Bachman (1851) provided a detailed drawing with their description, and therefore, the artwork serves as an iconotype. A specimen from which the drawing was directly made was procured by J. W. Audubon from the type locality presented below. The disposition of this specimen is unknown. An additional and similar appearing specimen in their possession at the time was provided by Dr. Wurdemann (Audubon and Bachman 1851). There is no information about the whereabouts of this second individual.

Type locality.—The description was based on an animal from "the vicinity of Castroville, on the headwaters of the Medina [River]," Medina County, Texas (see Audubon and Bachman above).

Topotypes.—None.

Near topotypes.—Medina Co: 7 mi S Dunlay, 1 (USNM); no specific locality, 1 (TCWC). Last near topotype collected 1978, no tissues available.

Remarks.—Audubon and Bachman (1851) provided a detailed description of the Texas bobcat, but the name they assigned to it, *Lynx rufus* var. *maculatus* (type locality Mexico), was preoccupied by *Felis* (*Lynx*) *vulgaris maculatus* and thus an invalid name. Allen (1895) renamed the Texas taxon to *Lynx texensis*, and mammalogists now consider Allen as the appropriate authority for this taxon. In their taxonomic review of bobcats from the southern United States, Schmidly and Read (1986) assigned all bobcats in Texas to *F. rufus texensis* [= *L. rufus texensis*]. However, based on molecular genetics data from Reding (2011), Kitchener et al. (2017) concluded that two subspecies occur in Texas, *L. rufus rufus* throughout most of the state (east of the Great Plains), and *L. rufus fasciatus* in the Trans-Pecos (west of the Great Plains). Under this arrangement, the holotype from Castroville would be assigned to *L. rufus rufus*.

Family Mephitidae

Conepatus leuconotus texensis Merriam, 1902
[Texas Conepatus]
= ***Conepatus leuconotus leuconotus***
[White-backed Hog-nosed Skunk]

1832. *Mephitis leuconata* Lichtenstein, Darstellung neuer oder wenig bekannter Säugethiere…. plate 44, figure 1.

1902. *Conepatus leuconotus* Merriam, Proc. Biol. Soc. Wash. 15:161.

1902. *Conepatus leuconotus texensis* Merriam, Proc. Biol. Soc. Wash. 15:162.

1902. *Conepatus mesoleucus* Merriam, Proc. Biol. Soc. Wash. 15:163.

1902. *Conepatus mesoleucus mearnsi* Merriam, Proc. Biol. Soc. Wash. 15:163.

2003. *Conepatus leuconotus leuconotus* Dragoo et al., J. Mamm. 84:168.

Type specimen.—Holotype, adult male, skin and skull, USNM 34857/47122, obtained by F. B. Armstrong on 20 July 1892, original number 70.

Type locality.—Brownsville, Lower Rio Grande, Cameron County, Texas.

Topotypes.—Cameron Co: Brownsville, 13 (USNM), 6 (KU). Last topotype collected 1894, no tissues available.

Near topotypes.—None.

Remarks.—All Texas hog-nosed skunks are now recognized as *Conepatus leuconotus*, and the subspecies of the South Texas population is *C. l. leuconotus* (Dragoo et al. 2003). The hog-nosed skunk of southern Texas is extremely rare, and the population has declined drastically in recent years (Schmidly et al. 2022).

Conepatus mesoleucus mearnsi Merriam, 1902
[Mearns Conepatus]
= ***Conepatus leuconotus leuconotus***
[White-backed Hog-nosed Skunk]

1832. *Mephitis leuconata* Lichtenstein, Darstellung neuer oder wenig bekannter Säugethiere…. plate 44, figure 1.

1832. *Mephitis mesoleuca* Lichtenstein, Darstellung neuer oder wenig bekannter Säugethiere…. plate 44, figure 2.

1902. *Conepatus leuconotus texensis* Merriam, Proc. Biol. Soc. Wash. 15:162.

1902. *Conepatus mesoleucus* Merriam, Proc. Biol. Soc. Wash. 15:163.

1902. *Conepatus mesoleucus mearnsi* Merriam, Proc. Biol. Soc. Wash. 15:163.

2003. *Conepatus leuconotus leuconotus* Dragoo et al., J. Mamm. 84:168.

Type specimen.—Holotype, adult female, skin and skull, USNM 186455, obtained by I. B. Henry on 20 February 1886, original number 69.

Type locality.—Mason, Mason County, Texas.

Topotypes.—None.

Near topotypes.—Mason Co: 0.5 mi SW Mason, 1 (TTU); 7.4 mi W Mason, 1 (ASNHC); Mason Mtn Wildlife Management Area, 1 (TTU); 3 mi E Mason, 1 (FHSM); 2 mi W Pontotoc, 1 (ASNHC). Last near topotype collected 2008, tissues available.

Conepatus mesoleucus telmalestes Bailey, 1905
[Swamp Conepatus]
= ***Conepatus leuconotus telmalestes***
[White-backed Hog-nosed Skunk]

1832. *Mephitis mesoleuca* Lichtenstein, Darstellung neuer oder wenig bekannter Säugethiere…. plate 44, figure 2.1902. Conepatus mesoleucus Merriam, Proc. Biol. Soc. Wash., 15:163.

1905. *Conepatus mesoleucus telmalestes* Bailey, N. Amer. Fauna, 25:203.

2003. *Conepatus leuconotus telmalestes* Dragoo et al., J. Mamm., 84:169.

Type specimen.—Holotype, adult male, skin and skull, USNM 136551, obtained by J. H. Gaut on 17 March 1905, original number 3485.

Type locality.—Big Thicket, 7 miles northeast of Sour Lake, Hardin County, Texas.

Topotypes.—None.

Near topotypes.—Hardin Co: 8 mi NE Sour Lake, 1 (USNM); 9 mi NE Sour Lake, 1 (USNM); 10 mi NE Sour Lake, 2 (USNM); Sour Lake, 1 (USNM). Last near topotype collected 1906, no tissues available.

Remarks.—This taxon is now thought to be extinct (see Schmidly and Bradley 2016 and Schmidly et al. 2022).

Mephitis varians Gray, 1837
[Long-tailed Texas Skunk]
= ***Mephitis mephitis varians***
[Striped Skunk]

1837. *Mephitis varians* J. E. Gray, Charlesworth's Magazine Nat. Hist., 1:581.

1901. *Chincha mesomelas varians* A. H. Howell, N. Amer. Fauna 20:31.

1901. *Mephitis mesomelas varians* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 14:334.

1926. *Mephitis mesomelas varians* Strecker, Baylor Univ. Bull. 29(3):14.

1936. *Mephitis mephitis varians* Hall, Carnegie Inst. Washington Publ. 473:66.

Type specimen.—No holotype designated. J. E. Gray's description of this skunk states: "black, with a narrow white streak on the forehead, a large square spot on the nape, and two narrow streaks between the blade-bones. Tail black; base of the hairs white. Inhabits Texas."

Type locality.—North America, Texas, from Mr. Drummond's collection.

Topotypes.—None.

Near topotypes.—None.

Remarks.—Although Gray did not designate a type specimen when he described the striped skunk in 1837, his listing of mammals in the British Museum (Gray 1843) references a specimen in the British Museum labelled "Var. c. *Mephitis varians varians*" that matches the 1837 description, but no locality is given. A check of the online catalog for the museum does not reveal any specimens of this skunk from Texas.

Spilogale indianola Merriam, 1890
[Gulf Spotted Skunk]
= ***Spilogale interrupta***
[Plains Spotted Skunk]

1820. *Mephitis interrupta* Rafinesque, Annals of nature or annual synopsis of new genera and species of animals, plants, &c, discovered in North America, Thomas Smith, Lexington, Kentucky, p. 3.

1859. *Mephitis quaterlinearis* Winans, [Kansas?] newspaper; see Coues, Fur-bearing animals…. U.S. Geol. Surv. Territories, Misc. Publ. 8, pp. 239–240, 1877.

1890. *Spilogale indianola* Merriam, N. Amer. Fauna 4:10.

1952. *Spilogale putorius indianola* Blair, Texas J. Sci. 4:246.

1952. *Spilogale putorius interrupta* McCarley, Texas J. Sci. 4:108.

2022. *Spilogale interrupta* McDonough et al., Mol. Phyl. Evol. 167:107266.

Type specimen.—Holotype, young adult, skull only, USNM 1621, obtained by J. H. Clark in 1851, cataloged on 15 February 1855, no original number.

Type locality.—Indianola, Matagorda Bay, Calhoun County, Texas.

Topotypes.—Calhoun Co: Indianola, 1 (USNM). Last topotype collected 1851, no tissues available.

Near topotypes.—None.

Remarks.—*Spilogale indianola* was described by Merriam (1890) on the basis of two skulls from Indianola, Matagorda Bay, Texas, collected in 1851 by J. H. Clark. It was named after the town of Indianola, which was once the county seat of Calhoun County. In 1875, a powerful hurricane almost entirely destroyed the town, and it was completely wiped out by another storm, followed by a fire, in 1886. It is now an abandoned ghost town that is part of Victoria, Texas.

On the basis of genomic data, McDonough et al. (2022) have demonstrated that *S. interrupta* should be regarded as a distinct species, although some taxonomists continue to follow Van Gelder (1959) and recognize it as a subspecies of *S. putorius*. *S. interrupta* is now listed as threatened or endangered by TPWD, and it is under review for listing by the USFWS (Schmidly et al. 2022).

Spilogale leucoparia Merriam, 1890
[Rio Grande Spotted Skunk]
[Desert Spotted Skunk]

1890. *Spilogale gracilis* Merriam, N. Amer. Fauna 3:83.

1890. *Spilogale leucoparia* Merriam, N. Amer. Fauna 4:11.

1890. *S*[*pilogale*]. *texensis* Merriam, N. Amer. Fauna 4:table following page 15.

1905. *Spilogale leucoparia* Bailey, N. Amer. Fauna 25:198.

1959. *Spilogale putorius leucoparia* Van Gelder, Bull. Amer. Mus. Nat. Hist. 117:299.

1974. *Spilogale gracilis* Davis, Mammals of Texas, Texas Parks Wildl. Dept. Bull. 41, p. 107.

1988. *Spilogale gracilis leucoparia* Jones et al., Occas. Pap. Mus. Texas Tech Univ. 119:19.

2022. *Spilogale leucoparia* McDonough et al., Mol. Phyl. Evol. 167:107266.

Type specimen.—Holotype, USNM 186452, obtained by I. B. Henry on 2 December 1885, original number 16.

Type locality.—Mason, Mason County, Texas.

Topotypes.—Mason Co: Brockman Ranch, Mason, 1 (TCWC). Last topotype collected 1942, no tissues available.

Near topotypes.—Mason Co: 10 mi N Mason, 1 (TCWC); 12 mi S Mason, 2 (TCWC). Last near topotype collected 1944, no tissues available.

Remarks.—According to Hall (1981:1017), the name *S. texensis* heads the column of measurements of *S. leucoparia* from Mason, Texas, in the article published by Merriam in 1890. Accordingly, Hall regarded *S. texensis* as a *lapsus* and a synonym of *S. leucoparia*. Dragoo et al. (1993) concluded that *S. gracilis* and *S. putorius* were distinct species, but they arranged *leucoparia* as a subspecies of *S. gracilis*. On the basis of genomic data, McDonough et al. (2022) recently demonstrated that *S. leucoparia* should be regarded as a distinct species.

Family Mustelidae

Lutra canadensis texensis Goldman, 1935
[Otter]
= ***Lontra canadensis lataxina***
[Northern River Otter]

1776. *Mustela lutra canadensis* Schreber, Die Saugethiere in Abbildungen nach der Natur mit Beschreibungen. Wolfgang Walther, Erlangen, theil 3, heft 18, plate 126b.

1823. *Lutra canadensis* Sabine in Franklin, Narrative of a journey to the shores of the Polar Sea in 1819–22, p. 653.

1823. *Lutra lataxina* Cuvier, Loutre, *Lutra*. Dictionnaire des Sciences Naturelles, Paris, 27:242.

1843. *Lontra* Gray, Ann. Mag. Nat. Hist. ser. 1, 11:118.

1898. *Lutra canadensis lataxina* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 10:460.

1905. *Lutra* (*canadensis*?) Bailey, N. Amer. Fauna 25:195.

1935. *Lutra canadensis texensis* Goldman, Proc. Biol. Soc. Wash. 48:184.

1972. *Lontra canadensis lataxina* van Zyll de Jong, Royal Ontario Mus. Life Sci. Contrib. 80:81.

1988. *Lutra canadensis lataxina* Jones et al., Occas. Pap. Mus. Texas Tech Univ. 119:20.

2004. *Lontra canadensis lataxina* Schmidly, Mammals of Texas, Univ. Texas Press, p. 179.

Type specimen.—Holotype, adult male, skull only, USNM 156849, obtained by B. V. Lilly in March 1908, no original number.

Type locality.—20 miles west of Angleton, Brazoria County, Texas.

Topotypes.—None.

Near topotypes.—None.

Remarks.—*Lutra canadensis* is now classified as *Lontra canadensis* (Van Zyll de Jong 1972; Lariviere and Walton 1998) and the subspecies in Texas is *Lontra canadensis lataxina*.

Mustela frenata texensis Hall, 1936
[Bridled Weasel]
[Long-tailed Weasel]

1831. *Mustela frenata* Lichtenstein, 1831:pl. 42 (and accompanying un-numbered page of text).

1905. *Putorius frenata* Bailey, N. Amer. Fauna 25:198.

1926. *Mustela frenata frenata* Strecker, Baylor Univ. Bull. 29(3):12.

1936. *Mustela frenata texensis* Hall, Carnegie Inst. Wash. Publ. 473:99.

Type specimen.—Holotype, adult male, scalp and tail, AMNH 14821, obtained by H. P. Attwateri on 17 September 1897, original number 16.

Type locality.—20 miles north of Kerrville, Kerr County, Texas.

Topotypes.—None.

Near topotypes.—Kerr Co: Kerrville, 2 (TCWC); no specific locality, 1 (MCZ). Last near topotype collected 1938, no tissues available.

Remarks.—We have followed Goetze (1998) in assigning specimens from Kerr County to *M. f. texensis* instead of *M. f. frenata* as depicted in Schmidly and Bradley (2016).

Taxidea berlandieri Baird, 1858
[Mexican Badger]
= ***Taxidea taxus berlandieri***
[American Badger]

1858. *Taxidea berlandieri* Baird, Mammals of North America *in* Reports Exploratory Survey……, 8(1):205.

1884. *Taxidea americana berlandieri* True, Proc. U.S. Nat. Mus. 7:609.

1895. *Taxidea taxus berlandieri* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 7:256.

1949. *Taxidea taxus littoralis* Schantz, J. Mamm. 30:301.

1972. *Taxidea taxus berlandieri* Long, J. Mamm. 53:745.

Type specimen.—Holotype, male, skin (no skull), USNM 1710, received from J. Pope on 8 May 1855, no original number.

Type locality.—Llano Estacado, Texas, near New Mexico boundary, in western Texas.

Topotypes.—None. The type locality of "Llano Estacado, near New Mexico boundary," is too vague to determine topotypes.

Near topotypes.—None. The type locality of "Llano Estacado, near New Mexico boundary," is too vague to determine near topotypes.

Taxidea taxus littoralis Schantz, 1949
[Mexican Badger]
= ***Taxidea taxus berlandieri***
[American Badger]

1858. *Taxidea berlandieri* Baird, Mammals of North America *in* Reports Exploratory Survey……, 8(1):205.

1895. *Taxidea taxus berlandieri* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 7:256.

1949. *Taxidea taxus littoralis* Schantz, J. Mamm. 30:301.

1972. *Taxidea taxus berlandieri* Long, J. Mamm. 53:745.

Type specimen.—Holotype, adult male, skin only, USNM 116763, obtained by J. M. Priour on 6 August 1901, original number 1.

Type locality.—Corpus Christi, Nueces County, Texas.

Topotypes.—None.

Near topotypes.—None.

Remarks.—Schantz (1949) suggested that a subspecies (*T. t. littoralis*) occupied the coastal areas of Texas, characterized only by darker pelage than specimens ascribed to *T. t. berlandieri*, but Long (1972:747) thought the character was not of sufficient worth to consider the darker specimens as representative of a subspecies.

Family Procyonidae

Bassariscus astutus flavus Rhoads, 1893
[Civet Cat; Cacomistle]
[Ringtail]

1830. *Bassaris astuta* Lichtenstein, Erläuterungen der Nachrichten des Fran. Hernandez von den vierfüssigen Thieren Neuspaniens. Abh. K. Akad. Wiss., Berlin, p. 119.

1887. *Bassariscus astutus* Coues, Sci. 9:516.

1893. *Bassariscus astutus flavus* Rhoads, Proc. Acad. Nat. Sci. Phil. 45:417.

Type specimen.—Holotype, adult, skin and skull, ANSP 972, according to catalog record "*Bassariscus astutus flavus* – type – Texas – Dr. Heermann coll. – TYPE." Rhoads gives 1861 as the year of collection (Koopman 1976).

Type locality.—Exact locality unknown, type from Texas (Koopman 1976).

Topotypes.—None. The type locality of "Texas" is too vague to determine topotypes.

Near topotypes.—None. The type locality of "Texas" is too vague to determine near topotypes.

Procyon lotor fuscipes Mearns, 1914
[Brown-footed Raccoon]
[Northern Raccoon]

1815. *Procyon lotor* Illiger, Abh. Preuss Akad. Wiss., Berlin, 1804–1811, pp. 70, 74.

1837. *Procyon nivea* Gray, Mag. Nat. Hist. 1:580.

1914. *Procyon lotor fuscipes* Mearns, Proc. Biol. Soc. Wash. 27:63.

Type specimen.—Holotype, adult male, skin and skull, USNM 63055, collected by E. A. Mearns on 6 February 1893, original number 2273.

Type locality.—Las Moras Creek at Fort Clark, 1,011 feet, Kinney County, Texas.

Topotypes.—Kinney Co: Fort Clark, 1 (USNM), 2 (AMNH). Last topotype collected 1939, no tissues available.

Near topotypes.—Kinney Co: 7 km NE Brackettville, 1 (UTEP). Near topotype collected 1985, no tissues available.

Procyon nivea J. E. Gray, 1837
[Black-footed Raccoon]
= ***Procyon lotor fuscipes***
[Northern Raccoon]

1815. *Procyon lotor* Illiger, Abh. Preuss Akad. Wiss., Berlin, 1804–1811, pp. 70, 74.

1837. *Procyon nivea* Gray, Charlesworth's Mag. Nat. Hist. 1:580.

1858. *Procyon hernandezii* Baird, Mammals in Rep. Expl. Surv. Rept. To Pacific…, 8:212.

1914. *Procyon lotor fuscipes* Mearns, Proc. Biol. Soc. Wash. 27:63.

Type specimen.—None designated.

Type locality.—"Inhabits North America, Texas." No specific locality given.

Topotypes.—None. The type locality "Inhabits North America, Texas" is too vague to determine topotypes.

Near topotypes.—None. The type locality "Inhabits North America, Texas" is too vague to determine near topotypes.

Remarks.—J. E. Gray of the British Museum described *Procyon nivea* in 1837 (Gray 1837) with no type specimen or type locality, other than "Texas," designated. He also suggested that it "may prove an albino variety." Baird (1858) listed *nivea* as a synonym of *P. hernandezii* with the notation "(albino)." Mearns (1914) stated this about *nivea*: "A raccoon, very doubtfully from Texas and from no definite locality…. and being an albino, its identification is impossible." Goldman (1950) also concluded that the name was unidentifiable and "doubtless based upon an albino." Hall and Kelson (1959) commented that *P. nivea* "may be referable" to the subspecies *P. l. fuscipes*.

Family Ursidae

Ursus horriaeus texensis Merriam, 1914
[Sonora Grizzly]
= ***Ursus arctos horribilis***
[Grizzly or Brown Bear]

1758. *Ursus arctos* Linnaeus, Systema naturae per regna tria naturae, secundum classes, ordines, genera, species, cum characteribus, differentiis, synonymis, locis. Tenth ed. Laurentii Salvii, Stockholm, p. 47.

1815. *Ursus horribilis* Ord. in Guthrie, A new geographic history, coml. grammar….. Philadelphia, 2nd Amer. Ed., 2:291.

1905. *Ursus horribilis horriaeus* Bailey, N. Amer. Fauna 25:192.

1914. *Ursus horriaeus texensis* Merriam, Proc. Biol. Soc. Wash. 27:191.

1918. *Ursus texensis texensis* Merriam, N. Amer. Fauna 41:35.

1966. *Ursus horribilis* Davis, Mammals of Texas, Texas Parks Wildl. Dept. Bull. 41:77.

1984. *Ursus arctos horribilis* Hall, Spec. Publ. Mus. Nat. Hist. Univ. Kansas 13:5.

Type specimen.—Holotype, adult male, skin and skull, USNM 203198, obtained by C. O. Finley and J. Z. Means on 2 November 1890, no original number.

Type locality.—Merrill Canyon, Davis Mountains, Jeff Davis County, Texas.

Topotypes.—None.

Near topotypes.—None.

Remarks.—This is the only record of a grizzly bear from Texas. The type locality as published in the original description (Merriam 1914) is "in Davis

Mts., Texas." Fisher and Ludwig (2016) emended the locality and stated it as "Davis Mountains, [Jeff Davis County], Texas." These mountains cover a broad geographic region encompassing a rough square area of about 50 kilometers (31 miles) on each side. To further restrict the type locality, we studied a detailed, published account of the hunt that resulted in the collection of this bear (see Burr 1948). According to that account, on the fifth day of the annual bear hunt in the Davis Mountains (November 2), several hunters and their dogs mustered at Bridge Gap about a mile from Mt. Livermore. Two of the hunters, C. O. Finley and J. Z. Means, remained about a mile behind the main hunting party, and their dogs located and commenced chasing a large bear over a distance of several miles. The bear was finally cornered and felled at the head of Merrill Canyon, several miles from where it was originally sighted. As they inspected the carcass of the dead bear, the two hunters immediately recognized that it was a grizzly bear, something they had never seen in these mountains before. Based on the account of the hunt, as recorded in a written account by Mr. Finley, the type locality has been restricted to Merrill Canyon in the Davis Mountains. The remains of the bear were shared by several people. The claws were made into jewelry, the skin was dressed and preserved in San Antonio, and the skull was boiled and displayed at the home of Mr. Means. Subsequently, the Biological Survey acquired the skin and skull, and it was cataloged and described as a new taxon (*Ursus horriaeus texensis*) in 1914 and then as *Ursus texensis texensis* in 1919 by C. Hart Merriam. E. Raymond Hall (1984) later synonymized *texensis* with *Ursus arctos horribilis*. Because it is now extinct in the state, *U. arctos* is not listed as threatened or endangered by TPWD, but it is considered endangered in other parts of its range by the USFWS (Schmidly et al. 2022).

ORDER ARTIODACTYLA
Family Bovidae

Ovis canadensis texianus Bailey, 1912
[Mexican Bighorn]
= ***Ovis canadensis mexicana***
[Bighorn Sheep]

1901. *Ovis mexicanus* Merriam, Proc. Biol. Soc. Wash. 14:30.

1901. *Ovis canadensis mexicana* Lydekker, The sheep and its cousins, p. 289.

1904. *Ovis cervina mexicanus* Elliot, Zool. Publ. Field Mus. 5:86.

1905. *Ovis mexicanus* Bailey, N. Amer. Fauna 25:70.

1912. *Ovis canadensis mexicana* Lydekker, The great and small game of Europe and northern Asia and America, p. 11.

1912. *Ovis canadensis texianus* Bailey, Proc. Biol. Soc. Wash. 25:109.

1931. *Ovis canadensis texiana* Bailey, N. Amer. Fauna 53:18.

1940. *Ovis canadensis mexicana* Cowan, Amer. Midl. Nat. 24:545.

Type specimen.—Holotype, adult female, skin and skull, USNM 118255, obtained by V. Bailey on 2 September 1902, original number 7971.

Type locality.—Guadalupe Mountains, south of Guadalupe Peak, Culberson County, Texas. The type locality originally was listed as from El Paso County. Culberson and Hudspeth counties were organized from El Paso County in 1911 and 1917, respectively. Fisher and Ludwig (2016) changed the type locality to Hudspeth County. However, most of the Guadalupe Mountains is in Culberson County, including Guadalupe Peak (the peak is in Guadalupe Mountains National Park) with only a small portion of the western sector extending into Hudspeth County. Given this information, the type locality has to be in Culberson County.

Topotypes.—Culberson Co: Guadalupe Mtns, S of Guadalupe Peak, 1 (USNM). Last topotype collected 1902, no tissues available.

Near topotypes.—Culberson Co: Guadalupe Mtns, McKittrick Canyon, 3 (USNM). Last near topotype collected 1901, no tissues available.

Remarks.—The native subspecies of bighorn in Texas was *O. c. mexicana*, which is now extirpated in the state. Other subspecies have been introduced, including *O. c. canadensis* and *O. c. nelsoni* (Schmidly and Bradley 2016), but they were never native to Texas.

Family Cervidae

Dorcelaphus texanus Mearns, 1898
[Texas White-tailed Deer]
= ***Odocoileus virginianus texana***
[White-tailed Deer]

1790. *Dama virginiana* Zimmermann, der Weygandschen Buchhandlung, Leipzig, 2:129.

1898. *Mazama americana texana* Lydekker, Rowland Ward, Limited, London, p. 261.

1898. *Dorcelaphus texanus* Mearns, Proc. Biol. Soc. Wash. 12:23.

1898. *Odocoileus texanus* Seton-Thompson, Forest and Stream 1:286.

1901. *Odocoileus texensis* Miller and Rehn, Proc. Boston Soc. Nat. Hist. 30:17

1902. *Dama v*[*irginiana*]. *texensis* [sic] J. A. Allen, Bull. Amer. Mus. Nat. Hist. 16:20.

1904. *Odontocoelus americanus texensis* Elliot, Field Columbian Mus., Zool. Ser., Publ. 95A, 4:70.

1905. *Odocoileus virginianus texanus* Bailey, N. Amer. Fauna 25:60.

1959. *Dama virginiana texana* Hall and Kelson, Mammals of North America, Ronald Press, p. 1011.

1960. *Odocoileus virginianus* Davis, Mammals of Texas, Texas Parks Wildl. Dept. Bull. 41, p. 230.

1988. *Odocoileus virginianus texana* Jones et al., Occas. Pap. Mus. Texas Tech Univ., 119:22.

Type specimen.—Holotype, adult male, skin and skull, USNM 84794, obtained by E. A. Mearns on 25 December 1897, original number 4288. Miller and Rehn (1901) described *Odocoileus texensis*, but according to Hall (1981) this was nothing more than an accidental renaming of *texanus* (= *texana*).

Type locality.—Fort Clark, Kinney County, Texas.

Topotypes.—Kinney Co: Fort Clark, 6 (USNM). Last topotype collected 1898, no tissues available.

Near topotypes.—Kinney Co: no specific locality, 1 (LSUMZ). Last near topotype collection 1965, no tissues available.

Remarks.—Miller and Kellogg (1955) amended the type locality given by Mearns (1898) as "north of Eagle Pass on Big Bend of Rio Grande," and Fisher and Ludwig (2016) also included that restriction. However, the Big Bend of the Rio Grande is in southern Brewster County and more than 240 miles west of Fort Clark. Thus, the locality restriction should not be used for the type locality given by Mearns (1898). Fort Clark was a frontier fort located just off US Highway 90 near Bracketville, Kinney County, Texas. Today, it is a 2,700-acre gated resort and leisure living community.

In a letter written to H. P. Attwater on 16 January 1898, E. A. Mearns had this to say about describing this deer: "I have just completed a description of the Texas white-tailed deer. I treat it as a species although it very probably intergrades with one or two other white-tails. The white-tail of Louisiana appears to be an undescribed form. I fear we may never get together a sufficient number of specimens to make clear the relationships of all the forms." His assessment has proven to be prophetic, as the introduction of deer throughout the state in the 20th century has prevented any contemporary attempt to work out the relationships of the original subspecies.

Family Tayassuidae

Dicotyles angulatus angulatus Cope, 1889
[Texas Peccary; Javelina; Musk Hog]
= ***Pecari tajacu angulatus***
[Collared Peccary]

1758. *Sus tajacu* Linnaeus, Systema Naturae, ed. L. Salvii, Uppsala., ed. 10, vol. I:50.

1816. *Dicotyles torquatus* Cuvier, Règne An. I, p. 237.

1835. *Pecari* Reichenbach, Bildergalerie der Thierwelt, part 6, p. 1.

1889. *Dicotyles angulatus angulatus* Cope, Amer. Nat. 23(266):147.

1905. *Tayassu angulatum* Bailey, N. Amer. Fauna 25:68.

1926. *Pecari angulatus angulatus* Strecker, Baylor Univ. Bull. 29(3):34.

1960. *Pecari tajacu* Davis, Mammals of Texas, Texas Parks Wildl. Dept. Bull. 41, p. 221.

1968. *Dicotyles tajacu angulatus* Woodburne, Mem. Southern California Acad. Sci. 7:147.

1988. *Tayassu tajacu angulatus* Jones et al., Occas. Pap. Mus. Texas Tech Univ. 119:21.

2004. *Pecari tajacu angulatus* Schmidly, Mammals of Texas, Univ. Texas Press, p. 261.

Type specimen.—Holotype, skull, ANSP 6386. Type not designated by number. Cope had five specimens: one was from the Guadalupe River, two were from the Llano River, and another two from a tributary of the Red River (Cope 1889a). ANSP catalog entry reads "Dicotyles angulatus Cope, Llano River, Texas. E. D. Cope TYPE" which is the basis for selecting this specimen as the holotype (see Koopman 1976). The other specimens were not designated and there is no mention of the collection where they are deposited.

Type locality.—Llano River, no specific locality, Texas. Koopman (1976) clearly indicates the type specimen is from the Llano River, although other sources (e.g., Hall 1981) give the type locality as Guadalupe River, Texas.

Topotypes.—None.

Near topotypes.—None.

Remarks.—Cope (1889a) lists *D. angulatus* as a "sp. nov." and provides a characterization comparing it to *D. tajassus* from Brazil. In a later paper in the same volume (Cope 1889b), Cope makes these comments about these two taxa: "In general the characters agree with the *D. tajassus*, but the lateral facial angle is as in *D. angulatus*, and occasionally the last premolar resembles that of the same species. It appears then the latter must be recognized as a subspecies rather than a species." Woodburne (1968) in his study of the cranial myology and osteology of *D. tajacu* reached the same conclusion, effectively making *angulatus* a synonym of *tajacu*. Fisher and Ludwig (2016) cite Ramirez-Pulido et al. (2014) as the basis for using *Dicotyles* rather than *Pecari* for this genus; however, recent rulings by the International Commission on Zoological Nomenclature (1999) established *Pecari* as the genus name.

ORDER RODENTIA
Family Castoridae

Castor canadensis texensis Bailey, 1905
[Texas Beaver]
[American Beaver]

1820. *Castor canadensis* Kuhl, Verlag der Hermannschen Buchandlung, Frankfurt am Main, Abt 1:64.

1884. *Castor fiber* True, Proc. U.S. Nat. Mus. 7:596.

1890. *Castor canadensis* Merriam, N. Amer. Fauna 3:59.

1905. *Castor canadensis texensis* Bailey, N. Amer. Fauna 25:122.

Type specimen.—Holotype, skin and skull, sex unknown, USNM 135744, original number 5139-X. According to Bailey (1905) "made over from a mounted specimen purchased from A. Hambold, New Ulm, Texas. Caught in Cummings Creek by Florence Brune, Dec. 25, 1900, and kept alive until Jan. 10, 1901. Sex not indicated. Old and large."

Type locality.—Cummings Creek, 9 miles from New Ulm, Colorado County, Texas.

Topotypes.—Colorado Co: Cummings Creek, 1 (USNM). Last topotype collected 1900, no tissues available.

Near topotypes.—None.

Family Cricetidae

Arvicola texiana Audubon and Bachman, 1853
[Texas Meadow Mouse]
= ***Sigmodon hispidus texianus***
[Hispid Cotton Rat]

1853. *Arvicola texiana* Audubon and Bachman, The viviparous quadrupeds of North America 3:229.

1891. *Sigmodon hispidus texianus* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 3:287.

1902. *Sigmodon hispidus berlandieri* Bailey, Proc. Biol. Soc. Wash. 15:106.

1905. *Sigmodon hispidus texianus* Bailey, N. Amer. Fauna 25:114.

Type specimen.—There is no type specimen; however, Audubon and Bachman (1853) provided a description and artwork based on a living animal. Therefore, the artwork serves as an iconotype.

Type locality.—Brazos River, Texas.

Topotypes.—None. The type locality "Brazos River, Texas" is too vague to determine topotypes.

Near topotypes.—None. The type locality "Brazos River, Texas" is too vague to determine near topotypes.

Remarks.— According to Audubon and Bachman (1853), "This [*Arvicola texiana*] was first discovered on the river Brazos, and afterwards seen in the country along the Nueces and Rio Grande, where chaparral thickets afford it shelter." Thus, the type locality is appropriately designated as the "Brazos River" (Allen 1891).

Hesperomys* (*Vesperimus*) *taylori Thomas, 1887
[Taylor Baiomys]
= ***Baiomys taylori taylori***
[Northern Pygmy Mouse]

1887. *Hesperomys* (*Vesperimus*) *taylori* Thomas, Ann. Mag. Nat. Hist., ser. 5, 19:66.

1905. *Peromyscus taylori* Bailey, N. Amer. Fauna 25:101.

1907. *Baiomys taylori* Mearns, Bull. U.S. Mus. Nat. Hist. 56:381.

1926. *Baiomys taylori taylori* Strecker, Baylor Univ. Bull. 29(3):27.

Type specimen.—Holotype, adult male, skin and skull, no. 1887.11.24.1, formerly British Museum of Natural History (BMNH), now known as Natural History Museum, London (NHMUK), obtained by W. Taylor on 24 November 1886, no original number provided.

Type locality.—San Diego, Duval County, Texas.

Topotypes.—Duval Co: San Diego, 3 (USNM). Last topotype collected 1888, no tissues available.

Near topotypes.—Duval Co: 3 mi N San Diego, Kaffie Brothers Ranch, 1 (MSB). Near topotype collected 1986, no tissues available.

Remarks.—Interestingly, Thomas (1887) in his description of this taxon did not include any mention of a type specimen, but Packard (1960) in his taxonomic revision of *Baiomys* mentioned the type as housed in the British Museum of Natural History where Oldfield Thomas, the describer, worked. The specimen for the basis of Thomas' description of this taxon was sent to him at the British Museum by William Taylor. Measurements (both skin and skull) of "an adult male" were included as part of the description by Thomas (1887). It seems reasonable to assume that these measurements were taken from the type specimen, and it was just a *lapsus* that Thomas did not mention the type specimen. In naming the mouse after Mr. Taylor, Thomas (1887) wrote that the Natural History Museum was "indebted [to Taylor] for many rare Rodents." Packard (1960) reviewed geographic variation in this species and confirmed the presence of two subspecies in Texas, *B. t. taylori* and *B. t. subater*.

Hesperomys texana Woodhouse, 1853
[Texas White-footed Mouse]
= ***Peromyscus leucopus texanus***
[White-footed Deermouse]

1818. *Musculus leucopus* Rafinesque, American Monthly Magazine 3:446.

1853. *Hesperomys texana* Woodhouse, Proc. Acad. Nat. Sci. Phil. 6:242.

1891. *Vesperimus mearnsii* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 3:300.

1896. *Peromyscus canus* Mearns, Preliminary diagnoses of new mammals from the Mexican border of the United States, p. 3, March 25 (preprint of Proc. U.S. Nat. Mus. 18:445).

1905. *Peromyscus leucopus mearnsi* Bailey, N. Amer. Fauna 25:96.

1909. *Peromyscus leucopus texanus* Osgood, N. Amer. Fauna 28:127.

Type specimen.—Holotype, skin preserved in alcohol, fragments of skull, USNM 2559/37026, obtained by S. W. Woodhouse in autumn of 1852, original number not given.

Type locality.—Originally stated (probably erroneously) as the "Rio Grande, near El Paso," Texas. According to Osgood (1909), the specimen is probably from the vicinity of Mason, Mason County, Texas.

Topotypes.—None. Given the uncertainty of the type locality, no topotypes are designated.

Near topotypes.—Mason Co: Mason, 7 (USNM), 2 (MSB); 1 mi W Mason, 3 (MSB); Mason Mtn Wildlife Management Area, 76 (TTU). Last near topotype collected 2016, tissues available.

Remarks.—Woodhouse (1853) in the original description of *Hesperomys texana*, stated "Habitat—Western Texas," and under "Observation": "I procured this little animal on the Rio Grande near El Paso." However, Osgood (1909)) provides an extensive explanation, based on the trip itinerary and the morphological characters of two specimens that came from "the vicinity of Mason" in the Hill Country, that the Waterhouse specimen most likely came from the latter location. Subsequent authors have followed Osgood's reasoning in placing the type locality. Poole and Schantz (1942) described the condition of the type specimen and noted that another specimen, USNM 4748/37155, labeled "*Hesperomys texana* West Texas, Dr. Woodhouse," was not mentioned by Baird and has never been regarded as a type, although it may have been in the hands of Woodhouse when the description was written. If so, then this specimen could be considered a cotype (see Osgood 1909 for a discussion). However, a search of VertNet for USNM 4748 does not produce a result.

Microtus mexicanus guadalupensis Bailey, 1902
[Guadalupe Vole]
= ***Microtus mogollonensis guadalupensis***
[Mogollon Vole]

1890. *Arvicola mogollonensis* Mearns, Bull. Amer. Mus. Nat. Hist. 2:283.

1902. *Microtus mexicanus guadalupensis* Bailey, Proc. Biol. Soc. Wash. 15:118.

1999. *Microtus mogollonensis guadalupensis* Frey, Smithsonian Book of North American Mammals (D. E. Wilson and D. A. Reeder, eds.), Smithsonian Institution Press, p. 634.

2008. *Microtus mogollonensis mogollonensis* Manning et al., Occas. Pap. Mus. Texas Tech Univ. 278:14.

2016. *Microtus mogollonensis guadalupensis* Schmidly and Bradley, Mammals of Texas, Univ. Texas Press, p. 454.

Type specimen.—Holotype, adult male, skin and skull, USNM 109191, obtained by V. Bailey on 21 August 1901, original number 7807.

Type locality.—Guadalupe Mountains, head of McKittrick Canyon, 7,800 feet, Culberson County, Texas.

Topotypes.—Culberson Co: Guadalupe Mtns, 9 (USNM). Last topotype collected 1901, no tissues available.

Near topotypes.—Culberson Co: The Bowl, Guadalupe Mtns, 34 (TCWC), 9 (TTU), 3 (MSB), 2 (MVZ); Guadalupe Peak Campground Guadalupe Mtns National Park, 4 (TTU); Upper Dog Ranger Station Guadalupe Mtns National Park, 27 (TTU); Blue Ridge, Guadalupe Mtns Nat Park, 1 (TTU); Upper Dog Canyon, 30 (TTU). Last near topotype collected 1975, tissues available.

Remarks.—When Bailey (1902) described this vole, he listed the type locality as in El Paso County; however, Culberson County was established as separate from El Paso County in 1911. We have followed the work of Frey (1999) in recognizing *M. mogollonensis* as a distinct species from *M. mexicanus*. Current

taxonomy refers this subspecies to *M. mogollonensis guadalupensis* (Schmidly and Bradley 2016; Schmidly et al. 2022).

Neotoma albigula robusta Blair, 1939
[None designated]
= ***Neotoma leucodon robusta***
[White-toothed Woodrat]

1894. *Neotoma leucodon* Merriam, Proc. Biol. Soc. Wash. 9:120.

1910. *Neotoma albigula leucodon* Goldman, N. Amer. Fauna 31:36.

1926. *Neotoma albigula albigula* Strecker, Baylor Univ. Bull. 29(3):31.

1939. *Neotoma albigula robusta* Blair, Occas. Pap. Mus. Zool. Univ. Mich. 403:3.

1981. *Neotoma albigula albigula* Rogers and Schmidly, Southwest. Nat. 26:178.

2001. *Neotoma leucodon* Edwards et al., J. Mamm. 82:276.

2004. *Neotoma leucodon robusta* Schmidly, Mammals of Texas, Univ. Texas Press, p. 433.

Type specimen.—Holotype, adult male, skin and skull, UMMZ 79238, obtained by F. Blair on 1 May 1937, original number 936.

Type locality.—Limpia Canyon, 4,300 feet, 16 miles north of Fort Davis, Jeff Davis County, Texas.

Topotypes.—None.

Near topotypes.—Jeff Davis Co: 20 mi N Fort Davis, Boy Scout Ranch, 1 (TTU); 10 mi N Fort Davis, Frasier Canyon, 1 (TTU); 2 mi NW Fort Davis, Limpia Canyon, 1 (TTU); 2 mi NW Fort Davis, 1 (TTU, UMMZ). Last near topotype collected 1982, no tissues available.

Remarks.—There are numerous records in VertNet of specimens identified as *Neotoma micropus* or *Neotoma mexicana* from the type locality or nearby. It is possible that some of those specimens are misidentified and may represent *N. leucodon robusta* topotypes or near topotypes.

Rogers and Schmidly (1981) regarded *robusta* as a melanistic form and placed it in synonymy of *N. albigula albigula*. However, Edwards et al. (2001) split *leucodon* from *albigula* and assigned all specimens from Texas to *N. leucodon*, without subspecific assignment. By default, the Texas form from the Trans-Pecos currently is recognized as *N. l. robusta* (Schmidly 2004; Schmidly and Bradley 2016).

Neotoma attwateri Mearns, 1897
[Attwater Wood Rat]
= ***Neotoma floridana attwateri***
[Eastern Woodrat]

1897. *Neotoma attwateri* Mearns, Proc. U.S. Nat. Mus., 19:721.

1901. [*Neotoma floridana*] *attwateri* Elliot, Field Columb. Mus. Pub. 45, Zool. Ser., 2:157.

1926. *Neotoma floridana attwateri* Strecker, Baylor Univ. Bull., 29(3):30.

Type specimen.—Holotype, adult female, skin and skull, AMNH 11964/10402, obtained by H. P. Attwater on 10 December 1895, original number 113.

Type locality.—Lacey's Ranch, Turtle Creek, Kerr County, Texas.

Topotypes.—Kerr Co: Turtle Creek, 10 (USNM), 1 (TTU); Turtle Creek, 8 (AMNH; note, specimens mistakenly cataloged in VertNet as Bexar County). Last topotype collected 1899, no tissues available.

Near topotypes.—Kerr Co: Ingram, 9 (USNM); Kerr Wildlife Management Area, 13 (TTU); no specific locality, 12 (MCZ), 1 (AMNH, FMNH). Last near topotype collected 2002, tissues available.

Ochrotomys nuttalli lisae Packard, 1969
[None designated]
[Golden Mouse]

1909. *Arvicola nuttalli* Osgood, N. Amer. Fauna 28:222.

1926. *Peromyscus nuttalli aureoles* Strecker, Baylor Univ. Bull. 29(3):29.

1958. *Ochrotomys nuttalli* Hooper, Misc. Publ. Mus. Zool., Univ. Michigan 105:23.

1969. *Ochrotomys nuttalli lisae* Packard, Univ. Kansas Mus. Nat. Hist., Misc. Publ. 51:398.

Type specimen.—Holotype, young adult male, skin, skull, and body skeleton, KU 119421, obtained on 18 January 1961 by R. L. Packard, original number 829.

Type locality.—La Nana Creek bottoms, 1 mile east of Stephen F. Austin State College Campus, Nacogdoches, Nacogdoches County, Texas.

Topotypes.—Nacogdoches Co: La Nana Creek, 12 (SFAVC), 11 (TTU); 1 mi E Stephen F. Austin Campus, Nacogdoches, 7 (SFAVC), 1 (FHSM). Last topotype collected 1961, no tissues available.

Near topotypes.—Nacogdoches Co: Nacogdoches, 10 (SFAVC), 2 (ISM, UMMZ); near Nacogdoches, 6 (ISM); 3 mi N Nacogdoches, 1 (SFAVC); 4 mi N Nacogdoches, 3 (TTU); 4 mi W Nacogdoches, 1 (PSM, SFAVC); 2 mi S Nacogdoches, 1 (SFAVC); Stephen F. Austin Experimental Forest, 8 (SFAVC), 1 (TTU); Bonita Creek, 1 (SFAVC). Last near topotype collected 1964, no tissues available.

Onychomys longipes Merriam, 1889
[Texas Grasshopper Mouse]
= ***Onychomys leucogaster longipes***
[Northern Grasshopper Mouse]

1889. *Onchomys longipes* Merriam, N. Amer. Fauna 2:1.

1913. *Onychomys leucogaster longipes* Hollister, Proc. Biol. Soc. Wash. 26:216.

Type specimen.—Holotype, adult female, skin and skull, USNM 186478, obtained by W. Lloyd on 11 March 1887, original number 3.

Type locality.—No specific locality, Concho County, Texas.

Topotypes.—None.

Near topotypes.—None.

Remarks.—Current taxonomy follows Riddle (1999) and treats *O. longipes* as a subspecies of the more wide-ranging species, *Onychomys leucogaster*, the northern grasshopper mouse.

Onychomys torridus arenicola Mearns, 1896
[Arizona Grasshopper Mouse]
= ***Onychomys arenicola***
[Chihuahuan or Mearns's Grasshopper Mouse]

1874. *Hesperomys* (*Onychomys*) *torridus* Coues, Proc. Acad. Nat. Sci. Phil. 26:183.

1889. *Onychomys torridus* Merriam, N. Amer. Fauna 2:3.

1896. *Onychomys torridus arenicola* Mearns, Preliminary diagnoses of new mammals from the Mexican border of the United States, page 3, May 25 (preprint of Proc. U.S. Mus. 19:139).

1926. *Onychomys torridus torridus* Strecker, Baylor Univ. Bull. 29(3):37.

1979. *Onychomys arenicola* Hinesley, J. Mamm. 60:119.

Type specimen.—Holotype, adult male, skin and skull, USNM 20081/35483 obtained by E. A. Mearns and F. X. Holzner on 29 February 1892, original number 1528.

Type locality.—Rio Grande, about 6 miles above El Paso, El Paso County, Texas.

Topotypes.—None.

Near topotypes.—El Paso Co: El Paso, 3 (UTEP), 1 (USNM). Last near topotype collected 1936, no tissues available.

Remarks.—Based on chromosome data, *O. t. arenicola* is recognized by Hinesley (1979) as a monotypic species, *Onychomys arenicola*. Its geographic range so far as known is in New Mexico and extreme western Texas (Hall 1981).

Oryzomys aquaticus J. A. Allen, 1891
[Rio Grande Rice Rat]
= ***Oryzomys couesi aquaticus***
[Coues's Rice Rat]

1877. *Hesperomys couesi* Alston, Proc. Zool. Soc. London for 1876, p. 756.

1891. *Oryzomys aquaticus* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 3:289.

1918. *Oryzomys couesi aquaticus* Goldman, North Amer. Fauna 43:39.

1960. *Oryzomys palustris aquaticus* Hall, Southwest. Nat. 5:173.

1960. *Oryzomys palustris couesi* Hall, Southwest. Nat. 5:173.

1960. *Oryzomys couesi* Davis, Mammals of Texas, Texas Parks Wildl. Dept. Bull. 41, p. 189.

1979. *Oryzomys couesi aquaticus* Benson and Gehlback, J. Mamm. 60:228.

Type specimen.—Holotype, adult male, skin and skull, AMNH 3411/2684, obtained by F. B. Armstrong on 25 February 1891, original number 729.

Type locality.—Brownsville, Cameron County, Texas.

Topotypes.—Cameron Co: Brownsville, 16 (AMNH), 2 (FMNH), 3 (LSUMZ), 2 (KU); Ft. Brown, 3 (UMMZ), 1 (MVZ, UCLA). Last topotype collected 1939, no tissues available.

Near topotypes.—Cameron Co: Brownsville, 2 (AMNH), 2 (FMNH), 3 (LSUMZ), 1 (LACM); 13.7 mi W Boca Chica, 16 (ASNHC); Las Palomas WMA, Resaca de la Palma Unit, 7 (TTU); Resaca de la Palma State Park, 2 (TTU). Last near topotype collected 2006, tissues available.

Remarks.—Coues's rice rat is classified as a subspecies, *Oryzomys couesi aquaticus*, and is known from only four counties along the Texas-Tamaulipas, Mexico, borderlands. It is considered threatened by TPWD because of the decline of resaca habitat in southernmost Texas, and it is listed as a vulnerable species by NatureServe.

Oryzomys palustris texensis J. A. Allen, 1894
[Rice Rat]
= ***Oryzomys texensis texensis***
[Texas Marsh Rice Rat]

1837. *Mus palustris* Harlan, Amer. J. Sci. 36:385

1854. *Arvicola oryzivora* Bachman, The viviparous quadrupeds of North America 3:214.

1858. *Oryzomys palustris* Baird, Mammals of North America *in* Reports Exploratory Survey……, 8(1):459.

1894. *Oryzomys palustris texensis* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 6:177.

2010. *Oryzomys texensis texensis* Hanson et al., J. Mamm. 91:342.

Type specimen.—Holotype, adult male, skin and skull, AMNH 7166/5764, obtained by H. P. Attwater on 15 November 1893, original number 81.

Type locality.—Rockport, Aransas County, Texas.

Topotypes.—Aransas Co: Rockport, 45 (AMNH), 3 (WMSA), 2 (ASNHC, FMNH, USNM). Last topotype collected 1985, no tissues available.

Near topotypes.—Aransas Co: 5.5 mi N Rockport, 2 (MSB); 5 mi N Rockport, 1 (MSB); 4.5 mi N Rockport, 3 (MSB); 2 mi SW Rockport, 1 (TCWC); 4.2 mi SW Rockport, 1 (TCWC); 4.2 mi SW Rockport/Goose Island State Park, 1 (TCWC). Last near topotype collected 1970, no tissues available.

Remarks.—Molecular divergence in the Cytb gene supports the recognition of *O. palustris* and *O. couesi* as separate species, as well as the elevation of *O. texensis* to separate species status from *O. palustris* (Hanson et al. 2010). With this taxonomic rearrangement, two species of rice rats (*O. texensis* and *O. couesi*) are known from Texas, and *O. palustris* is no longer considered to be a member of the Texas mammal fauna (Schmidly and Bradley 2016).

Peromyscus attwateri J. A. Allen, 1895
[Attwater Peromyscus]
[Texas Deermouse]

1895. *Peromyscus attwateri* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 7:330.

1896. *Peromyscus bellus* Bangs, Proc. Biol. Soc. Wash. 10:137.

1905. *Peromyscus boylei laceyi* Bailey, North Amer. Fauna 25:99.

1926. *Peromyscus boylii attwateri* Strecker, Baylor Univ. Bull. 29(3):29.

1972. *Peromyscus attwateri* Lee et al., J. Mamm. 53:706.

Type specimen.—Holotype, adult female, skin and skull, AMNH 10401/8712, obtained by H. P. Attwater on 12 March 1895, original number 7.

Type locality.—Turtle Creek, Kerr County, Texas.

Topotypes.—Kerr Co: Turtle Creek, 6 (USNM), 11 (AMNH), 2 (FMNH), 1 (MCZ); Lacey's Ranch, 1 (USNM). Last topotype collected 1899, no tissues available.

Near topotypes.—Kerr Co: 4 mi S Kerrville, 1 (MVZ); 3 mi S Kerrville, 1 (TCWC); Kerrville State Park, 3 mi S Kerrville, 1 (MVZ); 8 mi SW Kerrville, 1 (TCWC). Last near topotype collected 1940, no tissues available.

Remarks.—*P. attwateri* was elevated to the status of a separate species on the basis of chromosomal and morphometric differences compared to populations of *P. boylii rowleyi* in western Texas (Lee et al. 1972; Schmidly 1973a).

Peromyscus boylei laceyi Bailey, 1905
[Lacey Peromyscus]
= ***Peromyscus attwateri***
[Texas Deermouse]

1895. *Peromyscus attwateri* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 7:330.

1896. *Peromyscus bellus* Bangs, Proc. Biol. Soc. Wash. 10:137.

1905. *Peromyscus boylei laceyi* Bailey, North Amer. Fauna 25:99.

1906. *Peromyscus boylei attwateri* Bailey, Proc. Biol. Soc. Wash. 19:57.

1926. *Peromyscus boylii attwateri* Strecker, Baylor Univ. Bull. 29(3):29.

1972. *Peromyscus attwateri* Lee et al., J. Mamm. 53:706.

Type specimen.—Holotype, adult male, skin and skull, USNM 92746, obtained by H. P. Attwater on 4 December 1897, original number 1372-X.

Type locality.—Turtle Creek, Kerr County, Texas.

Topotypes.—Kerr Co: Turtle Creek, 6 (USNM), 11 (AMNH), 2 (FMNH), (1 MCZ); Lacey's Ranch, 1 (USNM). Last topotype collected 1899, no tissues available.

Near topotypes.—Kerr Co: 4 mi S Kerrville, 1 (MVZ); 3 mi S Kerrville, 1 (TCWC); Kerrville State Park, 3 mi S Kerrville, 1 (MVZ); 8 mi SW Kerrville, 1 (TCWC). Last near topotype collected 1940, no tissues available.

Remarks.—According to Osgood (1909), "the name *laceyi* is a pure synonym of *P. attwateri*, having been based on specimens from Turtle Creek (type locality of *attwateri*) on the supposition that the latter name applied to the form of *P. pectoralis* called *laceianus*."

Peromyscus boylii penicillatus Mearns, 1896
[Barefooted Brush Mouse]
= ***Peromyscus nasutus penicillatus***
[Northern Rock Deermouse]

1891. *Vesperimus nasutus* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 3:299.

1896. *Peromyscus boylii penicillatus* Mearns, Preliminary diagnoses of new mammals from the Mexican border of the United States, page 2, May 25 (preprint of Proc. U.S. Nat. Mus. 19:139).

1909. *Peromyscus boylii rowleyi* Osgood, N. Amer. Fauna 28:145.

1926. *Peromyscus nasutus* Strecker, Baylor Univ. Bull. 29(3):29.

1976. *Peromyscus difficilis penicillatus* Diersing, Proc. Biol. Soc. Wash. 89:462.

2004. *Peromyscus nasutus* Durish et al., J. Mamm. 85:1166.

2008. *Peromyscus nasutus penicillatus* Manning et al., Occas. Pap. Mus. Texas Tech Univ. 278:13.

Type specimen.—Holotype, adult female, skin and skull, USNM 20034/35426, obtained by E. A. Mearns and F. X. Holzner on 19 February 1892, original number 1463.

Type locality.—Foothills of Franklin Mountains, near El Paso, El Paso County, Texas.

Topotypes.—None.

Near topotypes.—El Paso: McKelligon Canyon State Park, 107 (MSB); McKelligon Canyon, 21 (TCWC). Last near topotype collected 1975, no tissues available.

Remarks.—At various times, this taxon has been considered a subspecies of *P. boylii*, *P. difficilis*, and *P. nasutus*. Diersing (1976) confirmed its status as a subspecies of *P. difficilis* along with *P. nasutus*. However, chromosome, allozyme, and mitochondrial DNA differences led to the elevation of *nasutus* to specific status (Zimmerman et al. 1975, 1978; Avise et al. 1979; Durish et al. 2004), resulting in this taxon being classified as *P. n. penicillatus*.

Peromyscus canus Mearns, 1896
[Mearns's White-footed Mouse]
= ***Peromyscus leucopus texanus***
[White-footed Deermouse]

1853. *Hesperomys texana* Woodhouse, Proc. Acad. Nat. Sci. Phil. 6:242.

1891. *Vesperimus mearnsii* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 3:300.

1896. *Peromyscus canus* Mearns, Preliminary diagnoses of new mammals from the Mexican border of the United States, p. 3, March 25 (preprint of Proc. U.S. Nat. Mus. 18:445).

1905. *Peromyscus leucopus mearnsi* Bailey, N. Amer. Fauna 25:96.

1909. *Peromyscus leucopus texanus* Osgood, N. Amer. Fauna 28:127.

Type specimen.—Holotype, adult female, skin and skull, USNM 21109/37096, obtained by E. A. Mearns on 13 January 1893, original number 2208.

Type locality.—Fort Clark, Kinney County, Texas.

Topotypes.—Kinney Co: Fort Clark, 35 (AMNH), 32 (USNM), 3 (FMNH), 1 (SUI); Brackettville, 1 (AMNH). Last topotype collected 1939, no tissues available.

Near topotypes.—None.

Peromyscus comanche Blair, 1943
[Texas Juniper-mouse]
= ***Peromyscus truei comanche***
[Piñon Deermouse]

1943. *Peromyscus comanche* Blair, Contr. Lab. Vert. Zool., Univ. Mich. 24:7.

1951. *Peromyscus nasutus comanche* Hoffmeister, Illinois Biol. Mono. 21:25.

1961. *Peromyscus difficilis comanche* Hoffmeister and de la Torre, J. Mamm. 42:9.

1973. *Peromyscus truei comanche* Schmidly, Southwest. Nat. 18:276.

Type specimen.—Holotype, adult female, skin and skull, UMMZ 66901, obtained by M. F. Landwer on 23 July 1932, original number 237.

Type locality.—Tule Canyon, H. Gill Ranch, 22 miles east of Tulia, Briscoe County, Texas.

Topotypes.—Briscoe Co: Gill Ranch, 22 mi E Tulia, 10 (UMMZ). Last topotype collected 1932, no tissues available.

Near topotypes.—Briscoe Co: Tule Canyon, 91 (UMMZ), 1 (TTU); 6 mi N, 4 mi W Silverton, 6 (MSB), 4 (TTU); 5 mi N, 6 mi W Silverton, 25 (MSB), 5 (TCWC) 4 (UMMZ); 4.5 mi N, 6 mi W Silverton, 1 (TTU); Tule Slope, 2 (TTU). Last near topotype collected 1990, tissues available.

Remarks.—This taxon has been considered at various times as a full species and as a subspecies of *P. nasutus*, *P. difficilis*, and *P. truei* (see Schmidly 1973b, Johnson and Packard 1974, Durish et al. 2004, and Wright et al. 2020 for a synopsis). Because of its restricted distribution on the eastern breaks of the Llano Estacado in Armstrong, Briscoe, and Randall counties, *P. comanche* is considered threatened by TPWD, but professional mammalogists are dubious of this designation (Schmidly et al. 2022).

Peromyscus eremicus arenarius Mearns, 1896
[Desert Peromyscus]
= ***Peromyscus eremicus eremicus***
[Cactus Deermouse]

1858. *Hesperomys eremicus* Baird, Mammals of North America in Reports Exploratory Survey……, 8:479.

1895. *Peromyscus eremicus* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 7:226.

1896. *Peromyscus eremicus arenarius* Mearns, Preliminary diagnoses of new mammals from the Mexican border of the United States, p. 2, May 25 (preprint of Proc. U.S. Nat. Mus. 19:138).

1926. *Peromyscus eremicus eremicus* Strecker, Baylor Univ. Bull. 29(3):27.

Type specimen.—Holotype, adult male, skin and skull, USNM 20018/35413, obtained by E. A. Mearns and F. X. Holzner on 25 February 1892, original number 1513.

Type locality.—Rio Grande, about 6 miles from El Paso, El Paso County, Texas.

Topotypes.—El Paso Co: near El Paso, 20 (USNM). Last topotype collected 1894, no tissues available.

Near topotypes.—El Paso Co: El Paso, 9 (TTU), 3 (USNM), 1 (KU, MSB, OMNH, TCWC); 4 mi NNW El Paso, 7 (KU); 3 mi W El Paso, 3 (TCWC). Last near topotype collected 1984, no tissues available.

Remarks.—Walpole et al. (1997) suggested that Texas populations of *Peromyscus eremicus* were distinct and should be recognized as *Peromyscus arenarius*; however, a limited geographic coverage has precluded an acceptance of this taxonomic change (Caire 1999).

Peromyscus leucopus brevicaudus Davis, 1939
[Short-tailed Peromyscus]
= ***Peromyscus leucopus leucopus***
[White-footed Deermouse]

1818. *Musculus leucopus* Rafinesque, Occas. Pap. Amer. Month. Mag. 3:446.

1895. *Peromyscus leucopus* Thomas, Ann. Mag. Nat. Hist., ser. 6, 15:192.

1939. *Peromyscus leucopus brevicaudus* Davis, Occas. Pap. Mus. Zool. Louisiana State Univ. Mus. 2:1.

1959. *Peromyscus leucopus leucopus* McCarley, Texas J. Sci. 11:408.

Type specimen.—Holotype, adult male, skin and skull TCWC 101, obtained by W. P. Taylor on 7 March 1935, original number A 324.

Type locality.—Huntsville, Walker County, Texas.

Topotypes.—Walker Co: Huntsville, 1 (TCWC). Last topotype collected 1935, no tissues available.

Near topotypes.—Walker Co: 7 mi E Huntsville, 1 (TCWC). Last near topotype collected 1936, no tissues available.

Remarks.—*P. l. brevicaudus* is regarded as inseparable from *P. l. leucopus* by McCarley (1959) and St. Romains (1975).

Peromyscus michiganensis pallescens J. A. Allen, 1896
[Little Pale Peromyscus]
= ***Peromyscus sonoriensis pallescens***
[Sonoran Deermouse]

1853. *Hesp*[*eromys*] *sonoriensis* Le Conte, Proc. Acad. Nat. Sci. Phil. 5:413.

1896. *Peromyscus michiganensis pallescens* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 8:238.

1909. *Peromyscus maniculatus pallescens* Osgood, N. Amer. Fauna 28:83.

2019. *Peromyscus sonoriensis pallescens* Bradley et al., Spec. Publ. Mus. Texas Tech Univ. 70:26.

Type specimen.—Holotype, adult male, skin and skull, AMNH 12213/10565, obtained by H. P. Attwater on 7 February 1896, original number 143.

Type locality.—San Antonio, Bexar County, Texas.

Topotypes.—Bexar Co: San Antonio, 11 (AMNH), 9 (USNM), 2 (FMNH). Last topotype collected 1897, no tissues available.

Near topotypes.—None.

Remarks.—This subspecies is listed as *Peromyscus maniculatus pallescens* in VertNet. Recent genetic evidence (Bradley et al. 2019) has resulted in *P. m. pallescens* being assigned as a subspecies to a newly recognized species, *Peromyscus sonoriensis*.

Peromyscus pectoralis laceianus Bailey, 1906
[None designated]
= ***Peromyscus laceianus***
[Lacey's White-ankled Deermouse]

1906. *Peromyscus pectoralis laceianus* Bailey, Proc. Biol. Soc. Wash. 19:57.

2015. *Peromyscus laceianus* Bradley et al., J. Mamm. 96:456.

Type specimen.—Holotype, adult male, skin and skull, USNM 97063, obtained by V. Bailey on 3 May 1899, original number 6860.

Type locality.—Ranch of Howard Lacey, Turtle Creek, 7 miles southwest of Kerrville, Kerr County, Texas (as listed in Fisher and Ludwig 2014).

Topotypes.—Kerr Co: Turtle Creek, 8 (USNM), 1 (FMNH). Last topotype collected 1898, no tissues available.

Near topotypes.—Kerr Co: 3.5 mi S, 5.25 mi W Kerrville, 53 (MSB); 8 mi SW Kerrville, 11 (TCWC); 6.5 mi S Kerrville, 2 (TTU); 6.5 mi S Kerrville/Turtle Creek on Neunhoffer Ranch, 6 (TTU). Last near topotype collected 1969, no tissues available.

Remarks.—This species is listed as *Peromyscus pectoralis laceianus* in VertNet. Bradley et al. (2015) showed that populations of *laceianus* were genetically and specifically distinct from Mexican populations of *P. pectoralis*.

Peromyscus taylori subater Bailey, 1905
[Dusky Baiomys]
= ***Baiomys taylori subater***
[Northern Pygmy Mouse]

1905. *Peromyscus taylori subater* Bailey, N. Amer. Fauna 25:102.

1912. *Baiomys taylori subater* Miller, Bull. U.S. Mus. Nat. Hist. 79:137.

Type specimen.—Holotype, adult female, skin and skull, USNM 32616/44539, obtained by William Lloyd on 25 February 1892, original number 1122.

Type locality.—Bernard Creek, 12 miles west of Columbia, Brazoria County, Texas.

Topotypes.—Brazoria Co: Bernard Creek, 12 mi W Columbia, 5 (USNM). Last topotype collected 1892, no tissues available.

Near topotypes.—Brazoria Co: Bernard Creek, near Columbia, 1 (USNM). Last near topotype collected 1892, no tissues available.

Remarks.—The subgenus *Baiomys* was elevated to generic status by Miller (1912) and confirmed by Packard (1960), so *Peromyscus taylori* is now recognized as *Baiomys taylori*. Packard (1960) reviewed geographic variation in this species and confirmed the presence of two subspecies in Texas, *B. t. taylori* and *B. t. subater*.

Peromyscus tornillo Mearns, 1896
[Texas White-footed Mouse]
= ***Peromyscus leucopus tornillo***
[White-footed Deermouse]

1896. *Peromyscus tornillo* Mearns, Preliminary diagnoses of new mammals from the Mexican border of the United States, page 3, March 25 (preprint of Proc. U.S. Nat. Mus. 18:445, 23 May 1896).

1905. *Peromyscus leucopus texanus* Bailey, N. Amer. Fauna 25:95.

1909. *Peromyscus leucopus tornillo* Osgood, N. Amer. Fauna 28:125.

Type specimen.—Holotype, adult male, skin and skull, USNM 20025/35420, obtained by E. A. Mearns and F. X. Holzner on 18 February 1892, original number 1458.

Type locality.—Rio Grande, 6 miles above El Paso, El Paso County, Texas.

Topotypes.—El Paso Co: near El Paso, 6 (USNM), 2 (SUI); Rio Grande Valley, 6 mi above El Paso, 3 (UMMZ). Last topotype collected 1907, no tissues available.

Near topotypes.—El Paso Co: El Paso, 3 (UTEP). Last near topotype collected 1936, no tissues available.

Remarks.—In his classic revision of the genus *Peromyscus*, Osgood (1909) confirmed that *P. tornillo* was a subspecies of *P. leucopus*, and its status has remained unchanged since his taxonomic revision.

Reithrodontomys griseus Bailey, 1905
[Little Gray Harvest Mouse]
= ***Reithrodontomys montanus griseus***
[Plains Harvest Mouse]

1905. *Reithrodontomys griseus* Bailey, N. Amer. Fauna 25:106.

1926. *Reithrodontomys albescens griseus* Howell, N. Amer. Fauna 36:23.

1935. *Reithrodontomys montanus griseus* Benson, J. Mamm. 16:141.

Type specimen.—Holotype, adult male, skin and skull, USNM 87852, obtained by H. P. Attwater on 4 March 1897, original number 1068.

Type locality.—San Antonio, Bexar County, Texas.

Topotypes.—Bexar Co: San Antonio, 10 (AMNH), 9 (USNM), 2 (FMNH); San Antonio, Capt Poor's Ranch, 5 (USNM). Last topotype collected 1897, no tissues available.

Near topotypes.—None.

Remarks.— The taxonomy of harvest mice (genus *Reithrodontomys*) in Texas changed dramatically over the 20th century (see Schmidly et al. 2022) and *R. griseus* has been relegated to a subspecies of *R. montanus* (Dowler 1999).

Reithrodontomys laceyi J. A. Allen, 1896
[Lacey's Harvest Mouse]
= ***Reithrodontomys fulvescens laceyi***
[Fulvous Harvest Mouse]

1896. *Reithrodontomys laceyi* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 8:235.

1905. *Reithrodontomys intermedius* Bailey, N. Amer. Fauna 25:104.

1914. *Reithrodontomys fulvescens intermedius* Howell, N. Amer. Fauna 36:47.

1953. *Reithrodontomys fulvescens laceyi* Russell, Texas J. Sci. 5:457.

Type specimen.—Holotype, adult female, skin and skull, AMNH 12212/10564, obtained by H. P. Attwater on 6 March 1896.

Type locality.—Watson's Ranch, 15 miles south of San Antonio, Bexar County, Texas.

Topotypes.—None.

Near topotypes.—None.

Remarks.—Howell (1914:47), in his revision of the genus *Reithrodontomys*, placed *laceyi* as a synonym under *R. f. intermedius*. However, Russell (1953:457) noted that specimens from central Texas could be separated without difficulty from *R. f. intermedius* and *R. f. aurantius*, and thus he recognized central Texas harvest mice as belonging to the subspecies *R. f. laceyi*.

Reithrodontomys merriami J. A. Allen, 1895
[Merriam Harvest Mouse]
= ***Reithrodontomys humulis merriami***
[Eastern Harvest Mouse]

1895. *Reithrodontomys merriami* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 7:119.

1914. *Reithrodontomys humulis merriami* Howell, N. Amer. Fauna 36:21.

Type specimen.—Holotype, adult male, skin and skull, USNM 32832/44853, obtained by W. Lloyd on 15 March 1892, original number 1162.

Type locality.—When Allen (1895) described *R. merriami*, he gave the type locality as Austin, near Alvin, Texas. Fisher and Ludwig (2016) further restricted the type locality to Austin Bayou, 10 miles southwest of Alvin, Brazoria County, Texas.

Topotypes.—Brazoria Co: Austin Bayou, near Alvin, 8 (USNM). Last topotype collected 1892, no tissues available.

Near topotypes.—None.

Remarks.—Modern taxonomists now regard *R. merriami* as a subspecies of *R. humulis*, the eastern harvest mouse (Schmidly et al. 2022).

Reithrodontomys mexicanus intermedius J. A. Allen, 1895
[Rio Grande Harvest Mouse]
= ***Reithrodontomys fulvescens intermedius***
[Fulvous Harvest Mouse]

1895. *Reithrodontomys mexicanus intermedius* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 7:136.

1905. *Reithrodontomys intermedius* Bailey, N. Amer. Fauna 25:104.

1914. *Reithrodontomys fulvescens intermedius* A. H. Howell, N. Amer. Fauna 36:47.

Type specimen.—Holotype, adult female, skin and skull, AMNH 4207/3237, obtained by F. B. Armstrong on 3 September 1891.

Type locality.—Brownsville, Cameron County, Texas.

Topotypes.—Cameron Co: Brownsville, 13 (AMNH), 20 (USNM), 3 (KU), 2 (FMNH), 1 (MCZ); Fort Brown, Brownsville, 1 (USNM). Last topotype collected 1941, no tissues available.

Near topotypes.—Cameron Co: Brownsville, 33 (AMNH), 12 (LACM), 2 (MSB), 1 (ANSP, LSUMZ, TTU); Resaca de la Palma State Park, 3 (TTU); Southmost Ranch, 5 mi SE Brownsville, 1 (TAIC); Noviega Refuge Brownsville, 1 (TCWC); near Brownsville, 1 (UMMZ); 1 mi W Villa Nueva, 2 (MSB); 5 mi S, 4.5 mi E Brownsville, 3 (MSB). Last near topotype collected 2006, tissues available.

Remarks.—For more than a century, taxonomists have continued to regard *R. m. intermedius* as a subspecies of the wide-ranging fulvous harvest mouse, *R. fulvescens* (Schmidly et al. 2022).

Sigmodon fulviventer dalquesti Stangl, 1992
[None designated]
[Tawny-bellied Cotton Rat]

1992. *Sigmodon fulviventer dalquesti* Stangl, Occas. Pap. Mus. Texas Tech Univ. 145:2.

Type specimen.—Holotype, adult male, TTU 59413. Previous catalog Midwestern State University, Collection of Recent Mammals number 17906, obtained by F. B. Stangl, Jr. on 27 March 1991, original field number 3085.

Type locality.—1.5 miles west of Point-of-Rocks Park, Jeff Davis County, Texas.

Topotypes.—Jeff Davis Co: 1.5 mi W Point-of-Rocks Park, 1 (ASNHC, OMNH, TCWC, TTU). Last topotype collected 1991, tissues available.

Near topotypes.—None.

Remarks.—The tawny-bellied cotton rat was first recorded in spring 1991 near Fort Davis, Jeff Davis County, by Fred Stangl (1992) of Midwestern State University. At the time, this represented a new taxon of mammal for Texas, and it was described as a distinct subspecies, *S. f. dalquesti*. Attempts to document it at the same place (and surrounding areas) since August 1991 have failed, which suggests that it is one of the state's rarest and most threatened rodents (Schmidly and Bradley 2016). It is listed as threatened by TPWD and critically imperiled by NatureServe. It is not listed by the USFWS.

Sigmodon hispidus pallidus Mearns, 1897
[Berlandier Cotton Rat]
= ***Sigmodon hispidus berlandieri***
[Hispid Cotton Rat]

1855. *Sigmodon berlandieri* Baird, Proc. Acad. Nat. Sci., Phil. 7:333.

1897. *Sigmodon hispidus pallidus* Mearns, Preliminary diagnoses of new mammals of the genera *Sciurus*, *Castor*, *Neotoma*, and *Sigmodon*, from the Mexican border of the United States, p. 4, March 5 (preprint of Proc. U.S. Nat. Mus. 20:504).

1902. *Sigmodon hispidus berlandieri* Bailey, Proc. Biol. Soc. Wash. 15:106.

Type specimen.—Holotype, adult male, skin and skull, USNM 20103/35464, obtained by E. A. Mearns and F. X. Holzner on 19 February 1892, original number 1461.

Type locality.—Left bank of the Rio Grande, about 6 miles above El Paso, and opposite the initial monument of the Mexican boundary, El Paso County, Texas (as listed in Fisher and Ludwig 2014).

Topotypes.—None.

Near topotypes.—El Paso Co: N bank Rio Grande, 4.8 mi NW El Paso City Hall, 39 (KU), 2 (UCONN), 1 (UF); El Paso, 6 (MSU), 4 (USNM); vicinity El Paso, 36 (UTEP). Last near topotype collected 1980, no tissues available.

Remarks.—Recent studies by Peppers and Bradley (2000) and Phillips et al. (2007) reported levels of genetic distinction between eastern (*S. h. texianus*) and western populations (*S. h. berlandieri*) of cotton rats in Texas that approach levels observed between other species of rodents; therefore, further studies are needed to resolve this taxonomic issue.

Sigmodon ochrognathus Bailey, 1902
[Chisos Mountain Cotton Rat]
[Yellow-nosed Cotton Rat]

1902. *Sigmodon ochrognathus* Bailey, Proc. Biol. Soc. Wash. 15:115.

Type specimen.—Holotype, adult female, skin and skull, USNM 110333, obtained by V. Bailey on 13 June 1901, original number 7681.

Type locality.—Chisos Mountains, 8,000 feet, Brewster County, Texas.

Topotypes.—Brewster Co: Chisos Mountains, 3 (USNM). Last topotype collected 1901, no tissues available.

Near topotypes.—Brewster Co: Big Bend National Park, Emory Peak, 2 (TCWC); Chisos Mtns, 3 (UMMZ); Chisos Mtns, SW Pulliam Peak, 2 (UMMZ); Chisos Mtns, W Pulliam Peak, 4 (UMMZ); base Emory Peak, La Laguna, 7 (AMNH); La Laguna, Chisos Mtns, 7000 ft, 3 (TCWC); Laguna, 0.25 mi W Mt Emory, Chisos Mtns, 6700 ft, 3 (MVZ); Chisos Mtns, Pine Canyon 4600 ft, 1 (UMMZ); Chisos Mtns, Pine Canyon, 4700 ft, 4 (UMMZ), 3 (MVZ); Laguna, 6500 ft, 1 (TCWC); BBNP, Laguna Meadow, 7000 ft, 3 (BBNP, SRSU), 1 (CM), 1 (TCWC); Pine Canyon, 5100 ft, Big Bend National Park, 9 (TCWC); Head Boot Springs Canyon, 7100 ft, 2 (TCWC), 1 (BBNP); Boot Springs, Chisos Mtns, 6800 ft, 1 (TCWC); Laguna Meadow Chisos Mtns, 10 (MVZ); Green Gulch, 5 (ISM); Green Gulch, Chisos Mtns, 5600 ft, 6 (TCWC); 0.25 mi W Laguna, Chisos Mtns, 2 (TCWC); Big Bend National Park, Emory Peak, 2 (TCWC); Boulder Meadow, 5700 ft, Big Bend National Park, 1 (TCWC); Juniper Flat, 5600 ft, Big Bend National Park, 1 (TCWC); Big Bend National Park, 4 (MSU), 2 (TTU); 3 mi S Government Spring, 4 (AMNH); Grapevine Springs, 3000 ft, BBNP, 1 (TCWC). Last near topotype collected 1975, tissues available.

Remarks.—*Sigmodon ochrognathus* is a monotypic species.

Vesperimus mearnsii J. A. Allen, 1891
[Mearns White-footed Mouse]
= ***Peromyscus leucopus texanus***
[White-footed Deermouse]

1853. *Hesperomys texana* Woodhouse, Proc. Acad. Nat. Sci. Phil. 6:242.

1891. *Vesperimus mearnsii* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 3:300.

1896. *Peromyscus canus* Mearns, Preliminary diagnoses of new mammals from the Mexican border of the United States, p. 3, March 25 (preprint of Proc. U.S. Nat. Mus. 18:445).

1909. *Peromyscus leucopus texanus* Osgood, N. Amer. Fauna 28:127.

Type specimen.—Holotype, adult female, skin and skull, AMNH 3400/2673, obtained by F. B. Armstrong on 4 February 1891, original number 646.

Type locality.—Brownsville, Cameron County, Texas.

Topotypes.—Cameron Co: Brownsville, 66 (AMNH), 13 (USNM), 3 (KU), 2 (FMNH, MCZ), 1 (CAS, CUMV, UCLA); Fort Brown, 5 (MCZ), 3 (USNM), 1 (UMMZ). Last topotype collected 1915, no tissues available.

Near topotypes.—Cameron Co: Brownsville, 56 (AMNH), 19 (FMNH, LACM), 7 (LSUMZ, SDNHM), 5 (CUMV), 1 (MSB, SBMNH); near Brownsville, 8 (UMMZ); 1 mi W Villa Nueva, 5 (MSB); 5 mi S, 4.5 mi E Brownsville, 26 (MSB). Last near topotype collected 1969, no tissues available.

Remarks.—*Vesperimus mearnsii* was based on seven specimens collected at Brownsville, Texas, 27 January to 11 March 1891 (Allen 1891). It was subsequently placed in the genus *Peromyscus* and for over a century has been regarded as a synonym of *P. leucopus texanus* (Osgood 1909).

Family Geomyidae

Almost one-fourth of the total mammal catalog and 40% of the rodents described from Texas are comprised of taxa described within four genera of geomyid rodents (*Cratogeomys*/*Pappogeomys* = 6 taxa; *Geomys* = 21 taxa; and *Thomomys* = 11 taxa). Within the three groups there exists considerable morphological conservation, resulting in confusion about the recognition of species and subspecies. Since the early 1900s, a vast literature has accumulated as researchers have attempted to decipher species and subspecies boundaries, using both morphological and genetic analysis (chromosomal, allozymes, mtDNA, and other molecular data). Unfortunately, in many cases this resulted in broad taxonomic generalizations based on small sample sizes and single characters. Recently, a comprehensive molecular genetic study (Bradley et al. 2023, in press), using larger samples sizes of specimens collected from or adjacent to type localities of most of the described taxa within each genus, has helped elucidate the taxonomic status of Texas pocket gophers. That study, combined with three published morphological monographs (Honeycutt and Schmidly 1979; Hollander 1990; and Beauchamp-Martin et al. 2019) have been followed in this catalog.

Cratogeomys castanops angusticeps Nelson and Goldman, 1934
[None designated]
[Yellow-faced Pocket Gopher]

1852. *Pseudostoma castanops* Baird, Expl. Surv. Valley Great Salt Lake Utah, Appen. C, Zool., p. 313.

1855. *Geomys clarkii* Baird, Proc. Acad. Nat Sci. Phil. 7:322.

1858. *Geomys castanops* Baird, Mammals in the Rep. Expl. Surv. Rept. to Pacific…, 8:384.

1895. *Cratogeomys castanops* Merriam, N. Amer. Fauna 8:159.

1926. *Cratogeomys castanops castanops* Strecker, Baylor Univ. Bull. 29(3):22.

1934. *Cratogeomys castanops angusticeps* Nelson and Goldman, Proc. Biol. Soc. Wash. 47:139.

1968. *Pappogeomys castanops angusticeps* Russell, Univ. Kansas Pub., Mus. Nat. Hist. 16:630.

1990. *Cratogeomys castanops angusticeps* Hollander, Spec. Publ. Mus. Texas Tech Univ. 33:36.

2008. *Cratogeomys castanops castanops* Hafner et al., J. Mamm. 89:199.

2016. *Cratogeomys castanops angusticeps* Schmidly and Bradley, Mammals of Texas, Univ. Texas Press, p. 533.

Type specimen.—Holotype, adult male, skin and skull, USNM 24503/31908, obtained by C. P. Streator on 11 November 1890, original number 434.

Type locality.—Eagle Pass, 3,000 feet, Maverick County, Texas.

Topotypes.—Maverick Co: Eagle Pass, 9 (USNM), 3 (SUI), 1 (KU). Last topotype collected 1890, no tissues available.

Near topotypes.—Maverick Co: 1 mi W Eagle Pass, 2 (TTU); 1 mi W Seco Mines, 2 (TTU). Last near topotype collected 1973, no tissues available.

Remarks.—Hafner et al. (2008) revised *Cratogeomys castanops* using mtDNA and nuDNA sequence variation, and they reduced the number of subspecies from 25 to two. All populations north of the Rio Grande, including those from Texas, were arranged into a single subspecies, *C. c. castanops*, which included the previously recognized subspecies from Texas (*perplanus*, *dalquesti*, *lacrimalis*, *parviceps*, *clarkii*, *angusticeps*, and *tamaulipensis*). Little consideration was given to morphological differences previously used to describe the various subspecies. Because their sample size was small (only three specimens from two of the Texas subspecies), mammalian taxonomists (Schmidly and Bradley 2016, Schmidly et al. 2022, and Bradley et al. 2023 [in press]) have not adopted their proposed taxonomic arrangement of subspecies and instead continue to recognize multiple subspecies based on the work of Hollander (1990). Numerous studies of pocket gophers of the genus *Geomys* in Texas, where many cryptic species and subspecies have been revealed based on chromosomal, genetic, and morphological features, have made us cautious about adopting sweeping taxonomic generalizations based on small sample sizes and single characters.

Cratogeomys castanops dalquesti Hollander, 1990
[None designated]
[Yellow-faced Pocket Gopher]

1852. *Pseudostoma castanops* Baird, Expl. Surv. Valley Great Salt Lake Utah, Appen. C, Zool., p. 313.

1855. *Geomys clarkii* Baird, Proc. Acad. Nat Sci. Phil. 7:322.

1858. *Geomys castanops* Baird, Mammals in the Rep. Expl. Surv. Rept. to Pacific…, 8:384.

1895. *Cratogeomys castanops* Merriam, N. Amer. Fauna 8:159.

1926. *Cratogeomys castanops castanops* Strecker, Baylor Univ. Bull. 29(3):22.

1979. *Pappogeomys castanops perplanus* Dowler and Genoways, Southwest. Nat. 24:600.

1990. *Cratogeomys castanops dalquesti* Hollander, Spec. Publ. Mus. Texas Tech Univ. 33:45.

2008. *Cratogeomys castanops castanops* Hafner, J. Mamm. 89:199.

2016. *Cratogeomys castanops dalquesti* Schmidly and Bradley, Mammals of Texas, Univ. Texas Press, p. 533.

Type specimen.—Holotype, adult female, skin and skull, TTU 44458, obtained by R. R. Hollander on 10 June 1986, original number 1506.

Type locality.—1 mile north, 4 miles west of Sterling City, Sterling County, Texas.

Topotypes.—None.

Near topotypes.— Sterling Co: Hwy 163, W of Sterling City, 5 (TTU); 23.7 mi E Garden City, Hwy 158, 1 (ASNHC); 25 mi E Garden City, Hwy 158, 1 (ASNHC). Last near topotype collected 2018, tissues available.

Remarks.—Hafner et al.'s (2008) conclusion that all Texas populations of this species belong to a single subspecies, *C. castanops castanops*, has not been adopted for purposes of this catalog. For an explanation, see account of *C. c. angusticeps*.

Cratogeomys castanops perplanus Nelson and Goldman, 1934
[None designated]
[Yellow-faced Pocket Gopher]

1852. *Pseudostoma castanops* Baird, Expl. Surv. Valley Great Salt Lake Utah, Appen. C, Zool., p. 313.

1855. *Geomys clarkii* Baird, Proc. Acad. Nat Sci. Phil. 7:322.

1858. *Geomys castanops* Baird, Mammals in the Rep. Expl. Surv. Rept. to Pacific…, 8:384.

1895. *Cratogeomys castanops* Merriam, N. Amer. Fauna 8:159.

1926. *Cratogeomys castanops castanops* Strecker, Baylor Univ. Bull. 29(3):22.

1934. *Cratogeomys castanops perplanus* Nelson and Goldman, Proc. Biol. Soc. Wash. 47:136.

1934. *Cratogeomys castanops lacrimalis* Nelson and Goldman, Proc. Biol. Soc. Wash. 47:137.

1968. *Pappogeomys castanops simulans* Russell, Univ. Kansas Pub. Mus. Nat. Hist. 16:656.

1968. *Pappogeomys castanops perplanus* Russell, Univ. Kansas Pub., Mus. Nat. Hist. 16:650.

1990. *Cratogeomys castanops perplanus* Hollander, Spec. Publ. Mus. Texas Tech Univ. 33:52.

2008. *Cratogeomys castanops castanops* Hafner, J. Mamm. 89:199.

2016. *Cratogeomys castanops perplanus* Schmidly and Bradley, Mammals of Texas, Univ. Texas Press, p. 533.

Type specimen.—Holotype, adult male, skin and skull, USNM 97171, obtained by V. Bailey on 5 June 1899, original number 6941.

Type locality.—Tascosa, Oldham County, Texas.

Topotypes.—Oldham Co: Tascosa, 3 (USNM); Boy's Ranch, horse pasture, 1 (TTU); 3 mi W Boy's Ranch Headquarters, 1 (TTU). Last topotype collected 2018, tissues available.

Near topotypes.—None.

Remarks.—Hafner et al.'s (2008) conclusion that all Texas populations of this species belong to a single subspecies, *C. castanops castanops*, has not been adopted for purposes of this catalog. For an explanation, see account of *C. c. angusticeps*.

Geomys arenarius Merriam, 1895
[Desert Pocket Gopher]
= ***Geomys arenarius arenarius***
[Desert Pocket Gopher]

1895. *Geomys arenarius* Merriam, N. Amer. Fauna 8:139.

1955. *Geomys arenarius arenarius* Miller and Kellogg, U.S. Nat. Mus. Bull. 205:338.

Type specimen.—Holotype, adult male, skin and skull, USNM 18117/25015, obtained by V. Bailey on 14 December 1889, original number 798.

Type locality.—El Paso, El Paso County, Texas.

Topotypes.—El Paso Co: El Paso, 7 (USNM). Last topotype collected 1892, no tissues available.

Near topotypes.—El Paso Co: El Paso, 2 (UMMZ), 1 (TCWC, UTEP); El Paso, 3750 ft, 8 (UTEP); east El Paso, 22 (USNM); Upper Valley, El Paso, 2 (UTEP), 1 (TTU); 5 mi S, 8 mi E El Paso City Hall, 3700 ft, 16 (KU); 10 mi SE El Paso City Hall, 17 (KU); 2 mi E El Paso City limits, El Paso, 15 (MVZ); River Bend Farm, 0.5 mi S Sunset Drive, El Paso, 1 (UTEP); various residences, El Paso, 3 (UTEP), 1 (ISM); E side Rio Grande, 0.5 mi N Country Club Road, 5 (UTEP); 3 mi N, 3 mi W Rio Grande shore, 1 (KU). Last near topotype collected 1986, no tissues available.

Remarks.—VertNet erroneously lists 1899 as the date of collection of the holotype; however, the specimen tags of both the skin and skull, as well as the USNM catalog ledger and Bailey's field notes for Number 798, all indicate 1889 as the collection date. Sudman et al. (2006) confirmed the separate species status of *G. arenarius*. The desert pocket gopher is not listed as a species of concern by TPWD or the USFWS, but NatureServe considers it vulnerable because of its highly restricted distribution.

Geomys breviceps ammophilus Davis, 1940
[Victoria Pocket Gopher]
= ***Geomys attwateri***
[Attwater's Pocket Gopher]

1895. *Geomys breviceps attwateri* Merriam, N. Amer. Fauna 8:135.

1940. *Geomys breviceps ammophilus* Davis, Bull. Texas Agri. Exper. Stat. 590:16.

1951. *Geomys bursarius ammophilus* R. H. Baker and Glass, Proc. Biol. Soc. Wash. 64:57.

1979. *Geomys bursarius attwateri* Honeycutt and Schmidly, Occas. Pap. Mus. Texas Tech Univ. 58:45.

1981. *Geomys attwateri* Tucker and Schmidly, J. Mamm. 62:270.

Type specimen.—Holotype, adult female, skin and skull, USNM 97010, obtained by V. Bailey on 26 April 1899, original number 6841.

Type locality.—Cuero, DeWitt County, Texas.

Topotypes.—DeWitt Co: Cuero, 4 (UCM), 3 (MSB), 2 (USNM), 1 (TTU). Last topotype collected 1970, no tissues available.

Near topotypes.—DeWitt Co: 1 mi SE Cuero, 1 (USNM); 1.13 mi SE Cuero, 6 (TTU). Last near topotype collected 2017, tissues available.

Remarks.—Several genetic studies have confirmed the specific distinctness of *G. attwateri* as originally proposed by Tucker and Schmidly (1981) (e.g., Sudman et al. 2006). Bradley et al. (2023, in press), based on genetic data, confirms that *G. breviceps ammophilus* is aligned with *attwateri* and not *breviceps*.

Geomys breviceps attwateri Merriam, 1895
[Attwater Pocket Gopher]
= ***Geomys attwateri***
[Attwater's Pocket Gopher]

1895. *Geomys breviceps attwateri* Merriam, N. Amer. Fauna 8:135.

1951. *Geomys bursarius attwateri* R. H. Baker and Glass, Proc. Biol. Soc. Wash. 64:57.

1981. *Geomys attwateri* Tucker and Schmidly, J. Mamm. 62:270.

Type specimen.—Holotype, adult male, skin and skull, USNM 51382, obtained by H. H. Keays on 18 November 1892, original number 36.

Type locality.—Rockport, Aransas County, Texas.

Topotypes.—Aransas Co: Rockport, 79 (AMNH), 19 (MSB), 13 (FMNH), 10 (CHAS, USNM), 7 (UCM), 6 (MCZ), 5 (TTU), 1 (LSUMZ, TCWC). Last topotype collected 1986, no tissues available.

Near topotypes.—Aransas Co: Nine Mile Point, Rockport, 2 (TTU); 0.41 mi SE Rockport, 2 (TTU); 0.57 mi SE Rockport, 2 (TTU); 1.1 mi E Rockport, 3 (TTU); 0.5 mi E Rockport, 2 (TTU); 0.5 mi SW Rockport, 13 (KU); 1.5 mi N Rockport, 3 (MSB); 2 mi E Rockport, 1 (TTU); 2 mi SW Rockport, 2 (TTU); 3 mi W Rockport, 3 (TTU); 2.5 mi NW Rockport, 1 (TTU); 4.5 mi NE Rockport, 1 (TTU); Talley Island, 3 (USNM); Fulton, 4 (KU). Last near topotype collected 2018, tissues available.

Remarks.—Sudman et al. (2006) and Bradley et al. (2023, in press) have confirmed the recognition of *G. attwateri* as a species.

Geomys breviceps brazensis Davis, 1938
[Brazos Pocket Gopher]
= ***Geomys brazensis brazensis***
[Brazos Pocket Gopher]

1895. *Geomys breviceps sagittalis* Merriam, N. Amer. Fauna 8:134.

1938. *Geomys breviceps brazensis* Davis, J. Mamm. 19:489.

1951. *Geomys bursarius brazensis* R. H. Baker and Glass, Proc. Biol. Soc. Wash. 64:57.

1979. *Geomys bursarius sagittalis* Honeycutt and Schmidly, Occas. Pap. Mus. Texas Tech Univ. 58:43.

1982. *Geomys breviceps sagittalis* Bohlin and Zimmerman, J. Mamm. 63:227.

2023. *Geomys brazensis brazensis* Bradley et al., Spec. Pub. Mus. Texas Tech Univ., in press.

Type specimen.—Holotype, adult female, skin and skull, TCWC 560, obtained by W. B. Davis on 20 February 1938, original number 2957.

Type locality.—5 miles east of Kurten, Grimes County, Texas.

Topotypes.—Grimes Co: 5 mi E Kurten, 2 (TCWC). Last topotype collected 1937, no tissues available.

Near topotypes.—Grimes Co: 5.81 mi E Kurten, 14 (TTU); 7.99 mi E Kurten, 6 (TTU); 8 mi SE Kurten, 3 (TTU). Brazos Co: 5.5 mi SE Kurten, 83 (TCWC); 4.8 mi SE Kurten, 7 (FHSM); 4.5 mi SE Kurten, 3 (TCWC); 5 mi SE Kurten, 4 (TCWC); 6.1 mi SE Kurten, 2 (TCWC); 3 mi E Kurten, 2 (TCWC), 1 (MCZ). Last near topotype collected 2018, tissues available.

Remarks.—Bradley et al. (2023, in press), based on genetic data, confirmed that *Geomys brazensis* should not be subsumed into *Geomys breviceps sagittalis* as recommended by Bohlin and Zimmerman (1982).

Geomys breviceps llanensis Bailey, 1905
[Llano Plains Gopher]
= ***Geomys texensis llanensis***
[Llano Pocket Gopher]

1905. *Geomys breviceps llanensis* Bailey, N. Amer. Fauna 25:129.

1940. *Geomys lutescens llanensis* Davis, Bull. Texas Agri. Exper. Sta. 590:32.

1947. *Geomys bursarius llanensis* Villa-R. and Hall, Univ. Kansas Publ. Mus. Nat. Hist. 1:234.

1991. *Geomys texensis* Block and Zimmermann, Southwest. Nat. 36:32.

2000. *Geomys texensis llanensis* Jolley et al., J. Mamm. 87:676.

2005. *Geomys texensis texensis* McAliley and Sudman, Southwest. Nat. 50:334.

2023. *Geomys texensis llanensis* Bradley et al., Spec. Pub. Mus. Texas Tech Univ., in press.

Type specimen.—Holotype, adult male, skin and skull, USNM 97086, obtained by V. Bailey on 15 May 1899, original number 6912.

Type locality.—Llano, Llano County, Texas.

Topotypes.—Llano Co: Llano, 8 (KU), 5 (USNM), 3 (UCM), 1 (TCWC). Last topotype collected 1984, no tissues available.

Near topotypes.—Llano Co: 0.54 mi N Llano, 4 (TTU); 1 mi E Llano, 3 (TCWC); 1.95 mi N Llano, 2 (TTU); 2 mi E Llano, 7 (TCWC); 2.1 mi N Llano, Llano River Golf Course, 2 (TTU); 2.9 mi NW Llano, 2 (TTU); 3 mi E Llano, 8 (KU); Oatman Creek, 3 mi S Llano, 6 (MVZ, TCWC); 4 mi E Llano, 2 (TCWC). Last near topotype collected 2018, tissues available.

Remarks.—On the basis of allozyme data, which revealed low genetic differentiation between *G. t. texensis* and *G. t. llanensis*, Block and Zimmerman (1991) concluded that these taxa were a single genetic entity and should be considered as a single taxon. However, subsequent molecular genetic studies (Jolley et al. 2000 and Sudman et al. 2006) continued to list both *texensis* and *llanensis* as subspecies, even though there was little genetic differentiation between them. In another molecular genetic study, McAliley and Sudman (2005) concluded these two subspecies were almost identical genetically and recommended they be grouped together under the name *G. t. texensis*. The most recent molecular genetic study continues to recognize *llanensis* as a valid subspecies (Bradley et al. 2023, in press). The TPWD SGCN lists this taxon as imperiled.

Geomys breviceps ludemani Davis, 1940
[Ludeman Pocket Gopher]
= ***Geomys breviceps sagittalis***
[Baird's Pocket Gopher]

1895. *Geomys breviceps sagittalis* Merriam, N. Amer. Fauna 8:134.

1940. *Geomys breviceps ludemani* Davis, Bull. Texas Agri. Exper. Stat. 590:19.

1951. *Geomys bursarius ludemani* R. J. Baker and Glass, Proc. Biol. Soc. Wash. 64:58.

1979. *Geomys bursarius sagittalis* Honeycutt and Schmidly, Occas. Pap. Mus. Texas Tech Univ. 58:43.

1982. *Geomys breviceps sagittalis* Bohlin and Zimmerman, J. Mamm. 63:227.

Type specimen.—Holotype, adult female, skin and skull, TCWC 1135, obtained by W. B. Davis on 25 November 1939, original number 247 of B. E. Ludeman.

Type locality.—7 miles southwest of Fannett, Jefferson County, Texas.

Topotypes.—Jefferson Co: 7 mi SW Fannett, 7 (TCWC). Last topotype collected 1939, no tissues available.

Near topotypes.—None.

Geomys breviceps pratincolus Davis, 1940
[Coastal Prairie Pocket Gopher]
= ***Geomys brazensis pratincolus***
[Baird's Pocket Gopher]

1895. *Geomys breviceps sagittalis* Merriam, N. Amer. Fauna 8:134.

1940. *Geomys breviceps pratincolus* Davis, Bull. Texas Agri. Exper. Stat. 590:18.

1951. *Geomys bursarius pratincolus* R. J. Baker and Glass, Proc. Biol. Soc. Wash. 64:57.

1979. *Geomys bursarius sagittalis* Honeycutt and Schmidly, Occas. Pap. Mus. Texas Tech Univ. 58:43.

1982. *Geomys breviceps sagittalis* Bohlin and Zimmerman, J. Mamm. 63:227.

2023. *Geomys brazensis pratincolus* Bradley et al., Spec. Pub. Mus. Texas Tech Univ., in press.

Type specimen.—Holotype, adult female, skin and skull, TCWC 1128, obtained by W. B. Davis on 24 November 1939, original number 3419.

Type locality.—2 miles east of Liberty, Liberty County, Texas.

Topotypes.—Liberty Co: 2 mi E Liberty, 10 (TCWC). Last topotype collected 1939, no tissues available.

Near topotypes.—Liberty Co: Liberty, 1 (UCM); 3.5 mi N Liberty Courthouse, 1 (LSUMZ). Last near topotype collected 1974, no tissues available.

Remarks.—Bradley et al. (2023, in press), based on molecular genetic data, confirmed that *Geomys*

brazensis pratincolus should not be subsumed into *Geomys breviceps sagittalis*.

Geomys breviceps sagittalis Merriam, 1895
[White-throated Pocket Gopher]
[Baird's Pocket Gopher]

1895. *Geomys breviceps sagittalis* Merriam, N. Amer. Fauna 8:134.

1951. *Geomys bursarius sagittalis* R. H. Baker and Glass, Proc. Biol. Soc. Wash. 64:57.

1982. *Geomys breviceps sagittalis* Bohlin and Zimmerman, J. Mamm. 63:227.

Type specimen.—Holotype, adult male, skin and skull, USNM 32936/44957, obtained by W. Lloyd on 28 March 1892, original number 1181.

Type locality.—Clear Creek, Galveston Bay, Galveston County, Texas. Davis (1940) placed the type locality at the southern end of Harris County.

Topotypes.—Galveston Co: Clear Creek, 3 (USNM); Clear Creek, near Galveston Bay, 20 (AMNH). Last topotype collected 1939, no tissues available.

Near topotypes.—Galveston Co: League City, 3 (CHAS); 1 mi N Texas City, 13 (MVZ), 10 (FMNH), 7 (USNM), 5 (TCWC), 3 (AMNH); 2 mi N Texas City, 5 (TTU). Harris Co: 3 mi NE Webster, 3 (TCWC). Last near topotype collected 1973, no tissues available.

Remarks.—The molecular genetic analysis of Bradley et al. (2023, in press) shows that samples of *sagittalis* from north of the Galveston Bay area in eastern Texas, Arkansas, and Louisiana form a separate genetic clade and likely represent an undescribed taxon.

Geomys breviceps terricolus Davis, 1940
[Texas City Pocket Gopher]
= ***Geomys breviceps sagittalis***
[Baird's Pocket Gopher]

1895. *Geomys breviceps sagittalis* Merriam, N. Amer. Fauna 8:134.

1940. *Geomys breviceps terricolus* Davis, Bull. Texas Agri. Exper. Stat. 590:17.

1951. *Geomys bursarius terricolus* R. H. Baker and Glass, Proc. Biol. Soc. Wash. 64:57.

1979. *Geomys bursarius sagittalis* Honeycutt and Schmidly, Occas. Pap. Mus. Texas Tech Univ. 58:43.

1982. *Geomys breviceps sagittalis* Bohlin and Zimmerman, J. Mamm. 63:227.

Type specimen.—Holotype, adult female, skin and skull, TCWC 624, obtained by W. B. Davis on 16 January 1937, original number 2936.

Type locality.—1 mile north of Texas City, Galveston County, Texas.

Topotypes.—Galveston Co: 1 mi N Texas City, 13 (MSB), 10 (FMNH), 7 (USNM), 4 (TCWC). Last topotype collected 1970, no tissues available.

Near topotypes.—Galveston Co: Texas City, 5 (LACM), 3 (AMNH); 2 mi N Texas City, 5 (TTU); Virginia Point, 9 (USNM). Last near topotype collected 1970, no tissues available.

Remarks.—When Davis (1940) described *G. b. terricolus*, he restricted its distribution to the type locality at Texas City, but he noted that specimens obtained by Bailey (1905) from Virginia Point (about 7 miles from Texas City) likely were assignable to this subspecies as well. When he described *G. b. saggitalis*, Merriam (1895b) assigned specimens from Arcadia, Texas, which is now part of Santa Fe, Galveston County, to that subspecies and Davis (1940) concurred with that assignment. Arcadia is about 15 airline miles from both Virginia Point and Texas City and about 20 miles from Clear Creek, the type locality of *G. b. saggitalis*. Honeycutt and Schmidly (1979) could not differentiate between *saggitalis* and *terricolus* and combined them as a single subspecies of *G. bursarius* under the name *saggitalis*, which had priority. After *G. breviceps* was elevated to separate species status from *G. bursarius*, this taxon became *G. breviceps saggitalis* (Bohlin and Zimmerman 1982).

Geomys bursarius knoxjonesi R. J. Baker and Genoways, 1975
[None designated]
= ***Geomys knoxjonesi***
[Jones's Pocket Gopher]

1975. *Geomys bursarius knoxjonesi* R. J. Baker and Genoways, Occas. Pap. Mus. Texas Tech Univ. 29:1.

1989. *Geomys knoxjonesi* R. J. Baker et al., Evol. 43:74.

Type specimen.—Holotype, adult female, skin, skull, and body skeleton, TTU 19872, obtained by S. L. Williams and E. F. Pemberton on 27 January 1974, original number 1303 of Williams, karyotype number TK 5074.

Type locality.—4.1 miles north, 5.1 miles east of Kermit, Winkler County, Texas.

Topotypes.—Winkler Co: 4.1 mi N, 5.1 mi E Kermit, 1 (FHSM). Last topotype collected 1974, no tissues available.

Near topotypes.—Winkler Co: 4.1 mi N, 5 mi E Kermit, 62 (TTU); 4 mi N, 6.1 mi E Kermit, 1 (TTU); 4.5 mi N, 4.5 mi E Kermit, 2 (TTU); 5.1 mi N, 5.1 mi E Kermit, 1 (TTU); 0.3 mi N, 2.5 mi E Kermit, 6 (TTU); 4 mi N, 0.5 mi W Kermit, 2 (TTU); Kermit, east city limits, 1 (MSB); 3.6 mi E Kermit, 1 (TTU); 5 mi E Kermit, 1 (TTU). Last near topotype collected 2018, tissues available.

Remarks.—Several recent molecular genetic studies have confirmed the specific distinctness of *G. knoxjonesi* (see Baker et al. 1989, Bradley et al. 1991, Jolley et al. 2000, and Sudman et al. 2006).

Geomys clarkii Baird, 1855
[Pecos Pocket Gopher]
= ***Cratogeomys castanops clarkii*** [of Maverick County]
[Yellow-faced Pocket Gopher]

1852. *Pseudostoma castanops* Baird, Expl. Surv. Valley Great Salt Lake Utah, Appen. C, Zool., p. 313.

1852. *Geomys castanops* Le Conte, Proc. Acad. Nat. Sci. Phil. 6:163.

1855. *Geomys clarkii* Baird, Proc. Acad. Nat. Sci. Phil., 7:332.

1875. *Geomys castanops* Coues, Rept. Maj. J. W. Powell's Explor. Colorado River in the west and its tributaries, 1869, 1870, 1871, and 1872:233.

1905. *Cratogeomys castanops* Merriam, N. Amer. Fauna 8:159.

2022. *Cratogeomys castanops clarkii* [see Remarks below].

Type specimen.—Holotype, sex unknown, skin, skull, and partial skeleton, USNM 6/1624, obtained by J. H. Clark, date unknown, original number unknown. Skin cataloged 12 Feb 1852; skull 15 Feb 1855 (see Fisher and Ludwig 2012). Type not designated by number in original description, but only one specimen, a skin and skull preparation, is mentioned. Reference to Baird (1858) shows that he had two specimens from Presidio del Norte obtained by Major W. H. Emory and collected by J. H. Clark, a skull only and one other whose measurements match those in the original description (see Fisher and Ludwig 2012). Nelson and Goldman (1934) reported that the type specimen was an adult female, but apparently that was *a lapsus* as the catalog of type specimens for the USNM does not indicate a sex for the type specimen and examination of the image for the type specimen indicates that it is a subadult individual based on dental wear and suture development.

Type locality.—Stated by Baird (1855) as Presidio del Norte, on the Rio Grande. Nelson and Goldman (1934) added "at or near the present town of Ojinaga," which would place it in Chihuahua, Mexico. Restricted in this publication to the Upper Rio Grande Crossing near the mouth of Cuervo Creek (also known as San Antonio Creek), about 18 air kilometers south of El Indio in Maverick County. See Remarks below.

Topotypes.—Maverick Co: Presidio del Norte, on the Rio Grande, 1 (USNM). Baird (1858) reported this second specimen. No tissues are available.

Near topotypes.—None. Baird (1858) listed two other specimens (USNM 447/1581 and 1737) of *G. clarkii* from the Pecos River, Texas, which is too far

away from the type locality for those specimens to be considered near topotypes.

Remarks.—John H. Clark, who collected the type specimen of *G. clarkii*, was a college educated naturalist assigned to the 1850–55 Boundary Survey field work between the US and Mexico, and he accompanied troops under the command of Lt. Colonel James Graham and Major William Emory during this time on excursions along the "Wool Road" from San Antonio to the Texas-Mexico border in the vicinity of Eagle Pass in Maverick County. Sometime during this period, Clark collected two pocket gophers from a locality he labeled "Presidio del Norte along the Rio Grande." These are the specimens that Spencer F. Baird used to describe *G. clarkii*. Subsequently, that locality was amended to "Presidio del Norte, on the Rio Grande, at or near the present town of Ojinaga, Chihuahua, Mexico" by Nelson and Goldman (1934) in their taxonomic revision of *Cratogeomys*, and unfortunately that locality restriction persisted in the literature. However, the herpetologists R. G. Webb and C. M. Eckerman (1998), in their explanation of the type locality and type specimen of the hog-nosed snake (*Heterodon nasicus*), demonstrated that "Presidio del Norte on the Rio Grande" was a Rio Grande crossing on the Texas side of the river southeast of Eagle Pass, about 4.3 air miles (7 km) southwest of El Indio, or approximately 19 miles (30.6 km) downstream from Eagle Pass in Maverick County, Texas. Subsequently, Carl Lieb in the herpetology catalog of this publication (see account of *Churchillia bellona*) further clarified that the location was most likely at the mouth of Cuervo Creek downstream of Webb and Eckerman's determination. Arthur Carl Victor Schott, a civilian surveyor and topographical artist who worked on the Boundary Survey from 1851 to 1855, sketched each of the boundary survey markers, including the one at the "Falls of Presidio de Rio Grande" in Maverick County, which further substantiated the location as more than 350 miles southeast of Ojinaga, Chihuahua, Mexico. Thus, the Nelson and Goldman (1934) reference to Presidio del Norte, which refers to Ojinaga and the Presidio-Ojinaga river crossing farther northwest on the Rio Grande, is considered an error and mistranscription for Presidio del Rio Grande.

This inappropriate restriction of the type locality has resulted in the application of the name *C. c. clarkii* for populations of this pocket gopher from the southern Trans-Pecos of Texas in Presidio and northwestern Brewster counties (see Hollander 1990). Another subspecies, *C. c. angusticeps*, was described by Nelson and Goldman (1934) from Maverick County with the type locality at Eagle Pass, about 44 kilometers (27.2 miles) upriver from Cuervo Creek. It is possible that *angusticeps* and *clarkii* are one and the same taxon, but without more detailed analysis this cannot be accurately determined. Examination of the online images of the type specimens (skin and skull) for the two taxa seems to suggest that the former has a smaller braincase than the latter, but without detailed cranial measurements this cannot be confirmed. According to Hollander, *angusticeps* is much paler in dorsal coloration than *clarkii* but this is not apparent from the online images. For these reasons, we tentatively continue to recognize both subspecies in Maverick County. The taxonomic assignment of specimens from localities surrounding Alpine and Marfa, Texas, previously referred to *C. c. clarkii*, is discussed below under the account of *Pappogeomys castanops pratensis*. Baird (1858) used the common name, Pecos gopher, in reference to *G. clarkii*, but the modern common name for *C. c. clarkii* is the yellow-faced pocket gopher (Schmidly and Bradley 2016).

Geomys lutescens major Davis, 1940
[Plains Pocket Gopher]
= ***Geomys bursarius major***
[Plains Pocket Gopher]

1940. *Geomys lutescens major* Davis, Bull. Texas Agric. Exper. Stat. 590:32.

1947. *Geomys bursarius major* Villa-R. and Hall, Univ. Kansas Publ. Mus. Nat. Hist. 1:229.

1979. *Geomys bursarius major* Honeycutt and Schmidly, Occas. Pap. Mus. Texas Tech Univ. 58:47.

Type specimen.—Holotype, adult female, skin and skull, TCWC 819, obtained by P. V. Jones on 29 December 1938, original number 35.

Type locality.—8 miles west of Clarendon, Donley County, Texas.

Topotypes.—None.

Near topotypes.—Donley Co: 4 mi W Clarendon, 1 (TCWC); 11 mi W Clarendon, 2 (TCWC); 3 mi S, 1.5 mi W Clarendon, 4 (TTU). Last near topotype collected 2004, tissues available.

Remarks.—Studies of molecular systematics of gophers of the genus *Geomys* by Sudman et al. (2006) and Bradley et al. (2023, in press) reinforced the taxonomic assignment of this taxon to *G. bursarius* and not *G. lutescens*.

Geomys personatus davisi Williams and Genoways, 1981
[None designated]
[Texas Pocket Gopher]

1981. *Geomys personatus davisi*, Williams and Genoways, Ann. Carnegie Mus. Nat. Hist. 50:459.

Type specimen.—Holotype, adult female, skin and skull, CM 48689, obtained by S. L. Williams on 16 November 1976, original number 208; karyotype number TK 6857.

Type locality.—3 miles north, 2.8 miles west of Zapata, Zapata County, Texas.

Topotypes.—Zapata Co: 3 mi N, 2.8 mi W Zapata, 13 (CM), 6 (TTU). Last topotype collected 2017, tissues available.

Near topotypes.—Zapata Co: 3 mi N, 4.2 mi W Zapata, 1 (CM); 6 mi NW Zapata, 1 (CM); Carrizo=Zapata, 1 (USNM); Swantner-Hunter Ranch, 1 mi NE Zapata, 2 (TCWC). Last near topotype collected 1978, no tissues available.

Remarks.—Concerning the taxonomic status of *G. p. davisi*, Sudman et al. (2006) suggested two choices were appropriate: either synonymize it into *G. tropicalis* (a closely related taxon from Tamaulipas, Mexico) or elevate it to species level. However, they concluded that it was premature to make permanent taxonomic changes because their dataset was small, so they tentatively retained *davisi* as a subspecies of *G. personatus*. Bradley et al. (2023, in press) had a larger sample size as well as material from the type locality, and they reaffirmed this taxonomic assignment. The TPWD SGCN lists this taxon as imperiled.

Geomys personatus fallax Merriam, 1895
[Nueces Pocket Gopher]
[Texas Pocket Gopher]

1895. *Geomys personatus fallax* Merriam, N. Amer. Fauna 8:144.

Type specimen.—Holotype, adult male, skin and skull, USNM 32031/43845, collected by W. Lloyd on 30 November 1891, original number 949.

Type locality.—South side of Nueces Bay, Nueces County, Texas.

Topotypes.—Nueces Co: S side Nueces Bay, 3 (UMMZ). Last topotype collected 1946, no tissues available.

Near topotypes.—Nueces Co: Corpus Christi, 21 (AMNH), 13 (USNM), 3 (UCM); 6 mi W Corpus Christi, S side Nueces Bay, 2 (TCWC); port area of Corpus Christi, 1 (TAIC); Calallen, 6 (LACM), 3 (MSB); 1 mi E Calallen, 8 (TCWC); Las Mottes, 1 (USNM). Last near topotype collected 1969, tissues available.

Remarks.—Williams and Genoways (1981) confirmed the taxonomic status of *G. p. fallax* and extended its distribution northward into Bee and Karnes counties where it abuts the range of *G. attwateri*.

Geomys personatus fuscus Davis, 1940
[Del Rio Pocket Gopher]
[Texas Pocket Gopher]

1940. *Geomys personatus fuscus* Davis, Texas Agri. Exper. Stat. Bull. 590:30.

Type specimen.—Holotype, subadult male, skin and skull, AMNH 12691/10985, obtained by E. A. Mearns on 6 February 1893, original number 2274.

Type locality.—Fort Clark (Brackettville), Kinney County, Texas.

Topotypes.—Kinney Co: Fort Clark, 11 (AMNH), 7 (USNM), 1 (FMNH). Last topotype collected 1893, no tissues available.

Near topotypes.—None.

Remarks.—Williams and Genoways (1981) confirmed the taxonomic status of *G. p. fuscus*, which is restricted to Val Verde and Kinney counties, although many attempts to collect this subspecies in recent years have failed to produce any evidence that it is extant (Schmidly et al. 2022).

Geomys personatus maritimus Davis, 1940
[Seaside Pocket Gopher]
[Texas Pocket Gopher]

1926. *Geomys personatus personatus* Strecker, Baylor Univ. Bull. 29(3):22.

1940. *Geomys personatus maritimus* Davis, Texas Agri. Exper. Stat. Bull. 590:26.

Type specimen.—Holotype, young adult female, skin and skull, TCWC 608, obtained by W. B. Davis on 21 April 1938, original number 3059.

Type locality.—Flour Bluff, 11 miles southeast of Corpus Christi, Nueces County, Texas.

Topotypes.—Nueces Co: 11 mi SE Corpus Christi, 9 (TCWC), 6 (MVZ, TTU), 2 (KU), 1 (MSB). Last topotype collected 2017, tissues available.

Near topotypes.—Nueces Co: Flour Bluff, 49 (TTU), 8 (TCWC), 6 (ANSP); Flour Bluff, 8.0 mi S, 8.3 mi E Corpus Christi, 5 (TTU); vicinity 1525 Ramfield Rd, SE Flour Bluff, 12 (TTU); Corpus Christi Naval Air Station, 2 (TTU), 1 (TCWC). Last near topotype collected 1998, tissues available.

Remarks.—Williams and Genoways (1981) confirmed the taxonomic status of *G. p. maritimus* and its limited distribution, which is "restricted to sandy soils of the mainland in Kleberg and Nueces counties, between Baffin Bay and Flour Bluff." The TPWD SGCN lists this taxon as imperiled.

Geomys personatus megapotamus Davis, 1940
[Rio Grande Pocket Gopher]
[Texas Pocket Gopher]

1926. *Geomys personatus personatus* Strecker, Baylor Univ. Bull. 29(3):22.

1940. *Geomys personatus megapotamus* Davis, Texas Agri. Exper. Stat. Bull. 590:27.

Type specimen.—Holotype, adult female, skin and skull, TCWC 794, obtained by W. B. Davis on 25 November 1938, original number 3254.

Type locality.—4 miles southeast of Oilton, Webb County, Texas.

Topotypes.—Webb Co: 4 mi SE Oilton, 9 (TTU), 6 (TCWC), 2 (KU). Last topotype collected 2017, tissues available.

Near topotypes.—Webb Co: between Oilton and Bruni on Hwy 359, 3 (TTU); 14 mi W Hebbronville, 3 (TTU). Last near topotype collected 1970, no tissues available.

Remarks.—Williams and Genoways (1981) confirmed the taxonomic status of *G. p. megapotamus*, which is the most widely distributed of all of the subspecies of this taxon. Given the low level of genetic divergence between *G. p. megapotamus* and *G. p. personatus*, it may be prudent to synonymize these two taxa, although this has not been officially adopted (Bradley et al. 2023, in press).

Geomys personatus minor Davis, 1940
[Carrizo Springs Pocket Gopher]
= ***Geomys streckeri***
[Strecker's Pocket Gopher]

1940. *Geomys personatus minor* Davis, Texas Agri. Exper. Stat. Bull. 590:29.

1943. *Geomys personatus streckeri* Davis, J. Mamm. 24:508.

2000. *Geomys streckeri* Jolley et al., J. Mamm. 81:1030.

Type specimen.—Holotype, adult female, skin and skull, TCWC 787, obtained by W. B. Davis on 24 November 1938, original number 3239.

Type locality.—Carrizo Springs, Dimmit County, Texas.

Topotypes.—Dimmit Co: Carrizo Springs, 40 (TTU), 13 (TCWC), 1 (LACM). Last topotype collected 2017, tissues available.

Near topotypes.—Dimmit Co: E side Carrizo Springs, US Hwy 85, 6 (TTU); 0.5 mi W Carrizo Springs, 6 (TTU); 1 mi E Carrizo Springs, 4 (TTU); 1 mi SW Carrizo Springs, 4 (TCWC); 1 mi S Carrizo Springs, 700 ft, 2 (TCWC); 1.5 mi E Carrizo Springs, 6 (TCWC). Last near topotype collected 1995, tissues available.

Remarks.—The name *G. p. minor* was preoccupied by *Geomys minor* (see Gidley 1922), and thus was not available for application to these gophers (Davis 1943; Williams and Genoways 1981). Therefore, the name was changed to *G. p. streckeri* by Davis (1943). Williams and Genoways (1981) noted the morphological distinctness of *G. streckeri*, compared to *G. p. fuscus*, and Sudman et al. (2006) and Bradley et al. (2023, in press) confirmed the conclusion of Jolley et al. (2000) that *G. streckeri* was a distinct species from *G. personatus*. The TPWD SGCN lists this taxon as imperiled.

Geomys personatus personatus True, 1889
[Padre Island Pocket Gopher]
[Texas Pocket Gopher]

1889. *Geomys personatus* True, Proc. U.S. Nat. Mus. [1888] 11:159.

1926. *Geomys personatus personatus* Strecker, Baylor Univ. Bull. 29(3):22.

Type specimen.—Two syntypes (see Fisher and Ludwig 2012 and Remarks below) previously designated by Williams and Genoways (1981) as lectotype and paralectotype. Lectotype, female, age undetermined, skin and skull (damaged), USNM 19668/38000, obtained by Mr. C. K. Worthen on 11 April 1888, no original number. Paralectotype, male, age undetermined, skin and skull (damaged), USNM 19667/37999, obtained by Mr. C. K. Worthen on 11 April 1888, no original number.

Type locality.—Padre Island [restricted by Williams and Genoways, 1981, to Padre Island, 6.1 miles south of Nueces County Park, 27°32' N, 97°15' W], Kleberg County, Texas.

Topotypes.—Kleberg Co: Padre Island, 6.1 mi S Nueces County Park, 5 (TTU). Last topotype collected 1971, no tissues available.

Near topotypes.—Kleberg Co: N Padre Island, 24 (TTU), 2 (MSB); 0.5 mi N entrance on Padre Island National Seashore, 2 (MSB); 0.25 mi N Entrance Padre Island National Seashore, 1 (TAIC). Nueces Co: N end Padre Island, 4 (TCWC), 2 (TTU). Last near topotype collected 1972, no tissues available.

Remarks.—No type designated by number in original description. Measurements and sex were given for two specimens, and these are the only specimens in the collection that are from 11 April 1888. Their measurements match those in the description as well. Williams and Genoways (1981) designated them as a lectotype and paralectotype, whereas Fisher and Ludwig (2012) regarded them as syntypes. We have followed Williams and Genoways (1981) in our assignment of the types, as well as confirmation of the trinomial assignment for this taxon. Also note, the VertNet records for the lectotype and paralectotype give Cameron County as the locality, although Williams and Genoways (1981) have shown that it should be in Kleberg County.

Geomys texensis Merriam, 1895
[Texas Pocket Gopher]
= ***Geomys texensis texensis***
[Llano Pocket Gopher]

1895. *Geomys texensis* Merriam, N. Amer. Fauna 8:137.

1938. *Geomys breviceps texensis* Davis, J. Mamm. 19:488.

1950. *Geomys bursarius texensis* R. H. Baker, J. Mamm. 31:349.

1991. *Geomys texensis* Block and Zimmerman, Southwest. Nat. 36:29.

1993. *Geomys texensis texensis* Smolen et al., Proc. Biol. Soc. Wash. 106:6.

Type specimen.—Holotype, adult female, skin and skull, USNM 186502, obtained by I. B. Henry on 17 December 1885, original number 1690/2259.

Type locality.—Mason, Mason County, Texas.

Topotypes.—Mason Co: Mason, 15 (MSB), 5 (UCM, USNM), 4 (MVZ, TTU), 1 (KU, TCWC). Last topotype collected 1970, no tissues available.

Near topotypes.—Mason Co: 1 mi SE Mason, 20 (KU); 1 mi W Mason, 2 (KU); 1 mi E Mason, 9 (TCWC); 1 mi N Mason, 1 (TCWC, TTU); 1 mi N, 1.1 mi W Mason, 4 (TTU); 2 mi SW Mason, Hwy 87, 1 (ASNHC); 2 mi W Mason, 1 (LSUMZ); 3.6 mi N, 1.5 mi W Mason, 1 (TTU); Mason Mtn Wildlife Management Area, 46 (TTU); 4.3 mi N Mason, 1 (ASNHC); 4.4 mi W Mason, US 377, 2 (TTU); 4.5 mi N Mason, Hwy 87, 4 (TTU); 1.5 mi N, 5 mi W Mason, 2 (TTU); 5 mi S Mason, 1 (MWSU). Last near topotype collected 2019, tissues available.

Remarks.—The recognition of *G. texensis* as a species has been confirmed by Block and Zimmeman (1991), Smolen et al. (1993), Jolley et al. (2000), and Sudman et al. (2006). These studies were based either on allozyme or genetic data. In two other molecular genetic studies, McAliley and Sudman (2005) and Bradley et al. (2023, in press) substantiated this conclusion and recognized two subspecies of *G. texensis*, *G. t. texensis*, and *G. t. bakeri*. McAliley and Sudman (2005) combined *G. t. llanensis* with *G. t. texensis*, but Bradley et al. (2023, in press) suggested it was best to recognize the two subspecies as distinct.

Geomys texensis bakeri Smolen et al., 1993
[None designated]
[Llano Pocket Gopher]

1993. *Geomys texensis bakeri* Smolen et al., Proc. Biol. Soc. Wash. 106:19.

Type specimen.—Holotype, adult male, skin, skull, and body skeleton, TCWC 52310, obtained by R. M. Pitts, on 3 January 1987, original number 1998.

Type locality.—1 mile east of D'Hanis, Medina County, Texas.

Topotypes.—Medina Co: 1 mi E D'Hanis, 16 (TCWC). Last topotype collected 1990, tissues available.

Near topotypes.—1 mi SE D'Hanis, 3 (TTU); 0.97 mi E D'Hanis, 5 (TTU); D'Hanis, 2 (TCWC); 6.2 mi W Hondo, 4 (TCWC); 5.5 mi W Hondo, 10 (TCWC); 4 mi SW Hondo, 1 (TCWC). Last near topotype collected 2018, tissues available.

Remarks.—Recognition of this taxon as a distinct subspecies has been validated by molecular genetic data (see McAliley and Sudman 2005, Sudman et al. 2006, and Bradley et al. 2023, in press). The TPWD SGCN lists this taxon as imperiled.

Pappogeomys castanops pratensis Russell, 1968
[Chestnut-faced Pocket Gopher]
= ***Cratogeomys castanops pratensis***
[Yellow-faced Pocket Gopher]

1852. *Pseudostoma castanops* Baird, Expl. Surv. Valley Great Salt Lake Utah, Appen. C, Zool., p. 313.

1855. *Geomys clarkii* Baird, Proc. Acad. Nat Sci. Phil. 7:332.

1858. *Geomys castanops* Baird, Mammals in Rep. Expl. Surv. Rept. To Pacific…., 8:384.

1895. *Cratogeomys castanops* Merriam, N. Amer. Fauna 8:159.

1926. *Cratogeomys castanops castanops* Strecker, Baylor Univ. Bull. 29(3):22.

1934. *Cratogeomys castanops clarkii* [of Mexican side of Big Bend section of Rio Grande Valley, in northeastern Chihuahua and northern Coahuila, Mexico] Nelson and Goldman, Proc. Biol. Soc. Wash. 47:140.

1968. *Pappogeomys castanops pratensis* Russell, Univ. Kansas Publ. Mus. Nat. Hist. 16:653.

1968. *Pappogeomys castanops clarkii* [of Rio Grande Valley, vicinity of Ojinaga, Chihuahua, Mexico] Russell, Univ. Kansas Publ. Mus. Nat. Hist. 16:638.

1990. *Cratogeomys castanops clarkii* [of Trans-Pecos Texas] Hollander, Spec. Publ. Mus. Texas Tech Univ. 33:42.

2008. *Cratogeomys castanops castanops* Hafner et al., J. Mamm. 89:199.

2023. *Cratogeomys castanops pratensis* Bradley et al., Spec. Pub. Mus. Texas Tech Univ., in press.

Type specimen.—Holotype, adult female, skin and skull, KU 52051, obtained by G. H. Heinrich on 30 December 1952, original number 5684.

Type locality.—3 miles south, 8 miles west of Alpine, 5,100 feet, Brewster County, Texas.

Topotypes.—Brewster Co: 8 mi W, 3 mi S Alpine, 4 (KU). Last topotype collected 1952, no tissues available.

Near topotypes.—Brewster Co: 6 mi W Alpine, 8 (AMNH); 4 mi W, 3 mi S Alpine, 2 (MSB); 10 mi W, 3 mi S Alpine, 2 (KU); 6 mi W, 2 mi S Alpine, 2 (KU); 5 mi W Alpine, 1 (MSB). Jeff Davis Co: 10 mi W Alpine, 2 (FHSM). Last near topotype collected 1969, no tissues available.

Remarks.—Restriction of the type locality of *Geomys clarkii* to Maverick County in southern Texas renders that name invalid for populations of this gopher from the Trans-Pecos part of the state. By rule of priority, *Cratogeomys castanops pratensis* would become the tentative name available for these populations, and this assignment has been confirmed by molecular genetic data (Bradley et al. 2023, in press).

Pappogeomys castanops simulans Russell, 1968
[Chestnut-faced Pocket Gopher]
= ***Cratogeomys castanops perplanus***
[Yellow-faced Pocket Gopher]

1852. *Pseudostoma castanops* Baird, Expl. Surv. Valley Great Salt Lake Utah, Appen. C, Zool., p. 313.

1855. *Geomys clarkii* Baird, Proc. Acad. Nat Sci. Phil. 7:322.

1858. *Geomys castanops* Baird, Mammals in Rep. Expl. Surv. Rept. To Pacific…., 8:384.

1895. *Cratogeomys castanops* Merriam, N. Amer. Fauna 8:159.

1926. *Cratogeomys castanops castanops* Strecker, Baylor Univ. Bull. 29(3):22.

1934. *Cratogeomys castanops perplanus* Nelson and Goldman, Proc. Biol. Soc. Wash. 47:136.

1968. *Pappogeomys castanops simulans* Russell, Univ. Kansas Pub. Mus. Nat. Hist. 16:656.

1979. *Pappogeomys castanops perplanus* Dowler and Genoways, Southwest. Nat. 24:600.

1990. *Cratogeomys castanops perplanus* Hollander, Spec. Publ. Mus. Texas Tech Univ. 33:52.

2008. *Cratogeomys castanops castanops* Hafner et al., J. Mamm. 87:199.

2016. *Cratogeomys castanops perplanus* Schmidly and Bradley, Mammals of Texas, Univ. Texas Press, p. 533.

Type specimen.—Holotype, female, adult, skin and skull, TTU 91597. The holotype, obtained 10 July 1947 by W. F. Blair, was originally housed at the Texas Natural History Collection, University of Texas (original number TNHC 1817).

Type locality.—17 miles southeast of Washburn, Armstrong County, Texas.

Topotypes.—Armstrong Co: 17 mi SE Washburn, 7 (TTU). Last topotype collected 1949, no tissues available.

Near topotypes.—Armstrong Co: Palo Duro Canyon, 3 (FMNH); 8 mi S, 7 mi W Claude, 1 (KU). Last near topotype collected 1969, no tissues available.

Remarks.—Dowler and Genoways (1979) allocated specimens referred by Russell (1968) as *C. c. simulans* to *C. c. perplanus* and placed the name *simulans* in synonymy, and Hollander (1990) confirmed this arrangement. Hafner et al. (2008) proposed an alternative interpretation of the subspecies of *C. castanops*, but that arrangement has not been adopted, as explained in the Remarks section of the account for *C. c. angusticeps*, and by the recent molecular genetics study of Bradley et al. (2023, in press).

Pappogeomys castanops torridus Russell, 1968
[Chestnut-faced Pocket Gopher]
= ***Cratogeomys castanops pratensis***
[Yellow-faced Pocket Gopher]

1852. *Pseudostoma castanops* Baird, Expl. Surv. Valley Great Salt Lake Utah, Appen. C, Zool., p. 313.

1855. *Geomys clarkii* Baird, Proc. Acad. Nat Sci. Phil. 7:332.

1858. *Geomys castanops* Baird, Mammals in Rep. Expl. Surv. Rept. To Pacific…., 8:384.

1895. *Cratogeomys castanops* Merriam, N. Amer. Fauna 8:159.

1926. *Cratogeomys castanops castanops* Strecker, Baylor Univ. Bull. 29(3):22.

1934. *Crategeomys castanops clarkii* Nelson and Goldman, Proc. Biol. Soc. Wash. 47:140.

1968. *Pappogeomys castanops torridus* Russell, Univ. Kansas Pub., Mus. Nat. Hist. 16:665.

1990. *Cratogeomys castanops clarkii* Hollander, Spec. Publ. Mus. Texas Tech Univ. 33:42.

2008. *Cratogeomys castanops castanops* Hafner et al., J. Mamm. 87:199.

2022. *Cratogeomys castanops pratensis* [this publication, see Remarks below].

Type specimen.—Holotype, adult female, skin and skull, KU 84461, obtained by M. R Lee on 13 August 1960, original number 2659.

Type locality.—3 miles east of Sierra Blanca, about 4,000 feet, Hudspeth County, Texas.

Topotypes.—None.

Near topotypes.—Hudspeth Co: 2 mi E Sierra Blanca, 2 (KU); Sierra Blanca, 4 (MSB), 2 (TTU, USNM); 1 mi N, 0.5 mi E Sierra Blanca, 8 (MSB); 0.25 mi W Sierra Blanca, 4 (MSB); 2 mi N Sierra Blanca, 1 (UAZ); 1.5 mi W Sierra Blanca, 2 (UAZ), 1 (TTU). Last near topotype collected 2017, tissues available.

Remarks.—Justification for the use of the name combination *C. c. pratensis* is explained in the account of *Pappogeomys castanops pratensis*, and by the recent molecular genetics study of Bradley et al. (2023, in press).

Thomomys aureus lachuguilla Bailey, 1902
[Lachuguilla Gopher]
= ***Thomomys baileyi lachuguilla***
[Bailey's Pocket Gopher]

1902. *Thomomys aureus lachuguilla* Bailey, Proc. Biol. Soc. Wash. 15:120.

1926. *Thomomys lachuguilla* Strecker, Baylor Univ. Bull. 29(3):21.

1936. *Thomomys lachuguilla limitaris* Goldman, J. Wash. Acad. Sci. 26:118.

1938. *Thomomys bottae lachugilla* [sic] Goldman, Proc. Biol. Soc. Wash. 51:55.

1938. *Thomomys bottae pervarius* Goldman, Proc. Biol. Soc. Wash. 51:57.

1959. *Thomomys umbrinus lachuguilla* Hall and Kelson, Mammals of North America, Ronald Press, p. 426.

2019. *Thomomys bottae lachuguilla* Beauchamp-Martin et al., Spec. Publ. Mus. Texas Tech Univ. 71:530.

2023. *Thomomys baileyi lachuguilla* Bradley et al., Spec. Pub. Mus. Texas Tech Univ., in press.

Type specimen.—Holotype, adult male, skin and skull, USNM 110336, obtained by V. Bailey on 24 September 1901, original number 7858.

Type locality.—Arid foothills near El Paso, Franklin Mountains, El Paso County. Bailey (1915) later restricted the type locality to a dry wash, 1 mile northeast of El Paso (Hooper 1941).

Topotypes.—El Paso Co: El Paso, 11 (USNM); foothills, Mt Franklin, 1 (UMMZ). Last topotype collected 1936, no tissues available.

Near topotypes.—El Paso Co: El Paso, 7 (UTEP); El Paso, McKelligon Canyon Park, 4 (MSB); 2.5 mi W Fort Bliss, 8 (MSB); Franklin Mtns State Park, 4 (TTU); El Paso Museum of Archeology, 1 (TTU); Fort Bliss, 1 (USNM); 0.5 mi N Tom Mays Memorial Park, 1 (UTEP); Tom Mays Park, 1.2 mi N Transmountain Rd., 1 (UTEP); 1 mi W Southgate, N side Transmountain Rd, El Paso, 1 (UTEP). Last near topotype collected 2017, tissues available.

Remarks.—Historically, these gophers in the Trans-Pecos, and elsewhere in their Texas range, were assigned to the species *Thomomys bottae*. However, Alvarez-Cataneda (2010) suggested that all nominal taxa with type localities in Texas should be recognized as a separate species. Bradley et al. (2023, in press) concurred and applied the name *Thomomys baileyi* to all of the taxa because that name had priority. These gophers show extensive morphological variation, and 10 subspecies have been described from the Trans-Pecos. Beauchamp-Martin et al. (2019) made an extensive study of the morphology of these subspecies and reduced that number to six. However, on the basis of their molecular genetics data, Bradley et al. (2023, in press) rejected this interpretation and continued to recognize the originally described subspecies. We have followed this approach in all subsequent taxonomic assignments for this catalog. Despite numerous attempts, *T. b. baileyi* has not been collected in several decades, and this subspecies may now be extinct in the Trans-Pecos (Schmidly et al. 2022).

Thomomys baileyi Merriam, 1901
[Sierra Blanca Pocket Gopher]
= ***Thomomys baileyi baileyi***
[Bailey's Pocket Gopher]

1901. *Thomomys baileyi* Merriam, Proc. Biol. Soc. Wash. 14:109.

1915. *Thomomys lachuguilla* (in part) Bailey, N. Amer. Fauna 39:89.

1926. *Thomomys baileyi* Strecker, Baylor Univ. Bull. 29(3):21.

1932. *Thomomys baileyi baileyi* Hall, Univ. California Publ. Zool. 38:411.

1966. *Thomomys bottae baileyi* Anderson, Syst. Zool. 15:195.

1959. *Thomomys baileyi baileyi* Hall and Kelson, Mammals of North America, Ronald Press, p. 435.

1981. *Thomomys umbrinus baileyi* Hall, Mammals of North America, John Wiley & Sons, Inc., p. 477.

2019. *Thomomys bottae baileyi* Beauchamp-Martin et al., Spec. Publ. Mus. Texas Tech Univ. 71:528.

2023. *Thomomys baileyi baileyi* Bradley et al., Spec. Publ. Mus. Texas Tech Univ., in press.

Type specimen.—Holotype, adult female, skin and skull, USNM 18256/25159, obtained by V. Bailey on 28 December 1889, original number 870.

Type locality.—Sierra Blanca, Hudspeth County, Texas. Bailey (1915) further restricted the type locality to "railway station at junction of Texas Pacific and Southern Pacific railroads" in Sierra Blanca (Hooper 1941).

Topotypes.—Hudspeth Co: Sierra Blanca, 5 (USNM). Last topotype collected 1889, no tissues available.

Near topotypes.—Hudspeth Co: Sierra Blanca, 2 (LACM); 1 mi E Sierra Blanca, 2 (USNM); 3 mi N

Sierra Blanca, 1 (TCWC). Last near topotype collected 1940, no tissues available.

Remarks.—This taxon is known only from the region of the type locality and is now thought to be extinct (see Schmidly et al. 2022).

Thomomys baileyi spatiosus Goldman, 1938
[Alpine Pocket Gopher]
[Bailey's Pocket Gopher]

1938. *Thomomys baileyi spatiosus* Goldman, Proc. Biol. Soc. Wash. 51:58.

1966. *Thomomys bottae spatiosus* Anderson, Syst. Zool. 15:195.

1959. *Thomomys baileyi spatiosus* Hall and Kelson, Mammals of North America, Ronald Press, p. 435.

1981. *Thomomys umbrinus spatiosus* Hall, Mammals of North America, John Wiley & Sons, Inc., p. 494.

2019. *Thomomys bottae spatiosus* Beauchamp-Martin et al., Spec. Publ. Mus. Texas Tech Univ. 71:533.

2023. *Thomomys baileyi spatiosus* Bradley et al., Spec. Publ. Mus. Texas Tech Univ., in press.

Type specimen.—Holotype, adult male, skin and skull, USNM 100427, obtained by V. Bailey on 26 May 1900, original number 7368.

Type locality.—Alpine, 4,500 feet, Brewster County, Texas.

Topotypes.—None.

Near topotypes.—None.

Thomomys bottae guadalupensis Goldman, 1936
[Guadalupe Mountains Pocket Gopher]
= ***Thomomys baileyi guadalupensis***
[Bailey's Pocket Gopher]

1852. *Geomys fulvus* Woodhouse, Proc. Acad. Nat. Sci. Phil. 6:201.

1902. *Thomomys fulvus texensis* Bailey, Proc. Biol. Soc. Wash. 15:119.

1926. *Thomomys fulvus fulvus* Strecker, Baylor Univ. Bull. 29(3):20.

1935. *Thomomys bottae texensis* Goldman, Proc. Biol. Soc. Wash. 48:157.

1936. *Thomomys bottae guadalupensis* Goldman, J. Wash Acad. Sci. 26:117.

1959. *Thomomys umbrinus guadalupensis* Hall and Kelson, Mammals of North America, Ronald Press, p. 425.

2019. *Thomomys bottae texensis* Beauchamp-Martin et al., Spec. Publ. Mus. Texas Tech Univ. 71:533.

2023. *Thomomys baileyi guadalupensis* Bradley et al., Spec. Publ. Mus. Texas Tech Univ., in press.

Type specimen.—Holotype, adult male, skin and skull, USNM 109225, obtained by V. Bailey on 22 August 1901, original number 7821.

Type locality.—McKittrick Canyon, 7,800 feet, Guadalupe Mountains, Culberson County, Texas (Hooper 1941).

Topotypes.—Culberson Co: McKittrick Canyon, Guadalupe Mtns, 5 (TCWC), 3 (TTU, USNM). Last topotype collected 1973, no tissues available.

Near topotypes.—Culberson Co: McKittrick Canyon, lower part, 6 (KU); The Bowl, Guadalupe Mountains National Park (GMNP), 2 (TCWC); Bear Canyon Pump House, GMNP, 1 (TTU); Manzanita Spring, GMNP, 1 (TTU); Nipple Hill, GMNP, 1 (TTU); Upper Bear Canyon Trail, GMNP, 2 (TTU). Last near topotype collected 2018, tissues available.

Thomomys bottae limpiae Blair, 1939
[Limpia Canyon Pocket Gopher]
= ***Thomomys baileyi limpiae***
[Bailey's Pocket Gopher]

1939. *Thomomys bottae limpiae* Blair, Occas. Pap. Mus. Zool. Univ. Mich. 403:2.

1959. *Thomomys umbrinus limpiae* Hall and Kelson, Mammals of North America, Ronald Press, p. 427.

2019. *Thomomys bottae limpiae* Beauchamp-Martin et al., Spec. Publ. Mus. Texas Tech Univ. 71:532.

2023. *Thomomys baileyi limpiae* Bradley et al., Spec. Publ. Mus. Texas Tech Univ., in press.

Type specimen.—Holotype, young adult male, skin and skeleton, UMMZ 79105, obtained by W. F. Blair on 22 March 1937, original number 697.

Type locality.—Limpia Canyon, 1 mile north of Fort Davis, 4,700 feet, Jeff Davis County, Texas.

Topotypes.—Jeff Davis Co: Limpia Canyon, 1 mi N Fort Davis, 13 (TCWC), 1 (MVZ). Last topotype collected 1941, no tissues available.

Near topotypes.—Jeff Davis Co: Fort Davis, 2 (MSB, UMMZ), 5 (USNM); 1 mi NW Fort Davis, 4700 ft, 1 (UMMZ); 2 mi NW of Fort Davis, near mouth of Limpia Canyon, 3 (KU). Last near topotype collected 1950, no tissues available. The TPWD SGCN lists this taxon as imperiled.

Thomomys bottae pervarius Goldman, 1938
[Marfa Pocket Gopher]
= ***Thomomys baileyi pervarius***
[Bailey's Pocket Gopher]

1902. *Thomomys aureus lachuguilla* Bailey, Proc. Biol. Soc. Wash. 15:120.

1926. *Thomomys lachuguilla* Strecker, Baylor Univ. Bull. 29(3):21.

1936. *Thomomys lachuguilla limitaris* Goldman, J. Wash. Acad. Sci. 26:118.

1938. *Thomomys bottae lachugilla* [sic], Goldman, Proc. Biol. Soc. Wash. 51:55.

1938. *Thomomys bottae pervarius* Goldman, Proc. Biol. Soc. Wash. 51:57.

1959. *Thomomys umbrinus pervarius* Hall and Kelson, Mammals of North America, Ronald Press, p. 430.

2019. *Thomomys bottae lachuguilla* Beauchamp-Martin et al., Spec. Publ. Mus. Texas Tech Univ. 71:531.

2023. *Thomomys baileyi pervarius* Bradley et al., Spec. Publ. Mus. Texas Tech Univ., in press.

Type specimen.—Holotype, young adult male, skin and skull, USNM 18201/25105, obtained by V. Bailey on 20 January 1890, original number 900.

Type locality.—Lloyd Ranch, 35 miles south of Marfa, 4,200 feet, Presidio County, Texas.

Topotypes.—Presidio Co: 35 mi S Marfa, 1 (USNM). Last topotype collected 1890, no tissues available.

Near topotypes.—Presidio Co: 1.7 mi N Shafter, 1 (TTU). Last near topotype collected 2018, tissues available.

Thomomys bottae robertbakeri Beauchamp-Martin et al., 2019
[None designated]
= ***Thomomys baileyi robertbakeri***
[Bailey's Pocket Gopher]

1901. *Thomomys perditus* Merriam, Proc. Biol. Soc. Wash. 15:120.

1936. *Thomomys lachuguilla limitaris* Goldman, J. Wash. Acad. Sci. 26:118.

1938. *Thomomys bottae limitaris* Goldman, Proc. Biol. Soc. Wash. 51:55.

2019. *Thomomys bottae robertbakeri* Beauchamp-Martin et al., Spec. Publ. Mus. Texas Tech Univ. 71:526.

2023. *Thomomys baileyi robertbakeri* Bradley et al., Spec. Pub. Mus. Texas Tech Univ., in press.

Type specimen.—Holotype, adult female (no embryos), skin and skull specimen, TTU 43737, obtained 18 March 1986 by J. K. Jones, Jr., original number 6135.

Type locality.—2.5 miles east of McCamey, Upton County, Texas.

Topotypes.—Upton Co: 2.5 mi E McCamey, 6 (TTU). Last topotype collected 1986, tissues available.

Near topotypes.—Upton Co: McCamey, 3 (TTU); McCamey Country Club, 1 (TTU); 1 mi E McCamey, 2 (TTU); 1.5 mi E McCamey, 3 (TTU); 3 mi E McCamey, 3 (TTU); 4 mi N, 4 mi E McCamey, 1 (TTU). Last near topotype collected 1987, tissues available.

Thomomys bottae scotophilus Davis, 1940
[Sierra Diablo Pocket Gopher]
= ***Thomomys baileyi scotophilus***
[Botta's Pocket Gopher]

1902. *Thomomys fulvus texensis* Bailey, Proc. Biol. Soc. Wash. 15:119.

1935. *Thomomys bottae texensis* Goldman, Proc. Biol. Soc. Wash. 48:157.

1939. *Thomomys umbrinus texensis* Blair, Occas. Pap. Univ. Mich. Mus. Zool. 403:2.

1940. *Thomomys bottae scotophilus* Davis, J. Mamm. 21:204.

1959. *Thomomys umbrinus scotophilus* Hall and Kelson, Mammals of North America, Ronald Press, p. 432.

2019. *Thomomys bottae texensis* Beauchamp-Martin et al., Spec. Publ. Mus. Texas Tech Univ. 71:531.

2023. *Thomomys baileyi scotophilus* Bradley et al., Spec. Pub. Mus. Texas Tech Univ, in press.

Type specimen.—Holotype, adult female, skin and skull, TCWC 682, obtained by W. B. Davis on 27 August 1938, original number 3220.

Type locality.—1.5 miles west of Bat Cave, Sierra Diablo Mountains, Hudspeth County, Texas.

Topotypes.—None.

Near topotypes.—Hudspeth Co: Bat Cave, Diablo Mtns, 5 (TCWC). Culberson Co: Sierra Diablo WMA, 9 (TTU). Last topotype collected 2018, tissues available.

Thomomys fulvus texensis Bailey, 1902
[Davis Mountains Pocket Gopher]
= ***Thomomys baileyi texensis***
[Bailey's Pocket Gopher]

1902. *Thomomys fulvus texensis* Bailey, Proc. Biol. Soc. Wash. 15:119.

1932. *Thomomys bottae ruidosae* Hall, Proc. Biol. Soc. Wash. 45:96.

1935. *Thomomys bottae texensis* Goldman, Proc. Biol. Soc. Wash. 48:157.

1936. *Thomomys bottae guadalupensis* Goldman, J. Wash. Acad. Sci. 26:117.

1936. *Thomomys pectoralis* Goldman, J. Wash. Acad. Sci. 26:117.

1939. *Thomomys umbrinus texensis* Blair, Occas. Pap. Mus. Zool., Univ. Mich. 403:2.

1940. *Thomomys bottae scotophilus* Davis, J. Mamm. 21:204.

1959. *Thomomys umbrinus texensis* Hall and Kelson, Mammals of North America, Ronald Press, p. 432.

2019. *Thomomys bottae texensis* Beauchamp-Martin et al., Spec. Publ. Mus. Texas Tech Univ. 71:533.

2023. *Thomomys baileyi texensis* Bradley et al., Spec. Pub. Mus. Texas Tech Univ, in press.

Type specimen.—Holotype, adult male, skin and skull, USNM 22511/31408, obtained by V. Bailey on 7 January 1890, original number 876.

Type locality.—Head Limpia Creek, Davis Mountains, about 18 miles west-northwest of Fort Davis, 5,500 feet, Jeff Davis County, Texas.

Topotypes.—Jeff Davis Co: Head Limpia Creek, 5700 ft, 12 (AMNH). Last topotype collected 1939, no tissues available.

Near topotypes.—Jeff Davis Co: Mt Livermore Preserve, 21 (TTU); 5 mi E Mt Livermore, 3 (UMMZ); 5 mi E Mt Livermore in Limpia Canyon, 11 (TCWC); 1 mi N Mt Livermore, 3 (UMMZ); Davis Mtns, 14 (USNM); Davis Mtns Preserve, Madera Canyon, 6 (MSB); Sawtooth Mtn, 2 (TTU), 1 (SRSU); 14 mi NW Fort Davis, 11 (TCWC); 3 mi N Mt Livermore, Madera Canyon, 3 (TCWC). Last near topotype collected 2002, tissues available.

Remarks.—The TPWD SGCN lists this taxon as imperiled.

Thomomys lachuguilla confinalis Goldman, 1936
[Rock Springs Pocket Gopher]
= ***Thomomys baileyi confinalis***
[Bailey's Pocket Gopher]

1936. *Thomomys lachuguilla confinalis* Goldman, J. Wash. Acad. Sci. 26:119.

1938. *Thomomys bottae confinalis* Goldman, Proc. Biol. Soc. Wash. 51:55.

1959. *Thomomys umbrinus confinalis* Hall and Kelson, Mammals of North America, Ronald Press, p. 423.

2019. *Thomomys bottae confinalis* Beauchamp-Martin et al., Spec. Publ. Mus. Texas Tech Univ. 71:529.

2023. *Thomomys baileyi confinalis* Bradley et al., Spec. Pub. Mus. Texas Tech Univ, in press.

Type specimen.—Holotype, subadult male, skin and skull, USNM 117571, obtained by V. Bailey on 11 July 1902, original number 7910.

Type locality.—35 miles east of Rock Springs, 2,450 feet, north fork of Guadalupe River, 15 miles west of Japonica, Kerr County, Texas (as listed in Fisher and Ludwig 2014). Poole and Schantz (1942) erroneously placed the type locality in Edwards County.

Topotypes.—None.

Near topotypes.—None.

Remarks.—There are no present-day roads or towns near the type locality, and no specimens have been collected near the type locality. The nearest specimens are from the vicinity of Rock Springs and London, Texas.

Thomomys lachuguilla limitaris Goldman, 1936
[Big Bend Pocket Gopher]
= ***Thomomys baileyi limitaris***
[Bailey's Pocket Gopher]

1902. *Thomomys aureus lachuguilla* Bailey, Proc. Biol. Soc. Wash. 15:120.

1936. *Thomomys lachuguilla limitaris* Goldman, J. Wash. Acad. Sci. 26:118.

1938. *Thomomys bottae lachugilla* [sic], Goldman, Proc. Biol. Soc. Wash. 51:55.

1959. *Thomomys umbrinus limitaris* Hall and Kelson, Mammals of North America, Ronald Press, p. 427.

2019. *Thomomys bottae lachuguilla* Beauchamp-Martin et al., Spec. Publ. Mus. Texas Tech Univ. 71:530.

2023. *Thomomys baileyi limitaris* Bradley et al., Spec. Pub. Mus. Texas Tech Univ, in press.

Type specimen.—Holotype, adult male, skin and skull, USNM 110339, obtained by V. Bailey on 28 May 1901, original number 7659.

Type locality.—4 miles west of Boquillas, Brewster County, Texas.

Topotypes.—None.

Near topotypes.—Brewster Co: 3 mi W Boquillas, 2000 ft, 1 (AMNH); Boquillas, Big Bend, Rio Grande, 1800 ft, 1 (MVZ); Boquillas, 1 (USNM). Last near topotype collected 1939, no tissues available.

Family Heteromyidae

Dipodomys ambiguus Merriam, 1890
[El Paso Kangaroo Rat]
= ***Dipodomys merriami ambiguus***
[Merriam's Kangaroo Rat]

1890. *Dipodomys ambiguus* Merriam, N. Amer. Fauna 4:42.

1890. *Dipodomys merriami* Mearns, Bull. Amer. Mus. Nat. Hist. 2:290.

1901. *ambiguus* (*Dipodomys merriami*) Elliot, Field Columb. Mus., Pub. Zool., ser. 45, 2:234.

1905. *Dipodomys merriami ambiguus* Bailey, N. Amer. Fauna 25:150.

1941. *Dipodomys merriami merriami* Davis, J. Mamm. 22:194.

1949. *Dipodomys merriami ambiguus* Blair, J. Mamm. 30:388.

1959. *Dipodomys merriami merriami* Hall and Kelson, Mammals of North America, Ronald Press, p. 530.

1960. *Dipodomys merriami ambiguus* Lidicker, Univ. California Publ. Zool. 67:178.

Type specimen.—Holotype, adult male, skin and skull, USNM 18147/25045, obtained by V. Bailey on 13 December 1889, original number 782.

Type locality.—El Paso, El Paso County, Texas.

Topotypes.—El Paso Co: El Paso, 25 (USNM), 1 (AMNH). Last near topotype collected 1907, no tissues available.

Near topotypes.—El Paso Co: El Paso, 8 (KU), 3 (MSU), 2 (UTEP), 1 (ROM); near El Paso, 11 (USNM); NE El Paso, 1 (ISM); McKelligon Canyon Park, 4 (MSB); western vicinity El Paso, 3 (KU); 0.1 mi E El Paso, 2 (UTEP); 0.2 mi SE jct I-10 and Executive Blvd, 8 (UTEP); 0.5 mi W El Paso Museum of Archaeology on Transmountain Rd, 1 (UTEP); 1 mi E El Paso on Rte 258, 2 (UTEP); 1 mi E El Paso on Hwy 180E, 1 (UTEP); 1 mi W jct North Mesa and Carnival Dr, 4 (UTEP); Alabama Ave and McKelligon Canyon Rd, 1 (UTEP); 1.25 mi N, 0.75 mi W El Paso, 3 (MSB); 1.5 mi NE El Paso city limits, 2 (UTEP); 1.4 mi E Pebble Hills from Lee Trevino, El Paso, 1 (UTEP); 1.1 mi N, 0.4 mi W Borderland Dr, El Paso, 1 (UTEP); 1.1 mi from jct Diana and Dyer S ton War Rd II, El Paso, 3 (UTEP); 1.1 mi N on Railroad Dr extension, NE El Paso, 2 (UTEP); 2 mi E El Paso city limit, 1 (UTEP); 3 mi E El Paso, 1 (UAZ); 3 mi NE El Paso city limits, 4 (MVZ); 3 mi NNW McCombs St, El Paso, 1 (UTEP); 3.5 mi E El Paso on Hwy 62/180, 3 (KU); 3.5 mi NW El Paso, 2 (UTEP); 4 mi NNW El Paso, 3 (KU); 4 mi E El Paso, 1 (TTU); 4 mi N Dyer on McCombs, El Paso, 1 (UTEP); 4 mi NNW int. Dyer and McCombs St, El Paso, 1 (UTEP); 5 mi S El Paso, 1 (UAZ); 5 mi N El Paso city limit near US 54, 1 (UTEP); 5 mi N int. Dyer and McCombs St, El Paso, 2 (UTEP); Loop 375 and FM 659, 3 (UTEP); Lomas Del Rey, 1 (UTEP); 6.3 mi NW El Paso City Hall, 3750 ft, 22 (KU). Last near topotype collected 1979, no tissues available.

Remarks.—As the synonomy reflects, in its taxonomic history, *D. m. ambiguus* went back and forth from being regarded as a distinct subspecies to being lumped with *D. m. merriami*. Hall (1981), in his *Mammals of North America*, followed Lidicker (1960) and included *ambiguus* as a valid subspecies of *D. merriami*, a distinction that it retains today.

Dipodomys compactus True, 1889
[Padre Island Kangaroo Rat]
= ***Dipodomys compactus compactus***
[Gulf Coast Kangaroo Rat]

1889. *Dipodomys compactus* True, Proc. U.S. Nat. Mus. 11:160.

1891. *Dipodomys sennetti* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 3:226.

1905. *Perodipus compactus* Bailey, N. Amer. Fauna 25:146.

1942. *Dipodomys ordii compactus* Davis, J. Mamm. 23:332.

1976. *Dipodomys compactus compactus* Schmidly and Hendricks, Bull. Southern California Acad. Sci. 75:235.

Type specimen.—Holotype, adult female, skin only, skull lost, USNM 19665/35227, collected on 3 April 1888, received from C. K. Worthen, collector unknown, no original number.

Type locality.—Padre Island, Cameron County, Texas.

Topotypes.—None, given uncertainty of holotype provenance and nonspecific locality.

Near topotypes.—Cameron Co: South Padre Island, 31 (USNM), 4 (TTU), 2 (OMNH, UWBM); Boca Chica, 4 (KU); 4 mi NE Port Isabel, 4 (MSB); 4.5 mi N, 3.6 mi E Port Isabel, South Padre Island, 1 (ASNHC); 4.5 mi N, 3 mi E Port Isabel, South Padre Island, 1 (ASNHC); 5 mi N Port Isabel, South Padre Island, 3 (MSB); 5 mi N, 2 mi E Port Isabel, 28 (MSB); 6 mi N, 3 mi E Port Isabel, 25 (TCWC); 6.5 mi N, 2 mi E Port Isabel, 5 (MSB); 6 mi N, 2 mi E Port Isabel, 16 (MSB); 7 mi N Port Isabel, 8 (OMNH); 7.5 mi N, 3 mi E Port Isabel, South Padre Island, 3 (ASNHC); 8 mi N South Padre Island, 2 (ASNHC); South Padre Island, 3 mi N Edwin King Atwood Park, 1 (TTU); South Padre Island Dunes, 9 mi from Beach Access 6, 2 (TCWC). Last near topotype collected 2015, tissues available.

Remarks.—According to Poole and Schantz (1942), the description of *compactus* was based on one specimen, and the skull of that specimen was lost. Poole and Schantz (1942) assumed the specimen was an adult female, USNM 19665/35227, and thus designated it as such. The description was based on this specimen and the data, including three measurements, which matched that of the specimen now listed as the holotype (Fisher and Ludwig 2012).

Baumgardner and Schmidly (1981) provided morphological and karyological evidence to support the earlier conclusion by Schmidly and Hendricks (1976) that *D. compactus* was a distinct species from *D. ordii*. The population from Padre Island belongs to the nominal subspecies, *D. c. compactus*, whereas the mainland population is *D. c. sennetti* (see below). The TPWD SGCN lists this taxon as vulnerable.

Dipodomys elator Merriam, 1894
[Loring Kangaroo Rat]
[Texas Kangaroo Rat]

1894. *Dipodomys elator* Merriam, Proc. Biol. Soc. Wash. 9:109.

Type specimen.—Holotype, adult male, skin and skull, USNM 64802, obtained by J. A. Loring on 13 April 1894, original number 1804.

Type locality.—Henrietta, Clay County, Texas.

Topotypes.—Clay Co: Henrietta, 6 (USNM). Last topotype collected 1900, no tissues available.

Near topotypes.—None.

Remarks.—Due to concerns about the conservation status of *D. elator*, numerous efforts to document this species in north-central Texas have been conducted in recent years. These efforts have resulted in specimens from Wichita County, but none from near the type locality. The population that once occurred in the Henrietta area is assumed to be extirpated. *D. elator* is considered threatened by TPWD, imperiled by NatureServe, and it is currently under consideration for listing by USFWS.

Dipodomys ordii Woodhouse, 1853
[Ord Kangaroo Rat]
= ***Dipodomys ordii ordii***
[Ord's Kangaroo Rat]

1853. *D*[*ipodomys*]. *ordii* Woodhouse, Proc. Acad. Nat. Sci. Phil. 6:224.

1905. *Perodipus ordii* Bailey, N. Amer. Fauna 25:144.

1926. *Dipodomys ordii ordii* Strecker, Baylor Univ. Bull. 29(3):25.

Type specimen.—Holotype, skull only, ANSP 2118. Type not designated by number. Holotype designation by Koopman (1976; see Remarks below).

Type locality.—El Paso, El Paso County, Texas.

Topotypes.—None, given uncertainty of holotype provenance and nonspecific locality.

Near topotypes.—El Paso Co: El Paso, 10 (USNM), 5 (UTEP); various localities within El Paso, 68 (UTEP); 1 mi E El Paso, off McCombs Rd, 3 (OMNH); 1.25 mi N, 0.75 mi W El Paso, 1 (MSB); ca 2 mi E El Paso, 1 (UTEP); 2 mi E El Paso city limit, 1 (UTEP); 2 mi NE El Paso, 17 (OMNH); 1 mi E SE corner fence of Biggs Field, 2 (UTEP); 3 mi E El Paso, 1 (UTEP); 3 mi NE El Paso, 12 (MVZ), 3 (TCWC); 3.2 mi E city limits Hwy 62, 1 (UTEP); 3.5 mi E of El

Paso on US Hwy 62/180, 9 (KU); 3.5 mi NW El Paso, 1 (UTEP); 4 mi E El Paso, 4 (TTU); 4 mi E Biggs Field, El Paso, 6 (MSB); 4 mi N of NE El Paso city limit, 1 (UTEP); 5 mi E Biggs Field, El Paso, 2 (MSB); near El Paso, 2 (USNM); El Paso area, 3 (UWYMV). Last near topotype collected 1980, no tissues available.

Remarks.—According to Koopman (1976), the catalog entry for this specimen reads "*Perodipus ordii* Woodhouse—New Mexico—Dr. Woodhouse collector and donor." Label adds "Type lot." This skull appears, therefore, to be part of the original series and is probably the only one extant. The uncertainty about the provenance of this specimen argues that it could be regarded as a holotype or a syntype. We have followed Koopman (1976) in listing it as a holotype. Woodhouse gave El Paso, Texas, as the type locality for the species. Baumgardner and Schmidly (1981) confirmed the taxonomic status of the subspecies of *D. ordii* in Texas, which has been followed in this catalog.

Dipodomys ordii attenuatus Bryant, 1939
[None designated]
= ***Dipodomys ordii obscurus***
[Ord's Kangaroo Rat]

1903. *Perodipus obscurus* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 19:603.

1921. *Dipodomys ordii obscurus* Grinnell, J. Mamm. 2:96.

1939. *Dipodomys ordii attenuatus* Bryant, Occas. Pap. Mus. Zool. Louisiana State Univ. 5:65.

1981. *Dipodomys ordii obscurus* Baumgardner and Schmidly, Occas. Pap. Mus. Texas Tech Univ. 73:22.

Type specimen.—Holotype, skin and skull, MVZ 80429, obtained by A. B. Borell on 19 November 1936, original number 5581.

Type locality.—Mouth Santa Helena Canyon, 2,146 feet, Big Bend Rio Grande, Brewster County, Texas.

Topotypes.—Brewster Co: mouth Santa Helena Canyon, Big Bend Rio Grande, 1 (MVZ), 1 (TCWC). Last topotype collected 1943, no tissues available.

Near topotypes.—Brewster Co: Big Bend of Rio Grande, 2 (UMMZ), 1 (MVZ); Johnson Ranch, Rio Grande, 2100 ft, 1 (TCWC). Last near topotype collected 1942, no tissues available.

Dipodomys ordii largus Hall, 1951
[None designated]
= ***Dipodomys compactus compactus***
[Gulf Coast Kangaroo Rat]

1889. *Dipodomys compactus* True, Proc. U.S. Nat. Mus. 11:160.

1951. *Dipodomys ordii largus* Hall, Univ. Kansas Publ. Mus. Nat. Hist. 5:40.

1976. *Dipodomys compactus compactus* Schmidly and Hendricks, Bull. Southern California Acad. Sci. 75:235.

Type specimen.—Holotype, adult female, skin and skull, KU 27234, obtained by W. K. Clark on 30 June 1948, original no. 543.

Type locality.—Mustang Island, 14 miles southwest of Port Aransas, Nueces County, Texas.

Topotypes.—Nueces Co: 14 mi SW Port Aransas, 22 (KU). Last topotype collected 1953, no tissues available.

Near topotypes.—Nueces Co: 15 mi SW Port Aransas, 2 (TCWC); 15 mi S Port Aransas, 1 (KU); 13 mi S Port Aransas, 8 (KU); 19 mi S Port Aransas, 19 (TCWC), 10 (MVZ); 10.7 mi S Port Aransas, 4 (ASNHC); 10.4 mi S Port Aransas, 2 (OMNH); 10 mi S Port Aransas, 8 (CUMV), 1 (TTU); 9 mi S Port Aransas, 3 (CUMV); 9 mi S, 5 mi W Port Aransas, 3 (TTU); 8 mi S Port Aransas, 2 (TTU). Last near topotype collected 1996, tissues available.

Remarks.—The original description of *D. o. largus* by Hall (1951) gives the holotype locality as Aransas County; however, the locality of Mustang Island, 14 mi SW Port Aransas, would place it in Nueces County. The VertNet record for the holotype gives Nueces County as the correct locality. Baumgardner and Schmidly (1981) presented morphological evidence confirming the earlier conclusion of Schmidly

and Hendricks (1976) that *D. o. largus* was not distinct from *D. c. compactus*.

Dipodops sennetti J. A. Allen, 1891
[Sennett Kangaroo Rat]
= ***Dipodomys compactus sennetti***
[Gulf Coast Kangaroo Rat]

1889. *Dipodomys compactus* True, Proc. U.S. Nat. Mus. 11:160.

1891. *Dipodops sennetti* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 3:226.

1905. *Perodipus sennetti* Bailey, N. Amer. Fauna 25:145.

1942. *Dipodomys ordii sennetti* Davis, J. Mamm. 23:332.

1976. *Dipodomys compactus sennetti* Schmidly and Hendricks, Bull. Southern California Acad. Sci. 75:235.

Type specimen.—Holotype, adult male, skin and skull, AMNH 3478/2733, obtained by J. M. Priour on 9 March 1888, original number 535.

Type locality.—Santa Rosa, 85 miles southwest of Corpus Christi, Cameron County, Texas.

Topotypes.—None.

Near topotypes.—Cameron Co: near Santa Rosa, 11 (USNM). Last near topotype collected 1891, no tissues available.

Remarks.—The type locality on the specimen label reads "near Brownsville, Cameron County, Texas," but Bailey (1905) reported it more precisely as Santa Rosa, 85 mi SW of Corpus Christi. This location was documented in a letter from J. M. Priour, the collector of the holotype (Goodwin 1953). Baumgardner and Schmidly (1981) confirmed the earlier conclusion of Schmidly and Hendricks (1976) that *sennetti* was affiliated with *compactus*, as the mainland subspecies of that form, and not *D. ordii* as previously reported.

Liomys texensis Merriam, 1902
[Spiny Spiny Rat]
= ***Liomys irroratus texensis***
[Mexican Spiny Pocket Mouse]

1902. *Liomys texensis* Merriam, Proc. Biol. Soc. Wash. 15:44.

1911. *Liomys irroratus texensis* Goldman, N. Amer. Fauna 34:59.

1911. *Liomys irroratus pretiosus* Goldman, N. Amer. Fauna 34:58.

1926. *Liomys irroratus texensis* Strecker, Baylor Univ. Bull. 29(3):22.

Type specimen.—Holotype, adult female, USNM 58670, obtained by J. A. Loring on 19 February 1894, original number 1672.

Type locality.—Brownsville, Cameron County, Texas.

Topotypes.—Cameron Co: Brownsville, 22 (AMNH), 6 (FMNH), 5 (USNM), 4 (MCZ), 2 (KU, SUI), 1 (CUMV, UCLA, UCM, UWBM); Fort Brown, 1 (USNM). Last topotype collected 1915, no tissues available.

Near topotypes.—Cameron Co: Brownsville, 11 (AMNH), 14 (LACM), 2 (FMNH), 2 (CUMV), 3 (LSUMZ), 2 (TCWC), 1 (SDNHM); Resaca de la Palma State Park, 19 (TTU); 4 mi N Brownsville, 1 (TTU); 4 mi SE Brownsville, 1 (ASNHC); 5 mi S Brownsville, 2 (ASHNC); 5 mi SE Brownsville, 9 (ASNHC), 4 (TTU); 5 mi S, 4.5 mi E Brownsville, 2 (MSB); Las Palomas WMA (Resaca de la Palma Unit), 12 (TTU). Last near topotype collected 2006, tissues available.

Remarks.—Genoways (1973) in his monograph of the genus *Liomys* confirmed that *L. texensis* was a subspecies of *L. irroratus*.

Perognathus collis Blair, 1938
[None designated]
= ***Chaetodipus collis collis***
[Highland Coarse-haired Pocket Mouse]

1894. *Perognathus* (*Chaetodipus*) *nelsoni* Merriam, Proc. Acad. Nat. Sci. Phil. 46:266.

1900. *Perognathus nelsoni canescens* Osgood, N. Amer. Fauna 18:54.

1926. *Perognathus nelsoni nelsoni* Strecker, Baylor Univ. Bull. 29(3):24.

1938. *Perognathus collis* Blair, Occas. Pap. Mus. Zool., Univ. Mich. 381:1.

1938. *Perognathus collis popei* Blair, Occas. Pap. Mus. Zool., Univ. Mich. 381:3.

1942. *Perognathus nelsoni canescens* Borell and Bryant, Univ. California Publ. Zool. 48:25.

1983. *C*[*haetodipus*]. *nelsoni* Hafner and Hafner, Great Basin Nat. Mem. 7:25.

2019. *Chaetodipus collis collis* Neiswenter et al., J. Mamm. 100:1859.

Type specimen.—Holotype, adult female, skin and skeleton, UMMZ 79299, obtained by W. F. Blair on 12 May 1937, original number 1007.

Type locality.—Limpia Canyon, 4,800 feet, about 1 mile northwest of Fort Davis, Jeff Davis County, Texas.

Topotypes.—Jeff Davis Co: 1 mi NW Fort Davis, 1 (UMMZ). Last topotype collected 1937, no tissues available.

Near topotypes.—Jeff Davis Co: 2 mi NW Fort Davis, 2 (TTU); Fort Davis, 4 (TTU); 3 mi WNW Fort Davis, 1 (TTU); Davis Mtns State Park, 6 (TTU); 3 mi E Hdqs Davis Mtns State Park, 1 (TTU); 4 mi W, 4.9 mi N Fort Davis, 1 (CSULB), 1 mi E McDonald Observatory, 2 (UAZ). Last near topotype collected 2001, tissues available.

Remarks.—Hooper (1977) listed *P. collis* as a synonym of *Perognathus nelsoni canescens* citing Borell and Bryant (1942) as the authority, but recently Neiswenter et al. (2019) demonstrated that *collis* is a valid species in the genus *Chaetodipus*.

Perognathus collis popei Blair, 1938
[None designated]
= ***Chaetodipus collis collis***
[Highland Coarse-haired Pocket Mouse]

1894. *Perognathus* (*Chaetodipus*) *nelsoni* Merriam, Proc. Acad. Nat. Sci. Phil. 46:266.

1900. *Perognathus nelsoni canescens* Osgood, N. Amer. Fauna 18:54.

1926. *Perognathus nelsoni nelsoni* Strecker, Baylor Univ. Bull. 29(3):24.

1938. *Perognathus collis* Blair, Occas. Pap. Mus. Zool., Univ. Mich. 381:1.

1938. *Perognathus collis popei* Blair, Occas. Pap. Mus. Zool., Univ. Mich. 381:3.

1942. *Perognathus nelsoni canescens* Borell and Bryant, Univ. California Publ. Zool. 48:25.

1983. *C*[*haetodipus*]. *nelsoni* Hafner and Hafner, Great Basin Nat. Mem. 7:25.

2019. *Chaetodipus collis collis* Neiswenter et al., J. Mamm. 100:1860.

Type specimen.—Holotype, adult female, skin and skeleton, UMMZ 79303, obtained by W. F. Blair on 20 April 1937, original number 858.

Type locality.—Big Bend of Rio Grande, Johnson's Ranch, Pinnacle Spring, 2,600 feet, Brewster County, Texas.

Topotypes.—Brewster Co: Big Bend of Rio Grande, 5 (UMMZ); Pinnacle Spring, S base of Chisos Mtns, 5 (MVZ). Last topotype collected 1937, no tissues available.

Near topotypes.—None.

Remarks.—*P. c. popei* was regarded by Borell and Bryant (1942) as inseparable from *Perognathus*

nelsoni canescens, relegating it to a synonym of *Chaetodipus collis collis*, which is supported by the recent analysis of Neiswenter et al. (2019).

Perognathus copei Rhoads, 1894
[Cope Pocket Mouse]
= ***Perognathus flavescens copei***
[Plains Pocket Mouse]

1894. *Perognathus copei* Rhoads, Proc. Acad. Nat. Sci. Phil. 46:404.

1900. *Perognathus flavescens* Osgood, N. Amer. Fauna 18:20.

1905. *Perognathus flavescens copei* Bailey, N. Amer. Fauna 25:143.

1978. *Perognathus flavescens copei* Williams, Bull. Carnegie Mus. Nat. Hist. 10:56.

Type specimen.—Holotype, skull only, sex not recorded, ANSP 1612, obtained by E. D. Cope on 26 August 1893.

Type locality.—Near Mobeetie, Wheeler County, Texas.

Topotypes.—Wheeler Co: Mobeetie, 3 (USNM). Last topotype collected 1904, no tissues available.

Near topotypes.—Wheeler Co: 1 mi W Mobeetie, 2 (MVZ); 6 mi N, 5 mi W New Mobeetie, 1 (TTU). Last near topotype collected 1990, no tissues available.

Perognathus* (*Chaetodipus*) *eremicus Mearns, 1898
[Eastern Desert Pocket Mouse]
= ***Chaetodipus eremicus eremicus***
[Chihuahuan Desert Pocket Mouse]

1898. *Perognathus* (*Chaetodipus*) *eremicus* Mearns, Bull. Amer. Mus. Nat. Hist. 10:300.

1900. *Perognathus penicillatus eremicus* Osgood, N. Amer. Fauna 18:48.

1996. *Chaetodipus eremicus eremicus* Lee et al., J. Mamm. 77:67.

Type specimen.—Holotype, adult female, skin and skull, USNM 21052/36094, obtained by E. A. Mearns on 27 June 1893, original number 2380.

Type locality.—Fort Hancock, Hudspeth County, Texas.

Topotypes.—Hudspeth Co: Fort Hancock, 31 (KU), 6 (USNM), 4 (MWSU). Last topotype collected 1953, no tissues available.

Near topotypes.—Hudspeth Co: 1 mi NW old Ft. Hancock, 25 (MVZ). Last near topotype collected 1937, no tissues available.

Remarks.—For most of the 20th century, this pocket mouse was classified as *Perognathus penicillatus*, the desert pocket mouse. Then, Hafner and Hafner (1983) demonstrated that all spiny-rumped mice in Texas should be placed in the genus *Chaetodipus*. Lee et al. (1996) determined that *C. penicillatus* should be divided into two species (*C. penicillatus*, a Sonoran form, and *C. eremicus*, a Chihuahuan Desert form) on the basis of studies of allozymes, chromosomes, and mitochondrial DNA sequences. Thus, Texas specimens of this species are now classified as *C. eremicus*, the Chihuahuan desert pocket mouse.

Perognatus* [sic] *flavus Baird, 1855
[Baird Pocket Mouse]
= ***Perognathus flavus flavus***
[Silky Pocket Mouse]

1855. *Perognatus* [sic] *flavus* Baird, Proc. Acad. Nat. Sci. Phil. 7:332.

1900. *Perognathus flavus* Osgood, N. Amer. Fauna 18:23.

1926. *Perognathus flavus flavus* Strecker, Baylor Univ. Bull. 29(3):23.

Type specimen.—Holotype, age and sex unknown, fragment of skull (skin lost), USNM 148/1130, obtained by J. H. Clark (United States and Mexican Boundary Survey) in 1851, no original number.

Type locality.—El Paso, El Paso County, Texas.

Topotypes.—El Paso Co: El Paso, 9 (USNM). Last topotype collected 1889, no tissues available.

Near topotypes.—El Paso Co: McKelligon Canyon, El Paso, 4000 ft, 1 (KU); McKelligon Park, El Paso, 1 (OSUM); Fusselman Canyon, 1 (UTEP); El Paso, 4 mi N jct McCombs and River Streets, 1 (UTEP); jct McKelligon Canyon Rd and Alabama Ave, El Paso, 1 (UTEP); arroyo 0.25 mi W Fountain Plaza Apts, El Paso, 1 (UTEP); immediately E border monument 80, 3947 ft, 7 (UTEP). Last near topotype collected 1973, no tissues available.

Remarks.—According to Poole and Schantz (1942), the type was not designated by number. Baird says, "Collected at El Paso by J. H. Clark." Reference to *Mammals of North America* (Baird 1859) shows that No. 148/1130 is the specimen he must have had in mind (Fisher and Ludwig 2012). At one time, *P. flavus* and *P. merriami* were considered conspecific (see Wilson 1973), although the two are now regarded as distinct species (see Lee and Engstrom 1991, Coyner et al. 2010, and the account of *Perognathus merriami* presented below).

Perognathus mearnsi J. A. Allen, 1896
[None designated]
= ***Perognathus merriami merriami***
[Merriam's Pocket Mouse]

1896. *Perognathus mearnsi* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 8:237.

1900. *Perognathus merriami* Osgood, N. Amer. Fauna 18:21.

1926. *Perognathus merriami merriami* Strecker, Baylor Univ. Bull. 29(3):23.

Type specimen.—Holotype, adult male, skin and skull, AMNH 11957/10395, obtained by H. P. Attwater on 20 November 1895, original number 110.

Type locality.—Watson's Ranch, 15 miles southwest of San Antonio, Bexar County, Texas.

Topotypes.—None.

Near topotypes.—Bexar Co: Watson Ranch, 12 mi S San Antonio, 1 (WMSA); 7 mi SW Somerset, 2 (KU); 8 mi SW Somerset, 2 (KU). Last near topotype collected 1936, no tissues available.

Perognathus merriami J. A. Allen, 1892
[Merriam Pocket Mouse]
= ***Perognathus merriami merriami***
[Merriam's Pocket Mouse]

1892. *Perognathus merriami* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 4:45.

1896. *Perognathus mearnsi* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 8:237.

1926. *Perognathus merriami merriami* Strecker, Baylor Univ. Bull. 29(3):23.

1973. *Perognathus flavus merriami* Wilson, Proc. Biol. Soc. Wash. 86:191.

1991. *Perognathus merriami merriami* Lee and Engstrom, J. Mamm. 72:280.

Type specimen.—Holotype, adult male, skin and skull, AMNH 4145/3177, obtained by F. B. Armstrong on 10 August 1891, original number 42.

Type locality.—Brownsville, Cameron County, Texas.

Topotypes.—Cameron Co: Brownsville, 58 (USNM), 17 (AMNH), 4 (UCM), 3 (MCZ), 2 (ANSP, FMNH, KU). Last topotype collected 1893, no tissues available.

Near topotypes.—None.

Remarks.—There are three species of "silky pocket mice" in Texas—*P. flavus*, *P. merriami*, and *P. flavescens*. Two of the three (*flavus* and *merriami*) were described from Texas specimens. *P. flavus* and *P. merriami* are morphologically similar and difficult to tell apart. For this reason, Wilson (1973) regarded the two as conspecific. However, using karyology, allozyme, and DNA studies, Lee and Engstrom (1991) and Coyner et al. (2010) have shown that they are genetically distinct and do not appear to interbreed in areas of sympatry. Furthermore, applying sophisticated multivariate

statistical techniques, Brant and Lee (2006) were able to demonstrate significant differences in morphology between them, providing yet another body of evidence supporting the recognition of two species.

Perognathus paradoxus spilotus Merriam, 1889
[Black-eared Pocket Mouse]
= ***Chaetodipus hispidus spilotus***
[Hispid Pocket Mouse]

1858. *Perognathus hispidus* Baird, Mammalia in Repts. U.S. Expl. Surv. 8:421.

1889. *Perognathus paradoxus spilotus* Merriam, N. Amer. Fauna 1:25.

1904. *Perognathus hispidus maximus* Elliot, Field Columb. Mus. Publ., 87 Zool. Ser., 3(14):253.

1905. *Perognathus hispidus spilotus* Bailey, N. Amer. Fauna 25:137.

1926. *Perognathus hispidus hispidus* Strecker, Baylor Univ. Bull. 26:37.

1939. *Perognathus hispidus spilotus* Blair, Amer. Midl. Nat. 22:115.

1983. *C*[*haetodipus*]. *hispidus* Hafner and Hafner, Great Basin Nat. Mem. 7:25.

1993. *Chaetodipus hispidus spilotus* Williams et al., in Biology of the Heteromyidae, Spec. Publ. Amer. Soc. Mamm. 10:125.

Type specimen.—Holotype, adult female, skull only, USNM 186514, obtained by G. H. Ragsdale on 8 October 1886, no original number.

Type locality.—Gainesville, Cooke County, Texas.

Topotypes.—Cooke Co: Gainesville, 7 (USNM). Last topotype collected 1892, no tissues available.

Near topotypes.—None.

Remarks.—According to Poole and Schantz (1942) and Fisher and Ludwig (2012), Merriam based his description on the skull of number 23096 (young adult female), a paratype from the type locality that had been collected by Ragsdale on 24 September 1888. Hafner and Hafner (1983) elevated the subgenus *Chaetodipus* to generic status, as discussed in the account of *Perognathus* (*Chaetodipus*) *eremicus*.

Family Sciuridae

Eutamias cinereicollis canipes Bailey, 1902
[Gray-footed Chipmunk]
= ***Tamias canipes canipes***
[Gray-footed Chipmunk]

1890. *Tamias cinereicollis* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 3:94.

1890. *Eutamias cinereicollis* Miller and Rehn, Bull. Amer. Mus. Nat. Hist. 3:94.

1902. *Eutamias cinereicollis canipes* Bailey, Proc. Boston. Soc. Nat Hist. 30:40.

1947. *Eutamias cinereicollis* Taylor and Davis, Mammals of Texas, Texas Game, Fish Oyster Comm. Bull. 27:42.

1960. *E*[*utamias*]. *canipes canipes* Fleharty, J. Mamm. 41:241.

2004. *Tamias canipes canipes* Schmidly, Mammals of Texas, Univ. Texas Press, p. 303.

Type specimen.—Holotype, adult female, skin and skull, USNM 109229, obtained by V. Bailey on 24 August 1901, original number 7827.

Type locality.—Dog Canyon, 7,000 feet, Guadalupe Mountains, Culberson County, Texas.

Topotypes.—Culberson Co: head of Dog Canyon, 7000 ft, Guadalupe Mountains National Park (GMNP), 4 (USNM). Last topotype collected 1901, no tissues available.

Near topotypes.—Culberson Co: Upper Dog Ranger Station, GMNP, 6 (TTU); The Bowl, GMNP, 8000 ft, 3 (MSB); The Bowl, GMNP, 25 (TCWC), 3 (MVZ), 3 (TTU). Last near topotype collected 1974, no tissues available.

Remarks.—Fleharty (1960) elevated *canipes* from a subspecies of *Eutamias cinereicollis* to full species status. Subsequent authors (Nadler et al. 1977; Levenson et al. 1985; Piaggio and Spicer 2000) used karyotypic, molecular genetic, and morphological features to justify its placement in the genus *Tamias* and to confirm the specific distinctness of *canipes*.

Glaucomys volans texensis A. H. Howell, 1915
[Texas Flying Squirrel]
[Southern Flying Squirrel]

1905. *Sciuropterus volans querceti* Bailey, N. Amer. Fauna 25:79.

1915. *Glaucomys volans texensis* A. H. Howell, Proc. Biol. Soc. Wash. 28:110.

Type specimen.—Holotype, adult male, skin and skull, USNM 136400, obtained by J. H. Gaut on 15 March 1905, original number 3480.

Type locality.—7 miles northeast of Sour Lake, Hardin County, Texas.

Topotypes.—None.

Near topotypes.—Hardin Co: 0.9 mi N, 5 mi E Saratoga, 2 (TCWC); 0.8 mi N, 2.6 mi E Saratoga, 1 (TCWC). Last near topotype collected 1978, no tissues available.

Sciurus limitis Baird, 1855
[Texas Fox Squirrel]
= ***Sciurus niger limitis***
[Eastern Fox Squirrel]

1855. *Sciurus limitis* Baird, Proc. Acad. Nat. Sci. Phil. 7:331.

1902. *Sciurus texianus* J. A. Allen, Bull. Amer. Mus. Nat. Hist. 26:166.

1905. *Sciurus ludovicianus limitis* Bailey, N. Amer. Fauna 25:77.

1907. *S*[*ciurus*]. *n*[*iger*]. *limitis* Osgood, Proc. Biol. Soc. Wash. 20:45.

1926. *Sciurus niger limitis* Strecker, Baylor Univ. Bull. 29(3):20.

Type specimen.—Holotype, sex undetermined, skin and skull, USNM 351/1265. Obtained by J. H. Clark, United States and Mexican Boundary Survey, under Major W. H. Emory, cataloged 12 December 1854, no original number.

Type locality.—Devils River, Val Verde County, Texas.

Topotypes.—None. The type locality of "Devils River" (which traverses 94 miles in Val Verde County) is too vague to determine topotypes. One additional USNM specimen cataloged as from "Devil's River" was collected by J. H. Clark, but the date of collection is "undetermined," and the specimen could have been collected from anywhere along the Devils River.

Near topotypes.—Val Verde Co: Devils River, 12 (USNM); Del Rio, 2 (USNM), 1 (TTU), 1 (CUMV); Mud Creek, 1 (USNM); 18 mi N of Comstock, Devils River, 3 (KU). Last near topotype collected 1953, no tissues available.

Remarks.—No specimen number was given in the original description. Lyon and Osgood (1909) determined this specimen was the type.

Spermophilus buckleyi Slack, 1861
[Black-backed Rock Squirrel]
= ***Otospermophilus variegatus buckleyi***
[Rock Squirrel]

1777. [*Sciurus*] *variegatus* Erxleben, Systema regni animalis …., 1:421.

1861. *Spermophilus buckleyi* Slack, Proc. Acad. Nat. Sci. Phil. 13:314.

1905. *Citellus variegatus buckleyi* Bailey, N. Amer. Fauna 25:84.

1926. *Otospermophilus grammurus buckleyi* Strecker, Baylor Univ. Bull. 29(3):17.

1947. *Citellus variegatus* Taylor and Davis, Bull. Game, Fish, and Oyster Comm. 27:38.

1974. *Spermophilus variegatus* Davis, Mammals of Texas, Bull. 41, Texas Parks Wildl. Dept., p. 152.

1981. *Spermophilus variegatus buckleyi* Hall, Mammals of North America, John Wiley & Sons, Inc., p. 399.

2002. *Spermophilus variegatus grammurus* Schmidly, Texas Natural History: A Century of Change, Texas Tech Press, p. 276.

2004. *Spermophilus variegatus buckleyi* Schmidly, Mammals of Texas, Univ. Texas Press, p. 314.

2009. *Otospermophilus variegatus buckleyi* Helgen et al., J. Mamm. 90:284.

Type specimen.—Holotype, flat furrier's skin (very distorted) with lower jaw (Slack 1861:314, with remarks that it is in poor condition).

Type locality.—Packsaddle Mountain, Llano County, Texas.

Topotypes.—None.

Near topotypes.—Llano Co: Llano, 11 (USNM). Last near topotype collected 1899, no tissues available.

Remarks.—Packsaddle Mountain is a landmark hill that stands five miles southwest of Kingsland on State Highway 71 in eastern Llano County. Slack (1861) noted that this skin was presented to the Academy of Natural Sciences of Philadelphia by Mr. S. R. Buckley. However, there is no record of this holotype in the catalog of the Academy, and it is presumed to have been lost or destroyed.

Helgen et al. (2009) split *Spermophilus* into multiple genera, including three in Texas: *Ictidomys*, *Otospermophilus*, and *Xerospermophilus*. Consequently, *Spermophilus variegatus* was changed to *Otospermophilus variegatus*. Goetze (1998) restricted the distribution of *O. v. buckleyi* to the eastern and central parts of the Edwards Plateau. Specimens of this subspecies show a large preponderance of entirely black individuals, which is why Bailey applied the common name "black-backed rock squirrel" to this taxon. Most taxonomists agree that this species is in serious need of taxonomic revision in Texas to determine the validity and accurate distribution of the subspecies in the state.

Spermophilus mexicanus parvidens Mearns, 1896
[Rio Grande Ground Squirrel]
= ***Ictidomys parvidens***
[Rio Grande Ground Squirrel]

1896. *Spermophilus mexicanus parvidens* Mearns, Preliminary diagnoses of new mammals from the Mexican border of the United States, page 1, March 25 (preprint of Proc. U.S. Nat. Mus. 18:443).

1903. *Citellus mexicanus parvidens* Stone and Rehn, Proc. Acad. Nat. Sci. Phil. 55:21.

1974. *Spermophilus mexicanus* Davis, Mammals of Texas, Bull. 41, Texas Parks Wildl. Dept., p. 148.

2004. *Spermophilus mexicanus parvidens* Schmidly, Mammals of Texas, Univ. Texas Press, p. 307.

2009. *Ictidomys parvidens* Helgen et al., J. Mamm. 90:291.

Type specimen.—Holotype, adult male, skin and skull, USNM 63073, obtained by E. A. Mearns on 21 March 1893, original number 2312.

Type locality.—Fort Clark, Brackettville, Kinney County, Texas.

Topotypes.—Kinney Co: Fort Clark, 48 (USNM); Fort Clark Golf Course, 1 (TTU). Last topotype collected 2010, tissues available.

Near topotypes.—Kinney Co: 4 mi W of Brackettville, 7 (KU). Last near topotype collected 1956, no tissues available.

Remarks.—The use of *Ictidomys* for the generic name of these squirrels is based on the work of Helgen et al. (2009) . As noted by Schmidly and Bradley (2016), *I. parvidens* is now considered to be a monotypic species and subspecies are not recognized.

Spermophilus spilosoma annectens Merriam, 1893
[Padre Island Ground Squirrel]
= ***Xerospermophilus spilosoma annectens***
[Spotted Ground Squirrel]

1893. *Spermophilus spilosoma annectens* Merriam, Proc. Biol. Soc. Wash. 8:132.

1905. *Citellus spilosoma* Bailey, N. Amer. Fauna 25:88.

1926. *Citellus spilosoma annectens* Strecker, Baylor Univ. Bull. 29(3):18.

1974. *Spermophilus spilosoma* Davis, Mammals of Texas, Bull. 41, Texas Parks Wildl. Dept., p. 150.

2004. *Spermophilus spilosoma annectens* Schmidly, Mammals of Texas, Univ. Texas Press, p. 309.

2009. *Xerospermophilus spilosoma* Helgen et al., J. Mamm. 90:294.

2016. *Xerospermophilus spilosoma annectens* Schmidly and Bradley, Mammals of Texas, Univ. Texas Press, p. 618.

Type specimen.—Holotype, young adult male, skin and skull, USNM 30410/42396, obtained by W. Lloyd on 24 August 1891, original number 694.

Type locality.—"The Tanks," 12 miles from Point Isabel, Padre Island, Cameron County, Texas.

Topotypes.—Cameron Co: Padre Island, 7 (USNM). The holotype is the only specimen listed in VertNet with the specific locality of "The Tanks, 12 mi from Point Isabel." However, Merriam (1893) reported that "8 adults [including holotype] from the type locality" were examined. It is unclear, however, which 7 of the 13 total USNM specimens from Padre Island may be the topotypes mentioned by Merriam.

Near topotypes.—Cameron Co: Padre Island, 6 (USNM); 2 mi E, 6.5 mi N Port Isabel, 17 (MSB); south end Padre Island, 1 (ANSP), 1 (OMNH); Padre Island, 6 mi N, 3 mi E Port Isabel, 1 (TCWC). Last near topotype collected 1974, no tissues available.

Remarks.—The use of *Xerospermophilus* for the generic name of these squirrels is based on the work of Helgen et al. (2009).

Spermophilus spilosoma arens Bailey, 1902
[Spotted Sand Squirrel]
= ***Xerospermophilus spilosoma canescens***
[Spotted Ground Squirrel]

1890. *Spermophilus canescens* Merriam, N. Amer. Fauna 4:38.

1902. *Spermophilus spilosoma arens* Bailey, Proc. Biol. Soc. Wash. 15:118.

1905. *Spermophilus spilosoma arens* Bailey, N. Amer. Fauna 25:88.

1926. *Citellus spilosoma arens* Strecker, Baylor Univ. Bull. 29(3):18.

1932. *Citellus spilosoma canescens* Bailey, N. Amer. Fauna 53:109.

1974. *Spermophilus spilosoma* Davis, Mammals of Texas, Bull. 41, Texas Parks Wildl. Dept., p. 150.

2004. *Spermophilus spilosoma canescens* Schmidly, Mammals of Texas, Univ. Texas Press, p. 309.

2009. *Xerospermophilus spilosoma* Helgen et al., J. Mamm. 90:295.

2016. *Xerospermophilus spilosoma canescens* Schmidly and Bradley, Mammals of Texas, Univ. Texas Press, p. 618.

Type specimen.—Holotype, adult male, skin and skull, USNM 64977, obtained by A. K. Fisher on 10 May 1894, original number 1446.

Type locality.—El Paso, El Paso County, Texas.

Topotypes.—El Paso Co: El Paso, 10 (USNM). Last topotype collected 1903, no tissues available.

Near topotypes.—El Paso Co: El Paso, 2 (AMNH), 11 (NTSU), 23 (UTEP); McKelligon Canyon, El Paso, 4700 ft, 5 (KU); Fort Bliss, 3 (UTEP); 1 mi S Fort Bliss, 1 (UMMZ); 0.5 mi E, 0.5 mi N El Paso, 1 (UTEP); El Paso, 1 mi NE city limits, 5 (MVZ); El Paso, Del Norte Golf Course, 14 (OMNH); El Paso, Ponder Park, 2 (OMNH); UTEP campus, 2 (UTEP). Last near topotype collected 1983, no tissues available.

Remarks.—The use of *Xerospermophilus* for the generic name of these squirrels is based on the work of Helgen et al. (2009).

Spermophilus spilosoma marginatus Bailey, 1902
[Brown Ground Squirrel]
= ***Xerospermophilus spilosoma marginatus***
[Spotted Ground Squirrel]

1890. *Spermophilus spilosoma major* Merriam, N. Amer. Fauna 4:39.

1902. *Spermophilus spilosoma marginatus* Bailey, Proc. Biol. Soc. Wash. 15:118.

1905. *Citellus spilosoma marginatus* Bailey, N. Amer. Fauna 25:88.

1926. *Citellus spilosoma major* Strecker, Baylor Univ. Bull. 29(3):18.

1974. *Spermophilus spilosoma* Davis, Mammals of Texas, Bull. 41, Texas Parks Wildl. Dept., p. 150.

2004. *Spermophilus spilosoma marginatus* Schmidly, Mammals of Texas, Univ. Texas Press, p. 309.

2009. *Xerospermophilus spilosoma* Helgen et al., J. Mamm. 90:295.

2016. *Xerospermophilus spilosoma marginatus* Schmidly and Bradley, Mammals of Texas, Univ. Texas Press, p. 619.

Type specimen.—Holotype, adult male, skin and skull, USNM 108927 obtained by V. Bailey on 5 July 1901, original number 7702.

Type locality.—4 miles east of Alpine, Brewster County, Texas (as listed by Fisher and Ludwig 2012).

Topotypes.—None.

Near topotypes.—Brewster Co: Alpine, 12 (USNM), 1 (LACM). Last near topotype collected 1939, no tissues available.

Remarks.—The use of *Xerospermophilus* for the generic name of these squirrels is based on the work of Helgen et al. (2009).

Spermophilus tridecemlineatus texensis Merriam, 1898
[Texas Ground Squirrel]
= ***Ictidomys tridecemlineatus texensis***
[Thirteen-lined Ground Squirrel]

1821. *Ictidomys tridecemlineatus* Mitchill, Med. Repos. N.Y., (n.s.) 6:248.

1898. *Spermophilus tridecemlineatus texensis* Merriam, Proc. Biol. Soc. Wash. 12:71.

1899. *Spermophilus* (*Ictidomys*) *tridecemlineatus badius* Bangs, Proc. New England Zool. Club 1:1.

1905. *Citellus tridecemlineatus texensis* Bailey, N. Amer. Fauna 25:86.

1974. *Spermophilus tridecemlineatus* Davis, Mammals of Texas, Bull. 41, Texas Parks Wildl. Dept., p. 146.

2004. *Spermophilus tridecemlineatus texensis* Schmidly, Mammals of Texas, Univ. Texas Press, p. 311.

2009. *Ictidomys tridecemlineatus* Helgen et al., J. Mamm. 90:293.

2016. *Ictidomys tridecemlineatus texensis* Schmidly and Bradley, Mammals of Texas, Univ. Texas Press, p. 605.

Type specimen.—Holotype, adult male, skin and skull, USNM 186471, obtained by G. H. Ragsdale on 15 April 1886, original number MCC: 25.

Type locality.—Gainesville, Cooke County, Texas.

Topotypes.—Cooke Co: Gainesville, 3 (KU, USNM). Last topotype collected 1955, no tissues available.

Near topotypes.—None.

Remarks.—The use of *Ictidomys* for the generic name of these squirrels is based on the work of Helgen et al. (2009).

Tamias interpres Merriam, 1890
[Texas Antelope Squirrel]
= ***Ammospermophilus interpres***
[Texas Antelope Squirrel]

1890. *Tamias interpres* Merriam, N. Amer. Fauna 4:21.

1904. [*Citellus*] *interpres* Elliot, Field Columb. Mus. Publ. Zool. Ser. 4:143.

1905. *Ammospermophilus interpres* Bailey, N. Amer. Fauna 25:81.

2016. *Ammospermophilus interpres* Schmidly and Bradley, Mammals of Texas, Univ. Texas Press, p. 591.

Type specimen.—Holotype, adult female, skin and skull, USNM 18162/25060, obtained by V. Bailey on 10 December 1889, original number 762.

Type locality.—El Paso, El Paso County, Texas.

Topotypes.—El Paso Co: El Paso, 32 (USNM). Last topotype collected 1892, no tissues available.

Near topotypes.—El Paso Co: El Paso, 1 (TCWC), 3 (UTEP); El Paso, McKelligon Canyon Park, 8 (MSB); Head of McKelligon Canyon, 12 (KU); McKelligon Canyon, 2 (TCWC), 1 (OMNH); Franklin Mtns, 1 (UTEP); El Paso, Lomas Del Rey, 5 (UTEP), 1 (FHSM); El Paso, 1 mi E Lomas Del Rey, 1 (UTEP), 1 (WNMU); El Paso, Crazy Cat Canyon, off Scenic Drive, 2 (UTEP), 1 (FHSM); west side El Paso, below Franklin Peak, 1 (UTEP); Tom Mays Park, 1 (MSU); El Paso, Piedmont Reservoir, 2 (UTEP). Last near topotype collected 1988, no tissues available.

LIST 1.2. ALPHABETICAL LIST OF MAMMAL TYPE LOCALITIES BY STATE AND COUNTY, WITH MAP (FIG. 2), INCLUDING ORIGINAL AND CURRENT TAXONOMIC DESIGNATIONS

STATE (7 taxa)

A. No exact locality:

Mephitis varians (= *Mephitis mephitis varians*).
Bassariscus astutus flavus (= *Bassariscus astutus flavus*).
Procyon nivea (= *Procyon lotor fuscipes*).

B. Brazos River, no exact locality:

Arvicola texiana (= *Sigmodon hispidus texianus*).

C. Llano River, no exact locality:

Dicotyles angulatus angulatus (= *Pecari tajacu angulatus*).

D. Llano Estacado, near border of New Mexico:

Taxidea berlandieri (= *Taxidea taxus berlandieri*).

E. Western Texas, no exact locality:

Lepus texianus (= *Lepus californicus texianus*).

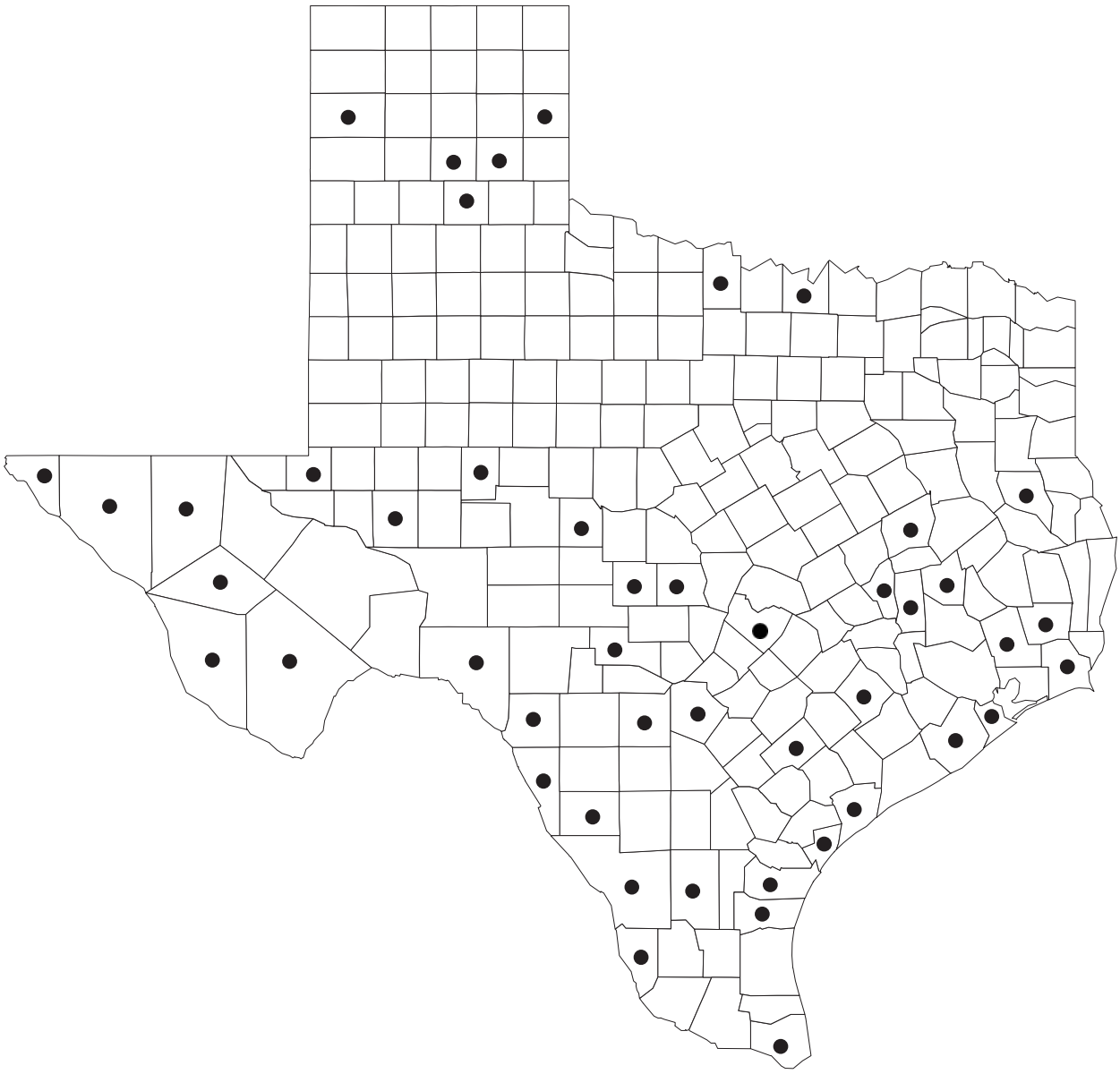

Figure 2. Distribution of Texas mammal type specimens by county. Solid circles (●) indicate counties in which one or more type specimens were collected.

COUNTY

Aransas (4 taxa):

1. 0.5 mile west of Marano Mill:

Blarina brevicauda plumbea (= *Blarina hylophaga plumbea*).

2. Rockport:

Scalopus aquaticus alleni (= *Scalopus aquaticus alleni*).
Oryzomys palustris texensis (= *Oryzomys texensis texensis*).
Geomys breviceps attwateri (= *Geomys attwateri*).

Armstrong (1 taxon):

3. 17 miles southeast of Washburn:

Pappogeomys castanops simulans (= *Cratogeomys castanops perplanus*).

Bexar (6 taxa):

4. San Antonio:

Vespertilio incautus (= *Myotis velifer incautus*).
Peromyscus michiganensis pallescens (= *Peromyscus sonoriensis pallescens*).
Reithrodontomys griseus (= *Reithrodontomys montanus griseus*).

5. 18 miles south of San Antonio, Medina River:

Lepus aquaticus attwateri (= *Sylvilagus aquaticus*).

6. Watson's Ranch, 15 miles southwest of San Antonio:

Perognathus mearnsi **(=** *Perognathus merriami merriami***)**.

7. Watson's Ranch, 15 miles south of San Antonio:

Reithrodontomys laceyi **(=** *Reithrodontomys fulvescens laceyi***)**.

Brazoria (3 taxa):

8. 20 miles west of Angleton:

Lutra canadensis texensis **(=** *Lontra canadensis lataxina***)**.

9. Austin Bayou, near Alvin:

Reithrodontomys merriami **(=** *Reithrodontomys humulis merriami***)**.

10. Bernard Creek, near Columbia:

Peromyscus taylori subater **(=** *Baiomys taylori subater***)**.

Brazos (1 taxon):

11. College Station:

Scalopus aquaticus cryptus (= *Scalopus aquaticus cryptus***)**.

Brewster (7 taxa):

12. Alpine:

Thomomys baileyi spatiosus **(=** *Thomomys baileyi spatiosus***)**.
Spermophilus spilosoma marginatus **(=** *Xerospermophilus spilosoma marginatus***)**.

13. 3 miles south, 8 miles west of Alpine, 5,100 feet:

Pappogeomys castanops pratensis **(=** *Cratogeomys castanops pratensis***)**.

14. 4 miles west of Boquillas:

Thomomys lachuguilla limitaris **(=** *Thomomys baileyi limitaris***)**.

15. Chisos Mountains, 8,000 feet:

Sigmodon ochrognathus **(=** *Sigmodon ochrognathus***)**.

16. Johnson's Ranch, Pinnacle Spring, Big Bend of Rio Grande, 2,600 feet:

Perognathus collis popei **(=** *Chaetodipus collis collis***)**.

17. mouth of Santa Helena Canyon, Big Bend of Rio Grande, 2,146 feet:

Dipodomys ordii attenuatus (= *Dipodomys ordii obscurus*).

Briscoe (2 taxa):

18. 6 miles south of Quitaque, old "F" Ranch headquarters:

Sylvilagus floridanus llanensis (= *Sylvilagus floridanus llanensis*).

19. Tule Canyon, 22 miles east of Tulia:

Peromyscus comanche (= *Peromyscus truei comanche*).

Calhoun (1 taxon):

20. Indianola, Matagorda Bay:

Spilogale indianola (= *Spilogale interrupta*).

Cameron (13 taxa):

21. Brownsville:

Didelphis marsupialis texensis (= *Didelphis virginiana californica*).
Tatu novemcinctum texanum (= *Dasypus novemcintus mexicanus*).
Lepus simplicicanus (= *Sylvilagus floridanus chapmani*).
Felis limitis (= *Leopardus pardalis albescens*).
Conepatus leuconotus texensis (= *Conepatus leuconotus leuconotus*).
Oryzomys aquaticus (= *Oryzomys couesi aquaticus*).
Reithrodontomys mexicanus intermedius (= *Reithrodontomys fulvescens intermedius*).
Vesperimus mearnsii (= *Peromyscus leucopus texanus*).
Liomys texensis (= *Liomys irroratus texensis*).
Perognathus merriami (= *Perognathus merriami merriami*).

22. Padre Island:

Dipodomys compactus (= *Dipodomys compactus compactus*).

23. Santa Rosa, 85 miles southwest of Corpus Christi:

Dipodops sennetti (= *Dipodomys compactus sennetti*).

24. The Tanks, 12 miles from Point Isabel, Padre Island:

Spermophilus spilosoma annectens (= *Xerospermophilus spilosoma annectens*).

Clay (1 taxon):

25. Henrietta:

Dipodomys elator (= *Dipodomys elator*).

Colorado (1 taxon):

26. Cummings Creek:

Castor canadensis texensis (= *Castor canadensis texensis*).

Concho (1 taxon):

27. No exact locality:

Onychomys longipes (= *Onchomys leucogaster longipes*).

Cooke (2 taxa):

28. Gainesville:

Perognathus paradoxus spilotus (= *Chaetodipus hispidus spilotus*).
Spermophilus tridecemlineatus texensis (= *Ictidomys tridecemlineatus texensis*).

Culberson (4 taxa):

29. McKittrick Canyon, Guadalupe Mountains, 7,800 feet:

Microtus mexicanus guadalupensis (= *Microtus mogollonensis guadalupensis*).
Thomomys bottae guadalupensis (= *Thomomys baileyi guadalupensis*).

30. Dog Canyon, Guadalupe Mountains, 7,000 feet:

Eutamias cinereicollis canipes (= *Tamias canipes canipes*).

31. Guadalupe Mountains:

Ovis canadensis texianus (= *Ovis canadensis mexicana*).

DeWitt (1 taxon):

32. Cuero:

Geomys breviceps ammophilus (= *Geomys attwateri*).

Dimmit (1 taxon):

33. Carrizo Springs:

Geomys personatus minor (= *Geomys streckeri*).

Donley (1 taxon):

34. 8 miles west of Clarendon:

Geomys lutescens major (= *Geomys bursarius major*).

Duval (1 taxon):

35. San Diego:

Hesperomys (*Vesperimus*) *taylori* (= *Baiomys taylori taylori*).

El Paso (15 taxa):

36. El Paso:

Lepus arizonae minor (= *Sylvilagus audubonii minor*).
V[*espertilio*]. *pallidus* (= *Antrozous pallidus pallidus*).
Geomys arenarius (= *Geomys arenarius arenarius*).
Dipodomys ambiguus (= *Dipodomys merriami ambiguus*).
Dipodomys ordii (= *Dipodomys ordii ordii*).
Perognatus [sic] *flavus* (= *Perognathus flavus flavus*).
Spermophilus spilosoma arens (= *Xerospermophilus spilosoma canescens*).
Tamias interpres (= *Ammospermophilus interpres*).

37. Arid foothills 1 mile northeast of El Paso:

Thomomys aureus lachuguilla **(=** *Thomomys baileyi lachuguilla***)**.

38. near Fort Bliss, about 2 miles above El Paso:

S*orex* (*Notiosorex***)** *crawfordi* **(=** *Notiosorex crawfordi***)**.

39. foothills of Franklin Mountains, near El Paso:

Peromyscus boylii penicillatus **(=** *Peromyscus nasutus penicillatus***)**.

40. Rio Grande, about 6 miles above El Paso:

Onychomys torridus arenicola (= *Onychomys arenicola*).
Peromyscus eremicus arenarius (= *Peromyscus eremicus eremicus*).
Peromyscus tornillo (= *Peromyscus leucopus tornillo*).
Sigmodon hispidus pallidus (= *Sigmodon hispidus berlandieri*).

Galveston (2 taxa):

41. Clear Creek:

Geomys breviceps sagittalis (= *Geomys breviceps sagittalis*).

42. 1 mile north of Texas City:

Geomys breviceps terricolus (= *Geomys breviceps sagittalis*).

Grimes (1 taxon):

43. 5 miles east of Kurten:

Geomys breviceps brazensis (= *Geomys brazensis brazensis*).

Hardin (2 taxa):

44. Big Thicket, 7 miles northeast of Sour Lake:

Conepatus mesoleucus telmalestes (= *Conepatus leuconotus telmalestes*).
Glaucomys volans texensis (= *Glaucomys volans texensis*).

Hudspeth (5 taxa):

45. 1.5 miles west of Bat Cave, Sierra Diablo Mountains:

Thomomys bottae scotophilus **(=** *Thomomys baileyi scotophilus***)**.

46. Fort Hancock:

Lepus texianus griseus (= *Lepus californicus texianus*).
Perognathus (*Chaetodipus*) *eremicus* (= *Chaetodipus eremicus eremicus*).

47. Railroad Station at junction Texas Pacific & Southern Pacific railroads, Sierra Blanca:

Thomomys baileyi (= *Thomomys baileyi baileyi*).

48. 3 miles east of Sierra Blanca:

Pappogeomys castanops torridus (= *Cratogeomys castanops pratensis*).

Jeff Davis (7 taxa):

49. Finleys Ranch, 15 miles west of Fort Davis, 6,000 feet, Davis Mountains, near Sawtooth Mountain:

Lepus pinetis robustus (= *Sylvilagus holzneri robustus*).

50. Merrill Canyon, Davis Mountains:

Ursus horriaeus texensis (= *Ursus arctos horribilis*).

51. Limpia Canyon, 1 mile north of Fort Davis, Davis Mountains:

Thomomys bottae limpiae (= *Thomomys baileyi limpiae*).
Perognathus collis (= *Chaetodipus collis collis*).

52. Limpia Canyon, 16 miles north of Fort Davis, Davis Mountains:

Neotoma albigula robusta (= *Neotoma leucodon robusta*).

53. Head of Limpia Creek, 5,500 feet, Davis Mountains:

Thomomys fulvus texensis (= *Thomomys baileyi texensis*).

54. 1.5 miles west of Point-of-Rocks Park:

Sigmodon fulviventer dalquesti (= *Sigmodon fulviventer dalquesti*).

Jefferson (1 taxon):

55. 7 miles southwest of Fannett:

Geomys breviceps ludemani (= *Geomys breviceps sagittalis*).

Kerr (6 taxa):

56. 20 miles north of Kerrville:

Mustela frenata texensis (= *Mustela frenata texensis*).

57. 35 miles east of Rock Springs, 2,450 feet, north fork of Guadalupe River, 15 miles west of Japonica:

Thomomys lachuguilla confinalis (= *Thomomys baileyi confinalis*).

58. Lacey Ranch, near Kerrville:

Neotoma attwateri (= *Neotoma floridana attwateri*).
Peromyscus pectoralis laceianus (= *Peromyscus laceianus*).

59. Turtle Creek:

Peromyscus attwateri (= *Peromyscus attwateri*).
Peromyscus boylei laceyi (= *Peromyscus attwateri*).

Kinney (8 taxa):

60. Fort Clark (Brackettville):

Lepus floridanus caniclunis (= *Sylvilagus floridanus chapmani*).
Lepus merriami (= *Lepus californicus merriami*).
Mormoops megalophylla senicula (= *Mormoops megalophylla megalophylla*).
Dorcelaphus texanus (= *Odocoileus virginianus texana*).
Peromyscus canus (= *Peromyscus leucopus texanus*).
Geomys personatus fuscus (= *Geomys personatus fuscus*)
Spermophilus mexicanus parvidens (= *Ictidomys parvidens*).

61. Las Moras Creek, Fort Clark:

Procyon lotor fuscipes (= *Procyon lotor fuscipes*).

Kleberg (2 taxa):

62. Santa Gertrudis, 45 miles southwest of Corpus Christi:

Canis nebrascensis texensis (= *Canis latrans texensis*).

63. Padre Island, 6.1 miles south of Nueces County Park:

Geomys personatus personatus (= *Geomys personatus personatus*).

Leon (1 taxon):

64. 13 miles east of Centerville:

Scalopus aquaticus nanus (= *Scalopus aquaticus cryptus*).

Liberty (1 taxon):

65. 2 miles east of Liberty:

Geomys breviceps pratincolus (= *Geomys brazensis pratincolus*).

Llano (2 taxa):

66. Llano:

Geomys breviceps llanensis (= *Geomys texensis llanensis*).

67. Packsaddle Mountain:

Spermophilus buckleyi (= *Otospermophilus variegatus buckleyi*).

Mason (4 taxa):

68. Mason:
Conepatus mesoleucus mearnsi (= *Conepatus leuconotus leuconotus*).
Spilogale leucoparia (= *Spilogale leucoparia*).
Geomys texensis (= *Geomys texensis texensis*).

69. probably vicinity of Mason:

Hesperomys texana (= *Peromyscus leucopus texanus*).

Maverick (4 taxa):

70. Eagle Pass:

Felis wiedii cooperi (= *Leopardus wiedii glauculus*).
Cratogeomys castanops angusticeps (= *Cratogeomys castanops angusticeps*).

71. San Pedro, near Eagle Pass:

Urocyon cinereoargenteus texensis (= *Urocyon cinereoargenteus scottii*).

72. Upper Rio Grande crossing near the mouth of Cuervo Creek (also known as San Antonio Creek), about 18 air kilometers south of El Indio:

Geomys clarkii (= *Cratogeomys castanops clarkii*).

Medina (3 taxa):

73. vicinity of Castroville, on headwaters of Medina River:

Lynx rufus var. *maculatus* (= *Lynx rufus rufus*).

74. Ney Cave, 20 miles north of Hondo:

Tadarida texana (= *Tadarida brasiliensis mexicana*).

75. 1 mile east of D'Hanis:

Geomys texensis bakeri (= *Geomys texensis bakeri*).

Nacogdoches (1 taxon):

76. La Nana Creek Bottoms, 1 mile east of Stephen F. Austin State College Campus, Nacogdoches:

Ochrotomys nuttalli lisae (= *Ochrotomys nuttalli lisae*).

Nueces (5 taxa):

77. Corpus Christi:

Lepus floridanus chapmani (= *Sylvilagus floridanus chapmani*).
Taxidea taxus littoralis (= *Taxidea taxus berlandieri*).

78. Flour Bluff, 11 miles southeast of Corpus Christi:

Geomys personatus maritimus (= *Geomys personatus maritimus*).

79. Mustang Island, 14 miles southwest of Port Aransas:

Dipodomys ordii largus **(=** *Dipodomys compactus compactus***)**.

80. south side of Nueces Bay:

Geomys personatus fallax **(=** *Geomys personatus fallax***)**.

Oldham (1 taxon):

81. Tascosa:

Cratogeomys castanops perplanus **(=** *Cratogeomys castanops perplanus***)**.

Presidio (2 taxa):

82. No exact locality:

Scalops argentatus texanus **(=** *Scalopus aquaticus texanus***)**.

83. Lloyd Ranch, 35 miles south of Marfa:

Thomomys bottae pervarius **(=** *Thomomys baileyi pervarius***)**.

Sterling (1 taxon):

84. 1 mile north, 4 miles west of Sterling City:

Cratogeomys castanops dalquesti **(=** *Cratogeomys castanops dalquesti***).**

Travis (2 taxa):

85. 15 miles west of Austin:

Canis lupus var. *rufus* **(=** *Canis rufus rufus***)**.

86. Laubach Cave, Georgetown:

Myotis magnamolaris (= *Myotis velifier magnamolaris*).

Upton (2 taxa):

87. 10 miles south of Rankin:

Canis lupus monstrabilis (= *Canis lupus nubilus*).

88. 2.5 miles east of McCamey:

Thomomys bottae robertbakeri (= *Thomomys baileyi robertbakeri*)

Val Verde (1 taxon):

89. Devils River:

Sciurus limitis (= *Sciurus niger limitis*).

Walker (1 taxon):

90. Huntsville:

Peromyscus leucopus brevicaudus (= *Peromyscus leucopus leucopus*).

Webb (2 taxa):

91. Bruni Ranch, near Bruni:

Felis concolor youngi (= *Puma concolor couguar*).

92. 4 miles southeast of Oilton:

Geomys personatus megapotamus (= *Geomys personatus megapotamus*).

Wheeler (1 taxon):

93. near Mobeetie:

Perognathus copei (= *Perognathus flavescens copei*).

Winkler (1 taxon):

94. 4.1 miles north, 5.1 miles east of Kermit:

Geomys bursarius knoxjonesi (= *Geomys knoxjonesi*).

Zapata (1 taxon):

95. 3 miles north, 2.8 miles west of Zapata:

Geomys personatus davisi (= *Geomys personatus davisi*).

LIST 1.3. SENIOR AUTHORS OF DESCRIPTIONS OF MAMMALS DESCRIBED FROM TEXAS AND NUMBER OF TAXA DESCRIBED

C. H. Merriam (19)

V. Bailey (18)

J. A. Allen (16)

E. A. Mearns (16)

W. B. Davis (15)

E. A. Goldman (9)

W. F. Blair (6)

S. F. Baird (4)

J. J. Audubon (3)

R. Russell (3)

J. E. Gray (2)

E. R. Hall (2)

G. S. Miller, Jr. (2)

E. W. Nelson (2)

S. N. Rhoads (2)

F. W. True (2)

S. W. Woodhouse (2)

R. H. Baker (1)

R. J. Baker (1)

S. L. Beauchamp-Martin (1)

M. D. Bryant (1)

J. R. Choate (1)

E. D. Cope (1)

E. Coues (1)

R. Hollander (1)

A. H. Howell (1)

J. L. LeConte (1)

R. L. Packard (1)

J. A. G. Rehn (1)

V. S. Schantz (1)

J. H. Slack (1)

M. Smolen (1)

K. E. Stager (1)

F. B. Stangl, Jr. (1)

O. Thomas (1)

G. R. Waterhouse (1)

S. L. Williams (1)

LIST 1.4. PRINCIPAL COLLECTORS OF TYPE SPECIMENS OF MAMMALS DESCRIBED FROM TEXAS

V. Bailey (21)

E. A. Mearns (16)

H. P. Attwater (12)

F. B. Armstrong (9)

W. B. Davis (8)

W. Lloyd (7)

W. F. Blair (6)

J. H. Clark (4)

I. B. Henry (3)

J. M. Priour (3)

J. H. Gaut (2)

J. A. Loring (2)

G. H. Ragsdale (2)

S. L. Williams (2)

S. W. Woodhouse (2)

C. K. Worthen (2)

A. E. Borrell (1)

F. Brune (1)

F. M. Chapman (1)

W. K. Clark (1)

S. Cooper (1)

E. D. Cope (1)

S. W. Crawford (1)

W. J. DeLong (1)

C. O. Finley (1)

A. K. Fisher (1)

A. L. Heerman (1)

G. Heinrich (1)

R. R. Hollander (1)

J. K. Jones, Jr. (1)

P. V. Jones (1)

H. H. Keays (1)

M. Landwer (1)

M. R. Lee (1)

B. V. Lilly (1)

R. L. Packard (1)

W. L. Parker (1)

R. M. Pitts (1)

J. Pope (1)

A. Schott (1)

B. H. Slaughter (1)

K. E. Stager (1)

F. B. Stangl, Jr. (1)

J. O. Stevenson (1)

C. Streator (1)

W. Taylor (1)

W. P. Taylor (1)

V. H. Williams (1)

I. Wood (1)

Collector unknown (3)

No type specimen designated (6)

LIST 1.5. MUSEUMS AND INSTITUTIONS HOUSING PRIMARY TYPE SPECIMENS OF MAMMALS COLLECTED IN TEXAS

National Museum of Natural History (USNM)	80
American Museum of Natural History (AMNH)	18
Texas A&M University Biodiversity Research and Teaching Collections (TCWC)	14
University of Michigan, Museum of Zoology (UMMZ)	6
Museum of Texas Tech University (TTU)	5
Museum of Natural History, University of Kansas (KU)	4
Academy of Natural Sciences of Philadelphia (ANSP)	4
Carnegie Museum of Natural History (CM)	1
Museum of Vertebrate Zoology, University of California Berkeley (MVZ)	1
Natural History Museum of Los Angeles County (LACM)	1
Shuler Museum of Paleontology, Southern Methodist University (SMU)	1
Natural History Museum, London (NHMUK)	1
No type specimen	6
Unknown (specimen lost or destroyed)	1

LIST 1.6. MAMMAL TAXA DESCRIBED FROM TEXAS THAT HAVE BEEN PLACED IN SYNONYMY (1) BECAUSE OF PRIORITY OR (2) BECAUSE THEY NO LONGER HAVE CURRENT TAXONOMIC RANK AS VALID SPECIES OR SUBSPECIES

Original Name	Current Taxonomic Designation
Didelphis marsupialis texensis	*Didelphis virginiana californica*
Tatu novemcinctum texanum	*Dasypus novemcinctus mexicanus*
Lepus aquaticus attwateri	*Sylvilagus aquaticus*
Lepus floridanus caniclunis	*Sylvilagus floridanus chapmani*
Lepus simplicicanus	*Sylvilagus floridanus chapmani*
Lepus texianus griseus	*Lepus californicus texianus*
Scalopus aquaticus nanus	*Scalopus aquaticus cryptus*
Tadarida texana	*Tadarida brasiliensis mexicana*
Mormoops megalophylla senicula	*Mormoops megalophylla megalophylla*
Canis lupus monstrabilis	*Canis lupus nubilus*
Urocyon cinereoargenteus texensis	*Urocyon cinereoargenteus scottii*
Felis concolor youngi	*Puma concolor couguar*
Felis limitis	*Leopardus pardalis albescens*
Felis wiedii cooperi	*Leopardus wiedii glauculus*
Lynx rufus var. *maculatus*	*Lynx rufus rufus*
Conepatus leuconotus texensis	*Conepatus leuconotus leuconotus*
Conepatus mesoleucus mearnsi	*Conepatus leuconotus leuconotus*
Spilogale indianola	*Spilogale interrupta*
Lutra canadensis texensis	*Lontra canadensis lataxina*
Taxidea taxus littoralis	*Taxidea taxus berlandieri*
Procyon nivea	*Procyon lotor fuscipes*

Ursus horriaeus texensis	*Ursus arctos horribilis*
Ovis canadensis texianus	*Ovis canadensis mexicana*
Peromyscus boylei laceyi	*Peromyscus attwateri*
Peromyscus canus	*Peromyscus leucopus texanus*
Peromyscus eremicus arenarius	*Peromyscus eremicus eremicus*
Peromyscus leucopus brevicaudus	*Peromyscus leucopus leucopus*
Sigmodon hispidus pallidus	*Sigmodon hispidus berlandieri*
Vesperimus mearnsii	*Peromyscus leucopus texanus*
Geomys breviceps ammophilus	*Geomys attwateri*
Geomys breviceps ludemani	*Geomys breviceps sagittalis*
Geomys breviceps terricolus	*Geomys breviceps sagittalis*
Geomys clarkii	*Cratogeomys castanops clarkii*
Geomys personatus minor	*Geomys streckeri*
Pappogeomys castanops simulans	*Cratogeomys castanops perplanus*
Pappogeomys castanops torridus	*Cratogeomys castanops pratensis*
Dipodomys ordii attenuatus	*Dipodomys ordii obscurus*
Dipodomys ordii largus	*Dipodomys compactus compactus*
Perognathus collis popei	*Chaetodipus collis collis*
Perognathus mearnsi	*Perognathus merriami merriami*
Spermophilus buckleyi	*Otospermophilus variegatus buckleyi*
Spermophilus spilosoma arens	*Xerospermophilus spilosoma canescens*

Endemic Taxa and Conservation Concerns

Of the 143 taxa of mammals described from Texas, 101 (70.6%) are still recognized as valid taxa. Of these, 32 are endemic (31.7%) to the state, including four species and 28 subspecies; all but eight are rodents, and 19 of the rodents (79.2%) are pocket gophers (Family Geomyidae). Among the pocket gophers, three are species and the other 16 are presently considered to be subspecies (Table 6). Three of the four endemic species described from Texas are pocket gophers and the fourth is a kangaroo rat, and all have restricted geographic ranges. Three subspecies described from Texas, *Scalopus aquaticus texanus*, *Conepatus leuconotus telmalestes*, and *Thomomys baileyi baileyi*, are now possibly extinct in the state, and 11 other subspecies appear on some sort of list of taxa having conservation concerns (Table 6).

Another group of mammalian taxa described from Texas that form a unique grouping would be those species and subspecies that were described from the state and occur nowhere else in the United States, although they may range extensively into Mexico (Table 6). Fourteen taxa (2 lagomorphs, 1 carnivore, and 11 rodents) fit into this category, and two are considered under conservation threat. TPWD lists the rice rat, *Oryzomys couesi aquaticus*, as threatened and imperiled because of habitat loss in the few places where it occurs in southernmost Texas, and *Dipodomys compactus compactus*, an island subspecies restricted to the southern group of barrier islands in the state, is listed as vulnerable on the TPWD list of species of greatest conservation need.

The other 49 taxa described from Texas that are still considered to be valid taxa are more wide-ranging in distribution and occur in other states or Mexico and few of them have conservation concerns. However, four are thought to have issues, including Holzner's Mountain Cottontail, *Sylvilagus holzneri robustus*, listed as critically imperiled by NatureServe; Plains Spotted Skunk, *Spilogale interrupta*, considered threatened by TPWD; Ocelot, *Leopardus pardalis albescens*, regarded as endangered by both the USFWS and TPWD; and Desert Pocket Gopher, *Geomys arenarius arenarius*, considered vulnerable by NatureServe.

Authors of Type Descriptions and Collectors of Type Specimens

Ten mammalogists either collected or authored descriptions for most of the mammals discovered in Texas. Following are brief biographies of these outstanding mammalogists. In a few cases, the same individuals were both leading collectors and describers (e.g., V. Bailey, E. A. Mearns, and W. B. Davis).

Vernon Bailey (1864–1942) was the Chief Field Naturalist for the United States Biological Survey (USBS) and he led the field and scientific work on the biological survey of the state, which was published in 1905 (Bailey 1905). This survey (conducted from 1885 to 1905) was the first serious attempt to conduct a detailed assessment of mammals across the entire state. Bailey's work was supervised by **C. Hart Merriam** (1855–1942), who was the Chief of the USBS and the most authoritative figure in mammalogy at the beginning of the twentieth century. Both men made monumental contributions to Texas mammalogy (Schmidly et al. 2016). Bailey collected 21 of the taxa described from the state and authored the scientific descriptions for 18 of those. Although Merriam never collected in Texas (as the administrator of the USBS, his duties were confined primarily to Washington, D.C.), he did author 19 of the descriptions of Texas taxa. Many field agents of the USBS, who were trained by Bailey and accompanied him in the field, collected type specimens or described taxa from the state. These included William Lloyd (provided specimens for seven types), J. H. Gaut and J. A. Loring (specimens for two types each), and Clark Streator and A. K. Fisher (one type each). A complete account of the biological survey of Texas, including a summary of the contributions of the many naturalists who worked on the project, is provided by Schmidly (2002) who also published a biography of Vernon Bailey (Schmidly 2018), the author of the *Biological Survey of Texas*.

Table 6. Conservation status of mammals described from Texas that (A) are endemic to the state or (B) occur nowhere else in the United States, although they may range by varying degrees into Mexico. State status taken from TPWD; federal status from USFWS; global status from NatureServe (https://explorer.natureserve.org). (**Dipodomys elator* was reported from Oklahoma in the early 1900s, but the species now is considered extirpated in that state and thus currently is considered endemic to Texas—see Braun et al. 2021).

Current Name of Taxon	Original Name of Taxon	State Threatened or Endangered	Federal Threatened or Endangered	State Conservation Status	Global Conservation Status
A. Mammals described from Texas that are endemic to the state					
Blarina hylophaga plumbea	*Blarina brevicauda plumbea*	Not Listed	Not Listed	Critically Imperiled	Subspecies Critically Imperiled
Scalopus aquaticus texanus	*Scalops argentatus texanus*			Probably Extirpated	
Scalopus aquaticus alleni	*Scalopus aquaticus alleni*	Not Listed	Not Listed	Not Listed	Not Listed
Scalopus aquaticus cryptus	*Scalopus aquaticus cryptus*	Not Listed	Not Listed	Not Listed	Not Listed
Conepatus leuconotus telmalestes	*Conepatus mesoleucus telmalestes*			Probably Extirpated	
Neotoma leucodon robusta	*Neotoma albigula robusta*	Not Listed	Not Listed	Not Listed	Not Listed
Neotoma floridana attwateri	*Neotoma attwateri*	Not Listed	Not Listed	Not Listed	Not Listed
Baiomys taylori subater	*Peromyscus taylori subater*	Not Listed	Not Listed	Not Listed	Not Listed
Peromyscus truei comanche	*Peromyscus comanche*	Threatened	Not Listed	Imperiled	Subspecies Imperiled
Sigmodon fulviventer dalquesti	*Sigmodon fulviventer dalquesti*	Threatened	Not Listed	Critically Imperiled	Species Secure
Cratogeomys castanops angusticeps	*Cratogeomys castanops angusticeps*	Not Listed	Not Listed	Not Listed	Not Listed
Cratogeomys castonops clarkii	*Geomys clarkii*	Not Listed	Not Listed	Not Listed	Not Listed
Cratogeomys castanops dalquesti	*Cratogeomys castanops dalquesti*	Not Listed	Not Listed	Not Listed	Not Listed
Geomys attwateri	*Geomys breviceps ammophilus*	Not Listed	Not Listed	Not Listed	Not Listed

Table 6. (cont.)

Current Name of Taxon	Original Name of Taxon	State Threatened or Endangered	Federal Threatened or Endangered	State Conservation Status	Global Conservation Status
Geomys brazensis brazensis	*Geomys breviceps brazensis*	Not Listed	Not Listed	Not Listed	Not Listed
Geomys personatus davisi	*Geomys personatus davisi*	Not Listed	Not Listed	Imperiled	Subspecies Imperiled
Geomys personatus fallax	*Geomys personatus fallax*	Not Listed	Not Listed	Not Listed	Not Listed
Geomys personatus fuscus	*Geomys personatus fuscus*	Not Listed	Not Listed	Not Listed	Not Listed
Geomys personatus maritimus	*Geomys personatus maritimus*	Not Listed	Not Listed	Imperiled	Subspecies Imperiled
Geomys personatus personatus	*Geomys personatus personatus*	Not Listed	Not Listed	Unranked	Unranked
Geomys streckeri	*Geomys personatus minor*	Not Listed	Not Listed	Critically Imperiled	Critically Imperiled
Geomys texensis bakeri	*Geomys texensis bakeri*	Not Listed	Not Listed	Imperiled	Subspecies Imperiled
Geomys texensis texensis	*Geomys texensis*	Not Listed	Not Listed	Imperiled	Subspecies Imperiled
Thomomys baileyi baileyi	*Thomomys baileyi*			Probably Extirpated	
Thomomys baileyi confinalis	*Thomomys lachuguilla confinalis*	Not Listed	Not Listed	Not Listed	Not Listed
Thomomys baileyi limpiae	*Thomomys bottae limpiae*	Not Listed	Not Listed	Imperiled	Subspecies Imperiled
Thomomys baileyi robertbakeri	*Thomomys bottae robertbakeri*	Not Listed	Not Listed	Not Listed	Not Listed
Thomomys baileyi spatiosus	*Thomomys baileyi spatiosus*	Not Listed	Not Listed	Not Listed	Not Listed
Thomomys baileyi texensis	*Thomomys fulvus texensis*	Not Listed	Not Listed	Imperiled	Subspecies Imperiled
Dipodomys compactus sennetti	*Dipodops sennetti*	Not Listed	Not Listed	Not Listed	Not Listed

Table 6. (cont.)

Current Name of Taxon	Original Name of Taxon	State Threatened or Endangered	Federal Threatened or Endangered	State Conservation Status	Global Conservation Status
Dipodomys elator *	*Dipodomys elator*	Threatened	Not Listed	Critically Imperiled	Imperiled
Xerospermophilus spilosoma annectens	*Spermophilus spilosoma annectens*	Not Listed	Not Listed	Not Listed	Not Listed
B. Mammals described from Texas that occur nowhere else in the United States although they range into Mexico					
Lepus californicus merriami	*Lepus merriami*	Not Listed	Not Listed	Not Listed	Not Listed
Sylvilagus floridanus chapmani	*Lepus floridanus chapmani*	Not Listed	Not Listed	Not Listed	Not Listed
Procyon lotor fuscipes	*Procyon lotor fuscipes*	Not Listed	Not Listed	Not Listed	Not Listed
Baiomys taylori taylori	*Hesperomys* (*vesperimus*) *taylori*	Not Listed	Not Listed	Not Listed	Not Listed
Onychomys leucogaster longipes	*Onychomys longipes*	Not Listed	Not Listed	Not Listed	Not Listed
Oryzomys couesi aquaticus	*Oryzomys aquaticus*	Threatened	Not Listed	Imperiled	Subspecies Imperiled
Peromsycus leucopus texanus	*Hesperomys texana*	Not Listed	Not Listed	Not Listed	Not Listed
Reithrodontomys fulvescens intermedius	*Reithrodontomys mexicanus intermedius*	Not Listed	Not Listed	Not Listed	Not Listed
Cratogeomys castanops pratensis	*Pappogeomys castanops pratensis*	Not Listed	Not Listed	Not Listed	Not Listed
Geomys personatus megapotamus	*Geomys personatus megapotamus*	Not Listed	Not Listed	Not Listed	Not Listed
Dipodomys compactus compactus	*Dipodomys compactus*	Not Listed	Not Listed	Vulnerable	Subspecies Vulnerable
Liomys irroratus texensis	*Liomys texensis*	Not Listed	Not Listed	Not Listed	Not Listed

Table 6. (cont.)

Current Name of Taxon	Original Name of Taxon	State Threatened or Endangered	Federal Threatened or Endangered	State Conservation Status	Global Conservation Status
Perognathus merriami merriami	*Perognathus merriami /P. mearnsi*	Not Listed	Not Listed	Not Listed	Not Listed
Sciurus niger limitis	*Sciurus limitis*	Not Listed	Not Listed	Not Listed	Not Listed

The older type specimens of Texas mammals have come from two main sources—the collections made by naturalists attached to the many government exploring parties sent to the western states about the middle of the nineteenth century, and those accumulated by the subsequent work of the United States Biological Survey under the direction of Merriam. Many Army surgeons were stationed in Texas at various places along the US-Mexico border, and in addition to their regular military duties, they found time to do field work in natural history and in the process provided much of our knowledge of the zoology of the west. From 1892 to 1894, Lieutenant Colonel **Edgar A. Mearns** (1856–1916) worked on the Mexican Boundary Commission, conducting natural history studies of mammals along the border region. In 1907, he authored *Mammals of the Mexican Boundary*, which contained accounts of the trees, big game, and rodents of the border region. He was an indefatigable collector and provided many specimens to the US National Museum (USNM) and the American Museum of Natural History (AMNH). He also was a noted publisher, describing many new species and providing notes on nomenclature, distribution, and habits of birds and mammals that had come under his observation (Palmer et al. 1954). Mearns collected 16 types of Texas mammals and he described 16 taxa from the state.

Another well-known describer of Texas mammals was **J. A. Allen** (1838–1921), curator of birds and mammals at the American Museum of Natural History in New York City, who described 16 taxa from the state, mostly on the basis of specimens provided to him by local state naturalists, such as H. P. Attwater and F. B. Armstrong. One taxon, a mole (*Scalopus aquaticus alleni*), was named after this highly regarded zoologist. In 1885 Allen became curator of the Department of Mammals and Birds in the American Museum of Natural History in New York City, a post he held until his death in 1921. He wrote many scientific papers, including a number of monographs. In addition to naming many species, he made important studies on geographic variation relative to climate (see Beolens et al. 2009).

E. A. Goldman (1873–1946), a mammologist at the USBS, described nine taxa of mammals from Texas in the 1930s, including several taxa of pocket gophers

and a few carnivores. Although he did very little field work in the state, Major Goldman was a prolific describer of species and subspecies and developed the moniker of the "Noah" of the Biological Survey.

Among the local naturalists who resided in the state, three British ex-patriots were especially important in the discovery of Texas taxa, primarily through their efforts to provide specimens of mammals for the AMNH and the USBS. The most important of these naturalists were **H. P. Attwater** (1854–1931), **F. B. Armstrong** (1863–1915), and **Howard Lacey** (1856–1929). Attwater worked extensively in the area around San Antonio and in the Hill Country. Three species of Texas mammals, a pocket gopher (*Geomys attwateri*), a deer mouse (*Peromyscus attwateri*), and a woodrat (*Neotoma attwateri*; now *Neotoma floridana attwateri*), were named after Attwater in recognition of his contributions to Texas natural history. Armstrong was known for his taxidermy and collecting skills, and he settled and collected extensively in the Brownsville area, obtaining specimens for museum scientists to describe new taxa. Together, Attwater and Armstrong provided specimens for 21 taxa described from the state. Howard Lacey was a rancher and naturalist who owned a goat ranch on Turtle Creek, near Kerrville, in Kerr County, Texas. Lacey published little, but he corresponded with natural scientists in Europe and throughout the United States and frequently entertained internationally known naturalists and scientists at his ranch. He also kept accurate and detailed notes about the wildlife on his property and throughout the Hill Country. In recognition of his contributions, three small mammals were named for him—*Peromyscus pectoralis laceianus* (now *P. laceianus*), *P. boylei laceyi*, and *Reithrodontomys laceyi*.

Academic mammalogy began to develop in Texas with the arrival of **William B. Davis** (1902–1995) at Texas A&M University in 1937 to establish the Department of Fish and Game and begin training graduate and undergraduate students in wildlife science and management. Davis had matriculated from the University of California-Berkeley, where he had studied under the legendary Joseph Grinnell and E. Raymond Hall, who took the encompassing approach that wildlife research should be broadly focused on all bird and mammal species and not just game animals. With his students, Davis began to collect and observe mammals across the state, and together with **Walter P. Taylor** (1888–1972), another student of Grinnell's, they established the Texas Cooperative Wildlife Collection, the first major collection of mammals in the state. Davis and his students began collecting and describing mammals, especially pocket gophers, beginning in the 1940s. He described 15 Texas mammal taxa, mostly pocket gophers, and collected eight of the type specimens for these taxa. Shortly after Davis' arrival at Texas A&M University, **W. Frank Blair** (1912–1984), a graduate of the mammalogy program at the University of Michigan, was employed by the University of Texas at Austin. Blair and his students also collected and conducted natural history studies of mammals, particularly in the Hill Country and the Trans-Pecos, and Blair described six species of Texas mammals.

Beginning in the 1960s, a center of mammalogy developed at Texas Tech University in the Department of Biology and the Natural Science Research Laboratory where the mammal collection is housed. Several prominent mammologists have been associated with this program, including **Robert L. Packard** (1928–1979), **Robert J. Baker** (1942–2018), **J. Knox Jones, Jr.** (1929–1992), and **Clyde Jones** (1935–2015), and collectively they contributed many discoveries about taxa in the state during the latter half of the twentieth century (see Bradley et al. 2005 for a history of the mammalogy program at Texas Tech University). **Robert D. Bradley**, one of the authors of this paper, currently oversees the Texas Tech mammalogy program.

David J. Schmidly, one of the authors and editors of this volume, has spent more than 50 years studying Texas mammals, first at Texas A&M University in the Department of Wildlife and Fisheries Sciences and as Curator of Mammals in the Texas Cooperative Wildlife Collection (1971–1996) and then as part of Texas Tech University (1996–2003) as a professor in the mammalogy program (while serving as Vice President and then President of the University). After leaving Texas Tech, Schmidly was appointed as a Research Associate of the NSRL and Professor Emeritus at the university. Schmidly has authored several books about Texas mammals, including three editions of *The Mammals of Texas*, two editions of *The Bats of Texas*, and two polemic volumes (*Texas Natural History*: *A Century of*

Change and *Texas Natural History in the 21st Century*) that chronicle changes in the mammal fauna over the past 125 years and make recommendations for their conservation. Schmidly was one of the authors of a paper describing a new subspecies of pocket gopher, *Thomomys bottae* (now *baileyi*) *robertbakeri*, from western Texas.

Surprisingly, a private citizen, **Richard Moreland Pitts**, may be the most prolific collector of Texas specimens. Pitts is a retired Army Lieutenant Colonel who had many duty assignments in Texas. Over his 45+ years of collecting mammals, he has prepared more than 16,300 specimens and has authored 53 publications. He collected the holotype of *Geomys texensis bakeri* and was one of the authors (Smolen et al. 1993) who described that taxon. He also obtained many topotype and near topotype specimens (many with genetic tissues) that have been deposited in the mammal collections at Texas Tech University and Texas A&M University.

Although it is not feasible to include information about all of the other collectors and describers of Texas mammals, brief biographies for many, but not all, can be found in *The Eponym Dictionary of Mammals* (Beolens et al. 2009).

SUMMARY

Some summaries of interest in the various listings and connections of the mammal catalog are as follows:

- Of the 143 taxa described from Texas, 50 (35%) originally were described as species and 93 (65%) as subspecies. Of those originally described as species, 15 have retained species status, 25 have been relegated to subspecific status by modern taxonomists, and 10 are no longer recognized as valid taxa (either species or subspecies). Of the 15 that have remained as species, nine have retained their original taxonomic designation, whereas the other six now belong to different genera. Of the 25 taxa relegated to subspecies, six now belong to a different genus. Of the 93 taxa originally described as subspecies, 48 still retain that status, 38 are synonyms, and 7 have been elevated to species. Those that are now species are: *Onychomys torridus arenicola* (= *Onychomys arenicola*), *Peromyscus pectoralis laceianus* (= *Peromyscus laceianus*), *Geomys breviceps attwateri* (= *Geomys attwateri*), *Geomys bursarius knoxjonesi* (= *Geomys knoxjonesi*), *Geomys breviceps brazensis* (= *Geomys brazensis*), *Eutamias cinereicollis canipes* (= *Tamias canipes*), and *Spermophilus mexicanus parvidens* (= *Ictidomys parvidens*). Most of these changes are the result of scientific monographs with careful revisions of taxonomic groups that have resulted in the shifting of species and subspecies based on better evidence and more advanced ideas about how different animals might be related.

- Of the 143 names applied to mammals (species and subspecies) described from Texas, 101 (70.6%) of the name combinations still remain valid, and 42 (29.4%) are invalid and now in synonymy. In other words, about 30% of the names applied to Texas mammals are now untenable. However, even in these cases it is important to know the accurate type localities, because as concepts and criteria in systematics shift, and as more cryptic species are discovered, some of these names could be returned to full taxonomic status.

- All but seven of the 143 taxa described from Texas have holotype specimens designated. The names of six mammals (*Lepus texianus*, *Canis lupus rufus*, *Lynx rufus* var. *maculatus*, *Mephitis varians*, *Procyon nivea*, and *Arvicola texiana*) are based on type descriptions with no type specimen designated, and four of these (*Lepus texianus*, *Canis lupus rufus*, *Lynx rufus* var. *maculatus*, and *Arvicola texiana*) are represented by drawings rendered by Audubon and Bachman (1851) that constitute iconotypes. A single taxon (*Geomys personatus personatus*) is represented by lectotype/paralectotype specimens, but none of the taxonomic names for mammals described from Texas are based on neotype specimens. One taxon

(*Myotis magnamolaris*) was described based on skeletal material from a Pleistocene cave deposit, although now it is considered to be a part of the modern Texas mammal fauna (see Dalquest and Stangl 1984).

- Of the 143 taxa of mammals described from Texas, 47 (32.9%) lack topotypes and 41 (28.7%) lack near topotype specimens. Only 11 (11.5%) of the topotypes are represented by genetic tissues, whereas 35 (34.3%) of near topotypes contain genetic tissues. Considering all of the catalog entries, it has been a century or more (mean = 99.6 years; median = 119 years) since the original type specimen or topotypes have been collected at the type localities. As would be expected, less time has expired since near topotypes have been obtained near the type localities (mean = 47.1 year; median = 48 years).

- Type localities have been designated from 95 locations in 47 of the 254 Texas counties (see Table 2 in Introduction). The counties with the most type specimens are El Paso (15); Cameron (13); Kinney (8); Brewster and Jeff Davis (7 each); and Kerr and Bexar (6 each). Five of the Texas type localities, represented by seven type specimens, are so general in nature they cannot be ascribed to a specific county or placed within a county. The type locality for one of the taxa described from Texas, *Geomys clarkii*, has been appropriately restricted from Presidio to Maverick County. This is the only restriction that changes county locations; the others are minor corrections within a single county.

- Of the 95 valid taxa of mammals described from Texas, 32 (33.7%) are endemic to the state, including 3 species and 29 subspecies. A majority of these are pocket gophers with restricted distributions. These taxa should be of high priority in terms of conservation concern and action. Another 14 species and subspecies represent taxa that were described from Texas and occur nowhere else in the United States, but they may range extensively into Mexico. The other 49 taxa that were described from Texas and remain valid today are more wide-ranging in distribution and occur in other states or Mexico and few of them have conservation concerns.

- There have been 49 known senior collectors and 37 senior-authored describers of Texas type specimens. Of the collectors, Vernon Bailey led with 21 taxa, followed by E. A. Mearns with 16, H. P. Attwater with 12, and F. B. Armstrong with nine. Among the describers, C. Hart Merriam described 19 forms, followed by Vernon Bailey (18), J. A. Allen (17), E. A. Mearns (16), William B. Davis (15), and E. A. Goldman (9). Of the 143 descriptions, 133 were provided by single authors and 10 were described by multiple authors.

- Twelve museums or university collections house primary Texas type specimens (not including topotypes and near topotypes). Another 41 collections house topotypes or near topotypes. The United States National Museum (USNM) has by far the most primary types (80 or 59% of the total), followed by the American Museum of Natural history (AMNH) with 18 (13%), and the Texas Cooperative Wildlife Collections (TCWC) with 14 (10%).

- Only 13 mammalian taxa were described from Texas prior to 1876 (see Table 1 in Introduction). The period of greatest activity in terms of published descriptions was from 1876 to 1925, when 81 forms (56.7% of the total) were described. Another period of high activity occurred from 1926 to 1950, when 36 forms (25% of the total) were described.

- The collectors for 134 of the 143 taxa described (94%) are known, and of course all of the describers have been identified. Collectively, these people include some of the best known scientific, museum, and local naturalists of their era. Below we describe some of the most important and best-known naturalists who have collected or described Texas mammals.

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Catalog 2: Type Specimens, Type Localities, Synonymies, and Authors/ Collectors of Recent Birds Described From Texas

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Birds represent the third largest number of terrestrial vertebrate taxa described from Texas, constituting 27.1% of the total number (see Table 1 in Introduction). The first birds recorded from the territory that would later become Texas were Wild Turkeys. During Major Stephen H. Long's expeditionary trek through the Texas Panhandle in 1820, naturalists in the excursion observed a flock of turkeys in present-day Oldham County (James 1823). However, nearly three centuries earlier, Álvar Nuñez Cabeza de Vaca mentioned that Native Americans delivered several "quails" to him when he was near the mouth of the Pecos River in present-day Val Verde County (Cabeza de Vaca 1555). A year after the Republic of Texas was established in 1836, John James Audubon became one of the first naturalists to inform the nation about the avian resources of the region (Oberholser 1974). By 1880, more than 50 men and at least two women were actively engaged in collecting bird specimens, eggs, and nests in Texas to supply the major museums and private collections back east. Many early collectors concentrated their activities in the Lower Rio Grande Valley. As of 2022 there had been more than 660 species documented within the 11 distinct ecological regions of the state (Chapman and Bolen 2018; Carpenter 2022). This incredibly diverse avifauna has attracted the attention of ornithologists, natural history museums, and private collectors from the eastern states and Europe since the early exploration of the region.

The search for avian types described from Texas began after the pandemic threat of Covid-19 was well underway. Consequently, a personal examination of museum collections was not possible because many museums and university collections closed to prevent spread of the virus. Consultation of the American Ornithologists' Union (AOU) Checklist published in 1957, the last checklist to include descriptions of all North American subspecies, served as a starting point for this project. Oberholser's two-volume tome (Oberholser 1974) on Texas birds extended the list of subspecies. After compiling a list of species and subspecies described from Texas from these sources, we examined all the supplements to the AOU Checklist and other ornithological literature to locate additional types. Other sources of information about avian type specimens included electronic databases and published compilations of type specimens. Particularly useful in this effort were the publicly accessible databases maintained by the US National Museum and the American Museum of Natural History. Published compilations of type specimens included the following: Museum of Comparative Zoology (Bangs 1930; Peters 1943); American Museum of Natural History (Greenway 1973, 1978, 1987; LeCroy 2003, 2005, 2010, 2012, 2017); U.S. National Museum (Deignan 1961); the Academy of Natural Sciences, Philadelphia (Stone 1899; Ingersoll and Fisher 2006); Museum of Natural Science, Louisiana State University (Cardiff and Remsen 1994); and Museum of Zoology, University of Michigan (Storer 1988). Records of Texas specimens and localities considered topotypes and near topotypes were obtained from the VertNet and iDigBio databases. Museums where type specimens and topotypes currently are located are indicated by acronyms for the museum names (see Table 4 in Introducton).

This publication has attempted to address the entire history of Texas' ornithological type-locality determinations and manipulations for all extant specific or subspecific taxa with at least one type or syntype specimen that ostensibly originated from Texas. Initially, using the criteria presented herein as developed from the aforementioned sources, 129 such taxa were identified with some type specimen material that either originated from Texas or possibly could have come from there. The type locality descriptions of many of these taxa, particularly those named from the mid-1800s to the end of the 19th century, are vaguely stated without any specificity (e.g., state of Texas). In some cases, type material originally attributed to Texas was later found not to have originated from the state, and these have not been included in the taxonomic catalog. Also, there are a few cases where the taxonomic description

was based on syntypes from Texas and from another state or another country (e.g., Mexico), and these have been included in the catalog unless there was a credible restriction or a lectotype designation which showed the type locality most likely was not in the state.

A good case in point involves the taxa described by Jacob Post Giraud, Jr., who in 1841 published a book, *A Description of Sixteen New Species of North American Birds described in the Annals of the New York Lyceum of Natural History*. Ostensibly, the type specimens for these species, which were purchased by Giraud, were collected in Texas in 1838. However, according to Wilmer Stone (1919), "While many of them have since been actually found in the United States, either in Texas or Arizona, it is certain that the collection as a whole never came from Texas. All of the species occur in Mexico but it is questionable whether they all came from any one locality in that republic, since some of them, as shown by the types, all but three of which are preserved in the U.S. National Museum, represent races that are found only in southern Mexico." In spite of the widely expressed doubt as to the correctness of the locality, Giraud, according to Dr. Elliot Coues, stoutly maintained to the day of his death that they were "taken in Texas."

Oberholser's (1974) comprehensive account of Texas birds includes Appendix C, which contains his interpretation of birds mistakenly attributed to Texas. He listed nine of Giraud's taxa as likely not from Texas, including: *Muscicapa texensis* (= *Myiozetetes similis texensis*); *Muscicapa lawrenceii* (= *Myiarchus tuberculifer lawrenceii*); *Muscicapa derhamii* (= *Myioborus miniatus miniatus*); *Muscicapa rubrifrons* (= *Cardellina rubrifrons*); *Muscicapa fulvifrons* (= *Empidonax flvifrons fulvifrons*); *Muscicapa belli* (= *Basileuterus belli belli*); *Sylvia olivacea* (= *Peucedramus taeniatus*); *Parus leucotis* (= *Cardellina rubra*); *Pipra galericulata* (= *Chlorophonia elegantissima*). These taxa have not been included in the bird catalog. The other seven taxa described by Giraud are provisionally included, although there is still some question about the exact provenance of their type locality. These include: *Muscicapa leucomus* (= *Myioborus pictus pictus*); *Muscicapa brasierii* (= *Basileuterus culicivorus brasierii*); *Fringilla texensis* (= *Spinus psaltria psaltria*); *Icterus audubonii* (= *Icterus graduacauda audubonii*); *Sylvia halseii* (= *Setophaga nigrescens halseii*); *Certhia albrifrons* (= *Catherpes mexicanus mexicanus*); *and Alauda minor* (= *Eremophila alpestris giraudi*). The uncertainty associated with the Giraud type localities is further demonstrated by the information contained in the catalog of the US National Museum where 13 of the 16 types are housed. One of the type specimens (the Lesser Goldfinch, *Fringilla texensis* = *Spinus psaltria psaltria*) has a type locality of "United States: Texas;" type localities for all of the others are stated as "unknown."

There are two other cases, both involving taxa of geese, of birds described from Texas that also deserve special mention because of controversy surrounding their taxonomic status and designation of type localities. In 2006 and 2007, the late Harold C. Hanson (with the editorial and publication assistance of Bertin W. Anderson) authored two annually successive volumes of a monograph of the Canada Goose (*Branta canadensis*) complex, which he split into six species and 218 subspecies (Hanson 2006, 2007). Of the new subspecies proposed, seven were described from Texas as follows (all of the types were deposited in the Field Museum of Natural History): *Branta canadensis macfarlanei*, FMNH 457812 from Muleshoe National Wildlife Refuge, Bailey County; *Branta canadensis smithi*, FMNH 457818 from Dalhart, Dallam County; *Branta canadensis vasquezi*, FMNH 457823 from Dumas, Moore County; *Branta canadensis andrewsi*, FMNH 457826 from Moore County (no specific locality); *Branta canadensis mcclurei*, FMNG 457872 from Dumas, Moore County; *Branta canadensis camselli*, FMNH 459312 from Dumas, Moore Counrty; and *Branta canadensis andersoni*, FMNH 457864 from Bailey County (no specific locality). After publication, avian taxonomists began to question Hanson's conclusions (see Dickerman 2011), and in 2015 Richard Banks, Mary LeCroy, and Richard Schedde (case no. 3682) petitioned the International Commission on Zoological Nomenclature (ICZN) to suppress for nomenclatural purposes the two-volume work on the grounds of general nomenclatural dysfunction that destabilized the nomenclature of the *Branta canadensis* complex (Banks et al. 2015). In 2019, the ICZN (in opinion 2436) accepted the petition and voted to suppress for nomenclatural purposes all of the names proposed by Hanson (ICZN 2019). For this reason, none of these taxa have been included in this catalog.

A similar controversy surrounds the description of Gambel's White-fronted Goose (*Anser gambelli* Hartlaub, 1852), which was based on three wintering specimens, two supposedly from Texas and one from southern North America. Unfortunately, when he described this species, Hartlaub did not provide catalog numbers or information other than the vague localities that identified the specimens. Kuroda (1929) examined the three specimens and noted that one of them (Zool. Mus. Berlin Coll. No. 17430) was designated as the type in his presence by Dr. Stresemann of the Berlin Museum. Thus, this constituted the designation of a lectotype, and Kuroda gave the locality and date of this specimen as "Alvarado, Texas," and "Jan., 1828" (see Banks 2011:220). That specimen, however, was collected by F. Deppe and is from Alvarado, Veracruz, Mexico, and not from Texas (for a detailed explanation see Stresemann 1954). According to Banks (2011), the placement of the locality "Alvarado" in Texas rather than in Veracruz, Mexico, where Deppe was known to have been at the time of collection, is inexplicable. Accordingly, Banks restricted the type locality to Veracruz, and, consequently, this taxon is not included in our catalog of taxa described from Texas specimens.

The Cassiar Junco (*Junco cismontanus*) is another taxon whose description possibly could be attributed to Texas specimens. In his original description, based on a series of specimens from east of the Rockies, including the Hill Country of Texas, Dwight (1918) did not designate a type specimen because he considered this taxon to be of hybrid origin, but he indicated that if it could be restricted to a definite geographical area, it might be considered a subspecies. Miller (1941:402–404) provided the necessary evidence for the existence of a stabilized population of hybrid origin, and he designated a lectotype (AMNH 402559) from British Columbia from Dwight's original series, which was outside the breeding range of the subspecies (LeCroy 2012:115). LeCroy (2012:16) identified four additional specimens, including a male (AMNH 402160) from Ingram in Kerr County, labeled "*cismontanus*" by Dwight, and she designated these as paralectotypes. However, because the lectotype is from outside of Texas and paralectotypes have no official standing in nomenclature, this taxon has not been included in this catalog.

With the aforementioned adjustments, the bird catalog includes 117 accounts of taxa definitely or likely described from Texas. These taxa represent 12 orders and 34 families of birds, including two titmice that are no longer recognized as valid taxa because they were described from hybrid type specimens, and one hummingbird that remains a *nomen dubium* because the holotype specimen was lost and neotypes matching the original description have never been obtained. The largest number of types (83 taxa) are from the Order Passeriformes, the "perching birds." Of these, 18 taxa are from the Family Passerellidae, the American sparrows, including juncos and towhees, and 8 taxa are from the Family Paridae (7 titmice and 1 chickadee). Seven types of blackbirds (Family Icteridae), 8 types of wrens (Family Troglodytidae), 4 types of tyrant flycatchers (Family Tyrannidae), 7 types of warblers (Family Parulidae), and 31 types representing 16 other families also are from the perching bird order. Among the other taxa there are two ducks (Order Anseriformes), three quail (Order Galliformes, Family Odontophoridae), four prairie-chickens and turkeys (Order Galliformes, Family Phasianidae), one grebe (Order Podicipediformes), three doves (Order Columbiformes), one roadrunner (Order Cuculiformes), five nighthawks (Order Caprimulgiformes), three hummingbirds (Order Apodiformes), one plover (Order Charadiiformes), three hawks (Accipitriformes), five owls (Order Strigiformes), and three woodpeckers (Order Piciformes). To avoid unnecessary complexity, orders, families, and genera are the only ranks above the level of species/subspecies that have been listed in the catalog.

Ornithology has developed bodies to make collective decisions on the taxonomy, scientific names, and common names of birds. This tradition, started in 1886, is intended to assist with communication and reduce confusion. For North and Central America, a committee of the American Ornithologists' Union standardizes the taxonomy and nomenclature of all the birds that naturally occur within that area. In 2016, the American Ornithologists' Union merged with the Cooper Ornithological Society and became known as the American Ornithological Society (AOS). This change included reference to the American Ornithologists' Society Checklist in the 58th supplement (Chesser et al. 2017). The AOS Checklist remains the standard for North and Middle America for scientific and common names of bird species, and we follow their base taxonomy here. There are now several worldwide checklists, and we are using the Clements/eBird World Bird List from the

Cornell University Laboratory of Ornithology as the authority for subspecies. Subspecies do not have internationally recognized common names, but Clements maintains a global checklist that includes taxonomic revisions to the level of subspecies. Along with the Clements/eBird list, the International Ornithological Committee (IOC) also maintains a worldwide bird list including subspecies. There are a small number of instances where the taxonomy used by Clements differs from the IOC and these conflicts are noted in the Remarks sections of the affected taxa.

For each entry in the avian catalog, the specific and subspecific name is given in exactly its original form, followed by the name of the author and the date of publication. The citation of the original description is given in the synonymy. The original common name is provided in brackets below the original scientific name. The presently recognized scientific name and common name, which follow the AOC Checklist (Chesser et al. 2022), is included below the original name, following an equal sign for those taxa in which the original name no longer applies. There are a few instances in which the original scientific name has not changed but the common name has. In those cases, the current common name is listed below the original common name but without repeating the valid scientific name. In accordance with nomenclatural rules established by both the AOS and the IOC, the common names of birds are capitalized.

In most cases the synonymies only list the earliest instance of a new name combination, but there are some entries in which earlier name combinations have been included for completeness's sake. The final synonymy entry represents the year in which the last (i.e., currently valid) name combination was published. The overall lack of taxonomic inflation (lumping and splitting) in bird species and subspecies (see Vaidya et al. 2018), compared to mammals and herptiles, has resulted in shorter and simpler synonymies for several entries in the bird catalog. In many instances, multiple sequential entries with the same taxonomic name combination are provided for those taxa with name combinations that remain valid, thereby illustrating the stability of many of the names applied to Texas birds over time.

The names used in two historical publications by taxonomic ornithologists who worked specifically on Texas birds are provided in almost every catalog entry, even if those names were identical to a previous name combination. John K. Strecker's 1912 *The Birds of Texas An Annotated Check-List* provided common and scientific names applied to Texas birds at the beginning of the 20th century, and Harry C. Oberholser's 1974 *Bird Life of Texas* incorporated many taxonomic changes proposed by him as well as those that had accumulated since Strecker's list was published. Browning (1978, 1990) and Banks and Browning (1995) evaluated name combinations applied to North American birds in the latter half of the 20th century, including the taxa named by Oberholser (1974), and their application of names for Texas birds has been included in many of the catalog entries.

Because of the practice in ornithology of relying on officially sanctioned checklists (discussed above), the synonymies for many entries in the bird catalog cite the name combinations approved and formally published by the AOU Committee as opposed to the primary taxonomic literature. In this regard, the bird catalog differs from that of mammals and amphibians/reptiles because in those fields standardized name combinations approved by a committee of experts are not required. The AOU checklist does not provide standardized names for subspecies, and we used the primary literature or the IOC and Clements checklists (mentioned above) for that purpose. A few of the synonymies include entries from other comprehensive bird catalogs, such as *The Known Birds of North and Middle America* (Phillips 1986); *The Birds of North America* (Kroodsma and Verner 1997); the *Complete Checklist of the Birds of the World* (Dickinson 2003); and the *Handbook of the Birds of the World* (del Hoya et al. 2007).

Numerous checklists and field guides of Texas birds geared to the birding audience began to appear at the end of the 20th and beginning of the of the 21st centuries, with most of them using the same name combinations recommended by the AOU checklist committee. For this reason, the published checklists and field guides specific to Texas birds have not been included in the synonymies as they would be entirely duplicative of those in the AOU/IOC/Clements checklists.

The type locality is given as originally designated by geographical position in the original published description or in any subsequent literature. This has been expanded whenever feasible to make the information as exact as possible. Published lists of type specimens by museum curators for the respective collections were consulted whenever they were available. Among the first published descriptions with type localities for birds described from Texas, at least 10 of the taxa were associated with localities along the Rio Grande without designating a specific place (e.g., Rio Grande in Texas; Texas, upon the Rio Grande; Texas, on the Rio Grande; Lower Rio Grande Valley; Rio Bravo del Norte). Museum databases with specimen labels and type specimen publications were used, where possible, to refine these designations. Many of the restrictions placed the type locality at Brownsville or a place, such as Fort Brown, associated with that city in Cameron County. The rationale for these type locality restrictions is clarified in the Remarks section of the catalog entries.

A list of all the type localities of birds from Texas is given (List 2.2) with the names of the species and subspecies described from each locality, and the accompanying map shows the locations of those type localities. In separate lists are given the original describers (List 2.3) of the species and subspecies, with the number named by each; the collectors of all the type specimens so far as known with the number for each (List 2.4); and the museums containing Texas types and the number of such types in each (List 2.5).

Unlike non-volant mammals, reptiles, and amphibians, birds are not confined to relatively small home ranges. Although some nonmigratory species remain within the boundaries of a well-defined territory, the capability of flight allows most species to traverse large individual ranges. It is not uncommon for a bird to leave its nesting territory and fly great distances, sometimes crossing county, state, or even international lines, with many species undertaking long-distance seasonal migrations. For these reasons, specific locations beyond the county level were not included when listing where topotype and near topotype specimens were obtained. Near topotypes include all specimens from outside a 20-mile radius, but within the type county. For instances where the 20-mile radius intersects adjacent counties, all specimens from those counties were included as near topotypes. Where the type locality is given by county only, specimens from that county are considered to be topotypes and there are no near topotypes.

LIST 2.1. ACCOUNTS FOR BIRD TAXA DESCRIBED FROM TEXAS LOCALITIES

ORDER ANSERIFORMES
Family Anatidae

Anas maculosa Sennett, 1889
[Mottled Duck]
= ***Anas fulvigula maculosa***
[Mottled Duck]

1889. *Anas maculosa* Sennett, Auk 6:263.

1890. *Anas fulvigula maculosa* 2nd supplement to the AOU Checklist, Auk 7:61.

1912. *Anas fulvigula maculosa* Strecker, Baylor Univ. Bull. 25(1):12.

1974. *Anas fulvigula maculosa* Oberholser, Bird Life of Texas, Univ. Texas Press, p. 158.

1978. *Anas platyrhynchos fulvigula* Johnsgard, Ducks, Geese and Swans of the World, Univ. Nebraska Press, p. 216.

1998. *Anas fulvigula* AOU Checklist 7:69.

2021. *Anas fulvigula maculosa* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

Type specimens.—Three syntypes: adult male, AMNH 79467, obtained by J. A. Singley on 4 April 1889, original collector's number 1386, Sennett Collection 5857; adult female, AMNH 79468, obtained by J. A. Singley on 4 April 1889, original collector's number 1387, Sennett Collection 5858; and half fledged young, sex unknown, AMNH 79462, obtained by J. M. Priour on 8 July 1887, Sennett Collection 5188.

Type localities.—Two adult specimens, Nueces Bay, near Corpus Christi, Nueces County; young specimen, at Nueces River, near Corpus Christi, Texas.

Topotypes.—Nueces Co: 20 (AMNH), 2 (FMNH), 1 (MCZ, PSM, SDNHM, TAMUCC, USNM). Last topotype collected in 1979.

Near topotypes.—Aransas Co: 2 (USNM), 1 (TCWC). Kleberg Co: 5 (MMNH), 1 (AMNH). Last near topotype collected in 1991.

Remarks.—There is no holotype, and because Sennett designated syntypes, the remainder of the specimens have no type standing according to the rules of zoological nomenclature (LeCroy 2017:83).

Dendrocygna autumnalis fulgens Friedman, 1947
[Black-bellied Tree Duck]
[Black-bellied Whistling-Duck]

1912. *Dendrocygna autumnalis* Strecker, Baylor Univ. Bull. 25(1):15.

1947. *Dendrocygna autumnalis fulgens* Friedman, Condor 49:190.

1974. *Dendrocygna autumnalis fulgens* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 150.

Type specimen.—Holotype, adult male, USNM 112429, obtained by G. B. Sennett, original number 271, 31 July 1880.

Type locality.—Lomita Ranch, Hidalgo County, Texas.

Topotypes.—Hidalgo Co: 51 (AMNH), 6 (USNM), 3 (WFVZ). Last topotype collected in 1913.

Near topotypes.—Cameron Co: 23 (AMNH), 7 (USNM), 6 (FMNH), 5 (ROM), 4 (CM, WFVZ), 2 (UMMZ, YPM). Last near topotype collected in 1959.

ORDER GALLIFORMES
Family Odontophoridae

Callipepla squamata castanogastris Brewster, 1883
[Chestnut-bellied Scaled Quail]
[Scaled Quail]

1883. *Callipepla squamata castanogastris* Brewster, Bull. Nuttall Ornithol. Club 8:34.23.

1912. *Callipepla squamata castanogastris* Strecker, Baylor Univ. Bull. 25(1):23.

1974. *Callipepla squamata castanogastris* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 273.

Type specimens.—Two syntypes, adult male, MCZ 206547, obtained by M. A. Frazar on 11 November 1880, original collector's number 1640, and adult female, MCZ 206548, obtained by M. A. Frazar on 16 November 1880, collector's number 1655.

Type locality.—Rio Grande City, Starr County, Texas.

Topotypes.—Starr Co: 30 (AMNH), 3 (YPM), 2 (FMNH, WFVZ), 1 (MCZ, UF, USNM). Last topotype collected in 1926.

Near topotypes.—Hidalgo Co: 12 (AMNH). Zapata Co: 5 (ANSP), 1 (FMNH, TCWC, WFVZ, YPM). Last near topotype collected in 1978.

Remarks.—The female syntype specimen has not been located.

Lophortyx gambelii ignoscens Friedmann, 1943
[Texas Gambel's Quail]
= ***Callipepla gambelii ignoscens***
[Gambel's Quail]

1912. *Lophortyx gambelii* Strecker, Baylor Univ. Bull. 25(1):23.

1943. *Lophortyx gambelii ignoscens* Friedmann, J. Wash. Acad. Sci. 33:369.

1974. *Lophortyx gambelii ignoscens* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 275.

1983. *Callipepla gambelii* AOU Checklist 6:147.

2021. *Callipepla gambelii ignoscens* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

Type specimen.—Holotype, unsexed (male by plumage), USNM 9363, obtained by Caleb B. R. Kennerly, original number 13, in December 1855.

Type locality.—San Elezario, El Paso County, Texas.

Topotypes.—El Paso Co: 2 (USNM). Last topotype collected in 1855.

Near topotypes.—Hudspeth Co: 7 (AMNH). New Mexico, Dona Ana Co: 4 (UCM), Grant Co: 3 (WFVZ). Last near topotype collected in 1948.

Ortyx texanus Lawrence, 1853
[Texas Bob-white]
= ***Colinus virginianus texanus***
[Northern Bobwhite]

1853 [1858]. *Ortyx texanus* Lawrence, Ann. Lyceum Nat. Hist. New York 6:1.

1872. *Ortyx virginianus* var. *texanus* Coues, Key to North American Birds, p. 237.

1874. *Colinus virginianus texanus* Baird, Brewer, and Ridgway, A History of North American Birds: Land Birds, Little Brown, Boston, p. 474.

1912. *Colinus virginianus texanus* Strecker, Baylor Univ. Bull. 25(1):23.

1974. *Colinus virginianus texanus* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 271.

Type specimen.—Holotype, adult male, AMNH 3250, obtained by Capt. J. P. McCown, USA, collection date unknown.

Type locality.—Small prairie above Ringgold Barracks, Starr County, Texas.

Topotypes.—Starr Co: 1 (MVZ, USNM, YPM). Last topotype collected in 1975.

Near topotypes.—Hidalgo Co: 11 (AMNH), 4 (FMNH, MCZ), 1 (UMMZ, WFVZ). Zapata Co: 1 (TCWC). Last near topotype collected in 1980.

Remarks.—Ringgold Barracks was located in Fort Ringgold, which is now within the city limits of Rio Grande City, Starr County, Texas.

Family Phasianidae

Cupidonia cupido* var. *pallidicincta Ridgway, 1873
[Lesser Prairie-Chicken]
= ***Tympanuchus pallidicinctus***
[Lesser Prairie-Chicken]

1873. *Cupidonia cupido* var. *pallidicincta* Ridgway, Bull. Essex Inst.5:199.

1885. *Tympanuchus pallidicinctus* Ridgway, Proc. U.S. Nat. Mus. VIII, p. 355.

1912. *Tympanuchus pallidicinctus* Strecker, Baylor Univ. Bull. 25(1):24.

1974. *Tympanuchus pallidicinctus* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 267.

Type specimens.—Two syntypes, adult male, USNM 10007, and adult female, USNM 10005, obtained by Capt. J. Pope, date unknown.

Type locality.—Restricted by Hubbard et al. (2008) to vicinity of Sulphur Springs, 3 miles north and 2 miles east of present Lenorah, Martin County, Texas (see Remarks below).

Topotypes.—None.

Near topotypes.—None.

Remarks.—A description of the Lesser Prairie-Chicken was published in a paper by Baird and Ridgway (1873). The syntypes apparently lacked original data, and there has been considerable vagueness about the designation of the type locality for this taxon. The original description of Baird and Ridgway (1873) listed

it as "Southwestern prairies–Staked Plains?". Ridgway, in Baird et al. (1874), amended it to: "Prairie of Texas, Staked Plains?". The AOU checklist of 1910 gave it as "Prairies of Texas, near Lat. 32 N." Cooke (in Bailey 1928) proposed an emendation that "it is probable they [the two type specimens] were collected not far from the Clear Fork of the Brazos River near the site of the present town of Abilene," but that recommendation was otherwise ignored or overlooked in most subsequent treatments of this taxon, including various editions of the AOU checklist (1931, 1957, 1983, 1998) and Ridgway and Friedmann (1941), which continued to use similar versions of the 1910 checklist. Deignan (1961) combined versions of the various emendations and recommended that the type locality should be designated as "Prairies of Texas, near Lat. 32 N, probably not far from the Clear Fork of the Brazos River near the present city of Abilene, Taylor County, Texas," and Oberholser (1974) also adopted this emendation. The most recent attempt to accurately identify the type locality was made by Hubbard et al. (2008), who carefully researched the history of the expedition itinerary and journals of Captain John Pope and his US Army command during their railroad survey along the 32nd parallel in New Mexico and Texas from 1854 to 1856. From their analysis, Hubbard et al. (2008) reached a different conclusion, specifically that the type specimens most likely came from "= vicinity of Sulphur Springs, 3 miles north and 2 miles east of present Lenorah, Martin County, Texas." This type locality restriction has been accepted for purposes of this catalog. Hubbard (2008) also referred to the two specimens used in the description of the Lesser Prairie-Chicken as "cotypes," which does not comply with recommendation 73E of the International Code of Zoological Nomenclature to avoid that usage in favor of syntype, which we have done in this catalog. The Lesser Prairie Chicken has recently been listed as Endangered by the USFWS.

Meleagris gallopavo ellioti Sennett, 1892
[Rio Grande Turkey]
= ***Meleagris gallopavo intermedia***
[Wild Turkey]

1892. *Meleagris gallopavo ellioti* Sennett, Auk 9:167.

1895. *Meleagris gallopavo intermedia* AOU Checklist 2:118.

1912. *Meleagris galloparo intermedia* Strecker, Baylor Univ. Bull. 25(1):24.

1957. *Meleagris gallopavo intermedia* AOU Checklist 5:149.

1974. *Meleagris gallopavo intermedia* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 285.

Type specimens.—Two syntypes, adult male, AMNH 80414, collected by J. N. Sanford (no. 110) for G. B. Sennett (no. 569) on 13 April 1878, and adult female, AMNH 80415, obtained by unknown collector (no. 514) for G. B. Sennett (no. 5533) on 6 March 1888. AMNH 80414 is also a syntype of *M. g. intermedia* (see below).

Type localities.—(1) Lomita Ranch, Hidalgo County, Texas; (2) Cameron County, Texas.

Topotypes.—Hidalgo Co: 4 paratypes (AMNH). Cameron Co: 4 (AMNH, USNM), 2 (FMNH, WFVZ). Last topotype collected in 1941.

Near topotypes.—None.

Remarks.—Thirteen years after suggesting that a variety of Wild Turkey in southern Texas and northeastern Mexico should be considered as a distinct race, Sennett (1892) proposed the name *M. g. ellioti* for the new subspecies. The description was based on a new set of specimens, including one from the same locality, Lomita Ranch, where he previously had suggested the new variety existed (Sennett 1879). An earlier name for the subspecies, *M. g. intermedia*, based on an informal description and suggestion, eventually came to be accepted because of the rule of priority (AOU 1957).

Meleagris gallopavo* var. *intermedia Sennett, 1879
[Mexican Turkey]
[Wild Turkey]

1879. *Meleagris gallopavo intermedia* Sennett, Bull. U.S. Geol. Geogr. Surv. Terr. 5:427.

1892. *Meleagris gallopavo ellioti* Sennett, Auk 9:167.

1895. *Meleagris gallopavo intermedia* AOU Checklist 2:118.

1912. *Meleagris gallopavo intermedia* Strecker, Baylor Univ. Bull. 25(1):24.

1957. *Meleagris gallopavo intermedia* AOU Checklist 5:149.

1974. *Meleagris gallopavo intermedia* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 285.

Type specimen.—Syntype, AMNH 80414, male, collected on 13 April 1878, by J. N. Sanford (no. 110) for G. B. Senett (no. 569). From the George B. Sennett Collection. Two other syntypes, also collected at Lomita, were supposedly designated by Sennett. One of these was said by Sennett (1879:427) to be in the USNM, but no syntype of *intermedia* was listed by Deignan (1961:72). A second specimen of *intermedia* (AMNH 80415), listed by Greenway (1973:298) as a syntype, was collected in 1888, ten years after the name was introduced. Therefore, it does not qualify as a valid syntype (see LeCroy 2005:155 for a discussion).

Type locality.—South Texas, Lomita Ranch, Hidalgo County, Texas.

Topotypes.—Hidalgo Co: 5 (AMNH), 1 (USNM). Last topotype collected in 1941.

Near topotypes.—Cameron Co: 4 (AMNH), 3 (MCZ), 2 (WFVZ). Starr Co: 1 (MCZ). Last near topotype collected in 1928.

Remarks.—According to LeCroy (2005:155), Sennett did not intend to introduce *intermedia* as a new name, but because he provided enough of a description the name was subsequently accepted as the valid name in the second edition of the AOU Checklist (AOU 1895:118), thus relegating *M. g. ellioti* to a synonym of *M. g. intermedia*.

Tympanuchus attwateri Bendire, 1893
[Southern Prairie Hen]
= ***Tympanuchus cupido attwateri***
[Greater Prairie-Chicken]

1893. *Tympanuchus attwateri* Bendire, Forest and Stream 40:425.

1894. *Tympanuchus americanus attwateri* Bendire, Auk 11:130.

1912. *Tympanuchus americanus attwateri* Strecker, Baylor Univ. Bull. 25(1):24.

1931. *Tympanuchus cupido attwateri* AOU Checklist 4:85.

1974. *Tympanuchus cupido attwateri* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 267.

Type specimens.—Two syntypes, adult male, USNM 128480, obtained by H. P. Attwater on 27 March 1893, and adult female, USNM 128481, obtained by H. P. Attwater on 25 April 1893.

Type localities.—(1) Refugio County, Texas; (2) 25 miles northeast of Rockport, Aransas County.

Topotypes.—Refugio Co: 7 (TCWC), 4 (USNM), 3 (WFVZ), 1 (DMNH). Last topotype collected in 1961.

Near topotypes.—None.

Remarks.—Bendire (1893) described the species based on two specimens, provided by H. P. Attwater, however the following year he examined 10 additional specimens from Texas and Louisiana and decided that the prairie-chicken was a well-marked race of the Greater Prairie-Chicken, then known as *T. americanus* (Bendire 1894). Attwater's Greater Prairie-Chicken is listed as Endangered by both the USFWS and TPWD.

ORDER PODICIPEDIFORMES
Family Podocipedidae

Colymbus dominicus brachypterus Chapman, 1899
[Northern Least Grebe]
= ***Tachybaptus dominicus brachypterus***
[Least Grebe]

1899. *Colymbus dominicus brachypterus* Chapman, Bull. Amer. Mus. Nat. Hist. 12:256.

1901. *Colymbus domincensis brachypterus* Allen, Auk 18:173.

1912. *Colymbus dominicus brachypterus* Strecker, Baylor Univ. Bull. 25(1):9.

1957. *Podiceps dominicus brachypterus* AOU Checklist 5:6.

1974. *Limnodytes dominicus brachypterus* Oberholser, Bird Life of Texas, Univ. Texas Press, p. 64.

2003. *Tachybaptus dominicus brachypterus* Ogilvie and Rose, Grebes of the World, Bruce Coleman Books, Cambridge, UK, p. 32.

Type specimen.—Holotype, adult male, AMNH 79168, obtained by G. B. Sennett on 27 April 1878, Sennett Collection number 11.

Type locality.—Lomita Ranch, Lower Rio Grande, Hidalgo County, Texas.

Topotypes.—Hidalgo Co: 19 (AMNH), 2 (CM), 1 (TCWC). Last topotype collected in 1968.

Near topotypes.—None.

Remarks.—In his description of this taxon, Chapman (1899) used 21 specimens from the Lower Rio Grande, Texas, that were part of the G. B. Sennett collection.

ORDER COLUMBIFORMES
Family Columbidae

Columba trudeaui Audubon 1843
[Texan Turtle Dove]
= ***Zenaida asiatica asiatica***
[White-winged Dove]

1843. *Columba trudeaui* Audubon, Birds of the Americas 7:352.

1905. *Melopelia leucoptera* Baird et al., Hist. N. Ameri. Birds, Vol. 3, p. 376.

1910. *Melopelia asiatica* AOU Checklist 2:150.

1912. *Melopelia leucoptera* Strecker, Baylor Univ. Bull. 25(1):25.

1934. *Zenaida asiatica* Peters, Condor 36:213-215.

1944. *Zenaida asiatica asiatica* 19th supplement to the AOU Checklist, Auk 61:450.

Type specimen.—Holotype, male, ANSP 30034, obtained from J. G. Bell. Collection date unknown.

Type locality.—"Texas".

Topotypes.—Tom Green Co: 3 ASNHC. Last topotype collected in 1988.

Near topotypes.—None.

Remarks.—Audubon's *Columba trudeaui* is rarely cited in the ornithological literature. It is mentioned by Stone (1899) in a listing of types held at the Philadelphia Academy of Sciences, and Baird et al. (1874) include it as a synonym of *Melopelia leucoptera*. Buchanan (1924) reported Audubon's travels in Texas were limited to the eastern portion of the state making it more likely that the specimen was given to him, as White-winged Doves were found only in South Texas, rarely north to San Antonio (Strecker 1912). *Columba trudeaui* is considered a synonym of *Zenaida asiatica asiatica* in part because *Z. a. mearnsi* was not known from Texas at this time (see account of *Z. a. grandis* below).

Leptotila fulviventris angelica Bangs and Penard, 1922
[White-fronted Dove]
= ***Leptotila verreauxi angelica***
[White-tipped Dove]

1912. *Leptotila fulviventris brachyptera* Strecker, Baylor Univ. Bull. 25(1):25.

1922. *Leptotila fulviventris angelica* Bangs and Penard, Proc. New England Zool. Club 8:29.

1957. *Leptotila verreauxi angelica* AOU Checklist 5:266.

1974. *Leptotila verreauxi angelica* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 427.

Type specimen.—Holotype, adult male, MCZ 41839, obtained by F. B. Armstrong on 16 March 1889.

Type locality.—Brownsville, Cameron County, Texas.

Topotypes.—Cameron Co: Brownsville, 46 (MVZ), 39 (MCZ), 27 (AMNH), 20 (FMNH, UMMZ), 19 (USNM), 4 (ROM), 3 (CM, YPM), 2 (LACM, SBMNH), 1 (CUMV, SDNHM, UBCBBM, UCLA, UF). Last topotype collected in 1943.

Near topotypes.—Hidalgo Co: 2 (CHAS, TCWC). Last near topotype collected in 1997.

Zenaida asiatica grandis Saunders, 1968
[Upper Big Bend White-winged Dove]
= ***Zenaida asiatica mearnsi***
[White-winged Dove]

1912. *Melopelia leucoptera* Strecker, Baylor Univ. Bull. 25(1):25.

1915. *Melopelia asiatica mearnsi* Ridgway, Proc. Biol. Soc. Wash. 28:107.

1957. *Zenaida asiatica mearnsi* AOU Checklist 5:261.

1968. *Zenaida asiatica grandis* Saunders, North Amer. Fauna 65:8.

1974. *Melopelia asiatica mearnsi* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 424.

1990. *Zenaida asiatica mearnsi* Browning, Proc. Biol. Soc. Wash. 103:435.

Type specimen.—Holotype, adult male, USNM 481592, obtained by G. B. Saunders on 25 May 1957, original number 2662.

Type locality.—Near Ruidosa, Presidio County, altitude about 3,000 feet, Texas.

Topotypes.—Presidio Co: 2 (ASNHC), 1 (TCWC, UWBM). Last topotype collected in 1990.

Near topotypes.—None.

Remarks.—The subspecies described by Ridgway (1915) was based on USNM 121177, an adult male specimen from Nogales, Arizona. Saunders (1968) based the description of *grandis* on the specimen from Texas. Because there was considerable overlap in color and size measurements, Browning (1990) placed *Z. a. grandis* in synonymy with *Z. a. mearnsi*.

ORDER CUCULIFORMES
Family Cuculidae

Geococcyx californianus dromicus Oberholser, 1974
[Texas Roadrunner]
= ***Geococcyx californianus***
[Greater Roadrunner]

1829. *Saurothera californiana* Lesson, Oeuvres Completes de Buffon 6:420.

1831. *Geococcyx variegata* Wagler, Isis von Oken, col. 524. Type, by monotypy, *Saurothera californiana* Lesson.

1858. *Geococcyx californianus* Baird, Birds of N. America, p. 73.

1912. *Geococcyx californianus* Strecker, Baylor Univ. Bull. 25(1):30.

1974. *Geococcyx californianus dromicus* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 436.

1978. *Geococcyx californianus* Browning, Proc. Biol. Soc. Wash. 91:87.

Type specimen.—Holotype adult male, USNM 140803, obtained by J. A. Loring on 12 February 1894.

Type locality.—Brownsville, Cameron County, Texas.

Topotypes.—Cameron Co: 42 (WFVZ), 22 (CM), 19 (USNM), 6 (AMNH). Last topotype collected in 1927.

Near topotypes.—Hidalgo Co: 8 (AMNH), 5 (WFVZ), 4 (USNM), 2 (PMNS). Last near topotype collected in 1931.

Remarks.—No subspecies were recognized in the AOU Checklist (1957). The subspecies designated by Oberholser does not warrant nomenclatural recognition (Browning 1978, 1990).

ORDER CAPRIMULGIFORMES
Family Caprimulgidae

Chordeiles popetue sennetti Coues, 1888
[Sennett's Lesser Nighthawk]
= *Chordeiles minor sennetti*
[Common Nighthawk]

1888. *Chordiles* [sic] *popetue sennetti* Coues, Auk 5:37.

1910. *Chordeiles virginianus sennetti* AOU Checklist 3:199.

1912. *Chordeiles virginianus* Strecker, Baylor Univ. Bull. 25(1):34.

1912. *Chordeiles virginianus chapmani*, Baylor Univ. Bull. 25(1):34.

1912. *Chordeiles virginianus henryi*, Baylor Univ. Bull. 25(1):34.

1931. *Chordeiles minor sennetti* AOU Checklist 4:176.

1974. *Chordeiles minor sennetti* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 472.

Type specimens.—Two syntypes, adult male, AMNH 81591, obtained by J. M. Priour on 27 May 1887, original Sennett Collection number 4927, and adult male, USNM 65490, obtained by E. Coues on 16 July 1873 (field number 3301).

Type localities.—Wharton County, Texas, for the AMNH specimen and 50 miles west of Pembina, Minnesota, for the USNM specimen (see Remarks).

Topotypes.—None.

Near topotypes.—None.

Remarks.—Coues (1888) based his description of *Chordeiles popetue sennetti* on two syntype specimens, one from Wharton County, Texas, and the other from 50 miles west of Pembina, Minnesota, despite their geographic separation. The latter locality is in Towner County, North Dakota, according to the catalog of type specimens at the USNM. Oberholser (1914:55) opined that the Texas syntype belonged to a smaller and paler population, which is now called *aserriensis* Cherrie. However, according to Greenway (1978:5), this specimen, obtained in Wharton County, has no status as a type specimen.

Chordeiles texensis Lawrence, 1857
[Texas Lesser Nighthawk]
= ***Chordeiles acutipennis texensis***
[Lesser Nighthawk]

1857 [1858]. *Chordeiles texensis* Lawrence, Ann. Lyceum Nat. Hist. New York 6:167.

1912. *Chordeiles scutipennis texensis* Strecker, Baylor Univ. Bull. 25(1):34.

1874. *Chordeiles acutipennis texensis* Baird, Brewster, and Ridgway, N. American Land Birds, II, p. 406

1974. *Chordeiles acutipennis texensis* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 473.

Type specimens.—Two syntypes, adult male, AMNH 43852, and adult female, AMNH 43851, both obtained by Capt. J. P. McCown.

Type locality.—Ringgold Barracks, near Rio Grande City, Starr County, Texas.

Topotypes.—Starr Co: 6 (AMNH), 3 (USNM, WFVZ). Last topotype collected in 1907.

Near topotypes.—Hidalgo Co: 10 (USNM), 9 (AMNH), 3 (WFVZ), 1 (CM). Last near topotype collected in 1880.

Remarks.—Ringgold Barracks was located in Fort Ringgold, which is within the city limits of Rio Grande City.

Chordeiles virginianus howelli Oberholser, 1914
[Howell's Common Nighthawk]
= ***Chordeiles minor howelli***
[Common Nighthawk]

1912. *Chordeiles virgianus sennettii* Strecker, Baylor Univ. Bull. 25(1):68.

1914. *Chordeiles virginianus howelli* Oberholser, U.S. National Museum Bulletin 86:5.

1931. *Chordeiles minor howelli* AOU Checklist 4:176.

1974. *Chordeiles minor howelli* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 472.

Type specimen.—Holotype, adult male, USNM 186731, obtained by Arthur H. Howell on 25 June 1903, original number 105.

Type locality.—Lipscomb, Lipscomb County, Texas.

Topotypes.—None.

Near topotypes.—None.

Nyctidromus albicollis merrilli Sennett, 1888
[Merrell's Pauraque]
[Common Pauraque]

1888. *Nyctidromus albicollis merrilli* Sennett, Auk 5:44.

1912. *Nyctidromus albicollis merrillii* Strecker, Baylor Univ. Bull. 25(1):34.

1974. *Nyctidromus albicollis merrilli* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 469.

Type specimens.—Two syntypes, adult male, AMNH 81548, collected by J. M. Priour on 22 March 1887, Sennett Collection 4122, and adult female, AMNH 81549, obtained by J. M. Priour on 22 March 1887, Sennett Collection 4121.

Type locality.—Nueces River, Nueces County, Texas.

Topotypes.—Nueces Co: 14 (AMNH, paratypes). Aransas Co: 3 (AMNH), 1 (USNM). Last topotype collected in 1937.

Near topotypes.—Jim Wells Co: 1 (TCWC, UMMZ). San Patricio Co: 1 (OMNH, USNM). Last near topotype collected 2016.

Remarks.—Sennett (1888) described the plumage characteristics of adult, immature, and juvenile birds when designating the subspecies.

Phalaenoptilus nuttalli nitidus Brewster, 1887
[Frosted Poorwill]
= ***Phalaenoptilus nuttallii nuttallii***
[Common Poorwill]

1887. *Phalaenoptilus nuttalli nitidus* Brewster, Auk 4:147.

1912. *Phalaenoptilus nuttallii nitidus* Strecker, Baylor Univ. Bull. 25(1):34.

1931. *Phalaenoptilus nuttallii nuttallii* AOU Checklist 4:174.

1974. *Phalaenoptilus nuttallii nuttallii* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 467.

Type specimens.—Two syntypes, adult male, MCZ 213076, original number 13076, and adult female, MCZ 213077, original number 13077, obtained by F. B. Armstrong on 27 February 1886.

Type locality.—Nueces River, Nueces County, Texas.

Topotypes.—Nueces Co: 1 (TCWC). Last topotype collected in 1933.

Near topotypes.—Jim Wells Co: 1 (TCWC). Last near topotype collected in 1984.

Remarks.—The subspecies designated by Brewster (1887) subsequently was incorporated into the subspecies described by Audubon (AOU 1931).

ORDER APODIFORMES
Family Trochilidae

Amazilia cerviniventris chalconota Oberholser, 1898
[Northern Buff-bellied Hummingbird]
= ***Amazilia yucatanensis chalconota***
[Buff-bellied Hummingbird]

1898. *Amazilia cerviniventris chalconota* Oberholser, Auk 15:32.

1911. *Amazilia yucatanensis chalconota* Ridgway, Bull. U.S. Nat. Mus. 50:415.

1912. *Amazilia cerniventris chalconota* Strecker, Baylor Univ. Bull. 25(1):36.

1974. *Amazilia yucatanensis chalconota* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 495.

Type specimen.—Holotype, adult male, USNM 134941, obtained by F. B. Armstrong on 29 May 1894.

Type locality.—Brownsville, Cameron County, Texas.

Topotypes.—Cameron Co: Brownsville, 38 (USNM), 17 (AMNH), 1 (CM, FMNH). Last topotype collected in 1938.

Near topotypes.—None.

Remarks.—The original type locality reported by Oberholser (1898a) was Beeville, Bee County, but Oberholser (1898b) later corrected it to Brownsville, Cameron County. The species was collected from Fort Brown, located at the southern edge of Brownsville, in 1876 by J. C. Merrill (Merrill 1877).

Lampornis clemenciae phasmorus Oberholser, 1974
[Texas Blue-throated Hummingbird]
[Blue-throated Mountain-gem]

1912. *Cyanolaemus clemenciae* Strecker, Baylor Univ. Bull. 25(1):35.

1974. *Lampornis clemenciae phasmorus* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 493.

1978. *Lampornis clemenciae phasmorus* Browning, Proc. Biol. Soc. Wash. 91:90.

1983. *Lampornis clemenciae clemenciae* Johnsgard, The Hummingbirds of North America, Smithsonian Institution Press, Washington, DC, p. 127.

2021. *Lampornis clemenciae phasmorus* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

Type specimen.—Holotype, adult male, USNM 168365 obtained by H. C. Oberholser on 1 June 1901, original number 298.

Type locality.—Pine Canyon, 6,000 feet, northeastern side of Chisos Mountains, Brewster County, Texas.

Topotypes.—Brewster Co: 9 (UMMZ), 5 (CM, USNM), 3 (ROM), 2 (CUMV, TCWC), 1 (MVZ). Last topotype collected in 1967.

Near topotypes.—None.

Remarks.—Oberholser (1974) named this hummingbird from the Chisos Mountains as a new race, and after further study of the specimens, Browning (1978) agreed he was correct with this taxonomic assignment.

Phasmornis mystica Oberholser, 1974
[Chisos Hummingbird]
= ***Nomen dubium***
(identity uncertain; holotype lost)

1974. *Phasmornis mystica* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 485.

1978. Species not recognized, Browning, Proc. Biol. Soc. Wash. 91:89.

Type specimen.—Holotype, adult male, obtained by C. H. Mueller on 4 July 1932. The holotype specimen upon which Oberholser (1974) based the description of this new genus and species was subsequently lost.

Type locality.—Boot Spring, Chisos Mountains, Brewster County.

Topotypes.—None.

Near topotypes.—None.

Remarks.—Described from a unique specimen, which subsequently was lost, as a new species (and genus), this form probably represents a hybrid of unknown parentage or an aberrant individual of Black-chinned Hummingbird, *Archilochus alexandri* (Browning 1978). No specimen with characteristics similar to those reported by Oberholser has been obtained since the original discovery. In the absence of a holotype or neotype specimen, the species is not recognized by

the AOS Checklist Committee or the IOC. Thus, the name applied to this taxon represents a *nomen dubium*, a taxonomic name that cannot be assigned with certainty to any taxonomic group because the description is insufficient for identification and the original type specimen (and only specimen ever collected) no longer exists. The type specimen was collected by C. H. Muller inadvertently while collecting insects in support of Rollin H. Baker's master's work on insects. Muller, a botanist, saved the specimen by placing it in a plant press (D. H. Riskind, pers. comm.). This unorthodox preservation was likely part of the reason the specimen no longer exists.

ORDER CHARADRIIFORMES
Family Scolopacidae

Actidurus naevius Heermann 1854
[Mottled Grass Plover]
= ***Calidris subruficollis***
[Buff-breasted Sandpiper]

1819. *Tringa rufescens* Vieillot, Nouv. Dict. Hist. Nat. 34:465.

1854. *Actidurus naevius* Heermann, Proc. Acad. Nat. Sci. Philadelphia 7: 178.

1857. *Tryngites rufescens* Cabanis, Journal of Ornith. 4:418.

1886. *Tryngites subruficollis* AOU Checklist 1:158.

1912. *Tryngites subruficolles* Strecker, Baylor Univ. Bull. 25(1):21.

1974. *Tryngites subruficollis* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 357.

2013. *Calidris subruficollis* 44th Supplement to AOU Checklist, Auk 130:562.

Type specimen.—Holotype, sex unknown, USNM A6694, obtained by John G. Parke. Collection date unknown.

Type locality.—Prairie near San Antonio, Bexar County.

Topotypes.—None.

Near topotypes.—None.

Remarks.—The Buff-breasted Sandpiper was described in 1819 from a specimen obtained in Paraguay, but Heermann was unaware of that work and described the species as *Actidurus naevius*, which became an invalid name (Casto 1997).

ORDER ACCIPITRIFORMES
Family Accipitridae

Buteo albicaudatus sennetti J. A. Allen,1893
[Sennett's White-tailed Hawk]
= ***Geranoaetus albicaudatus hypospodius***
[White-tailed Hawk]

1893. *Buteo albicaudatus sennetti* J. A. Allen, Bull. Amer. Mus. of Nat. Hist. 5:144.

1912. *Buteo albicaudatus sennettii* Strecker, Baylor Univ. Bull. 25(1):27.

1931. *Buteo albicaudatus hypospodius* AOU Checklist 4:68.

1974. *Tachytriorchis albicaudatus hypospodius* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 238.

1983. *Buteo albicaudatus* AOU Checklist 6:117.

2003. *Buteo albicaudatus hypospodius* Dickinson, The Howard and Moore Complete Checklist of the Birds of the World, p. 111.

2015. *Geranoaetus albicaudatus* 56th Supplement to AOU Checklist, Auk 2015:753.

2021. *Geranoaetus albicaudatus hypospodius* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

Type specimen.—Lectotype, AMNH 80727, adult male, collected on 7 January 1887, from the collection of George B. Sennett (no. 3915).

Type locality.—Restricted by lectotype designation to Chiltipin Creek, San Patricio County, Texas.

Topotypes.—San Patricio Co: 4 (AMNH), 1 (ASNHC). Last topotype collected in 1887.

Near topotypes.—Bee Co: 3 (AMNH), 2 (WFVZ), 1 (USNM). Last near topotype collected in 1956.

Remarks.—Allen (1893) based his description of *B. a. sennetti* upon nearly 30 specimens from the Lower Rio Grande Valley supplied to him by George B. Sennett. In the original description Allen did not designate a type; however, Greenway (1973) designated AMNH 80727 as the lectotype, which made AMNH 80726, 80728–80753, and 86812 paralectotypes (see LeCroy 2017). The selection of the lectotype established the type locality as Chiltipin Creek, San Patricio, Texas. According to the Texas State Historical Association, Chiltipin Creek rises north of West Sinton in west-central San Patricio County and runs east for 45 miles from its mouth, on the Aransas River in western Aransas County.

Buteo jamaicensis fuertesi Sutton and Van Tyne, 1935
[Fuertes' Red-tailed Hawk]
[Red-tailed Hawk]

1912. *Buteo borealis calurus* Strecker, Baylor Univ. Bull. 25:27.

1935. *Buteo jamaicensis fuertesi* Sutton and Van Tyne, Occ. Pap. Mus. Zool., Univ. Michigan 321:1.

1974. *Buteo jamaicensis fuertesi* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 219.

Type specimen.—Holotype, adult female, UMMZ 86400, obtained by Josselyn Van Tyne on 8 March 1935, original number 3154.

Type locality.—Calamity Creek Bridge, 22 miles south of Alpine, Brewster County, Texas.

Topotypes.—Brewster County (14 paratypes): 6 (UMMZ), 4 (CM), 3 (CUMV), 1 (USNM). Last topotype collected in 1995.

Near topotypes.—Jeff Davis Co: 3 (UMMZ). Presidio Co: 2 (TCWC). Last near topotype collected in 1970.

Buteo lineatus texanus Bishop, 1912
[Texas Red-shouldered Hawk]
[Red-shouldered Hawk]

1912. *Buteo lineatus alleni* Strecker, Baylor Univ. Bull. 25:27.

1912. *Buteo lineatus texanus* Bishop, Auk 29:232.

1974. *Buteo lineatus texanus* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 223.

2021. *Buteo lineatus texanus* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

Type specimen.—Holotype, adult female, FMNH 124035, obtained by John M. Priour on 7 November 1909; collection of Louis B. Bishop, original number 22355.

Type locality.—Corpus Christi, Nueces County, Texas.

Topotypes.—Nueces Co: 22 (MCZ), 20 (FMNH), 10 (AMNH, WFVZ). Last topotype collected in 1940.

Near topotypes.—Aransas Co: 1 (FMNH). San Patricio Co: 1 (MCZ). Last near topotype collected in 1913.

ORDER STRIGIFORMES
Family Strigidae

Bubo virginianus pallescens Stone, 1897
[Western Horned Owl]
[Great Horned Owl]

1897. *Bubo virginianus pallescens* Stone, Amer. Nat. 31:237.

1912. *Bubo virginianus pallescens* Strecker, Baylor Univ. Bull. 25:30.

1974. *Bubo virginianus pallescens* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 449.

Type specimen.—Holotype, adult male, USNM 152219, obtained by H. P. Attwater on 15 February 1894, original collector's number 279.

Type locality.—Watson Ranch, 18 miles southwest of San Antonio, Bexar County, Texas.

Topotypes.—Bexar Co: 3 (WFVZ), 1 (SBMNH, UMMZ, USNM, YPM). Last topotype collected in 1929.

Near topotypes.—Atascosa Co: 5 (UMMZ). Last near topotype collected in 1935.

Micropallas whitneyi idoneus Ridgway, 1914
[Texas Elf Owl]
= ***Micrathene whitneyi idonea***
[Elf Owl]

1912. *Micropallas whitneyi* Strecker, Baylor Univ. Bull. 25(1):30.

1914. *Micropallas whitneyi idoneus* Ridgway, Bull. U.S. Nat. Mus. 50:810.

1957. *Micrathene whitneyi idonea* AOU Checklist 5:283

1974. *Micropallas whitneyi idonea* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 454.

1995. *Micrathene whitneyi idonea* Banks and Browning, Auk 112:635.

Type specimen.—Holotype, adult male, AMNH 80966, obtained by F. B. Armstrong on 5 April 1889.

Type locality.—Five miles from Hidalgo, Hidalgo County, Texas.

Topotypes.—Hidalgo Co: 1 (ANSP, TCWC). Last topotype collected in 1969.

Near topotypes.—None.

Remarks.—Coues (1889) had replaced *Micrathene* Coues with *Micropallas* Coues because the original name was preoccupied at the time, a proposal that was followed by Oberholser (1974). However, the AOU (1957) contended that *Micrathene* was no longer preoccupied and was valid. Banks and Browning (1995) supported that decision.

Otus asio hasbroucki Ridgway, 1914
[Hasbrouck's Screech Owl]
= ***Megascops asio hasbroucki***
[Eastern Screech Owl]

1912. *Otus asio* Strecker, Baylor Univ. Bull. 25(1):29.

1914. *Otus asio hasbroucki* Ridgway, U.S. Nat. Mus. Bull. 50:694.

1974. *Otus asio hasbroucki* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 445.

2003. *Megascops asio* 44th Supplement to AOU Checklist, Auk 120:927.

2021. *Megascops asio hasbroucki* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

Type specimen.—Holotype, adult male, USNM 153359, obtained by E. M. Hasbrouck on 8 September 1888, original collector's number 523.

Type locality.—McClenny's Pasture, 10 to 15 miles south of Palo Pinto, Palo Pinto County, Texas.

Topotypes.—Palo Pinto County, 10–15 miles S Palo Pinto, 1.

Near topotypes.—None.

Remarks.—The taxonomic classification of New and Old World owls, especially the genus *Otus*, has been a subject of debate for decades. Marshall and King (1988) placed all New World *Otus* in the subgenus *Megascops* on the basis of differences in call patterns. Wink and Heidrich (1999) recognized that differences between New and Old World *Otus* were substantial based on an analysis of mitochondrial DNA. Based on genetic and vocal evidence, the AOU (2003) elevated *Megascops* to full generic status.

Scops mccallii Cassin, 1854
[Western Mottled Owl]
= ***Megascops asio mccallii***
[Eastern Screech Owl]

1854. *Scops mccallii* Cassin, Illustrations of Birds of California, Texas, Oregon, British and Russian

America, J. P. Lippencott, Philadelphia, PA, p. 180.

1886. *Megascops asio mccallii* AOU Checklist 1, no. 373b.

1908. *Otus asio mccallii* AOU Committee, Auk 25:372.

1912. *Otus asio mccallii* Strecker, Baylor Univ. Bull. 25(1):29.

1974. *Otus asio mccallii* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 445.

2003. *Megascops asio* 44th Supplement to AOU Checklist, Auk 120:927.

2021. *Megascops asio mccallii* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

Type specimens.—Two syntypes but USNM 9171, sex unknown, obtained by Mr. Schott on 9 September 1853, is the only specimen that is extant. The other syntype specimen, used by Cassin (1854) in his original description, was placed in the collection of the Philadelphia Academy of Sciences and was subsequently lost.

Type locality.—Rio Bravo del Norte (believed to be = Lower Rio Grande, Texas; see AOU 1910 Checklist).

Topotypes.—None. Imprecise type locality.

Near topotypes.—None.

Remarks.—See Remarks under *Otus asio hasbroucki* regarding the use of *Megascops*.

Syrnium nebulosum helveolum Bangs, 1899
[Texas Barred Owl]
= *Strix varia*
[Barred Owl]

1899. *Syrnium nebulosum helveolum* Bangs, Proc. New England Zool. Club 1:31.

1908. *Strix varia albogilva* Bangs, Auk 25:316.

1912. *Strix varia helveolum* Strecker, Baylor Univ. Bull. 25(1):29.

1931. *Strix varia helveola* AOU Checklist 4:170.

1974. *Strix varia helveola* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 457.

2011. *Strix varia* Barrowclough et al., Auk 128:704.

Type specimen.—Holotype, adult female, MCZ 104551, original number 4551 in collection of E. A. and O. Bangs, Corpus Christi, Texas. The specimen was obtained on 2 February 1899 by F. B. Armstrong.

Type locality.—Corpus Christi, Nueces County, Texas.

Topotypes.—Nueces Co: 3 (FMNH), 2 (WFVZ), 1 (OMNH, PSM). Last topotype collected in 2009.

Near topotypes.—Aransas Co: 3 (UMMZ, WFVZ). Last near topotype collected in 1936.

Remarks.—When the AOU replaced *Syrnium* with *Strix*, Bangs (1908) changed the name of the subspecies he described to *Strix varia albogilva* because *helveolum* was preoccupied. Until recently, several subspecies were recognized, but the Barred Owl is now considered monotypic (Barrowclough et al. 2011).

ORDER PICIFORMES
Family Picidae

Centurus aurifrons incanescens Todd, 1946
[Northern Golden-fronted Woodpecker]
= ***Melanerpes aurifrons aurifrons***
[Golden-fronted Woodpecker]

1829. *Picus aurifrons* Wagler, Isis von Oken 22, Heft 5, col. 512.

1912. *Centurus aurifrons* Strecker, Baylor Univ. Bull. 25(1):33.

1946. *Centurus aurifrons incanescens* Todd, Ann. Carnegie Mus. 30:298.

1974. *Centurus aurifrons incanescens* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 514.

2009. *Melanerpes aurifrons* García-Trejo et al., Condor 111:449.

2013. *Melanerpes aurifrons aurifrons* 54th supplement of the AOU Checklist., Auk 130:568.

Type specimen.—Holotype, adult male, CM 113850, obtained by George M. Sutton on 5 May 1933.

Type locality.—12 miles south of Marathon, Brewster County, Texas.

Topotypes.—Brewster Co: 9 (CM), 1 (CUMV, ROM). Last topotype collected in 1978.

Near topotypes.—Presidio Co: 13 (TCWC). Last near topotype collected in 2020.

Remarks.—*Melanerpes aurifrons* is a member of a superspecies group consisting of five morphologically similar species (Sealander and Giller 1963; Short 1982). García-Trejo et al. (2009) separated the southern subspecies from *M. aurifrons*, making it monotypic. The AOU didn't follow this treatment and this taxon is included as *M. a. aurifrons* (Chesser et al. 2013).

Centurus carolinus harpaceus Koelz, 1954
[Texas Red-bellied Woodpecker]
= ***Melanerpes carolinus***
[Red-bellied Woodpecker]

1912. *Centurus carolinus* Strecker, Baylor Univ. Bull. 25(1):33.

1954. *Centurus carolinus harpaceus* Koelz, Contrib. Inst. Regional Explor. 1(3):32.

1974. *Centurus carolinus harpaceus* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 511.

2009. *Melanerpes carolinus* García-Trejo et al., Condor 111:449.

Type specimen.—Holotype, adult female, UMMZ 122056, obtained by H. H. Kimball on 28 December 1936.

Type locality.—Matagorda, Matagorda County, Texas.

Topotypes.—Matagorda Co: 1 (AMNH), 5 (UMMZ). Last topotype collected in 1935.

Near topotypes.—Brazoria Co: 3 (USNM), 2 (TCWC), 1 (ASNHC, MSB). Calhoun Co: 1 (FMNH). Last near topotype collected in 2019.

Remarks.—According to Storer (1988:20), the type of this taxon is a specimen "without a precise locality." However, Kimball did most of his collecting near where he lived, so it is likely that the locality is accurate to within approximately ten miles (Storer 1988). *Melanerpes carolinus* is a member of a superspecies group consisting of five morphologically similar species (Sealander and Giller 1963; Short 1982). García-Trejo et al. (2009) determined that *M. carolinus* was monotypic.

Dryobates scalaris symplectus Oberholser, 1911
[Texas Ladder-backed Woodpecker]
= ***Dryobates scalaris cactophilus***
[Ladder-backed Woodpecker]

1911. *Dryobates scalaris symplectus* Oberholser, Proc. U.S. Nat. Mus. 41:155.

1912. *Dryobates scalaris bairdi* Strecker, Baylor Univ. Bull. 25(1):32.

1948. *Dendrocopos scalaris symplectus* Peters, Checklist of Birds of the World, Vol. VI, Harvard Univ. Press, p. 213.

1974. *Dryobates scalaris symplectus* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 524.

1982. *Picoides scalaris cactophilus* Short, Woodpeckers of the World, Mus. Nat. Hist., Greenville, Delaware, p. 292.

2015. *Dryobates scalaris* Fuchs and Pons, Mol. Phylogen. Evol. 88:36.

2021. *Dryobates scalaris cactophilus* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

Type specimen.—Holotype, adult male, USNM 140730, obtained by William Lloyd on 21 November 1891.

Type locality.—Mouth of Nueces River, Nueces County, Texas.

Topotypes.—Nueces Co: 4 (AMNH), 3 (TCWC, USNM), 1 (FMNH). Last topotype collected in 2019.

Near topotypes.—Aransas Co: 3 (AMNH). Kleberg Co: 1 (DMNH, TCWC). San Patrico Co: 2 (MMNH, ROM), 1 (CHAS). Last near topotype collected in 1962.

ORDER PASSERIFORMES
Family Aegithalidae

Psaltriparus lloydi Sennett, 1888
[Lloyd's Bushtit]
= ***Psaltriparus minimus dimorphicus***
[Bushtit]

1888. *Psaltriparus lloydi* Sennett, Auk 5:43.

1895. *Psaltriparus lloydi* AOU Checklist 2:312.

1912. *Psaltriparus melanotis lloydi* Strecker, Baylor Univ. Bull. 25(1):65.

1931. *Psaltriparus minimus lloydi* AOU Checklist 4:236.

1934. *Psaltriparus melanotis lloydi* van Rossem, Bull. Mus. Comp. Zool. 77:455.

1967. *Psaltriparus minimus* Raitt, Auk 84:526.

1973. *Psaltriparus minimus lloydi* 32nd supplement to the AOU Checklist Auk 90:416.

1974. *Psaltriparus melanotis lloydi* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 617.

1983. *Psaltriparus minimus* AOU Checklist 6:517.

1986. *Psaltriparus minimus dimorphicus* Phillips, The Known Birds of North and Middle America, Part I, Denver Mus. Nat. Hist, 91.

Type specimens.—Two syntypes, adult male, AMNH 86426, obtained by Wm. Lloyd on 16 June 1887, Sennett Collection 4895, and adult female, AMNH 86427, obtained by Wm. Lloyd on 16 June 1887, Sennett Collection 4896.

Type locality.—"Pineries," near Fort Davis, Jeff Davis County, Texas, at altitudes of 6,200 to 6,400 feet.

Topotypes.—Jeff Davis Co: 12 (AMNH), 5 (USNM), 2 (CUMV), 1 (TCWC). Last topotype collected in 1941.

Near topotypes.—Brewster Co: 99 (LACM), 15 (USNM), 11 (FMNH), 1 (TCWC). Last near topotype collected in 1962.

Remarks.—Raitt (1967) determined that populations in northwestern Mexico should be retained in *P. m. lloydi*, but that black-eared individuals in the United States were only immature males and the result of introgression of *P. m. lloydi* with *P. m. plumbeus*. Phillips (1986) synonymized *P. m. lloydi* with *P. m. dimorphicus*. Sennett (1888) also provided a description of a nest and one egg (AMNH EN 2263).

Family Alaudidae

Alauda minor Giraud, 1841
[Lesser Shore Lark]
= ***Eremophila alpestris giraudi***
[Horned Lark]

1841. *Alauda minor* Giraud, Description of Sixteen New Species of North American Birds, p. 33.

1884. *Alauda minor giraudi* Henshaw, Auk 1:260.

1912. *Otocarus alpestris giraudi* Strecker, Baylor Univ. Bull. 25(1):40.

1947. *Eremophila alpestris giraudi* 22nd Supplement to AOU Checklist, Auk 64:450.

1974. *Eremophila alpestris giraudi* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 570.

Type specimen.—Holotype, sex unknown, USNM 47701 (Giraud Collection).

Type locality.—"Received from Texas, 1838."

Topotypes.—None. Imprecise type locality.

Near topotypes.—None.

Remarks.—Henshaw (1884:260) recognized that the specimen upon which Giraud based his description

was a distinct taxon. However, he noted that the name *A. minor* was preoccupied by *Alauda minor* 1788 and thus was not eligible for use as a name for this taxon. Therefore, he subsequently applied Giraud's name to the subspecies he described (see following account).

Otocorys alpestris giraudi Henshaw, 1884
[Texas Horned Lark]
= ***Eremophila alpestris giraudi***
[Horned Lark]

1884. *Otocorys alpestris giraudi* Henshaw, Auk 1:266.

1889. *Otocoris alpestris giraudi* AOU Checklist 1:239.

1912. *Otocoris alpestris giraudi* Strecker, Baylor Univ. Bull. 25(1):40.

1947. *Eremophila alpestris giraudi* 22nd Supplement to AOU Checklist, Auk 64:450.

1974. *Eremophila alpestris giraudi* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 570.

Type specimens.—Two syntypes, adult male, USNM 73706, collected by G. B. Sennett, on 29 March 1871, original number 7, and adult female, USNM 73707, collected by G. B. Sennett on 29 March 1871, original number 108.

Type locality.—Adult male, Corpus Christi, Nueces County, Texas; adult female, Brownsville, Cameron County, Texas.

Topotypes.—Cameron Co: 26 (UMMZ), 23 (WFVZ), 12 (MCZ). Nueces Co: 34 (MCZ), 32 (FMNH), 13 (AMNH), 8 (WFVZ), 5 (CAS, SDNHM), 3 (USNM), 1 (CHAS, CM, CUMV, DMNS, TCWC, UCLA). Last topotype collected in 1979.

Near topotypes.—Aransas Co: 3 (USNM), 1 (TTU, WFVZ). Last near topotype collected in 1946.

Remarks.—Henshaw (1884) based his description of this subspecies on two syntypes collected by G. B. Sennett because Giraud's type locality was so imprecise (see previous account). The USNM register for specimen 73706 does not give the definite locality or date, so Henshaw's assertion that one of his designated types came from Corpus Christi is questionable, although Deignan (1961) noted that this information might have been acquired by correspondence with the collector.

Otocorys alpestris praticola Henshaw, 1884
[Prairie Horned Lark]
= ***Eremophila alpestris praticola***
[Horned Lark]

1884. *Otocorys alpestris praticola* Henshaw, Auk 1:264.

1886. *Otocoris alpestris praticola* Ridgway, AOU Checklist 1:239.

1912. *Otocoris alpestris praticola* Strecker, Baylor Univ. Bull. 25(1):40

1947. *Eremophila alpestris praticola* 22nd supplement to the AOU Checklist, Auk 64:450.

1974. *Eremophila alpestris praticola* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 570.

Type specimens.—Six syntypes, adult male, USNM 95583, collected by George H. Ragsdale on 12 February 1884, and 5 specimens from Illinois (USNM 90763, 90760, 85417, 90761, 90792), obtained in 1883 by Robert Ridgway.

Type locality.—USNM 95583 (Gainesville, Cooke County, Texas); Illinois syntypes are from Richland and Wabash counties.

Topotypes.—Cooke Co: 1 (ROM, USNM).

Near topotypes.—None.

Family Calcariidae

Plectrophanes mccownii Lawrence, 1851
[Rufous-winged Lark Bunting]
= ***Rhynchophanes mccownii***
[Thick-billed Longspur]

1851 [1852]. *Plectrophanes McCownii* Lawrence, Ann. Lyceum Nat. Hist. New York 5:122.

1858. *Rhynchophanes* (*Plectrophanes*) *mccownii* Baird, Cassin, and Lawrence, Rep. Expl. Sur. … Pacific Ocean, Vol. 9 (part 2), p. 432.

1912. *Rhynchophanes mccownii* Strecker, Baylor Univ. Bull. 25(1):47.

1973. *Calcarius mccownii* 32nd supplement to the AOU Checklist, Auk 90:418.

1974. *Rhynchophanes mccownii* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 959.

1983. *Calcarius mccownii* AOU Checklist 6:717.

2010. *Rhynchophanes mccownii* 51st supplement to the AOU Checklist, Auk 127:738.

Type specimen.—Two syntypes, unknown sex, winter plumage, likely AMNH 41711 and AMNH 41712, obtained by Capt. J. P. McCown, USA, in late spring, unkown date.

Type locality.—High prairies of western Texas.

Topotypes.—None. Imprecise locality. Unknown breeding location; type specimens were collected on migratory route.

Near topotypes.—None.

Remarks.—The paper describing this species was first read at a Lyceum meeting on 8 September 1851 (Lawrence 1851a [1852]). As far back as 1882, the common name of this taxon was McCown's Longspur (Coues 1881), but a proposal was submitted to the American Ornithological Society's Classification Committee (Proposal 2020-S) to change the common name of the species because Captain John P. McCown, for whom the species was named, was an active Confederate soldier who fought for the right to own slaves. The proposal was approved by the AOS Committee, and the new common name is Thick-billed Longspur.

Family Cardinalidae

Cardinalis cardinalis canicaudus Chapman, 1891
[Gray-tailed Cardinal]
[Northern Cardinal]

1891. *Cardinalis cardinalis canicaudus* Chapman, Bull. Amer. Mus. Nat. Hist. 3(22):324.

1912. *Cardinalis cardinalis canicaudus* Strecker, Baylor Univ. Bull. 25(1):52.

1918. *Richmondena cardinalis* Mathews and Iredale, Austral Avian Record 3:145.

1957. *Richmondena cardinalis canicaudus* AOU Checklist 5:547.

1974. *Richmondena cardinalis canicaudus* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 854.

1998. *Cardinalis cardinalis* AOU Checklist, 7:633.

2021. *Cardinalis cardinalis canicaudus* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

Type specimens.—Two syntypes, adult male, AMNH 54935, and breeding female, AMNH 54937, both obtained by F. M. Chapman on 23 April 1891.

Type locality.—30 miles west of Corpus Christi, Nueces County, Texas.

Topotypes.—Nueces Co: 18 (FMNH), 5 (AMNH, USNM), 3 (CAS), 2 (WFVZ), 1 (MCZ, MVZ, SBMNH, WFVZ). Last topotype collected in 1940.

Near topotypes.—Jim Wells Co: 2 (TCWC). Last near topotype collected in 1986.

Guiraca caerulea mesophila Oberholser, 1974
[Texas Blue Grosbeak]
= ***Passerina caerula caerula***
[Blue Grosbeak]

1758. *Loxia caerula* Linneaus, Systema Naturae, ed. 10, vol. 1:175. Iconotype based on "The blew Grossbec" [Blue Grosbeak], plate 39 in Catesby (1754, vol. 1).

1886. *Guiraca caerulea* AOU Checklist 1:287.

1912. *Guiraca caerulea* Strecker, Baylor Univ. Bull. 25(1):52.

1974. *Guiraca caerulea mesophila* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 862.

1978. *Guiraca caerula caerula* Browning, Proc. Biol. Soc. Wash. 91:112.

2001. *Passerina caerula* Klicka et al., Auk 118:618.

2021. *Passerina caerula caerula* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

Type specimen.—Holotype, adult male, USNM 186740, obtained by A. H. Howell on 27 June 1903, original no. 110.

Type locality.—Lipscomb, Lipscomb County, Texas.

Topotypes.—Lipscomb Co: 1 (USNM). Topotype collected in 1903.

Near topotypes.—None.

Remarks.—Because the holotype shared more characters with *G. c. caerula*, Browning (1978) considered Oberholser's subspecific designation to be invalid, and he regarded *mesophila* as a synonym of *caerula*.

Passerina ciris pallidior Mearns, 1911
[Pale Painted Bunting]
[Painted Bunting]

1911. *Passerina ciris pallidior* Mearns, Proc. Biol. Soc. Wash. 24:217.

1912. *Cyanospiza ciris* Strecker, Baylor Univ. Bull. 25(1):53.

1957. *Passerina ciris pallidior* AOU Checklist 5:554.

1974. *Linaria ciris pallidior* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 869.

2021. *Passerina ciris pallidior* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

Type specimen.—Holotype, adult male, USNM 163673, obtained by E. A. Mearns on 7 May 1898, original number 11800.

Type locality.—Fort Clark [= Brackettville], Kinney County, Texas.

Topotypes.—Kinney Co: 8 paratypes (USNM), 4 (USNM), 2 (CAS). Last topotype colleted in 1898.

Near topotypes.—Val Verde Co: 23 (USNM), 1 (TCWC). Last near topotype collected in 1984.

Piranga hepatica oreophasma Oberholser 1917
[Northern Hepatic Tanager]
= ***Piranga flava dextra***
[Hepatic Tanager]

1827. *Pyranga hepatica* Swainson, Philadelphia Mag. 1:438.

1886. *Piranga hepatica* AOU Checklist 1:291.

1912. *Piranga hepatica* Strecker, Baylor Univ. Bull. 25(1):53.

1917. *Piranga hepatica oreophasma* Oberholser, Auk 36:74.

1931. *Piranga flava hepatica* AOU Checklist 4:311.

1942. *Piranga flava dextra* Sutton and Phillips, Condor 44:278.

1974. *Piranga hepatica oreophasma* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 849.

1983. *Piranga flava* AOU Checklist 6:657.

2003. *Piranga flava dextra* Dickinson, The Howard and Moore Complete Checklist of the Birds of the World, p. 818.

Type specimen.—Holotype, USNM 168379, collected by Harry C. Oberholser on 3 June 1901, original number 290.

Type locality.—Pine Canyon (at elevation 6,000 feet), Chisos Mountains, Brewster County, Texas.

Topotypes.—Brewster Co: 4 (ROM), 3 (FMNH), 2 (CUMV, MCZ, TCWC), 1 (MCZ, USNM). Last topotype collected in 1968.

Near topotypes.—Brewster Co (not BBNP): 2 (CM, MCZ), 1 (CUMV). Last near topotype collected in 1968.

Pyrrhuloxia sinuata beckhami Ridgway 1887
[Arizona Pyrrhuloxia]
= ***Cardinalis sinuatus sinuatus***
[Pyrrhuloxia]

1837. *Cardinalis sinuatus* Bonaparte, Proc. Zool. Soc. London 5:1837.

1850. *Pyrrhuloxia sinuata* Bonaparte, Consp. Gen. Avium 1:500.

1887. *Pyrrhuloxia sinuate beckmani* Ridgway, Auk 4:347.

1912. *Pyrrhuloxia sinuata* Strecker, Baylor Univ. Bull. 25(1):52.

1947. *Pyrrhuloxia sinuatus sinuatus* Amadon and Phillips, Auk 64:580.

1974. *Pyrrhuloxia sinuata beckmani* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 856.

1976. *Cardinalis sinuatus* 33rd Supplement to AOU Checklist, Auk 93:879.

2003. *Cardinalis sinuatus sinuatus* Dickinson, The Howard and Moore Complete Checklist of the Birds of the World p. 823.

Type specimens.—Two syntypes, USNM 6369, adult female, collected in 1854 by Adolphus L. Heermann, and USNM 6370, adult (sex not indicated, but apparently male), collected sometime between 1851 and 1855 by Arthur C. V. Schott.

Type locality.—No. 6369 from El Paso, El Paso County, Texas. No. 6370 from Texas, but according to Deignan (1961:598) probably not from El Paso.

Topotypes.—El Paso Co: 5 (UTEP), 4 (USNM), 1 (WFVZ). Last topotype collected in 2014.

Near topotypes.—None.

Remarks.—For an explanation of the generic name *Cardinalis* see the account of *Richmondena* below.

Pyrrhuloxia sinuata texana Ridgway 1897
[Texas Cardinal]
= ***Cardinalis sinuatus sinuatus***
[Pyrrhuloxia]

1837. *Cardinalis sinuatus* Bonaparte, Proc. Zool. Soc. London 5:1837.

1850. *Pyrrhuloxia sinuata* Bonaparte, Consp. Gen. Avium 1:500.

1897. *Pyrrhuloxia sinuata texana* Ridgway, Auk 14:95.

1912. *Pyrrhuloxia sinuata texana* Strecker, Baylor Univ. Bull. 25(1):52.

1947. *Pyrrhuloxia sinuata sinuata* Amadon and Phillips, Auk 64:579.

1974. *Pyrrhuloxia sinuata sinuata* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 855.

1976. *Cardinalis sinuatus* 33rd Supplement to AOU Checklist, Auk 93:879.

2003. *Cardinalis sinuatus sinuatus* Dickinson, The Howard and Moore Complete Checklist of the Birds of the World p. 823.

Type specimens.—Four syntypes: USNM 112362 (adult female obtained 12 January 1887); USNM 112363 (adult female obtained 4 February 1887); USNM 112815 (adult male obtained 9 February 1887); and USNM 112816 (adult female obtained 9 February 1887). USNM 112362 and 112363 were collected by George B. Sennett (original numbers 27 and 80, respectively), and USNM 112815 and 112816 were collected by Charles W. Beckham (original numbers 2880 and 2881, respectively).

Type locality.—Corpus Christi, Nueces County, Texas.

Topotypes.—Nueces Co: 8 (FMNH), 2 (CM, DMNH, OSUM), 1 (CAS, HSU, SMBNH, WFVZ, YPM). Last topotype collected in 1967.

Near topotypes.—Aransas Co: 3 (FMNH), 1 (AMNH). Jim Wells Co: 2 (UMMZ). Kleberg Co:

3 (OSUM), 2 (DMNH),1 (CM). San Patricio Co: 2 (MCZ), 1 (MVZ, WFVZ). Last near topotype collected in 1976.

Remarks.—An image in the Richmond Index at the USNM indicates 112815 was selected as the type (http://www.zoonomen.net/cit/RI/SP/Ptil/ptil00773a.jpg), which would make it a lectotype. However, the digital entries for all four syntypes at the USNM continue to recognize each as a "cotype" (= syntype) with no lectotype selected. In Ridgway's (1887) description of *P. s. beckmani* he erroneously believed that Bonaparte's original description of *Pyrrhuloxia* was from eastern Mexico. When he realized that the original description was from western Mexico, he proposed *P. s. texana* be applied to the population in Texas and northeastern Mexico and the taxon be added to the AOU checklist (Ridgway 1897). A complete description of the taxon subsequently was published four years later (Ridgway 1901). For an explanation of the use of the generic name *Cardinalis*, see the account of *Richmondena* below.

Richmondena cardinalis planicola Stevenson, 1940
[Palo Duro Cardinal]
= ***Cardinalis cardinalis canicaudus***
[Northern Cardinal]

1891. *Cardinalis cardinalis canicaudus* Chapman, Bull. Amer. Mus. Nat. Hist. 3(22):324.

1912. *Cardinalis cardinalis canicaudus* Strecker, Baylor Univ. Bull. 25(1):52.

1918. *Richmondena cardinalis* Mathews and Iredale, Austral Avian Record 3:145.

1940. *Richmondena cardinalis planicola* Stevenson, Proc. Biol. Soc. Wash. 53:16.

1957. *Richmondena cardinalis canicaudus* AOU Checklist 5:547.

1974. *Richmondena cardinalis planicola* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 854.

1998. *Cardinalis cardinalis* AOU Checklist 7:633.

2021. *Cardinalis cardinalis canicaudus* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

2022. *Cardinalis cardinalis canicaudus* Gill et al., IOC World Bird List, file no. 32,574.

Type specimen.—Holotype, adult female, USNM 363607, obtained by T. F. Smith on 26 December 1936, original number 1232.

Type locality.—Palo Duro Canyon, 2 miles north of Palo Duro [Canyon] State Park, Elkins Ranch, Randall County, Texas.

Topotypes.—Randall Co: 7 (USNM), 1 (AMNH, KU). Last topotype collected in 1956.

Near topotypes.—Armstrong Co: 6 (USNM). Potter Co: 1 (UMMZ). Last near topotype collected in 1938.

Remarks.—Oberholser (1974), without comment, used *Richmondena* as the generic name for the Northern Cardinal (*cardinalis*), and *Pyrrhuloxia* for the Pyrrhuloxia (*sinuata*), even though the Commission had validated (1966) *Cardinalis* as the name for the genus into which both *cardinalis* and *sinuata* had been merged (Banks and Browning 1995). Paynter (1970) used *Cardinalis* for the species formerly in *Richmondena* and *Pyrrhuloxia*. The AOU (1973) replaced *Richmondena* with *Cardinalis* and accepted the merger of *Pyrrhuloxia* in 1976, and that is the taxonomic arrangement that is followed today (Banks and Browning 1995).

Family Certhiidae

Certhia familiaris iletica Oberholser, 1974
[Pecos Brown Creeper]
= ***Certhia americana montana***
[Brown Creeper]

1912. *Certhia familiaris americana* Strecker, Baylor Univ. Bull. 25(1):64.

1957. *Certhia familiaris montana* Ridgway, Proc. U.S. Nat. Mus. 5:114

1974. *Certhia familiaris iletica* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 627.

1978. *Certhia familiaris montana* Browning, Proc. Biol. Soc. Wash. 91:98.

1983. *Certhia americana* AOU Checklist 6:520.

2021. *Certhia americana montana* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

Type specimen.—Holotype, adult female, USNM 341640, obtained by T. D. Burleigh on 19 May 1938, original number 5068.

Type locality.—The Bowl, Guadalupe Mountains, Culberson County, Texas.

Topotypes.—Culberson Co: 4 (TCWC, USNM). Last topotype collected in 1973.

Near topotypes.—None.

Remarks.—Browning (1978, 1990) considered *C. f. iletica* to be synonymous with *C. f. montana*, a subspecies inhabiting the region from the Rocky Mountains to western Texas.

Family Corvidae

Aphelocoma coerulescens mesolega Oberholser, 1974
[Pecos Scrub Jay]
= ***Aphelocoma woodhouseii woodhouseii***
[Woodhouse's Scrub-Jay]

1858. *Cyanocitta woodhousei* Baird, Birds of N. Amer. pl. 59.

1877. *Aphelocoma woodhousei* Ridgway, Field and Forest, June, p. 208.

1912. *Aphelocoma woodhousei* Strecker, Baylor Univ. Bull. 25(1):40.

1934. *Aphelocoma coerulescens woodhousei* Hellmayr, Field Mus. Nat. Hist., Zool. Ser. 13(part 7):54.

1951. *Aphelocoma coerulescens woodhouseii* Pitelka, Univ. California Publ. Zool. 50(3):399.

1957. *Aphelocoma coerulescens woodhouseii* AOU Checklist 5:373.

1964. *Cyanocorax coeralescens suttoni* Phillips, Rev. Soc. Mexicana Hist. Nat. 25:225.

1974. *Aphelocoma coerulescens mesolega* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 589.

1998. *Alphelocoma californica* AOU Checklist 7:447.

2003. *Alphelocoma californica woodhouseii* Dickinson, The Howard and Moore Complete Checklist of the Birds of the World, p. 508.

2016. *Aphelocoma woodhouseii* 57th supplement of the AOU Checklist Auk 133:554.

2021. *Aphelocoma woodhouseii woodhouseii* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

Type specimen.—Holotype, adult female, USNM 139592, obtained by V. Bailey on 11 January 1890.

Type locality.—Fort Davis, Jeff Davis County, Texas.

Topotypes.—Jeff Davis Co: 22 (AMNH), 11 (UMMZ), 10 (FMNH), 9 (USNM), 6 (ROM), 3 (WFVZ), 1 (MSB). Last topotype collected in 1987.

Near topotypes.—None.

Remarks.—The subspecies of this bird from the Trans-Pecos of Texas has been the subject of much controversy. At one time or another, populations have been assigned to four different subspecies: *woodhouseii* (Smith 1917), *texana* (Oberholser 1920; Hellmayr 1934), integrades between *woodhoueseii* and *texana* (Pitelka 1951), *suttoni* (Phillips 1964), and *mesolega* (Oberholser 1974). Today, most ornithologists have adopted the trinomial *A. woodhouesii woodhouseii* as the appropriate assignment for the scrubjays from this region of Texas (Clements et al. 2021).

Aphelocoma texana Ridgway, 1902
[Texas Scrub Jay]
= ***Aphelocoma woodhouseii texana***
[Woodhouse's Scrub-Jay]

1887. *Aphelocoma woodhousei* Lloyd, Auk 4:290.

1895. *Aphelocoma cyanotis* Bendire, U.S. Nat. Mus. Bull. 3:382.

1902. *Aphelocoma texana* Ridgway, Auk, 19:70.

1912. *Aphelocoma texana* Strecker, Baylor Univ. Bull. 25(1):41.

1917. *Aphelocoma californica texana* Oberholser, Condor 19:95.

1934. *Aphelocoma coerulescens texana* Hellmayr, Field Mus. Nat. Hist., Zool. Ser. 13(part 7):54.

1964. *Cyanocorox coerulescens suttoni* Phillips, Rev. Soc. Mexicana Hist. Nat. 25:225.

1974. *Aphelcoma coerulescens texana* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 589.

1998. *Alphecoma californica* AOU Checklist 7:447.

2003. *Alphelocoma californica texana* Dickinson, The Howard and Moore Complete Checklist of the Birds of the World, p. 508.

2016. *Aphelocoma woodhouseii* 57th supplement of the AOU Checklist, Auk 133:554.

2021. *Aphelocoma woodhouseii texana* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

Type specimen.— Holotype, adult female, USNM 150507, obtained by H. P. Attwater on 1 December 1894.

Type locality.—Near head of Nueces R[iver], Edwards County, Texas.

Topotypes.—Edwards Co: 40 (FMNH), 37 (WFVZ), 14 (USNM), 8 (AMNH), 3 (CM, UCLA), 2 (MVZ), 1 (CHAS, OSUM, YPM). Last topotype collected in 1987.

Near topotypes.—Kerr Co: 70 (MCZ), 32 (AMNH), 28 (USNM), 17 (FMNH), 1 (ROM). Kimble Co: 4 (WFVZ). Sutton Co: 7 (MCZ), 2 (WFVZ). Last near topotype collected in 1918.

Remarks.—*Aphelocoma woodhouseii texana* is endemic to Texas and is found primarily in the Hill Country (Lockwood and Freeman 2014), but it is not listed on any critical conservation list (see Table 7 later in this catalog). The label on the type specimen reads that it was collected by H. P. Attwater, but apparently it was collected by Howard Lacey on his ranch and sent to Attwater (Lacey 1903:151; Lacey 1911:211).

Xanthoura luxuosa glaucescens Ridgway, 1900
[Rio Grande Green Jay]
= ***Cyanocorax yncas luxuosus***
[Green Jay]

1900. *Xanthoura luxuosa glaucescens* Ridgway, Auk 17:28.

1912. *Xanthoura luxuosa glaucescens* Strecker, Baylor Univ. Bull. 25(1):41.

1934. *Xanthoura yncas glaucescens* Hellmayr, Field Mus. Nat. Hist., Zool. Ser. 13(part 7):36.

1951. *Xanthoura yncas luxuosus* Sutton, Condor 53:124.

1957. *Cyanocorax yncas luxuosus* AOU Checklist 5:375.

1974. *Xanthoura yncas glaucescens* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 591.

1983. *Cyanocorax yncas* AOU Checklist 6:502.

1995. *Cyanocorax yncas luxuosus* Gayou, The Birds of North America, The Birds of North America, Inc., Philadelphia, PA, 187:1.

2021. *Cyanocorax yncas luxuosus* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

Type specimen.—Holotype, adult male, USNM 70593, obtained by Dr. J. C. Merrill on 30 March 1876.

Type locality.—Fort Brown, Cameron County, Texas.

Topotypes.—Cameron Co: Brownsville, 47 (USNM), 33 (AMNH), 26 (UMMZ), 11 (FMNH), 5 (YPM), 2 (CHAS, MMNH). Last topotype collected in 1982.

Near topotypes.—Hidalgo Co: 1 (YPM, no date).

Remarks.—Sutton (1951) examined 93 specimens from southern Texas and northeastern Mexico and compared his findings to Ridgway's (1900) description of *glaucescens* based on 14 specimens including two that were later determined to be from southern Mexico. Based on this examination, Sutton (1951) made *Xanthoura luxuosa glaucescens* a synonym of *Xanthoura yncas luxuosus*. The AOU followed Sutton's recommendation (Wetmore et al. 1952); however, other worldwide checklists have continued to use *glaucescens* to refer to these birds in southern Texas.

Family Fringillidae

Erythrina mexicana anconophila Oberholser, 1974
[Texas House Finch]
= ***Haemorhous mexicanus frontalis***
[House Finch]

1823. *Fringilla frontalis* Say, in James, Long Exped. of the Rocky Mountains, Vol. 2:40.

1889. *Carpodacus frontalis* AOU Checklist 1:256.

1910. *Carpodacus mexicanus frontalis* AOU Checklist 3:244.

1912. *Carpodacus mexicanus frontalis* Strecker, Baylor Univ. Bull. 25(1):45.

1928. *Carpodacus mexicanus potosinus* Griscom, New birds from Mexico and Panama, Amer. Mus. Novit. 293:5

1974. *Erythrina mexicana anconophila* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 879.

1978. *Carpodacus mexicanus frontalis* Browning, Proc. Biol. Soc. Wash. 91:112.

2012. *Haemorhous mexicanus* 53rd Supplement to AOU Checklist, Auk 129:574.

2021. *Haemorhous mexicanus frontalis* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

Type specimen.—Holotype, adult male, USNM 139226, obtained by William Lloyd on 1 April 1890.

Type locality.—Chinati Mountains, Presidio County, Texas.

Topotypes.—Presidio Co: 25 (TCWC), 5 (USNM), 3 (AMNH). Last topotype collected in 2020. A tissue sample is held by AMNH (DOT 24780).

Near topotypes.—Brewster Co: 25 (UMMZ), 17 (TCWC), 2 (DMNS), 1 (KU). Jeff Davis Co: 3 (UMMZ). Last near topotype collected in 2020.

Remarks.—Oberholser (1974) considered birds from the southwestern part of the Trans-Pecos to be distinct from the races *fontalis* and *potosinus*, and he named a new subspecies, *anconophilus*, described as paler above and more suffused with red than *frontalis*. However, according to Browning (1978) the type series of *anconophilus* is composed of intergrades between *frontalis* and *potosinus*, and the holotype is similar to populations of more northern examples of *frontalis*, which is why Browning (1978) synonymized *anconophilus* with *frontalis*.

Fringilla texensis Giraud**,** 1841
[Texan Finch]
= *Spinus psaltria psaltria*
[Lesser Goldfinch]

1823. *Fringillia psaltria* Say, Long's Exp. Rocky Mount. 2:40.

1841. *Fringilla texensis* Giraud, Description of Sixteen New Species of North American Birds, p. 37.

1884. *Spinus psaltria* Stejneger, Auk 2:364.

1899. *Astragalinus psaltria* 9th supplement to the AOU Checklist, Auk 16:115.

1912. *Astragalinus psaltria* Strecker, Baylor Univ. Bull. 25(1):46.

1931. *Spinus psaltria psaltria* AOU Checklist 4:327.

1968. *Carduelis psaltria psaltria* Howell and Paynter, Check-list of Birds of the World, vol. 14, p. 250.

1974. *Spinus psaltria psaltria* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 887.

2009. *Spinus psaltria* 50th supplement to the AOU Checklist, Auk 126:710.

2021. *Spinus psaltria psaltria* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

Type specimen.—Holotype, adult female, USNM 47700, received by Jacob P Giraud, Jr., 1838 (collector and collection date unknown).

Type locality.—"Texas."

Topotypes.—None. Imprecise type locality.

Near topotypes.—None.

Remarks.—According to Deignan (1961:221), "A cotype of this form, acquired by Baird from Bell in 1941, became his No. 559 and later entered the museum collection under the same number. The specimen seems to have vanished without trace."

Family Hirudinidae

Petrochelidon lunifrons tachina Oberholser, 1903
[Lesser Cliff Swallow]
= ***Petrochelidon pyrrhonota tachina***
[Cliff Swallow]

1903. *Petrochelidon lunifrons tachina* Oberholser, Proc. Biol. Soc. Wash. 16:15.

1904. *Hirundo lunifrons* Ridgway, Bull. U.S. Nat. Mus. 50(3):48.

1912. *Hirundo albifrons* Rhoads, Auk 29:193.

1912. *Petrochelidon lunifrons tachina* Strecker, Baylor Univ. Bull. 25(1):54.

1935. *Petrochelidon pyrrhonota tachina* Hellmayr, Field Mus. Nat. Hist. Zool., Ser. 13 (part 8):31.

1957. *Petrochelidon lunifrons tachina* AOU Checklist 5:363.

1974. *Petrochelidon pyrrhonota tachina* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 580.

1982. *Hirundo pyrrhonota* 34th Supplement to AOU Checklist, Auk 99:11cc.

1983. *Hirundo lunifrons* Rea, Bird Life and Habitat Changes on the Middle Gila, Univ. Arizona Press, p. 196.

1992. *Hirundo pyrrhonota* Browning, Western Birds 23:21.

1997. *Petrochelidon pyrrhonota* 41st Supplement to AOU Checklist, Auk 14:547.

2003. *Petrochelidon pyrrhonota tachina* Dickinson, The Howard and Moore Complete Checklist of the Birds of the World p. 506.

Type specimen.—Holotype, adult male, USNM 168271, obtained by H. C. Oberholser on 26 April 1901.

Type locality.—Langtry, Val Verde County, Texas.

Topotypes.—Val Verde Co: 7 (USNM), 2 (UMMZ), 1 (WFVZ). Last topotype collected in 1939.

Near topotypes.—None.

Remarks.—Browning (1978) suggests that the amount of individual variation and lack of consistent geographic variation does not warrant the recognition of subspecies. However, Clements (2021) and IOC (Gill et al. 2022) continue to recognize four subspecies of the Cliff Swallow. Banks and Browning (1995) describe the numerous nomenclatural flip-flops on the specific name for this taxon.

Family Icteridae

Agelaius phoeniceus megapotamus Oberholser, 1919
[Rio Grande Red-winged Blackbird]
[Red-winged Blackbird]

1919. *Agelaius phoeniceus megapotamus* Oberholser, Wilson Bull. 31:20.

1974. *Agelaius phoeniceus megapotamus* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 811.

Type specimen.—Holotype, adult female, USNM 207912, obtained by A. K. Fisher on 17 February 1911, original number 7093.

Type locality.—Brownsville, Cameron County, Texas.

Topotypes.—Cameron Co: 57 (CM), 33 (UMMZ), 27 (FMNH), 19 (AMNH, WFVZ), 12 (MCZ), 10 (LACM), 7 (MMNH), 6 (DMNH), 5 (ROM, SDNHM, UCLA), 4 (USNM, YPM), 3 (SBMNH), 1 (MSB). Last topotype collected in 1946.

Near topotypes.—Hidalgo Co: 29 (AMNH), 2 (WFVZ, USNM). Willacy Co: 1 (MVZ, WFVZ, YPM). Last near topotype collected in 1952.

Cassidix mexicanus prosopidicola Lowery, 1938
[Mesquite Great-tailed Grackle]
= ***Quiscalus mexicanus prosopidicola***
[Great-tailed Grackle]

1912. *Megaquiscalus major macrourus* Strecker, Baylor Univ. Bull. 25(1):45.

1938. *Cassidix mexicanus prosopidicola* Lowery, Occ. Pap. Mus. Zool. Louisiana State Univ. 1:1.

1974. *Cassidix mexicanus prosopidicola* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 835.

1976. *Cassidix mexicanus* Smith and Zimmerman, Comp. Biochem. Phys. Part B: Comp. Biochem 53:319.

1998. *Quiscalus mexicanus* AOU Checklist 7:646.

2008. *Quiscalus mexicanus prosopidicola* Powell et al., Condor 110:725.

Type specimen.—Holotype, adult female, LSUMZ 1568, obtained by G. H. Lowery, Jr., on 25 October 1937, original number 619.

Type locality.—Although the type locality given in the description is Brownsville, Cameron County, the complete locality on the holotype label reads "Texas: Cameron County, 6 miles west Brownsville" (Cariff and Remsen 1994), which is used here as the type locality.

Topotypes.—Cameron Co: 74 (WFVZ), 34 (UMMZ), 31 (USNM), 17 (FMNH), 11 (CM), 8 (MVZ), 7 (DMNH), 6 (ROM), 4 (CAS), 3 (AMNH, YPM, CUMV), 2 (LACM), 1 (MSB, ROM, SBMNH, UF). Last topotype collected in 1969.

Near topotypes.—Hidalgo Co: 3 (WFVZ, USNM), 2 (MCZ, ROM), 1 (MVZ). Willacy Co: 1 (TCWC). Last near topoytype collected in 1969.

Remarks.—Peters (1929) provides a complete analysis of early taxonomic references to *Cassidix mexicanus*.

Icterus audubonii Giraud, 1841
[Audubon's Oriole]
= ***Icterus graduacauda audubonii***
[Audubon's Oriole]

1841. *Icterus audubonii* Giraud, Description of Sixteen New Species of North American Birds, p. 12.

1912. *Icterus melanocephalus audubonii* Strecker, Baylor Univ. Bull. 25(1):44.

1957. *Icterus graduacauda audubonii* AOU Checklist 5:531.

1974. *Icterus graduacaudus* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 516.

2003. *Icterus graduacauda audubonii* Dickinson, The Howard and Moore Complete Checklist of the Birds of the World p. 771.

Type specimen.—Holotype, sex unknown, USNM 47704 (Giraud Collection).

Type locality.—"Received from Texas, 1838."

Topotypes.—None. Imprecise type locality.

Near topotypes.—None.

Remarks.—The subspecies occurs in southern Texas and northeastern Mexico. The uncertaintly associated with the type locality of the taxa described by Giraud (1841) is discussed in the introduction of this catalog.

Icterus bullockii eleutherus Oberholser, 1974
[Texas Bullock's Oriole]
= ***Icterus bullockii bullockii***
[Bullock's Oriole]

1912. *Icterus bullockii* Strecker, Baylor Univ. Bull. 25(1):44.

1974. *Icterus bullockii eleutherus* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 827.

1978. *Icterus galbula bullockii* Browning, Proc. Biol. Soc. Wash. 91:109.

1983. *Icterus galbula* AOU Checklist 6:737.

1995. *Icterus bullockii* 40th Supplement to AOU Checklist, Auk 112:827.

1998. *Icterus bullockii* AOU Checklist 7:655.

2021. *Icterus bullockii bullockii* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

Type specimen.—Holotype, adult male, USNM 186125, obtained by J. H. Gaut on 23 May 1903, original number 166.

Type locality.—Del Rio, Val Verde County, Texas.

Topotypes.—Val Verde Co: 1 (USNM). Last topotype collected in 1903.

Near topotypes.—Kinney Co: 1 (USNM [no date], TCWC). Last near topotype collected in 2009.

Remarks.—Browning (1978) considered the name *eleutherus* to be a synonym of *bullockii* because the color variation described by Oberholser was inconsistent between the populations described. In 1983, the AOU considered Bullock's Oriole to be conspecific with the Baltimore Oriole, *I. galbula*, and provided a new common name, Northern Oriole. After further study, the AOU separated the two species in 1995 based on a multitude of factors, including molecular data (Freeman and Zink 1995). Clements (2021) considers Bullock's Oriole to consist of two subspecies, but the IOC (2022) considers the species to be monotypic.

Icterus cucullatus sennetti Ridgway, 1901
[Sennett's Oriole]
[Hooded Oriole]

1901. *Icterus cucullatus sennetti* Ridgway, Proc. Wash. Acad. Sci. 3:152.

1912. *Icterus cucullatus sennettii* Strecker, Baylor Univ. Bull. 25(1):44.

1974. *Icterus cucullatus sennetti* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 819.

Type specimen.—Holotype, adult male, USNM 73654, obtained by G. B. Sennett on 3 April 1877.

Type locality.—Brownsville, Cameron County, Texas.

Topotypes.—Cameron Co: 30 (UMMZ), 22 (AMNH), 18 (WFVZ), 17 (USNM), 13 (CM), 8 (DMNH), 7 (FMNH, MSB, ROM), 5 (WFVZ), 2 (LACM, MVZ, UCLA), 1 (CHAS, TCWC). Last topotype collected in 1952.

Near topotypes.—Hidalgo Co: 1 (DMNH, WFVZ). Last near topotype collected in 1899.

Sturnella magna hoopesi Stone, 1897
[Rio Grande Meadowlark]
[Eastern Meadowlark]

1897. *Sturnella magna hoopesi* Stone, Proc. Acad. Nat. Sci. Phil. 49:149.

1912. *Sturnella magna hoopesi* Strecker, Baylor Univ. Bull. 25(1):43.

1974. *Sturnella magna hoopesi* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 806.

Type specimen.—Holotype, male, ANSP 40786, Collection of Josiah Hoopes, original number 786, obtained by F. B. Armstrong on 13 March 1892.

Type locality.—Brownsville, Cameron County, Texas.

Topotypes.—Cameron Co: 33 (UMMZ), 17 (MCZ), 12 (AMNH, USNM), 6 (FMNH), 5 (WFVZ), 3 (CM, DMNH, MSB), 1 (CAS, CHAS, MVZ, SDNHM). Last topotype collected in 1972.

Near topotypes.—Hidalgo Co: 1 (WFVZ). Last near topotype collected in 1910.

Xanthornus affinis Lawrence, 1851
[Lesser Orchard Oriole]
= ***Icterus spurius spurius***
[Orchard Oriole]

1766. *Oriolus spurius* Linnaeus, Systema Naturae, ed. 12, vol. 1, p. 162.

1851 [1852]. *Xanthornus affinis* Lawrence, Ann. Lyceum Nat. Hist. New York 5:112.

1879. *Icterius spurius affinis* Coues, A Check-list of North American Birds, F. W. Putnam, Salem, MA, p. 397.

1912. *Icterus spurius* Strecker, Baylor Univ. Bull. 25(1):44.

1957. *Icterus spurius* AOU Checklist 5:530.

1974. *Icterus spurius spurius* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 813.

Type specimens.—Three syntypes: two adult males, AMNH 41954 and AMNH 41960; and a juvenile male, AMNH 41958; each obtained by Capt. J. P. McCown in 1850.

Type locality.—On the Rio Grande, Texas [= Brownsville, Cameron County].

Topotypes.—Cameron Co: 53 (UMMZ), 19 (USNM), 8 (AMNH), 5 (FMNH, WFVZ), 3 (MCZ), 2 (MVZ, WNMU, YPM). Last topotype collected in 1940.

Near topotypes.—Hidalgo Co: 12 (AMNH), 5 (USNM), 3 (DMNS), 2 (PMNS). Last near topotype collected in 1945.

Family Icteriidae

Icteria virens danotia Oberholser, 1974
[Brownsville Yellow-breasted Chat]
= ***Icteria virens virens***
[Yellow-breasted Chat]

1758. *Turdus virens* Linneaus, Systema Naturae, ed. 10, vol. 1:171. Iconotype based on "The Yellow Breasted Chat," *Oenanthe americana pectore luteo*, by Catesby (1754, vol. 1:50).

1830. *Icteria virens auricollis* Deppe, Pres-Verzeichn. Saugeth. Vog. Mex. P.2.

1912. *Icteria virens* Strecker, Baylor Univ. Bull. 25(1):60.

1974. *Icteria virens danotia* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 789.

1978. *Icteria virens virens* Browning, Proc. Biol. Soc. Wash. 91:105.

Type specimen.—Holotype, adult male, USNM 363609, obtained by B. E. Ludeman on 18 June 1937, original collector's no. 80.

Type locality.—20 miles west of Mountain Home, Kerr County, Texas.

Topotypes.—Kerr Co: 6 (AMNH), 2 (MCZ). Last topotype collected in 1937.

Near topotypes.—Gillespie Co: 1 (USNM). Last near topotype collected in 1937.

Remarks.—Based on the characteristics of the holotype and specimens in the type series, which are morphologically intermediate between the races *auricollis* and *virens*, Browning (1978, 1990) regarded *I. v. danotia* as synonymous with *I. v. virens*.

Family Mimidae

Harporhynchus longirostris sennetti Ridgway, 1888
[Sennett's Long-billed Thrasher]
= ***Toxostoma longirostre sennetti***
[Long-billed Thrasher]

1888. *Harporhynchus longirostris sennetti* Ridgway, Proc. U.S. Nat. Mus. 10:506.

1902. *Toxostoma longirostre sennetti* 11th supplement to the AOU Checklist, Auk 19:327.

1912. *Toxostoma longirostre sennettii* Strecker, Baylor Univ. Bull. 25(1):62.

1974. *Toxostoma longirostre sennetti* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 652.

Type specimens.—Two syntypes, adult male USNM 112299, obtained by G. B. Sennett in 1879, original number 2517, and adult male USNM 112298, obtained by G. B. Sennett on 12 April 1878, original number 2504.

Type locality.—Southern Texas [= Lomita, near Hidalgo, Hidalgo County], Texas.

Topotypes.—Hidalgo Co: 14 (FMNH), 10 (AMNH), 4 (CM, MCZ, MVZ), 3 (USNM, WFVZ), 2 (CUMV, OSUM), 1 (CHAS, MMNH, TCWC, UF). Last topotype collected in 1997.

Near topotypes.—Cameron Co: 61 (UMMZ), 48 (WFVZ), 20 (MCZ), 19 (USNM), 14 AMNH, ANSP), 10 (ROM), 8 (CM, FMNH, YPM), 4 (LACM, MVZ), 3 (DMNH, OSUM, UBCBBM, UF), 2 (MMNH, SDNHM), 1 (UCLA). Starr Co: 17 (WFVZ), 4 (YPM), 2 (UCLA), 1 (MMNH, CM). Last near topotype collected in 1974.

Remarks.—Ridgway (1888) based his description of *T. s. sennetti* entirely upon 19 specimens supplied to him by George B. Sennett.

Toxostoma curvirostris oberholseri Law, 1928
[Brownsville Thrasher]
= ***Toxostoma curvirostre oberholseri***
[Curve-billed Thrasher]

1912. *Toxostoma curvirostre* Strecker, Baylor Univ. Bull. 25(1):62.

1928. *Toxostoma curvirostris oberholseri* Law, Condor 30:151.

1957. *Toxostoma curvirostre oberholseri* AOU Checklist 5:427.

1974. *Toxostoma curvirostris oberholseri* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 654.

1982. *Toxostoma curvirostre oberholseri* 34th Supplement to AOU Checklist, Auk 99(3, Suppl.):13cc.

Type specimen.—Holotype, adult female, USNM 165931, obtained by H. C. Oberholser on 17 April 1900.

Type locality.—San Diego, Duval County, Texas.

Topotypes.—Duval Co: 2 (TTU). Last topotype collected in 1957.

Near topotypes.—Jim Wells Co: 1 (USNM). Live Oak Co: 3 (TCWC), 1 (WFVZ). Last near topotype collected in 1977.

Remarks.—The spelling of the species epithet as *curvirostris* was established by Swainson (1827). Law (1928) and Oberholser (1974) upheld that the feminine spelling *curvirostris* was in agreement with the gender of the Latin *Toxostoma*. However, the AOU and IOC have always recognized *curvirostre* as valid.

Family Paridae

Baeolophus atricristatus paloduro Stevenson, 1940
[Palo Duro Black-crested Titmouse]
[Black-crested Titmouse]

1940. *Baeolophus atricristatus paloduro* Stevenson, Proc. Biol. Soc. Wash. 53:15.

1955. *Parus bicolor paloduro* Dixon, Univ. Calif. Publ. Zool. 54:189.

1957. *Parus atricristatus paloduro* AOU Checklist 5:391.

1974. *Baeolophus atricristatus paloduro* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 611.

1976. *Parus bicolor atricristatus* 33rd Supplement to AOU Checklist, Auk 93:878.

1984. *Parus atricristatus* Braun et al., Auk 101:170.

1998. *Baeolophus bicolor* AOU Checklist 7:466.

2002. *Baeolophus atricristatus* 43rd Supplement to AOU Checklist, Auk 119:898.

2007. *Baeolophus atricristatus paloduro* del Hoyo et al., Handbook of the Birds of the World, Vol. 12, Lynx Editions, Barcelona, Spain, p. 730.

Type specimen.—Holotype, adult male, USNM 363608, obtained by J. O. Stevenson on 25 September 1938, original number (J. O. Stevenson Collection) 1352.

Type locality.—Palo Duro Canyon, Harold [= Harrell] Ranch, 18 miles east of Canyon, Armstrong County, Texas.

Topotypes.—Armstrong Co: 4 (USNM). Last topotype collected in 1852.

Near topotypes.—Randall Co: 15 (USNM), 4 (AMNH), 3 (CHAS). Last near topotype collected in 1955.

Baeolophus atricristatus sennetti Ridgway, 1904
[Sennett's Black-crested Titmouse]
[Black-crested Titmouse]

1904. *Baeolophus atricristatus sennetti* Ridgway, Bull. U.S. Nat. Mus. 50(3):386.

1912. *Baeolophus atricristatus sennettii* Strecker, Baylor Univ. Bull. 25(1):65.

1955. *Parus bicolor sennetti* Dixon, Univ. Calif. Publ. Zool. 54:187.

1957. *Parus atricristatus sennetti* AOU Checklist 5:391.

1974. *Baeolophus atricristatus sennetti* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 611.

1976. *Parus bicolor sennetti* 33rd Supplement to AOU Checklist, Auk 93:878.

1984. *Parus atristicratus* Braun et al., Auk 101:170.

1986. *Parus bicolor castaneifrons* Phillips, The Known Birds of North and Middle America, Part I, Denver Mus. Nat. Hist., 91.

2002. *Baeolophus atricristatus* 43rd Supplement to AOU Checklist, Auk, 119:898.

2007. *Baeolophus atricristatus sennetti* del Hoyo et al., Handbook of the Birds of the World, Vol. 12, Lynx Editions, Barcelona, Spain, p. 730.

Type specimen.—Holotype, adult male, USNM 112939, obtained by C. W. Beckham on 18 March 1887, original collector's number 3105.

Type locality.—Leon Springs, Bexar County, Texas.

Topotypes.—Bexar Co: 25 (USNM), 29 (WFVZ), 17 (UMMZ), 5 (ROM), 4 (FMNH, MCZ), 2 (CM), 1 (AMNH, CUMV, TCWC). Last topotype collected in 1977.

Near topotypes.—Atascosa Co: 6 (WFVZ), 1 (ROM). Medina Co: 13 (WFVZ), 1 (USNM). Last near topotype collected in 1952.

Parus annexus Cassin, 1850
[Bridled Titmouse]
= ***Baeolophus wollweberi phillipsi***
[Bridled Titmouse]

1850. *Parus annexus* Cassin, Proc. Acad. Nat. Sci. Phil., 5:103, pl. 1.

1904. *Baeolophus wollweberi annexus* Ridgway, Bull. U.S. Nat. Mus. 50(3):393.

1947. *Parus wollweberi phillipsi* van Rossem, Fieldiana Zoologica 31(10):89.

1957. *Parus wollweberi phillipsi* AOU Checklist 5:393.

1974. *Baeolophus wollweberi* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 612.

1998. *Baeolophus wollweberi* AOU Checklist 7:466.

2021. *Baeolophus wollweberi phillipsi* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

Type specimen.—Holotype, adult, sex unknown, ANSP 23674, obtained by J. W. Audubon, unknown date.

Type locality.—Texas, upon the Rio Grande (as listed by Deignan 1961).

Topotypes.—None. Imprecise type locality.

Near topotypes.—None.

Remarks.—Oberholser (1917:323; 1974:612) regarded this species as "hypothetical" in Texas, noting that the holotype specimen may have been obtained from "some part of Mexico." In addition, Lockwood and Freeman (2014) concluded that the Bridled Titmouse has not been documented in Texas. For a discussion of subspecies designations, see Dixon (1955, 1990), Braun et al. (1984), Avise and Zink (1988), and Sheldon et al. (1992).

Parus atricristatus Cassin, 1850
[Rio Grande Black-crested Titmouse]
= ***Baeolophus atricristatus atricristatus***
[Black-crested Titmouse]

1850. *Parus atricristatus* Cassin, Proc. Acad. Nat. Sci. Phil. 5:103.

1904. *Baeolophus atricristatus atricristatus* Ridgway, Bull. U.S. Nat. Mus. 50:384.

1912. *Baeolophus atricristatus* Strecker, Baylor Univ. Bull. 25(1):64.

1912. *Baeolophus bicolor* Strecker, Baylor Univ. Bull. 25(1):64.

1955. *Parus bicolor atricristatus* Dixon, Univ. Calif. Publ. Zool. 54:186.

1957. *Parus atricristatus atricristatus* AOU Checklist 5:391.

1974. *Baeolophus atricristatus atriscristatus* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 610.

1976. *Parus bicolor atristicratus* 33rd Supplement to AOU Checklist, Auk 93:878.

1984. *Parus atristicratus* Braun et al., Auk 101:170.

1998. *Baeolophus bicolor* AOU Checklist 7:466.

2002. *Baeolophus atricristatus*, 43rd Supplement to AOU Checklist, Auk 119:898.

2004. *Baeolophus atricristatus* x *Baeolophus bicolor* Lockwood and Freeman, TOS Handbook of Texas Birds [1st ed.], Texas A&M Univ. Press, p. 148.

2007. *Baeolophus atricristatus atricristatus* del Hoyo et al., Handbook of the Birds of the World, Vol. 12, Lynx Editions, Barcelona, Spain, p. 730.

Type specimen.—Holotype, adult, sex unknown, ANSP 23676, obtained by J. Woodhouse Audubon, date unknown.

Type locality.—Texas, upon the Rio Grande (as listed by Deignan 1961).

Topotypes.—None. Imprecise type locality.

Near topotypes.—None.

Parus atricristatus castaneifrons Sennett, 1887
[Chestnut-fronted Titmouse]
= *Baeolophus atricristatus sennetti* x *Baeolophus bicolor*
[unrecognized hybrid]

1887. *Parus atricristatus castaneifrons* Sennett, Auk 4:28.

1904. *Baeolophus atricristatus sennetti* x *Baeolophus bicolor* Ridgway, Bull. U.S. Nat. Mus. 50(3):386.

1912. *Baeolophus bicolor* Strecker, Baylor Univ. Bull. 25(1):64.

1955. *Parus bicolor bicolor* x *P. b. sennetti* Dixon, Univ. Calif. Publ. Zool. 54:187.

1986. *Parus bicolor castaneifrons* Phillips, The Known Birds of North and Middle America, Part I, Denver Mus. Nat. Hist, 91.

Type specimens.—Two syntypes, adult male, AMNH 86336, obtained by J. M. Priour on 4 April 1886, Sennett Collection 3106, original collector's number 33, and adult female, AMNH 86337, obtained by J. M. Priour on 4 April 1886, Sennett Collection 3107, original collector's number 34.

Type locality.—Bee County, Texas.

Topotypes.—Bee Co: 27 (AMNH), including two paratypes: adult male, AMNH 86315, obtained by J. M. Priour on 9 April 1886, Sennett Collection 3108, original collector's number 66; adult female, AMNH 86336, obtained by J. M. Priour on 9 April 1886, Sennett Collection 3161, original collector's number 67. Last topotype collected in 1951.

Near topotypes.—None.

Remarks.—The specimens Sennett examined and upon which he based the original description (Sennett 1887) are believed to be hybrids between *Baeolophus atricristatus sennetti* and *Baeolophus bicolor*, thereby rendering the subspecies *castaneifrons* invalid (see Ridgway 1904, Dixon 1955). In a contrasting opinion, Phillips (1986) considered the differences between individuals used to describe *castaneifrons*, *sennetti*, and *texensis* (see account of *P. b. texensis*) to be within the normal range of variation, and thus, based on a more distinct plumage, selected *castaneifrons* to represent all three taxa collectively. This view, however, generally has not been adopted. Shortly after Sennett's original description in 1887, both *castaneifrons* and *texensis* (also considered a hybrid of the same two taxa by Ridgway) appeared on a list of proposed inclusions to the list of North American avifauna (Chapman 1888); however, *castaneifrons* has not been included as a valid taxon in any of the major bird checklists (AOS, IOC) since.

Parus atricristatus dysleptus Van Tyne, 1954
[Western Black-crested Titmouse]
= ***Baeolophus atricristatus paloduro***
[Black-crested Titmouse]

1954. *Parus atricristatus dysleptus* Van Tyne, Auk 71:201.

1955. *Parus bicolor dysleptus* Dixon, Univ. Calif. Publ. Zool. 54:189.

1957. *Parus atricristatus dysleptus* AOU Checklist 5:391.

1974. *Baeolophus atricristatus dysleptus* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 611.

2021. *Baeolophus atricristatus paloduro* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

Type specimen.—Holotype, adult male, UMMZ 65256, obtained by J. Van Tyne on 15 February 1935.

Type locality.—5 miles south of Alpine, 5,000 feet, Brewster County, Texas.

Topotypes.—Brewster Co: 4 (USNM), 1 (CUMV, ROM). Last topotype collected in 1978.

Near topotypes.—Brewster Co: 12 (TCWC), 4 (UMMZ), 3 (CUMV), 1 (BUMMC, MMNH, ROM). Jeff Davis Co: 12 (AMNH), 10 (USNM), 6 (UMMZ). Last near topotype collected in 1981.

Parus bicolor texensis Sennett, 1887
[Texan Tufted Titmouse]
= ***Baeolophus atricristatus sennetti* x *Baeolophus bicolor***
[unrecognized hybrid]

1887. *Parus bicolor texensis* Sennett, Auk 4:29.

1904. *Baeolophus atricristatus sennetti* x *Baeolophus bicolor* Ridgway, Bull. U.S. Nat. Mus. 50(3):386.

1912. *Baeolophus astricristatus sennettii* Strecker, Baylor Univ. Bull. 25(1):65.

1986. *Parus bicolor castaneifrons* Phillips, The Known Birds of North and Middle America, Part I, Denver Mus. Nat. Hist, 91.

2004. *Baeolophus atricristatus* x *Baeolophus bicolor* Lockwood and Freeman, TOS Handbook of Texas Birds [1st ed.], Texas A&M Univ. Press, p. 148.

Type specimens.—Two syntypes, adult male, AMNH 86190, obtained by J. M. Priour on 7 April 1886, Sennett Collection 3104, original collector's number 52, and adult female, AMNH 86189, obtained by J. M. Priour on 7 April 1886, Sennett Collection 3105, original collector's number 53.

Type locality.—Bee County, southern Texas.

Topotypes.—Bee Co: 6 (MCZ), 2 (AMNH), 1 (Collection of G. N. Lawrence). Last topotype collected in 1951.

Near topotypes.—None.

Remarks.—The specimens Sennett examined and upon which he based the original description (Sennett 1887) are believed to be hybrids between *Baeolophus atricristatus sennetti* and *Baeolophus bicolor*, thereby rendering the name of the subspecies *texensis* invalid (Ridgway 1904). In an opposing view, Phillips (1986) considered the differences between specimens used to describe *castaneifrons*, *sennetti*, and *texensis* to be within the normal range of variation, and subsequently, based on a more distinct plumage, chose *castaneifrons* to represent all three taxa collectively. This opinion, however, mostly has been rejected. Shortly after Sennett's original description in 1887, *texensis* appeared on a list of proposed inclusions to the list of North American avifauna (Chapman 1888) and continued to be recognized up to the 1895 AOU checklist. However, following Ridgway's (1904) report of this form as a hybrid, the Checklist Committee in 1908 removed *texensis* from the Checklist with the declaration "Canceled, as being a hybrid" (Dixon 1955). Although the concept of *texensis* as a subspecies of Tufted Titmouse remained for several years following Dixon (1955), it has not been included as a valid taxon in any of the major bird checklists (AOS, IOC) since.

Tufted and Black-crested Titmice (*Baeolophus astricristatus* and *B. bicolor*) historically have been viewed both as subspecies (AOU 1983) and species (AOU 1957), meeting in a narrow hybrid zone in Texas and southwestern Oklahoma where hybridization occurs (Dixon 1955). Recent allozyme (Braun et al. 1984), mtDNA (Avise and Zink 1988), and DNA-DNA hybridization (Sheldon et al. 1992) seem to confirm that the two are closely related and conspecific. In Texas, hybridization has been occurring for several thousands of years, while evidence suggests the southwestern Oklahoma contact is more recent, beginning with the past century (Curry and Patten 2014).

Parus carolinensis agilis Sennett, 1888
[Plumbeous Chickadee]
= ***Poecile carolinensis agilis***
[Carolina Chickadee]

1888. *Parus carolinensis agilis* Sennett, Auk 5:46.

1912. *Penthestes carolinensis agilis* Strecker, Baylor Univ. Bull. 25(1):65.

1974. *Parus carolinensis agilis* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 607.

2005. *Poecile carolinensis agilis* Gill et al., Auk 122:140.

Type specimen.—Holotype, sex unknown, AMNH 86395, Sennett Collection 3894, obtained by J. M. Priour on 2 January 1887.

Type locality.—Bee County, Texas.

Topotypes.—Bee Co: 5 (MCZ), 3 (AMNH). Last topotype collected in 1913.

Near topotypes.—None.

Family Parulidae

Compsothlypis americana ramalinae Ridgway, 1902
[Western Parula Warbler]
= ***Setophaga americana***
[Northern Parula]

1886. *Compsothlypis americana* AOU Checklist 1:305.

1902. *Compsothlypis americana ramalinae* Ridgway, Bull. U.S. Nat. Mus. 50(2):486.

1910. *Compsothlypis americana* AOU Checklist 3:309.

1912. *Compsothlypis americana ramelinae* Strecker, Baylor Univ. Bull. 25(1):58.

1947. *Parula americana* 22nd supplement to the AOU Checklist, Auk 64:451.

2011. *Setophaga americana* 52nd supplement to the AOU Checklist, Auk 128:608.

Type specimen.—Holotype, adult male, USNM 152380, obtained by Henry P. Attwater, 10 June 1890, original number 106.

Type locality.—"Gallaghers," near San Antonio, Bexar County, Texas. Note: the Gallagher ranch was situated across Bexar and Medina counties.

Topotypes.—Bexar Co: 1 (CAS, USNM). Last topotype collected in 1891.

Near topotypes.—Kendall Co: 2 (FMNH). Last near topotype collected in 1889.

Remarks.—According to Deignan (1961:528), Ridgway had no less than 26 males and 3 females before him when he named *ramalinae* and failed to designate any one of them as the type. However, in 1841 in the general collection Ridgway found specimen no. 152380, which carried Attwater's original label, and upon which Ridgway had written, "probably in 1902, Type of *Compsothlypis americana ramalinae* Ridgway." In the 14th supplement to the AOU Check-list, *Compsothlypis americana ramalinae* was determined not to be worthy of recognition (Allen et al. 1908).

Geothlypis poliocephala ralphi Ridgway, 1894
[Ralph's Ground-Chat]
[Gray-crowned Yellowthroat]

1894. *Geothlypis poliocephala ralphi* Ridgway, Proc. U.S. Nat. Mus. 16:692.

1912. *Chamaethlypis poliocephala* Strecker, Baylor Univ. Bull. 25(1):60.

1957. *Chamaethlypis poliocephala ralphi* AOU Check-list 5:514.

1974. *Chamaethlypis poliocephala ralphi* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 787.

1998. *Geothlypis poliocephala* AOU Checklist 7:560.

2003. *Geothlypis poliocephala ralphi* Dickinson, The Howard and Moore Complete Checklist of the Birds of the World, p. 764.

Type specimen.—Holotype, adult male, USNM 129348, obtained by Dr. Wm. L. Ralph on 4 May 1893.

Type locality.—Brownsville, Cameron County, Texas.

Topotypes.—Cameron Co: Brownsville, 11 (USNM, 5 are paratypes), 2 (AMNH, WFVZ), 1 (SBMNH, UMMZ). Last topotype collected in 1950.

Near topotypes.—Hidalgo Co: 2 (WFVZ), 1 (MVZ). Last near topotype collected in 1917.

Geothlypis trichas insperata Van Tyne, 1933
[Brownsville Yellowthroat]
[Common Yellowthroat]

1912. *Geothlypis trichas occidentalis* Strecker, Baylor Univ. Bull. 25(1):60.

1912. *Geothlypis trichas brachidactyla* Strecker, Baylor Univ. Bull. 25(1):60.

1933. *Geothlypis trichas insperata* Van Tyne, Occ. Pap. Mus. Zool. Univ. Mich. 255:3.

1974. *Geothlypis trichas insperata* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 783.

Type specimen.—Holotype, adult male, UMMZ 66467, obtained by H. H. Kimball on 11 June 1930, original number 440.

Type locality.—Rio Grande Delta, 14 miles below Brownsville, Cameron County, Texas.

Topotypes.—Cameron Co: 25 (MMNH), 22 (UMMZ), 6 (USNM), 5 (UMMZ, lectotytpes), 2 (ROM, WFVZ), 1 (CM, CUMV, FMNH, MCZ). Last topotype collected in 1930.

Near topotypes.—None.

Remarks.—According to Deignan (1961), Kimball's collecting area and campsite was located approximately 14 miles "below" Brownsville, Texas.

Muscicapa brasierii Giraud, 1841
[Brazier's Fly Catcher]
= ***Basileuterus culicivorus brasierii***
[Golden-crowned Warbler]

1830. *Sylvia culicivora* Deppe, Pres-Verzeich Saugeth Vogel, p. 2.

1841. *Muscicapa brasierii* Giraud, Description of Sixteen New Species of North American Birds, p. 6.

1858. *Basileuterus brasierii* Baird, Rept. Pacific R.R. Survey vol. 9:306.

1902. *Basileuterus culicivorus brasierii* Ridgway, Bull. U.S. Nat. Mus. 50:755.

1912. *Basileuterus culicivorus brasherii* Strecker, Baylor Univ. Bull. 25(1):69.

1974. *Basileuterus culicivorus brasierii* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 794.

Type specimen.—Holotype, adult, sex unknown, USNM 47698 (Giraud Collection)

Type locality.—"Received from Texas, 1838."

Topotypes.—None. Imprecise type locality

Near topotypes.—None.

Remarks.—See the introduction of this catalog for a discussion of the type locality for specimens reported by Giraud (1841).

Muscicapa leucomus Giraud, 1841
[White Shouldered Fly Catcher]
= ***Myioborus pictus pictus***
[Painted Redstart]

1829. *Setophaga picta* Swainson, Zool. Illustr. 2d ser., pl. 3.

1841. *Muscicapa leucomus* Giraud, Description of Sixteen New Species of North American Birds, p. 6.

1886. *Setophaga picta* AOU Checklist 1:317.

1912. *Setophaga picta* Strecker, Baylor Univ. Bull. 25(1):69.

1912. *Muscicapa leucosmus* Strecker, Baylor Univ. Bill. 25(1):69.

1931. *Setophaga picta picta* AOU Checklist 4:300.

1961. *Myioborus pictus pictus* Parkes, Wilson Bull. 73:374.

1974. *Setophaga picta picta* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 797.

1976. *Myioborus pictus pictus* 33rd supplement of the AOU Checklist, Auk 93:878.

Type specimen.—Holotype, adult, sex unknown, USNM 47696 (Giraud Collection).

Type locality.—"Received from Texas, 1838."

Topotypes.—None. Imprecise type locality.

Near topotypes.—None.

Remarks.—See the introduction of this catalog for a discussion of the type locality for specimens reported by Giraud (1841).

Parula nigrilora Coues, 1878
[Olive-backed Warbler]
= ***Setophaga pitiayumi nigrilora***
[Tropical Parula]

1878. *Parula nigrilora* Coues, in Sennett, Bull. U.S. Geol and Geograph. Sur. Terr. 4(1):11.

1912. *Peucedramus olivacea* Strecker, Baylor Univ. Bull. 25(1):69.

1957. *Parula pitiayumi nigrilora* AOU Checklist 5:486.

1974. *Parula pitiayumi nigrilora* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 733.

2010. *Setophaga pitiayumi* Lovette et al., Mol. Phylogen. Evol., 57:755.

2011. *Setophaga pitiayumi nigrilora* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

Type specimens.—Three syntypes: adult male, USNM 73698, obtained by G. B. Sennett on 20 April 1877, original number 248; adult male, USNM 73699, obtained by G. B. Sennett on 3 May 1877, original number 343; and adult male, USNM 73700, obtained by G. B. Sennett on 8 May 1877, original number 396.

Type locality.—Hidalgo, Hidalgo County, Texas.

Topotypes.—Hidalgo Co: 35 (AMNH), 7 (USNM), 2 (CM, MVZ, SDNHM, YPM). Last topotype collected in 1948.

Near topotypes.—Cameron Co: 15 (UMMZ), 10 (FMNH), 4 (MMNH), 3 (MSB, ROM), 2 (CHAS, CM, MCZ), 1 (CAS, NYSM, UCLA). Last near topotype collected in 1934.

Sylvia halseii Giraud, 1841
[Halsey's Warbler]
= ***Setophaga nigrescens halseii***
[Black-throated Gray Warbler]

1841. *Sylvia halseii* Giraud, Description of sixteen new species of North American Birds, p. 11, pl. 3.

1882. *Dendroica nigrescens* Coues, Key to North American Birds, p. 96.

1912. *Dendroica nigrescens* Strecker, Baylor Univ. Bull. 25(1):69.

1912. *Sylvia halseii* Strecker, Baylor Univ. Bull. 25(1):69.

1957. *Dendroica nigrescens* AOU Checklist 5:494.

1974. *Dendrioca nigrescens halseii* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 746.

1998. *Dendrioca nigrescens* AOU Checklist 7:543.

2010. *Setophaga nigrescens* Lovette et al., Mol. Phylogen. Evol. 57:755.

2011. *Setophaga nigrescens halseii* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

Type specimen.—Holotype, immature, sex unknown, USNM 47697 (Giraud Collection).

Type locality.—"Received from Texas, 1838."

Topotypes.—None. Imprecise type locality.

Near topotypes.—None.

Remarks.—The holoptype is accepted as being a specimen from Texas, but the exact type locality is unknown (see discussion of Giraud's type localities in the introduction of this catalog).

Family Passerellidae

Aimophila botterii texana Phillips, 1943
[Texas Botteri's Sparrow]
= ***Peucaea botterii texana***
[Botteri's Sparrow]

1912. *Aimophila botterii* Strecker, Baylor Univ. Bull. 25(1):50.

1943. *Aimophila botterii texana* Phillips, Auk 60:242.

1974. *Aimophila botterii texana* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 919.

2010. *Peucaea botterii* 51st supplement to the AOU Checklist, Auk 127: 738.

2021. *Peucaea botterii texana* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

Type specimen.—Holotype, adult male, USNM 165985, obtained by Vernon Bailey on 2 May 1900.

Type locality.—Brownsville, Cameron County, Texas.

Topotypes.—Cameron Co: 13 (UMMZ), 12 (FMNH), 8 (USNM), 6 (AMNH), 4 (ROM), 1 (MSB). Last topotype collected in 1964.

Near topotypes.—Willacy Co: 7 (USNM), 1 (TCWC). Last near topotype collected in 2020.

Remarks.—This subspecies is listed as threatened by TPWD.

Aimophila ruficeps tenuirostra Burleigh and Lowery, 1939
[Guadalupe Mountain Rock Sparrow]
= ***Aimophila ruficeps scottii***
[Rufous-crowned Sparrow]

1888. *Peucaea ruficeps scottii* Sennett, Auk 5:42.

1912. *Aimophila ruficeps scottii* Strecker, Baylor Univ. Bull. 25(1):50.

1939. *Aimophila ruficeps tenuirostra* Burleigh and Lowery, Occ. Pap. Mus. Zool. Louisiana State Univ. 6:67.

1957. *Aimophila ruficeps scottii* AOU Checklist 5:600.

1970. *Aimophila ruficeps eremoeca* Paynter, Checklist of the Birds of the World, Museum of Comparative Zoology, vol. 13, p. 98.

1974. *Aimophila ruficeps scottii* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 917.

Type specimen.—Holotype, adult male, LSUMZ 3334, obtained by George H. Lowery on 3 January 1939, original number 1293.

Type locality.—Frijole, McKittrick Canyon, 5,500 feet, Guadalupe Mountains, Culberson County, Texas.

Topotypes.—Culberson Co: 8 (LSUMZ), 1 (TCWC, USNM). Last topotype collected in 1940.

Near topotypes.—None.

Remarks.—The locality on the holotype label reads "Texas, Frijole, 5,500 ft, McKittrick Canyon." Sennett (1888) described *A. r. scottii* from a locality in Arizona, suggesting that the range of the subspecies might extend into western Texas. Hubbard and Crossin (1974) considered this subspecies to be an intergrade between *A. r. scottii* and *A. r. eremoeca*.

Ammodramus henslowii houstonensis Arnold, 1983
[Henslow's Sparrow]
= ***Centronyx henslowii henslowii***
[Henslow's Sparrow]

1983. *Ammodramus henslowii houstonensis* Arnold, Auk 100:505.

1990. *Ammodramus henslowi henslowi* Browning, Proc. Biol. Soc. Wash. 103:445.

1998. *Ammodramus henslowii* AOU Checklist 7:617.

2018. *Centronyx henslowii* 59th Supplement to AOU Checklist, Auk 135:799.

2018. *Centronyx henslowii henslowii* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

Type specimen.—Holotype, adult female, TCWC 11041, obtained by Keith A. Arnold on 9 May 1981, original number KAA 5230.

Type locality.—Field in south-central Houston, Harris County, Texas.

Topotypes.—Harris Co: 3 (TCWC, paratypes: 3 adult males, TCWC 11040 obtained on 13 June 1981, and TCWC 9751 and TCWC 9752, both collected on 12 July 1975, all obtained by K. A. Arnold.). Last topotype collected in 1981.

Near topotypes.—None.

Remarks.—The only known population for this subspecies existed on a privately owned 105-ha field in central Houston. The habitat in the type locality subsequently was eliminated by industrial development. No other populations of this subspecies have been located and the form is now believed to be extinct. Browning (1990) concluded that the amount of individual color variation within the western form, *A. h. henslowii*, precluded recognition of *A. h. houstonensis*.

Ammodramus maritimus sennetti J. A. Allen, 1888
[Texas Seaside Sparrow]
=***Ammospiza maritima sennetti***
[Seaside Sparrow]

1888. *Ammodramus maritimus sennetti* J. A. Allen, Auk 5:286.

1910. *Passerherbulus maritimus sennetti* AOU Checklist 2:259.

1912. *Ammodramus maritimus sennettii* Strecker, Baylor Univ. Bull. 25(1):48.

1931. *Ammospiza maritima sennetti* AOU Checklist 4:339.

1974. *Thyrospiza maritima sennetti* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 911.

1983. *Ammodramus maritimus* AOU Checklist 6:709.

2018. *Ammospiza maritima* 59th supplement to the AOU Checklist, Auk 135:808.

2018. *Ammospiza maritima sennetti* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

Type specimen.—Two syntypes, adult male, AMNH 83537, and adult female, AMNH 83538, both collected by collected by J. M. Priour on 25 May 1886 and obtained from George B. Sennett with his original numbers that were 3304 (male) and 3303 (female).

Type locality.—Gulf Coast of Texas, Corpus Christi, Nueces County, Texas.

Topotypes.—Nueces Co: 14 (AMNH), 12 (ANSP), 10 (WFVZ), 6 (CM), 2 (USNM), 1 (CUMV, MCZ, MVZ, SBMNH, SDNMH, UCM, UF, YPM). Last topotype collected in 1838.

Near topotypes.—Aransas Co: 12 (USNM), 4 (WFVZ), 3 (FMNH) 1 (CMNH, MVZ, UF). San Patriocio Co: 1 (FMNH, MVZ, SBMNH). Last near topotype collected in 1925.

Amphispiza bilineata dapolia Oberholser, 1974
[Chisos Black-throated Sparrow]
= ***Amphispiza bilineata opuntia***
[Black-throated Sparrow]

1912. *Amphispiza bilineata* Strecker, Baylor Univ. Bull. 25(1):50.

1939. *Amphispiza bilineata opuntia* Burleigh and Lowery, Occ. Pap. Mus. Zool. Louisiana State Univ. 6:68

1974. *Amphispiza bilineata dapolia* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 923.

1978. *Amphispiza bilineata opuntia* Browning, Proc. Biol. Soc. Wash. 91:114.

Type specimen.—Holotype, adult male, USNM 168416, obtained by H. C. Oberholser on 8 June 1901, original no. 624.

Type locality.—Pine Canyon, 6,000 feet, Chisos Mountains, Brewster County, Texas.

Topotypes.—Brewster Co: Big Bend National Park, 14 (ROM), 9 (TCWC), 8 (USNM), 2 (CM). Last topotype collected in 1979.

Near topotypes.—Brewster Co (other than BBNP): 9 (CM), 4 (ROM), 1 (YPM). Last near topotype collected in 1980.

Remarks.—After re-examining the specimens used by Oberholser to describe *A. b. dapolia*, Browning (1978, 1990) concluded that most were similiar to *opuntia* and the holotype of *dapolia* was nearly identical to the holotype of *opuntia*. Thus, he regarded *A. b. dapolia* as a synonym of *A. b. opuntia*.

Amphispiza bilineata opuntia Burleigh and Lowery, 1939
[Frijole Desert Sparrow]
[Black-throated Sparrow]

1912. *Amphispiza bilineata deserticola* Strecker, Baylor Univ. Bull. 25(1):50.

1939. *Amphispiza bilineata opuntia*, Burleigh and Lowery, Occ. Pap. Mus. Zool., Louisiana State Univ. 6:68.

1974. *Amphispiza bilineata opuntia* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 924.

Type specimen.—Holotype, adult male, UNSM 342085, obtained by Thos. D. Burleigh on 2 January 1939, original number 5458.

Type locality.—10 miles east of Frijole, 4,800 feet, Guadalupe Mountains, Culberson County, Texas.

Topotypes.—Culberson Co: 8 (USNM), 7 (TCWC). Last topotype collected in 1974.

Near topotypes.—Culberson Co: 1 (ROM). Hudspeth Co: 1 (MVZ). New Mexico, Dona Ana Co: 2 (FMNH), Eddy Co: 1 (CM). Last near topoype collected in 1977.

Chondestes grammacus quillini Oberholser, 1974
[Texas Lark Sparrow]
= ***Chondestes grammacus strigatus***
[Lark Sparrow]

1974. *Chondestes grammacus quillini* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 915.

1978. *Chondestes grammacus strigatus* Browning, Proc. Biol. Soc. Wash. 91:114.

Type specimen.—Holotype, adult female, USNM 230377, obtained by H. C. Oberholser on 10 May 1900, original number 132.

Type locality.—Cotulla, La Salle County, Texas.

Topotypes.—LaSalle Co: 2 (TCWC). Last topotype collected in 1939.

Near topotypes.—Frio Co: 3 (UF). Webb Co: 5 (USNM), 1 (CUMV, UMMZ, WFVZ). Last near topotype collected in 1968.

Remarks.—Browning (1978, 1990) regarded *C. g. quillini* as a synonym of *strigatus*, noting that the measurements and coloration of *quillini* were "well within the range of *strigatus*."

Emberiza bilineata Cassin, 1850
[Texas Black-throated Sparrow]
= ***Amphispiza bilineata bilineata***
[Black-throated Sparrow]

1850. *Emberiza bilineata* Cassin, Proc. Acad. Nat. Sci. Phil. 5:104.

1874. *Amphispiza* (*Emberiza*) *bilineata* Coues, Birds of the Northwest, p. 234.

1912. *Amphispiza bilineata* Strecker, Baylor Univ. Bull. 25(1):50.

1974. *Amphispiza bilineata bilineata* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 921.

Type specimen.—Holotype, sex unknown, ANSP 24038, obtained by J. W. Audubon on unknown date.

Type locality.—Texas, on the Rio Grande.

Topotypes.—None. Imprecise type locality.

Near topotypes.—None.

Remarks.—Cassin (1850) used the term "hab." [habitat] instead of type locality.

Embernagra rufivirgata Lawrence, 1851
[Brown Striped Olive Finch]
= ***Arremonops rufivirgatus rufivirgatus***
[Olive Sparrow]

1851 [1852]. *Embernagra rufivirgata* Lawrence, Ann. Lyceum Nat. Hist. New York, 5:112.

1896. *Arremonops rufivirgatus rufivirgatus* Ridgway, A Manual of North American Birds, vol. 2, p. 434.

1912. *Arremonops rufivirgatus* Strecker, Baylor Univ. Bull. 25(1):51.

1974. *Arremonops rufivirgatus rufivirgatus* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 892.

Type specimen.—Holotype, sex unknown, likely AMNH 3261, obtained by Capt. J. P. McCown. Collection date unknown.

Type locality.—Brownsville (Fort Brown on the Rio Grande, 25.54 N, 97.29 W [Times Atlas]), Cameron County, Texas (Deignan 1961).

Topotypes.—Cameron Co: 95 (UMMZ), 90 (WFVZ), 41 (FMNH), 35 (YPM), 33 (MCZ), 31 (USNM), 30 (AMNH, CM, ROM), 26 (MMNH), 14 (DMNS), 11 (LCM), 8 (SDNHM), 7 (DMNH), 6 (MVZ), 5 (CUMV, OMNH), 4 (CAS), 3 (PSM), 2 (CHAS, LACM, NCSM, UCLA, UF, UWBM), 1 (SBMNH, WNMU). Last topotype collected in 1998.

Near topotypes.—Hidalgo Co: 6 (DMNH, MCZ), 4 (MSB), 3 (MVZ, OMNS), 2 (PMNS), 1 (CM, TCWC, UMMZ, WFVZ). Willacy Co: 1 (SDNHM, TCWC). Last near topotype collected in 2014.

Remarks.—Brownsville is the probable type locality because the specimen was collected by Capt. McCown, who was stationed at Fort Brown when he collected the type specimen.

Hortulanus fuscus aimophilus Oberholser, 1974
[Pecos Brown Towhee]
= ***Melozone fusca texana***
[Canyon Towhee]

1912. *Pipilo fuscus mesoleucus* Strecker, Baylor Univ. Bull. 25(1):53.

1934. *Pipilo fuscus mesoleucus* van Rossem, Trans. San Diego Soc. Nat. Hist. 7:371.

1974. *Hortulanus fuscus aimophilus* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 899.

1978. *Pipilo fuscus texanus* Browning, Proc. Biol. Soc. Wash. 91:113.

1998. *Pipilo fuscus* AOU Checklist 7:606.

2010. *Melozone fusca* 51st supplement to the AOU Checklist, Auk 127:737.

2015. *Melozone fusca texana* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

Type specimen.—Holotype, adult male, USNM 135832, obtained by Vernon Bailey on 8 January 1890.

Type locality.—Fort Davis, Jeff Davis County, Texas.

Topotypes.—Jeff Davis Co: 4 (USNM), 2 (TTU). Last topotype collected in 1957.

Near topotypes.—None.

Remarks.—van Rossum (1934) and Davis (1951) concurred that the central Trans-Pecos is a region of intergradation between the races *texana* and *mesoleucus* (type locality = Kerrville, Kerr County, Texas), but Oberholser (1974) considered the birds of that region and adjacent Mexico merited subspecific recognition, and he named a new race, *aimophilus*, for these birds. Subsequently, Browning (1978) noted there were no trenchant morphological differences between them, and he synonymyzed *aimophilus* with *texana*. The type locality of *aimophilus* (Ft. Davis, Jeff Davis County, Texas) is included in what Davis (1951) considered to be the breeding range of *texana*. The generic name *Hortulanus* has no standing according to Banks and Browning (1995).

Peucaea illinoensis Ridgway, 1879
[Oak-woods Sparrow]
Peucaea aestivalis illinoensis
[Bachman's Sparrow]

1879. *Peucaea illinoensis* Ridgway, Bull. Nutt. Ornith. Club 4:219.

1912. *Aimophila aestivalis bachmanii* Strecker, Baylor Univ. Bull. 25(1):50.

1944. *Aimophila aestivalis illinoensis* 19th supplement to the AOU Checklist, Auk 61:463.

1974. *Aimophila aestivalis illinoensis* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 918.

2009. *Peucaea aestivalis* DaCosta et al., J. Avian Biol. 40:213.

2011. *Peucaea aestivalis illinoensis* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

Type specimens.—Five syntypes: three adults from Texas (sex not indicated), USNM 78385–78387, collected by George H. Ragsdale on 10 April 1879, 11 August 1879, and 29 April 1879, respectively; two adult males from Illinois, USNM 83605 and 83606, collected 14 and 11 August, respectively, in 1871 by Robert Ridgway.

Type locality.—Texas syntypes are from "Lower Cross Timbers" near Gainesville, Cooke County, Texas; the Illinois syntypes are from Mount Carmel, Wabash County, Illinois.

Topotypes.—Cooke Co: 2 (MCZ, OSUM), 1 (CAS, USNM). Last topotype collected in 1879.

Near topotypes.—None.

Peucaea ruficeps eremoeca Brown, 1882
[Rock Sparrow]
= ***Aimophila ruficeps eremoeca***
[Rufous-crowned Sparrow]

1882. *Peucaea ruficeps eremoeca* Brown, Bull. Nuttall Ornith. Club 7:26.

1912. *Aimophila ruficeps eremoica* Strecker, Baylor Univ. Bull. 25(1):50.

1957. *Aimophila ruficeps eremoeca* AOU Checklist 5:600.

1974. *Aimophila ruficeps eremoeca* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 916.

Type specimens.—Three syntypes, collected during December 1879 through March 1880 by J. M. Priour. Disposition of specimens unknown.

Type locality.—Boerne, Kendall County, Texas.

Topotypes.—Kendall Co: 4 (MCZ), 3 (FMNH), 2 (MVZ), 1 (DMNH, WFVZ). Last topoype collected in 1917.

Near topotypes.—Bexar Co: 1 (CHAS, UMMZ). Comal Co: 3 (WFVZ) 1 (MCZ, TCWC, UF, USNM). Last near topotype collected in 2011.

Pipilo fuscus texanus van Rossem, 1934
[Texas Brown Towhee]
= ***Melozone fusca texana***
[Canyon Towhee]

1912. *Pipilo fuscus mesoleucus* Strecker, Baylor Univ. Bull. 25(1):51.

1934. *Pipilo fuscus texanus* van Rossem, Trans. San Diego Soc. Nat. Hist. 7:371.

1974. *Hortulanus fuscus texanus* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 899.

1998. *Pipilo fuscus* AOU Checklist 7:606.

2015. *Melozone fusca texana* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

Type specimen.—Holotype, adult male, MCZ 316022 (previous number 16025, Thayer Collection), obtained by F. B. Armstrong on 24 April 1910.

Type locality.—Kerrville, Kerr County, Texas.

Topotypes.—Kerr Co: 3 (USNM). Last topotype collected in 1938.

Near topotypes.—None.

Pipilo maculatus gaigei Van Tyne and Sutton, 1937
[Chisos Rufous-sided Towhee]
[Spotted Towhee]

1912. *Pipilo maculatus megalonyx* Strecker, Baylor Univ. Bull. 25(1):54.

1937. *Pipilo maculatus gaigei* Van Tyne and Sutton, Publ. Mus. Zool. Univ. Mich. 37:102.

1957. *Pipilo erythrophthalmus gaigei* AOU Checklist 5:580.

1974. *Hortulanus erythrophthalmus gaigei* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 897.

1995. *Pipilo maculatus* 40th Supplement to AOU Checklist 112:820.

2003. *Pipilo maculatus gaigei* Dickinson, The Howard and Moore Complete Checklist of the Birds of the World, p. 797.

Type specimen.—Holotype, breeding male, UMMZ 86309, obtained by Josselyn Van Tyne on 22 May 1932.

Type locality.—Chisos Mountains, southeast of Boot Spring, 6,800 feet, Brewster County, Texas.

Topotypes.—Brewster Co: 22 (USNM), 2 (ROM), 1 (DMNH, TTU, UMMZ). Last topotype collected in 1968.

Near topotypes.—None.

Remarks.—*Pipilo maculatus* formerly was considered conspecific with *P. erythropthalamus* (Sibley and West 1959). The AOU (1995) split *P. maculatus* from *P. erythrophthalmus*, the Rufous-sided Towhee, and renamed them the Spotted Towhee and the Eastern Towhee, respectfully. The generic name *Hortulanus* used by Oberholser (1974) has no standing according to Banks and Browning (1995), who used *Pipilo* as the appropriate generic name.

Spizella pusilla arenacea Chadbourne, 1886
[Western Field Sparrow]
[Field Sparrow]

1886. *Spizella pusilla arenacea* Chadbourne, Auk 3:248.

1912. *Spizella pusilla arenacea* Strecker, Baylor Univ. Bull. 25(1):49.

1974. *Spizella pusilla arenacea* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 941.

2008. *Spizella pusilla* Carey et al., The Birds of North America online, Cornell Laboratory of Ornithology, Ithaca.

2021. *Spizella pusilla arenacea* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

Type specimen.—Holotype, adult female, MCZ 230468, original Chadbourne Collection number 2141, obtained by F. B. Armstrong on 12 November 1885.

Type locality.—Laredo, Webb County, southern Texas.

Topotypes.—Webb Co: 1 (CM, DMNH, MCZ). Last topotype collected in 1885.

Near topotypes.—None.

Remarks.—Carey et al. (2008) suggested that *Spizella pusilla* is monotypic and the IOC followed that recommendation (Gill et al. 2022). However, Clements et al. (2021) continue to recognize *Spizella pusilla arenacea* as the appropriate designation for this taxon in Texas.

Spizella pusilla vernonia Oberholser, 1974
[Texas Field Sparrow]
= ***Spizella pusilla arenacea***
[Field Sparrow]

1912. *Spizella pusilla* Strecker, Baylor Univ. Bull. 25(1):49.

1939. *Spiz ella pusilla arenacea* Wetmore, Proc. U.S. Nat. Mus.,86: 241.

1974. *Spizella pusilla vernonia* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 941.

1978. *Spizella pusilla arenacea* Browning, Proc. Biol. Soc. Wash. 91:115.

2008. *Spizella pusilla* Carey et al., The Birds of North America online, Cornell Laboratory of Ornithology, Ithaca.

2021. *Spizella pusilla arenacea* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

Type specimen.—Holotype, adult male, USNM 184188, obtained by Merrit Cary on 8 July 1902.

Type locality.—Japonica, Kerr County, Texas.

Topotypes.—Kerr Co: 26 (AMNH), 10 (UMMZ), 4 (USNM), 1 (TCWC, UWBM). Last topotype collected in 1955.

Near topotypes.—Kimble Co: 8 (TCWC), 1 (USNM). Last near topotype collected in 2009.

Remarks.—Browning (1978) lumped *S. p. vernonia* into *S. p. arenacea* based on an examination of the holotype, which he deemed was most similar to the later. Browning also commented that there was considerable variation in the type series overlapping both described subspecies. Carey et al. (2008) suggested that *S. pusilla* is monotypic and the IOC agreed with that assessment (Gill et al. 2022). However, Clements et al. (2021) continue to recognize *S. p. arenacea*.

Zonotrichia cassinii Woodhouse, 1852
[Cassin's Sparrow]
= ***Peucaea cassinii***
[Cassin's Sparrow]

1852. *Zonotrichia Cassinii* Woodhouse, Proc. Acad. Nat. Sci. Phil. 6:60.

1895. *Peucaea cassini* AOU Checklist 2:239.

1901. *Peucaea cassinii* Ridgway, Bull. U.S. Nat. Mus. 50(1):253.

1912. *Aimophila cassinii* Strecker, Baylor Univ. Bull. 25(1):50.

1944. *Aimophila cassinii* 19th supplement to the AOU Checklist, Auk 61:463.

1974. *Aimophila cassinii* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 920.

2009. *Peucaea cassinii* DaCosta et al., J. Avian Biol. 40:213.

Type specimen.—Holotype, male, USNM 12531, obtained by S. W. Woodhouse on 25 April 1851.

Type locality.—On the prairie near San Antonio, Bexar County, Texas.

Topotypes.—Bexar Co: 22 (USNM), 9 (WFVZ), 2 (YPM), 1 (AMNH, CHAS, MCZ, PSM, ROM, SDNHM, UMMZ). Last topotype collected in 1937.

Near topotypes.—Atascosa Co: 3 (UMMZ), 1 (TCWC). Last near topotype collected in 1937.

Zonotrichia leucophrys intermedia Ridgway 1873
[Ridgway's White-crowned Sparrow]
= ***Zonotrichia leucophrys gambelli***
[White-crowned Sparrow]

1873. *Zonotrichia leucophrys intermedia* Ridgway, Bull. Exxes Inst. 5:198.

1877. *Zonotrichia intermedia* Ridgway, Field & Forest vol. II, p. 198.

1886. *Zonotrichia intermedia* AOU Checklist 1:271.

1890. *Zonotrichia leucophrys intermedia* 2nd supplement to the AOU Checklist, Auk 7:65.

1899. *Zonotrichia leucophrys gambelli* Ridgway, Auk 16:36.

1912. *Zonotrichia leucophrys gambellii* Strecker, Baylor Univ. Bull. 25(1):48.

1974. *Zonotrichia gambelli* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 947.

2003. *Zonotrichia leucophrys gambelli* Dickinson, The Howard and Moore Complete Checklist of the Birds of the World, p. 783.

Type specimens.—Seven syntypes, one from Texas (USNM 46986 obtained on 3 February 1867 by H. B. Butcher, original number 897). The other syntypes are from California (USNM 3341, 5551, 6205); Baja California, Mexico (No. 265568); Montana (No. 52683); and Utah (No. 62998).

Type locality.—Laredo, Webb County, Texas (USNM 46986).

Topotypes.—None.

Near topotypes.—None.

Remarks.—To our knowledge, no one has selected a lectotype or produced a credible type locality restriction from the various syntypes (see Deignan 1961:657).

Family Polioptilidae

Polioptila melanura Lawrence, 1857
[Black-tailed Gnatcatcher]
= ***Polioptila melanura melanura***
[Black-tailed Gnatcatcher]

1857 [1858]. *Polioptila melanura* Lawrence, Ann. Lyceum Nat. Hist. New York 6:168.

1912. *Polioptila caerula* Strecker, Baylor Univ. Bull. 25(1):65.

1931. *Polioptila melanura melanura* van Rossem, Condor 33:36.

1974. *Polioptila melanura melanura* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 680.

Type specimen.—According to LeCroy (2005: 107), a syntype, AMNH 39348, female, obtained by Capt. J. P. McCown, collection date unknown.

Type locality.—Brownsville, Cameron County, Texas.

Topotypes.—None.

Near topotypes.—None.

Remarks.—Lawrence (1857:168) identified a male and female specimen collected in Texas by McCown as a new species, and he added California as part of the range. LeCroy (2005:107) searched the AMNH catalog and found only the above female (AMNH 39348) cataloged with the Lawrence Collection. The Lawrence label noted in Lawrence's hand read "Type, Brownsville, Presented by Capt. McCown." McCown was stationed at Fort Brown (= Brownsville) in 1850 (LeCroy 2005). LeCroy was unable to locate the specimen from California or the male from Texas, and speculated that Lawrence may not have had a specimen from California or a second one from Texas. For this reason, AMNH 39348 is indicated as the surviving syntype. Atwood (1988) recognized the western Texas population as *P. m. melanura*, one of three subspecies defined on the basis of distinguishable evolutionary groups (Craycraft 1983).

Family Remizidae

Conirostrum ornatus Lawrence, 1852
[Chestnut Shouldered Warbler]
= ***Auripaurus flaviceps ornatus***
[Verdin]

1850. *Aegithalus flaviceps* Sundevall, Ofversigt af Vet. Ak. Forh. 7: 129.

1852. *Conirostrum ornatus* Lawrence, Ann. Lyc. Nat. Hist. New York 5:112.

1864. *Auriparus flaviceps* Baird, Review of American Birds 6:85.

1912. *Auriparus flaviceps* Strecker, Baylor Univ. Bull. 25(1):65.

1944. *Auriparus flaviceps ornatus* 19th Supplement to AOU Checklist, Auk 51:455.

1974. *Auriparus flaviceps ornatus* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 615.

Type specimen.—Holotype, sex unknown, AMNH 39401, obtained by Capt. J. P. McCown. Collection date unknown.

Type locality.—Rio Grande, Texas (= Brownsville, 25.54 N, 97.30 W [Times Atlas], Cameron County), as listed by Deignan (1961).

Topotypes.—Cameron Co: Brownsville, 29 (WFVZ), 23 (UMMZ), 13 (AMNH, FMNH), 6 (USNM), 5 (MCZ, YPM), 3 (CM, CUMV), 2 (MVZ), 1 (CAS, CMNH, OMNH, ROM, SDNHM, UF). Last topotype collected in 1950.

Near topotypes.—Cameron Co: 12 (WFVZ), 23 (UMMZ), 1 (CAS, CNMH, DMNS, UMMZ). Hidalgo Co: 15 (AMNH), 6 (USNM), 1 (MCZ). Willacy Co: 3 (WFVZ), 2 (PMNS). Last near topotype collected in 1964.

Family Sittidae

Sitta carolinensis oberholseri Brandt, 1938
[Chisos Nuthatch]
= ***Sitta carolinensis nelsoni***
[White-breasted Nuthatch]

1902. *Sitta carolinensis nelsoni* Mearns, Proc. U.S. Nat. Mus. 24:923.

1912. *Sitta carolinensis nelsoni* Strecker, Baylor Univ. Bull. 25(1):64.

1938. *Sitta carolinensis oberholseri* Brandt, Auk 55:269.

1957. *Sitta carolinensis nelsoni* AOU Checklist 5:398.

1974. *Sitta carolinensis nelsoni* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 620.

Type specimen.—Holotype, adult male, collection of Herbert W. Brandt, 2061, obtained by H. W. Brandt on 11 May 1937. Disposition of specimen unknown.

Type locality.—Boot Canyon, 7,000 feet, Chisos Mountains, Brewster County, Texas.

Topotypes.—Brewster Co: 12 (UMMZ), 4 (FMNH, TCWC), 1 (CM, CUMV, USNM). Last topotype collected in 1954.

Near topotypes.—None.

Family Thraupidae

Spermophila albigularis Lawrence, 1851
[White-collared Seedeater]
= ***Sporophila morelleti sharpei***
[Morelet's Seedeater]

1851 [1852]. *Spermophila albigularis* Lawrence, Ann. Lyceum Nat. Hist. New York 5:124.

1856. *Spermophilla morelleti* Sclater, Proc. Zool. Soc. 24:302.

1888. *Spermophila parva* Sharpe, Catalogue of the Birds in the British Museum, Fringillidae, vol. 12, part III:123.

1889. *Sporophila morelleti sharpei* Lawrence, Auk 6:53.

1912. *Sporophila morrelleti* Strecker, Baylor Univ. Bull. 25(1):53.

1957. *Sporophila torqueola sharpei* AOU Checklist 5:562.

1974. *Sporophila morelleti morelleti* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 879.

1998. *Sporophila torqueola* AOU Checklist 7:592.

2018. *Sporophila morelleti* 59th supplement to the AOU Checklist, Auk 135:809.

2021. *Sporophila morelleti sharpei* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

Type specimen.—Lawrence's description included measurements of an immature male specimen, but he did not designate a type specimen.

Type locality.—Lawrence's 1851 description gave the locality as "Procured in Texas, by Capt. J. P. McCown, USA." However, the specimen most likely came from Brownsville in Cameron County (see Remarks below).

Topotypes.—Cameron Co: 55 (UMMZ), 18 (WFVZ), 12 (FMNH), 11 (ROM), 8 (UF), 7 (YPM), 3 (AMNH, CM, SDNHM, UCLA), 2 (OSUM), 1 (CAS, MCZ, UBCBBM). Last topotype collected in 1946.

Near topotypes.—Cameron Co: 13 (UMMZ), 2 (ROM, CM, FMNH, WFVZ). Hidalgo Co: 2 (FMNH), 1 (AMNH, CHAS). Last near topotype collected in 1946.

Remarks.—Capt. McCown was stationed at Fort Brown (= Brownsville) in 1850, and he collected specimens for many taxa of birds described from the Brownsville area (e.g. see account of *Polioptila melanura*). LeCroy (2012) checked the AMNH catalog and found a specimen (41295) obtained by McCown in 1851 with the locality designation "procured in Texas" and another McCown specimen (41296) listed as obtained from Brownsville, Texas [no date indicated].

The latter specimen had a type label, but someone marked through "Type" and replaced it with "Original." LeCroy (2012:30) concluded that specimen 41296 had no nomenclatural standing, although it remains in the type collection with an added label to explain its status. Today, *Spermophila albigularis* is regarded as a synonym of *S. morelleti sharpei*, as discussed in the following account.

Sporophila morelleti sharpei Lawrence, 1889
[Sharpe's Seedeater]
[Morelet's Seedeater]

1851 [1852]. *Spermophila albigularis* Lawrence, Ann. Lyceum Nat. Hist. New York 5:124.

1888. *Spermophila parva* Sharpe, Catalogue of the Birds in the British Museum, Fringillidae, vol. 12, part III:123.

1889. *Sporophila morelleti sharpei* Lawrence, Auk 6:53.

1912. *Sporophila morrelleti* Strecker, Baylor Univ. Bull. 25(1):53.

1957. *Sporophila torqueola sharpei* AOU Checklist 5:562.

1974. *Sporophila morelleti morelleti* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 879.

1998. *Sporophila torqueola* AOU Checklist 7:592.

2018. *Sporophila morelleti* 59th supplement to the AOU Checklist, Auk 135:809.

2021. *Sporophila morelleti sharpei* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

Type specimens.—Two syntypes, AMNH 84610, adult male collected 21 July 1880, and AMNH 84611, female, obtained on 19 March 1880, both collected by M. A. Frazar. From the George B. Sennett Collection (nos. 2160 and 2154, respectively).

Type locality.—Lomita, Hidalgo County, Texas.

Topotypes.—Hidalgo Co: 18 (AMNH), 10 (WFVZ), 6 (MCZ), 5 (USNM), 2 (MVZ). Last topotype collected in 1962.

Near topotypes.—Cameron Co: 32 (AMNH), 22 (FMNH), 17 (MVZ), 15 (UMMZ), 14 (USNM), 12 (WFVZ), 10 (ROM, UF), 9 (DMNH), 7 (YPM), 5 (CM), 3 (CHAS, SDNHM, MCZ, UCLA, UWBM, WNMU), 1 (CAS, CUMV, OSUM, PSM). Starr Co: 1 (AMNH, DMNH). Last near topotype collected in 1946.

Remarks.—In 1851, Lawrence (1851b:124) attributed an immature male specimen, collected at Brownsville, Texas, by J. P. McCown, to *Spermophilus albigularis*. Subsequent authors decided it should be included in *S. morelleti* or in *S. parva*, but Lawrence (1889:53), being dissatisfied with any of these identifications, provided the name *S. m. sharpei* (see LeCroy 2012:30 for more details about the history of the nomenclature of this form).

Family Troglodytidae

Catherpes mexicanus polioptilus Oberholser, 1903
[Texas Canyon Wren]
= ***Catherpes mexicanus conspersus***
[Canyon Wren]

1903. *Catherpes mexicanus polioptilus* Oberholser, Auk 20:197.

1910. *Catherpes mexicanus conspersus* AOU Checklist 3:337.

1912. *Catherpes mexicanus polioptilus* Strecker, Baylor Univ. Bull. 25(1):63.

1974. *Catherpes mexicanus conspersus* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 643.

Type specimen.—Holotype, adult male, UNSM 168350, obtained by H. C. Oberholser on 14 June 1901, original number 356.

Type locality.—Deer Mountain (opposite Mount Emory to the east), Chisos Mountains, 6,500 feet, Brewster County, Texas.

Topotypes.—Brewster Co: 2 (CM), 1 (USNM). Last topotype collected in 1933.

Near topotypes.—Presidio Co: 5 (USNM), 1 (AMNH, MVZ). Last near topotype collected in 1925.

Certhia albifrons Giraud, 1841
[White-throated Wren]
= ***Catherpes mexicanus albifrons***
[Canyon Wren]

1829. *Thryothorus mexicanus* Swainson, Zool. Illustrations, vol. 1, series 2: pl. 11 and text.

1841. *Certhia albifrons* Giraud, Description of Sixteen New Species of North American Birds, p. 31.

1899. *Catherpes mexicanus albifrons* 9th supplement to the AOU Checklist, Auk 14:124.

1912. *Catherpes mexicanus albifrons* Strecker, Baylor Univ. Bull. 25(1):62.

1974. *Catherpes mexicanus polioptilus* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 644.

1995. *Catherpes mexicanus albifrons* Jones and Dieni, The Birds of North America, No. 197:1.

2022. *Catherpes mexicanus conspersus* Gill et al., IOC World Bird Listl, file no. 32,574.

2022. *Catherpes mexicanus albifrons* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

Type specimen.—Holotype, sex unknown, USNM 47702 (Giraud Collection).

Type locality.—"Received from Texas, 1838."

Topotypes.—None. Imprecise type locality.

Near topotypes.—None.

Remarks.—The specimen upon which Giraud based his description may have come from Texas, but most ornithologists believe that it most likely was collected in Mexico (see Stone 1919 for a discussion). Thus, the inclusion of this taxon in this catalog must be considered provisional. Clements et al. (2022) regards *C. m. albifrons* as a valid subspecies, but the IOC (Gill et al. 2022) regards it as synonymous with *C. m. conspersus* (Ridgway, 1873), a subspecies from the southwestern United States and northwestern Mexico.

Telmatodytes palustris thryophilus Oberholser, 1903
[Louisiana Long-billed Marsh Wren]
= ***Cistothorus palustris marianae***
[Marsh Wren]

1810. *Certhia palustris* Wilson, Amer. Ornithology, 2:58.

1850. *Telmatodytes palustris* Cabanis, Museum Heineanum, vol. 1:78. Type, by subsequent designation, *Certhia palustris* Wilson (see Baird 1858).

1903. *Telmatodytes palustris thryophilus* Oberholser, Proc. Biol. Soc. Wash. 16:149.

1912. *Telmatodytes palustris thryophilus* Strecker, Baylor Univ. Bull. 25(1):64.

1974. *Telmatodytes palustris palustris* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 640.

1976. *Cistothorus palustris thryophilus* 33rd supplement to the AOU Checklist, Auk 93:878.

1997. *Cistothorus palustris marianae* Kroodsma and Verner, Birds of N. Amer. No. 308.

Type specimen.—Holotype, adult male, USNM 184769, obtained by H. C. Oberholser on 3 September 1902.

Type locality.—Sabine, Jefferson County, Texas.

Topotypes.—None.

Near topotypes.—None.

Remarks.—Oberholser (1974) placed the type locality in Jefferson County. In his description, Oberholser (1903) acknowledged that there were only minor differences between his specimen and the subspecies to which the specimen eventually was referred.

Thryomanes bewickii cryptus Oberholser, 1899
[Texas Bewick's Wren]
[Bewick's Wren]

1836. *Troglodytes leucogastra* Gould, Proc. Zool. Soc. London, part IV:89.

1859. *Thryothorus bewickii* Sclater, Proc. Zool. Soc. London, part XXVII:372.

1864. *Thryothorus bewickii leucogaster* Baird, Rev. Amer. Birds I:127.

1885. *Thryothorus bewickii bairdi* Ridgway, Proc. U.S. Nat. Mus. VIII, p. 354.

1886. *Thryothorus bewickii bairdi* AOU Check-List 2:328.

1899. *Thryomanes bewickii cryptus* Oberholser, Proc. U.S. Nat. Mus. 21:425.

1912. *Thryomanes bewickii cryptus* Strecker, Baylor Univ. Bull. 25(1):63.

1974. *Thryomanes bewickii cryptus* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 634.

Type specimen.—Holotype, adult male, USNM 112838, obtained by C. W. Beckham on 5 January 1887.

Type locality.—San Antonio, Bexar County, Texas.

Topotypes.—Bexar Co: 37 (WFVZ), 21 (UMMZ), 15 (USNM), 8 (ROM), 7 (MVZ), 4 (MCZ), 2 (AMNH), 1 (SBMNH, YPM). Last topotype collected in 1951.

Near topotypes.—Atascosa Co: 4 (WFVZ), 2 (MVZ), 1 (AMNH, UMMZ). Guadalupe Co: 1 (USNM). Last near topotype collected in 1952.

Remarks.—Oberholser (1899) based his description on 18 specimens in the USNM. A specimen of a wren taken in Tamaulipas, Mexico, was mislabeled as being from Texas, causing S. F. Baird to refer it to the subspecies, *T. b. leucogaster*. However, according to Allen (1899:345), this name could not be used because Baird misidentified his specimens and mistakenly referred them to a taxon already described.

Thryothorus ludovicianus alamoensis Godfrey 1946
[Bexar Wren]
= ***Thryothorus ludovicianus ludovicianus***
[Carolina Wren]

1912. *Thryothorus ludovicianus* Strecker, Baylor Univ. Bull. 25(1):63.

1946. *Thryothorus ludovicianus alamoensis* Godfrey, Auk 63:564.

1957. *Thryothorus ludovicianus ludovicianus* AOU Checklist 5: 5:415.

1974. *Thryothorus ludovicianus alamoensis* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 636.

2003. *Thryothorus ludovicianus ludovicianus* Dickinson, The Howard and Moore Complete Checklist of the Birds of the World, p. 638.

Type specimen.—Holotype, male, USNM 152430, obtained by H. P. Attwater on 8 March 1889.

Type locality.—San Antonio, Bexar County, Texas.

Topotypes.—Bexar Co: 11 (USNM), 2 (AMNH, FMNH, MCZ, UMMZ), 1 (TCWC). Last topotype collected in 1947.

Near topotypes.—Atascosa Co: 1 (UMMZ). Comal Co: 3 (WFVZ), 1 (MCZ). Kendall Co: 1 (MCZ). Medina Co: 2 (TCWC), 1 (MCZ, WFVZ). Wilson Co: 3 (UMMZ). Last near topotype collected in 1935.

Thryothorus ludovicianus lomitensis Sennett, 1890
[Lomita Wren]
[Carolina Wren]

1890. *Thryothorus ludovicianus lomitensis* Sennett, Auk 7:104.

1912. *Thryothorus ludovicianus lomitensis* Strecker, Baylor Univ. Bull. 25(1):63.

1974. *Thryothorus ludovicianus lomitensis* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 637.

Type specimens.—Three syntypes: adult male, AMNH 85954, obtained by G. B. Sennett on 24 April 1878, Sennett Collection 2598; adult female, AMNH 85955, obtained by G. B. Sennett on 15 May 1878, Sennett Collection 2592; and adult male, AMNH 85956, obtained by M. A. Frazar on 23 February 1880, Sennett Collection 2599.

Type locality.—Lomita Ranch, Hidalgo County, Texas.

Topotypes.—Hidalgo Co: 19 (AMNH), 10 (USNM), 2 (DMNH), 1 (TCWC). Last topotype collected in 2006.

Near topotypes.—Cameron Co: 44 (UMMZ), 25 (FMNH), 22 (MCZ), 14 (ANSP, USNM), 9 (WFVZ), 5 (ROM), 4 (AMNH, CHAS), 3 (CM, DMNH), 2 (UCLA), 1 (CMNH, LACM, SDNHM, YPM). Last near topotype collected in 1946.

Thryothorus ludovicianus oberholseri Lowery, 1940
[Oberhholser's Carolina Wren]
=***Thryothorus ludovicianus ludovicianus***
[Carolina Wren]

1912. *Thryothorus ludoviciannus* Strecker, Baylor Univ. Bull. 25(1):63.

1940. *Thryothorus ludovicianus oberholseri* Lowery, Auk 57:101.

1957. *Thryothorus ludovicianus ludovicianus* AOU Checklist 5:415.

1974. *Thryothorus ludovicianus oberholseri* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 636.

2021. *Thryothorus ludovicianus ludovicianus* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

Type specimen.—Holotype, adult male, USNM 342081, obtained by Thomas D. Burleigh on 30 December 1938, original number 5439.

Type locality.—Del Rio, Val Verde County, along the Rio Grande, Texas.

Topotypes.—Val Verde Co: 4 (USNM). Last topotype collected in 1938.

Near topotypes.—None.

Troglodytes bewickii pulichi Phillips, 1986
[Bewick's Wren]
= ***Thryomanes bewickii pulichi***
[Bewick's Wren]

1912. *Thryomanes bewickii* Strecker, Baylor Univ. Bull. 25(1):63.

1986. *Troglodytes bewickii pulichi* Phillips, The Known Birds of North and Middle America. Part I: Hirudinidae to Mimidae; Certhiidae, Denver Museum of Natural History, p. 151.

1998. *Thryomanes bewickii* AOU Checklist 7:479.

2021. *Thryomanes bewickii pulichi* Clements et al., The eBird/Clements Checklist of Birds of the World, online.

Type specimen.—Holotype, adult male, AMNH 831491, obtained by G. G. Potts and Warren Pulich on 26 September 1985, original number 2965.

Type locality.—Bryan Tower, downtown Dallas, Dallas County, Texas.

Topotypes.—Dallas Co: 3 (PMNS), 1 (UWBM). Last topotype collected in 2015.

Near topotypes.—Tarrant Co: 3 (PMNS), 1 (WFVZ). Last near topotype collected in 1959.

Remarks.—Phillips (1986) suggested that *Troglodytes* be merged with *Thryomanes* and the change was approved by the AOU (1998).

Family Turdidae

Sialia mexicana jacoti Phillips, 1991
[Western Bluebird]
= ***Sialia mexicana bairdi***
[Western Bluebird]

1912. *Sialia mexicana bairdi* Strecker, Baylor Univ. Bill. 25(1):67.

1991. *Sialia mexicana jacoti* Phillips, Known Birds of Middle and North America, part II, p. 120.

2003. *Sialia mexicana jacoti* Dickinson, The Howard and Moore Complete Checklist of the Birds of the World, p. 368.

2022. *Sialia mexicana jacoti* Gill et al., IOC World Bird Listl, file no. 32,574.

2022. *Sialia mexicana bairdi* Clements et al., The eBird/ Clements Checklist of Birds of the World, online.

Type specimen.—Holotype, immature female, AMNH 377279, obtained by Austin Paul Smith on 27 September 1916. From the Dwight Collection, no. 44429.

Type locality.—Davis Mountains, Jeff Davis County, Texas, at an elevation of 7,000 feet.

Topotypes.—Jeff Davis Co: 17 (MSB), 6 (PMNS), 5 (AMNH), 4 (DMNS, 3 (ROM), 2 (CUMV, FMNH, USNM). Last topotype collected in 2000.

Near topotypes.—Brewster Co: 2 (UMMZ, USNM), 1 (MCZ). Presidio Co: 2 (AMNH). Last near topotype collected in 1943.

Remarks.—Dickerman and Parkes (1997) accepted AMNH 377279 as the holotype but did not comment on its validity other than including question marks after the listing. Dickinson et al. (2003) tentatively recognized *S. m. jacoti* and the IOC (2022) continues to include it as a valid taxon. Conversly, the Clements et al. checklist (2022) does not consider it valid.

Family Tyrannidae

Empidonax difficilis hellmayeri Brodkorb, 1935
[Chisos Western Flycatcher]
= ***Empidonax occidentalis hellmayeri***
[Cordilleran Flycatcher]

1912. *Empidonax difficilis* Strecker, Baylor Univ. Bull. 25(1):38.

1935. *Empidonax difficilis hellmayeri* Brodkorb, Occ. Pap. Mus. Zool. Univ. Mich. 306:1.

1974. *Empidonax difficilis hellmayeri* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 560.

1980. *Empidonax occidentalis hellmayeri* Johnson, Univ. of Calif. Pub. Zool. 112:110.

1989. *Empidonax occidentalis* 37th Supplement to AOU Checklist, Auk 106:535.

2003. *Empidonax occidentalis hellmayeri* Dickinson, The Howard and Moore Complete Checklist of the Birds of the World, p. 368.

Type specimen.—Holotype, adult male (breeding plumage), UMMZ 59729, obtained by J. Van Tyne on 19 July 1928.

Type locality.—Boot Spring, 6,800 feet, Chisos Mountains, Brewster County, Texas.

Topotypes.—Brewster Co: 7 (USNM), 6 (UMMZ), 3 (TCWC), 1 (CHAS, MCZ, MVZ). Last topotype collected in 1968.

Near topotypes.—None.

Remarks.—*Empidonax difficilis hellmayeri* was considered a subspecies of the Western (= Pacific-slope) Flycatcher, *E. difficilis*, until 1989 (AOU 1989).

Empidonax wrightii Baird, 1858
[Wright's Flycatcher]
[Gray Flycatcher]

1858. *Empidonax wrightii* Baird et al., Rept. Expl. Surv. Rt. Pacific Ocean, Vol. 9 (part 2), p. 200.

1910. *Empidonax wrighti* AOU Checklist 3:217.

1912. *Empidonax wrightii* Strecker, Baylor Univ. Bull. 25(1):39.

1945. *Empidonax wrightii* 20th supplement to the AOU Checklist, Auk 62:444.

1957. *Empidonax griseus* Miller et al., Pacific Coast Avifauna 33:89.

1957. *Empidonax wrightii* AOU Checklist 5:346.

1974. *Empidonax obscurus* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 558.

1998. *Empidonax wrightii* AOU Checklist 7:396.

Type specimen.—Holotype, male, USNM 7234, obtained by Charles Wright 4 May 1850.

Type locality.—El Paso, El Paso County, Texas.

Topotypes.—None.

Near topotypes.—None.

Remarks.—The sex indicated on the holotype's specimen label had the notation "?" and the USNM indicates the specimen is a male but with the remark "sex uncertain." Oberholser (1974) revived the name *Empidonax* (*Tyrannula*) *obscurus* because it had priority over *E. wrightii*. However, the holotype of *Tyrannula obscura* subsequently was lost and the measurements provided by Swainson (1827) do not conform to recognized species. Consequently, *E. obscurus* has been regarded as a *nomen dubium* (Banks and Browning 1995).

Pitangus sulphuratus texanus van Rossem, 1940
[Texas Kiskadee Flycatcher]
[Great Kiskadee]

1940. *Pitangus sulphuratus texanus* van Rossem, Trans. San Diego Soc. Nat. Hist. 9:82.

1974. *Pitangus sulphuratus texanus* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 542.

Type specimen.—Holotype, adult male, USNM 135066, obtained by F. B. Armstrong on 8 December 1893.

Type locality.—Brownsville, Cameron County, Texas.

Topotypes.—Cameron Co: 34 (UMMZ), 21 (WFVZ), 13 (USNM), 9 (AMNH), 8 (FMNH), 2 (SBMNH), 1 (CM). Last topotype collected in 1946.

Near topotypes.—Hidalgo Co: 5 (USNM), 2 (AMNH). Last near topotype collected in 1955.

Tyrannula cinerascens Lawrence, 1851
[Ash-colored Flycatcher]
= ***Myiarchus cinerascens cinerascens***
[Ash-throated Flycatcher]

1851 [1852]. *Tyrannula cinerascens* Lawrence, Ann. Lyceum Nat. Hist. New York 5:121.

1851. *Tyrannula mexicanus* Kaup, Proc. Zool. Soc. London, 1851 (19):51.

1859. *Myiarchus cinerascens* Sclater, Ibis 1:440.

1910. *Myiarchus cinerascens cinerascens* AOU Checklist 3:211.

1912. *Myiarchus mexicanus* Strecker, Baylor Univ. Bull. 25(1):37.

1974. *Myiarchus cinerascens cinerascens* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 546.

Type specimen.—Holotype, sex unknown, AMNH 42863, obtained by Capt. J. P. McCown, USA. Collection date unknown.

Type locality.—Between San Antonio and the Rio Grande, western Texas.

Topotypes.—None. Imprecise type locality.

Near topotypes.—None.

Remarks.—The paper describing this species was first read at a Lyceum meeting on 8 September 1851. That same year, Kaup (1851) mistakenly described the same species. The error was corrected in 1859, when Sclater (1859) moved the Ash-throated Flycatcher from the genus *Tyrannula* to *Myiarchus*.

Family Vireonidae

Vireo atricapilla Woodhouse, 1852
[Black-capped Vireo]
[Black-capped Vireo]

1852. *Vireo atricapilla* Woodhouse, Proc. Acad. Nat. Sci. Phil. 6:60.

1912. *Vireo atricapilla* Strecker, Baylor Univ. Bull. 25(1):56.

1974. *Vireo atricapilla* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 700.

Type specimen.—Holotype, male, USNM 15040, obtained by S. W. Woodhouse on 26 May 1851.

Type locality.—Near Juno, northern Val Verde County, Texas (see Remarks).

Topotypes.—Val Verde Co: 8 (USNM, 1 paratype), 1 (AMNH, paratype). Last topotype collected in 1970.

Near topotypes.—Edwards Co: 1 (TCWC). Kinney Co: 1 (CUMV). Last near topotype collected in 2020.

Remarks.—Samuel W. Woodhouse listed the location of the place where he collected the first Black-capped Vireo on 26 May 1851 as "on the Rio Grande, two hundred and eight miles from San Antonio, on the road leading from that place to El Paso del Norte" (Woodhouse 1852). Deignan (1961) assigned the modern equivalent of that locality as "= Devil's River near Sonora, Sutton County, Texas." Oberholser (1963) further refined the location to "the Devil's River 10 miles below its source in northern Val Verde County." By examining maps of early survey routes and revisiting Samuel Woodhouse's personal diaries, Sexton and Tomer (1990) established that Woodhouse collected the type specimen near the present settlement of Juno in northern Val Verde County, Texas, which has been listed in this catalog as the official type locality. The Black-capped Vireo was federally listed as Endangered in 1987 but was delisted in 2018 due to recovery.

Vireo bellii medius Oberholser, 1903
[Texas Bell's Vireo]
[Bell's Vireo]

1903. *Vireo bellii medius* Oberholser, Proc. Biol. Soc. Wash. 16:17.

1912. *Vireo bellii medius* Strecker, Baylor Univ. Bull. 25(1):56.

1974. *Vireo bellii medius* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 705.

Type specimen.—Holotype, adult male, USNM 168275, obtained by H. C. Oberholser on 24 May 1901, original number 253.

Type locality.—Boquillas, Brewster County, Texas.

Topotypes.—Brewster Co: 4 (USNM), 2 (TTU). Last topotype collected in 1951.

Near topotypes.—None.

Vireo huttoni carolinae Brandt, 1938
[Chisos Vireo]
[Hutton's Vireo]

1938. *Vireo huttoni carolinae* Brandt, Auk 55:269.

1974. *Vireo huttoni carolinae* Oberholser, The Bird Life of Texas, Univ. Texas Press, p. 704.

Type specimen.—Holotype, adult male, collection of Herbert W. Brandt, no. 2048, obtained by H. W. Brandt on 10 May 1937. Disposition of specimen unknown.

Type locality.—Boot Canyon, 7,000 feet, Chisos Mountains, Brewster County, Texas.

Topotypes.—Brewster Co: 10 (ROM), 5 (FMNH), 4 (CM), 3 (TCWC, USNM). Last topotype collected in 1968.

Near topotypes.—None.

LIST 2.2. ALPHABETICAL LIST OF BIRD TYPE LOCALITIES BY STATE AND COUNTY, WITH MAP (FIG. 3), INCLUDING ORIGINAL AND CURRENT TAXONOMIC DESIGNATIONS

STATE (14 taxa)

A. "Received from Texas, 1838," no exact locality:

Alauda minor (= *Eremophila alpestris giraudi*).
Icterus audubonii (= *Icterus graduacauda audubonii*).
Muscicapa brasierii (= *Basileuterus culicivorus brasierii*).
Muscicapa leucomus **(=** *Myioborus pictus pictus*).
Sylvia halseii (= *Setophaga nigrescens halseii*).
Certhia albifrons (= *Catherpes mexicanus albifrons*).

B. Prairie of Texas (near Latitude 32°) = High prairies of western Texas, no exact locality:

Plectrophanes mccownii (= *Rhynchophanes mccownii*).

C. Between San Antonio and the Rio Grande, western Texas, no exact locality:

Tyrannula cinerascens (= *Myiarchus cinerascens cinerascens*).

D. On the Rio Grande, no exact locality:

Parus annexus (= *Baeolophus wollweberi phillipsi*).
Emberiza bilineata (= *Amphispiza bilineata bilineata*).

E. Upon the Rio Grande:

Parus atricristatus (= *Baeolophus atricristatus atriscristatus*).

F. Rio Bravo del Norte, no exact locality:

Scops mccallii (= *Megascops asio mccallii***).**

G. "Texas," no exact locality:

Columba trudeaui (= *Zenaida asiatica asiatica*).
Fringilla texensis (= *Spinus psaltria psaltria*).

COUNTY

Aransas (1 taxon):

1. 25 miles northeast of Rockport:

Tympanuchus attwateri (= *Tympanuchus cupido attwateri*).

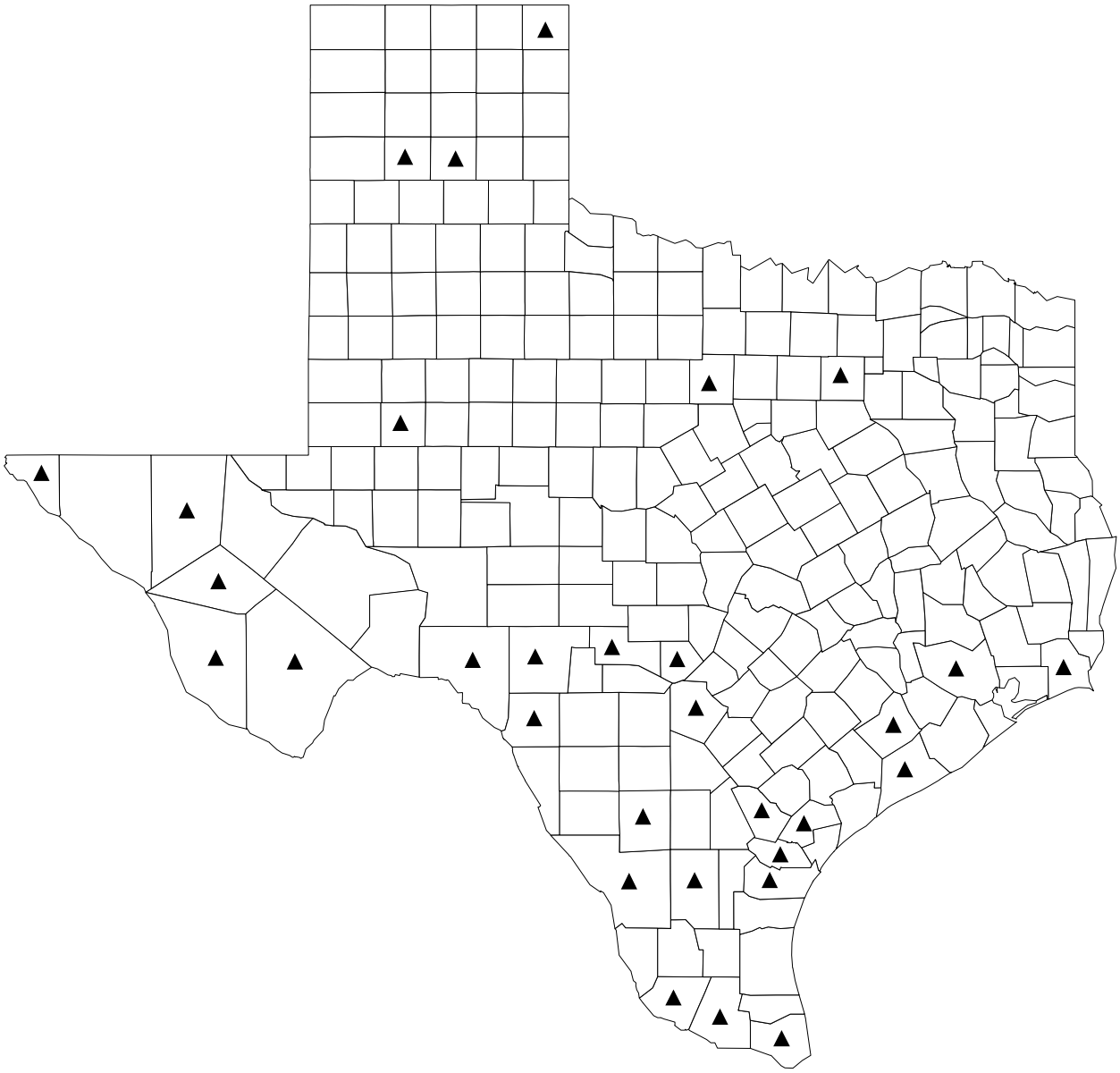

Figure 3. Distribution of Texas avian type specimens by county. Solid triangles (▲) indicate counties in which one or more type specimens were collected.

Armstrong (1 taxon):

2. Palo Duro Canyon, Harold [= Harrell] Ranch, 18 miles east of Canyon:

Baeolophus atricristatus paloduro (= *Baeolophus atricristatus paloduro*).

Bee (3 taxa):

3. No exact locality:

Parus atricristatus castaneifrons (= *Baeolophus atricristatus sennetti* x *Baeolophus bicolor*).
Parus bicolor texensis (= *Baeolophus atricristatus sennetti* x *Baeolophus bicolor*).
Parus carolinensis agilis (= *Poecile carolinensis agilis*).

Bexar (7 taxa):

4. Watson Ranch, 18 miles southwest of San Antonio:

Bubo virginianus pallescens (= *Bubo virginianus pallescens*).

5. Leon Springs:

Baeolophus atricristatus sennetti (= *Baeolophus atricristatus sennetti*).

6. San Antonio:

Thryomanes bewickii cryptus (= *Thryomanes bewickii cryptus*).
Thryothorus ludovicianus alamoensis (= *Thryothorus ludovicianus ludovicianus*).

7. On the prairie, near San Antonio:

Actidurus naevius (= *Calidris subruficollis*).
Zonotricha cassinii (= *Peucaea cassinii*).

8. “Gallaghers,” near San Antonio:

Compsothlypis americana ramalinae (= *Setophaga americana*).

Brewster (13 taxa):

9. 5 miles south of Alpine, 5,000 feet:

Parus atricristatus dysleptus (= *Baeolophus atricristatus paloduro*).

10. Calamity Creek Bridge, 22 miles south of Alpine:

Buteo jamaicensis fuertesi (= *Buteo jamaicensis fuertesi*).

11. 12 miles south of Marathon:

Centurus aurifrons incanescens (= *Melanerpes aurifrons aurifrons*).

12. Boot Spring (and southeast of Boot Spring, 6,800 feet), Chisos Mountains:

Phasmornis mystica (= *nomen dubium*).
Empidonax difficilis hellmayeri (= *Empidonax occidentalis hellmayeri*).
Pipilo maculatus gaigei (= *Pipilo maculatus gaigei*).

13. Pine Canyon, 6,000 feet, northeastern side of Chisos Mountains:

Lampornis clemenciae phasmorus (= *Lampornis clemenciae phasmorus*).
Piranga hepatica oreophasma (= *Piranga flava dextra*).
Amphispiza bilineata dapolia (= *Amphispiza bilineata opuntia*).

14. Boquillas:

Vireo bellii medius (= *Vireo bellii medius*).

15. Boot Canyon, 7,000 feet, Chisos Mountains:

Vireo huttoni carolinae (= *Vireo huttoni carolinae*).
Sitta carolinensis oberholseri (= *Sitta carolinensis nelsoni*).

16. Deer Mountain (opposite Mount Emory to the east), 6,500 feeet, Chisos Mountains:

Catherpes mexicanus polioptilus (= *Catherpes mexicanus conspersus*).

Cameron (19 taxa):

17. No exact locality:

Meleagris gallopavo ellioti (= *Meleagris gallopavo intermedia*).

18. Brownsville:

Amazilia cerviniventris chalconota (= *Amazilia yucatanensis chalconota*).
Leptotila fulviventris angelica (= *Leptotila verreauxi angelica*).
Geococcyx californianus dromicus (= *Geococyx californianus*).
Otocorys alpestris giraudi (= *Eremophila alpestris giraudi*).
Agelaius phoeniceus megapotamus (= *Agelaius phoeniceus megapotamus*).
Icterus cucullatus sennetti (= *Icterus cucullatus sennetti*).
Sturnella magna hoopesi (= *Sturnella magna hoopesi*).
Xanthornus affinis (= *Icterus spurius spurius*).
Geothlypis poliocephala ralphi (= *Geothlypis poliocephala ralphi*).
Aimophila botterii texana (= *Peucaea botterii texana*).
Polioptila melanura (= *Polioptila melanura melanura*).

Pitangus sulphuratus texanus (= *Pitangus sulphuratus texanus*).
Spermophila albigularis (= *Sporophila morelleti sharpei*).

19. Brownsville (Fort Brown on the Rio Grande, 25.54 N, 97.29 W):

Embernagra rufivirgata (= *Arremonops rufivirgatus rufivirgatus*).
Conirostrum ornatus (= *Auriparus flaviceps ornatus*)

20. 6 miles west of Brownsville:

Cassidix mexicanus prosopidicola (= *Quiscalus mexicanus prosopidicola*).

21. Fort Brown:

Xanthoura luxuosa glaucescens (= *Cyanocorax luxuosus glaucescens*).

22. Rio Grande Delta, 14 miles below Brownsville:

Geothlypis trichas insperata (= *Geothlypis trichas insperata*).

Cooke (2 taxon):

23. Gainesville:

Otocorys alpestris praticola (= *Eremophila alpestris praticola*).
Peucaea illinoensis (= *Peucaea aestivalis illinoensis*).

Culberson (3 taxa):

24. The Bowl, Guadalupe Mountains:

Certhia familiaris iletica (= *Certhia americana montana*).

25. 10 miles east of Frijole, 4,800 feet, Guadalupe Mountains:

Amphispiza bilineata opuntia (= *Amphispiza bilineata opuntia*).

26. Frijole, McKittrick Canyon, 5,500 feet, Guadalupe Mountains:

Aimophila ruficeps tenuirostra (= *Aimophila ruficeps scottii*).

Dallas (1 taxon):

27. Bryan Tower, downtown Dallas:

Troglodytes bewickii pulichi (= *Thryomanes bewickii pulichi*).

Duval (1 taxon):

28. San Diego:

Toxostoma curvirostris oberholseri (= *Toxostoma curvirostre oberholseri*).

Edwards (1 taxon):

29. Near head of Nueces R[iver]:

Aphelocoma texana (= *Aphelocoma woodhouseii texana*).

El Paso (3 taxa):

30. San Elezario:

Lophortyx gambelii ignoscens (= *Callipepla gambelii ignoscens*).

31. El Paso:

Pyrrhuloxia sinuata beckhami (= *Cardinalis sinuatus sinuatus*).
Empidonax wrightii (= *Empidonax wrightii*).

Harris (1 taxon):

32. Field in south-central Houston:

Ammodramus henslowii houstonensis (= *Centronyx henslowii henslowii*).

Hidalgo (9 taxa):

33. Lomita Ranch:

Dendrocygna autumnalis fulgens (= *Dendrocygna autumnalis fulgens*).
Meleagris gallopavo ellioti (= *Meleagris gallopavo intermedia*).
Meleagris gallopavo intermedia (= *Meleagris gallopavo intermedia*).
Colymbus dominicus brachypterus (= *Tachybaptus dominicus brachypterus*).
Sporophila morelleti sharpei (= *Sporophila morelleti sharpei*).
Thyrothorus ludovicianus lomitensis (= *Thyrothorus ludovicianus lomitensis*).

34. Hidalgo (and near Hidalgo):

Harporhynchus longirostris sennetti (= *Toxostoma longirostre sennetti*).
Parula nigrilora (= *Setophaga pitiayumi nigrilora*).

35. 5 miles from Hidalgo, Texas:

Micropallas whitneyi idoneus (= *Micrathene whitneyi idonea*).

Jeff Davis (4 taxa):

36. Fort Davis:

Aphelocoma coerulescens mesolega (= *Aphelocoma woodhouseii woodhouseii*).
Hortulanus fuscus aimophilus (= *Melozone fusca texana*).

37. "Pineries" near Fort Davis, at altitudes of 6,200 to 6,400 feet:

Psaltriparus lloydi (= *Psaltriparus minimus dimorphicus*).

38. Davis Mountains at an elevation of 7,000 feet:

Sialia mexicana jacoti (= *Sialia mexicana bairdi*).

Jefferson (1 taxon):

39. Sabine:

Telmatodytes palustris thryophilus (= *Cistothorus palustris marianae*).

Kendall (1 taxon) :

40. Boerne:

Peucaea ruficeps eremoeca (= *Aimophila ruficeps eremoeca*).

Kerr (3 taxa):

41. Japonica:

Spizella pusilla vernonia (= *Spizella pusilla arenacea*).

42. Kerrville:

Pipilo fuscus texanus (= *Melozone fusca texana*).

43. 20 miles west of Mountain Home:

Icteria virens danotia (= *Icteria virens virens*).

Kinney (1 taxon):

44. Fort Clark:

Passerina ciris pallidior (= *Passerina ciris pallidior*).

La Salle (1 taxon):

45. Cotulla:

Chondestes grammacus quillini (= *Chondestes grammacus strigatus*).

Lipscomb (2 taxa):

46. Lipscomb:

Chordeiles virginianus howelli (= *Chordeiles minor howelli*).
Guiraca caerulea mesophila (= *Passerina caerula caerula*).

Martin (1 taxon):

47. vicinity of Sulphur Springs, 3 miles north and 2 miles east of present Lenorah:

Cupidonia cupido var. *pallidicincta* (= *Tympanuchus pallidicinctus*).

Matagorda (1 taxon):

48. Matagorda:

Centurus carolinus harpaceus (= *Melanerpes carolinus*).

Nueces (10 taxa; ***Anas maculosa* (= *Anas fulvigula maculosa*)** described from two syntypes with different localities within Nueces County**):**

49. Nueces Bay, near Corpus Christi:

**Anas maculosa* (= *Anas fulvigula maculosa*).

50. Mouth of Nueces River:

Dryobates scalaris symplectus (= *Dryobates scalaris cactophilus*).

51. Nueces River:

**Anas maculosa* (= *Anas fulvigula maculosa*).
Nyctidromus albicollis merrilli (= *Nyctidromus albicollis merrilli*).
Phalaenoptilus nuttalli nitidus (= *Phalaenoptilus nuttallii nuttallii*).

52. Corpus Christi:

Buteo lineatus texanus (= *Buteo lineatus texanus*).
Syrnium nebulosum helveolum (= *Strix varia*).
Otocorys alpestris giraudi (= *Eremophila alpestris giraudi*).
Pyrrhuloxia sinuata texana (= *Cardinalis sinuatus sinuatus*).
Ammodramus maritimus sennetti (= *Ammodrama maritimus sennetti*).

53. 30 miles west of Corpus Christi:

Cardinalis cardinalis canicaudus (= *Cardinalis cardinalis canicaudus*).

Palo Pinto (1 taxon):

54. McClenny's pasture, 10 to 15 miles south of Palo Pinto:

Otus asio hasbroucki (= *Megascops asio hasbroucki*).

Presidio (2 taxa):

55. Near Ruidosa, altitude about 3,000 feet:

Zenaida asiatica grandis (= *Zenaida asiatica mearnsi*).

56. Chinati Mountains:

Erythrina mexicana anconophila (= *Haemorhous mexicanus frontalis*).

Randall (1 taxon):

57. Elkins Ranch, 2 miles north of Palo Duro [Canyon] State Park:

Richmondena cardinalis planicola (= *Cardinalis cardinalis canicaudus*).

Refugio (1 taxon):

58. No exact locality:

Tympanuchus attwateri (= *Tympanuchus cupido attwateri*).

San Patricio (1 taxon):

59. Chiltipin Creek:

Buteo albicaudatus sennetti (= *Geranoaetus albicaudatus hypospodius*).

Starr (3 taxa):

60. Rio Grande City:

Callipepla squamata castanogastris (= *Callipepla squamata castanogastris*).

61. Small prairie above Ringgold Barracks [now within Rio Grande City]:

Ortyx texanus (= *Colinus virginianus texanus*).

62. Ringgold Barracks, near Rio Grande City [now within Rio Grande City]:

Chordeiles texensis (= *Chordeiles acutipennis texensis*).

Val Verde (4 taxa):

63. Near Juno:

Vireo atricapilla (= *Vireo atricapilla*).

64. Langtry:

Petrochelidon lunifrons tachina (= *Petrochelidon pyrrhonota tachina*).

65. Del Rio, along the Rio Grande:

Icterus bullockii eleutherus (= *Icterus bullockii bullockii*).
Thryothorus ludovicianus oberholseri (= *Thryothorus ludovicianus ludovicianus*).

Webb (2 taxa):

66. Laredo:

Spizella pusilla arenacea (= *Spizella pusilla arenacea*).
Zonotrichia leucophrys intermedia (= *Zonotrichia leucophrys gambelli*).

Wharton (1 taxon):

67. No exact locality:

Chordeiles popetue sennetti (= *Chordeiles minor sennetti*).

LIST 2.3. SENIOR AUTHORS OF DESCRIPTIONS OF BIRDS DESCRIBED FROM TEXAS AND NUMBER OF TAXA DESCRIBED

H. C. Oberholser (23)

R. Ridgway (14)

G. N. Lawrence (10)

G. B. Sennett (9)

J. P. Giraud, Jr. (7)

J. Cassin (4)

A. R. Phillips (3)

J. Van Tyne (3)

J. A. Allen (2)

O. Bangs (2)

H. W. Brandt (2)

W. Brewster (2)

T. D. Burleigh (2)

F. M. Chapman (2)

E. Coues (2)

H. Friedmann (2)

H. W. Henshaw (2)

G. H. Lowery, Jr. (2)

J. O. Stevenson (2)

W. Stone (2)

A. J. van Rossem (2)

S. W. Woodhouse (2)

K. A. Arnold (1)

J. J. Audubon (1)

S. F. Baird (1)

C. E. Bendire (1)

L. B. Bishop (1)

W. P. Brodkorb (1)

N. C. Brown (1)

A. P. Chadbourne (1)

W. E. Godfrey (1)

A. L. Heermann (1)

W. Koelz (1)

J. E. Law (1)

E. A. Mearns (1)

G. B. Saunders (1)

G. M Sutton (1)

W. E. C. Todd (1)

LIST 2.4. PRINCIPAL COLLECTORS OF TYPE SPECIMENS OF BIRDS DESCRIBED FROM TEXAS

F. B. Armstrong (9)

Capt. J. P. McCown (9)

H. C. Oberholser (9)

J. M. Priour (9)

G. B. Sennett (9)

H. P. Attwater (5)

J. Van Tyne (4)

J. W. Audubon (3)

V. Bailey (3)

C. W. Beckham (3)

T. D. Burleigh (3)

M. A. Frazar (3)

W. Lloyd (3)

H. W. Brandt (2)

A. H. Howell (2)

H. H. Kimball (2)

G. H. Lowery, Jr. (2)

J. N. Sanford (2)

A. C. V. Schott (2)

S. W. Woodhouse (2)

K. A. Arnold (1)

J. G. Bell (1)

H. B. Butcher (1)

M. Cary (1)

F. M. Chapman (1)

A. K. Fisher (1)

J. H. Gaut (1)

E. M. Hasbrouck (1)

A. L. Heermann (1)

Dr. C. B. Kennerly (1)

J. A. Loring (1)

B. E. Ludeman (1)

E. A. Mearns (1)

Dr. J. C. Merrell (1)

C. H. Mueller (1)

J. G. Parke (1)

Capt. J. Pope (1)

G. G. Potts (1)

G. H. Ragsdale (1)

W. L. Ralph (1)

B. Saunders (1)

J. A. Singley (1)

A. P. Smith (1)

T. F. Smith (1)

J. O. Stevenson (1)

G. M. Sutton (1)

C. Wright (1)

Unknown (7)

LIST 2.5. MUSEUMS AND INSTITUTIONS HOUSING PRIMARY TYPE SPECIMENS OF BIRDS COLLECTED IN TEXAS

United States National Museum (USNM)	64
American Museum of Natural History (AMNH)	26
Museum of Comparative Zoology, Harvard University (MCZ)	6
University of Michigan Museum of Zoology (UMMZ)	6
Academy of Natural Sciences, Philadelphia (ANSP)	5
Louisiana State University Museum of Zoology (LSUMZ)	2
Carnegie Museum of Natural History (CM)	1

Field Museum of Natural History (FMNH)	1
Texas Cooperative Wildlife Collection (now Biodiversity Research and Teaching Collections), Texas A&M University (TCWC)	1
Private Collection of Herbert W. Brandt (Current Disposition Unknown)	2
Unknown Disposition	1
No Type Specimen Designated	1
Holotype Lost	1

LIST 2.6. BIRD TAXA DESCRIBED FROM TEXAS THAT HAVE BEEN PLACED IN SYNONYMY (1) BECAUSE OF PRIORITY OR (2) BECAUSE THEY NO LONGER HAVE CURRENT TAXONOMIC RANK AS VALID SPECIES OR SUBSPECIES

Original Name	Current Taxonomic Designation
Meleagris gallopavo ellioti	*Meleagris gallopavo intermedia*
Columba trudeaui	*Zenaida asiatica asiatica*
Zenaida asiatica grandis	*Zenaida asiatica mearnsi*
Geococcyx californianus dromicus	*Geococcyx californianus*
Phalaenoptilus nuttalli nitidus	*Phalaenoptilus nuttallii nuttallii*
Actidurus naevius	*Calidris subruficollis*
Buteo albicaudatus sennetti	*Geranoaetus albicaudatus hypospodius*
Syrnium nebulosum helveolum	*Strix varia*
Centurus aurifrons incanescens	*Melanerpes aurifrons aurifrons*
Centurus carolinus harpaceus	*Melanerpes carolinus*
Dryobates scalaris symplectus	*Dryobates scalaris cactophilus*
Psaltriparus lloydi	*Psaltriparus minimus dimorphicus*
Alauda minor	*Eremophila alpestris giraudi*
Guiraca caerulea mesophila	*Passerina caerula caerula*

Piranga hepatica oreophasma	*Piranga flava dextra*
Pyrrhuloxia sinuata beckhami	*Cardinalis sinuatus sinuatus*
Pyrrhuloxia sinuata texana	*Cardinalis sinuatus sinuatus*
Richmondena cardinalis planicola	*Cardinalis cardinalis canicaudus*
Certhia familiaris iletica	*Certhia americana montana*
Aphelocoma coerulescens mesolega	*Aphelocoma woodhouseii woodhouseii*
Xanthoura luxuosa glaucescens	*Cyanocorax yncas luxuosus*
Erythrina mexicana anconophila	*Haemorhous mexicanus frontalis*
Fringilla texensis	*Spinus psaltria psaltria*
Icterus bullockii eleutherus	*Icterus bullockii bullockii*
Xanthornus affinis	*Icterus spurius spurius*
Icteria virens danotia	*Icteria virens virens*
Parus annexus	*Baeolophus wollweberi phillipsi*
Parus atricristatus dysleptus	*Baeolophus atricristatus paloduro*
Compsothlypis americana ramalinae	*Setophaga americana*
Muscicapa leucomus	*Myioborus pictus pictus*
Aimophila ruficeps tenuirostra	*Aimophila ruficeps scottii*
Ammodramus henslowii houstonensis	*Centronyx henslowii henslowii*
Amphispiza bilineata dapolia	*Amphispiza bilineata opuntia*
Chondestes grammacus quillini	*Chondestes grammacus strigatus*
Hortulanus fuscus aimophilus	*Melozone fusca texana*
Spizella pusilla vernonia	*Spizella pusilla arenacea*
Zonotrichia leucophrys intermedia	*Zonotrichia leucophrys gambelli*
Sitta carolinensis oberholseri	*Sitta carolinensis nelsoni*

Spermophila albigularis	*Sporophila morelleti sharpei*
Catherpes mexicanus polioptilus	*Catherpes mexicanus conspersus*
Telmatodytes palustris thryophilus	*Cistothorus palustris marianae*
Thryothorus ludovicianus alamoensis	*Thryothorus ludovicianus ludovicianus*
Thryothorus ludovicianus oberholseri	*Thryothorus ludovicianus ludovicianus*
Sialia mexicana jacoti	*Sialia mexicana bairdi*

Note: Three taxa whose original names are no longer valid are not included in List 2.6, as they are no longer recognized because the original name is *nomen dubium* (*Phasmornis mystica*) or is based on hybrid type specimens (*Parus atricristatus castaneifrons* and *Parus bicolor texensis*).

Endemic Taxa and Conservation Concerns

Because of the highly mobile nature of most bird taxa found in temperate regions, few species are restricted to small geographic areas. The majority of species found in Texas are migratory, which includes taxa that make relatively short migrations, often to the state for winter, or extremely long routes that cross international borders with some reaching the southern hemisphere. For this reason, there are only two endemic and one near endemic taxa of birds described from Texas specimens (Table 7). These three taxa are all subspecies; none of the bird species described from Texas specimens are endemic to the state. There are many taxa that are endemic to Texas within the US, but Mexico also makes up a significant portion of their current geographic range (Table 7, part B).

The two endemic taxa from Texas are Woodhouse's Scrub Jay (*Aphelocoma woodhouseii texana*), which is restricted to the Edwards Plateau and western Rolling Plains, where it is a common resident and not of conservation concern; and Attwater's Prairie Chicken (*Tympanachus cupido attwateri*), which is critically endangered and was native to coastal Texas and Louisiana, although it is now restricted to Texas with populations persisting at the Attwater Prairie Chicken National Wildlife Refuge near Eagle Lake in Colorado County and on private lands in Goliad County. The Texas Seaside Sparrow (*Ammospiza maritima sennetti*) is near endemic. It is found along the immediate coast of Texas from Calhoun County south to Cameron County, and apparently is rare at the mouth of the Rio Grande in Tamaulipas, Mexico. Despite its limited range and strict habitat requirements, it has not yet been placed on any list of species of conservation concern. Texas Botteri's Sparrow (*Peucaea botteri texana*) is listed as threatened by the Texas Parks and Wildlife Department, and it is the only other taxon with a geographic range confined primarily to the state that appears on a threatened, endangered, or vulnerable status list (Table 7).

Early Listers, Authors of Type Descriptions, and Collectors of Type Specimens

The published journals of several explorers, especially the list of birds observed in northwestern Texas by **Lieutenant James W. Abert** and the notes made by **Colonel George A. McCall,** piqued early interest in the avifauna of Texas (Abert 1846; McCall 1847, 1852). Additional lists of birds in the reports from parties exploring railroad routes to the Pacific Ocean further expanded interest in Texas avifauna. Although **Henry Eeles Dresser** wrote the first extensive article listing birds observed in Texas, it was somewhat over-

Table 7. Conservation status of birds described from Texas that (A) are endemic to the state or (B) occur nowhere else in the United States, although they may range by varying degrees into Mexico. State status taken from TPWD; federal status from USFWS; global status from NatureServe (https://explorer.natureserve.org). (**Tympanuchus cupido attwateri* was native to coastal Louisiana, but the taxon now is extirpated in that state and thus currently is considered endemic to Texas).

Current Name of Taxon	Original Name of Taxon	State Threatened or Endangered	Federal Threatened or Endangered	State Conservation Status	Global Conservation Status
A. Birds described from Texas that are endemic to the state					
Aphelocoma woodhouseii texana	*Aphelocoma texana*	Not Listed	Not Listed	Not Listed	Not Listed
*Tympanuchus cupido attwateri**	*Tympanuchus attwateri*	Endangered	Not Endangered	Critically Imperiled	Subspecies Critically Imperiled
B. Birds described from Texas that occur nowhere else in the United States although they range into Mexico					
Callipepla squamata castanogastris	*Callipepla squamata castanogastris*	Not Listed	Not Listed	Not Listed	Not Listed
Colinus virginianus texanus	*Ortyx texanus*	Not Listed	Not Listed	Not Listed	Not Listed
Amazilia yucatanensis chalconota	*Amazilia cerviniventris chalconota*	Not Listed	Not Listed	Not Listed	Not Listed
Lampornis clemenciae phasmorus	*Lampornis clemenciae phasmorus*	Not Listed	Not Listed	Not Listed	Not Listed
Nyctidromus albicollis merrilli	*Nyctidromus albicollis merrilli*	Not Listed	Not Listed	Not Listed	Not Listed
Leptotila verreauxi angelica	*Leptotila fulviventris angelica*	Not Listed	Not Listed	Not Listed	Not Listed
Buteo lineatus texanus	*Buteo lineatus texanus*	Not Listed	Not Listed	Not Listed	Not Listed
Megascops asio mccallii	*Scops mccallii*	Not Listed	Not Listed	Not Listed	Not Listed
Micrathene whitneyi idonea	*Micropallas whitneyi idoneus*	Not Listed	Not Listed	Not Listed	Not Listed
Pitangus sulphuratus texanus	*Pitangus sulphuratus texanus*	Not Listed	Not Listed	Not Listed	Not Listed
Vireo bellii medius	*Vireo bellii medius*	Not Listed	Not Listed	Not Listed	Not Listed
Vireo huttoni carolinae	*Vireo huttoni carolinae*	Not Listed	Not Listed	Not Listed	Not Listed
Cyanocorax yncas luxuosus	*Xanthoura luxuosa glaucescens*	Not Listed	Not Listed	Not Listed	Not Listed
Baeolophus atricristatus paloduro	*Baeolophus atricristatus paloduro*	Not Listed	Not Listed	Not Listed	Not Listed
Baeolophus atricristatus atricristatus	*Parus atricristatus*	Not Listed	Not Listed	Not Listed	Not Listed
Eremophila alpestris giraudi	*Alauda minor*	Not Listed	Not Listed	Not Listed	Not Listed

Table 7. (cont.)

Current Name of Taxon	Original Name of Taxon	State Threatened or Endangered	Federal Threatened or Endangered	State Conservation Status	Global Conservation Status
Psaltriparus minimus dimorphicus	*Psaltriparus lloydi*	Not Listed	Not Listed	Not Listed	Not Listed
Sitta carolinensis nelsoni	*Sitta carolinensis oberholseri*	Not Listed	Not Listed	Not Listed	Not Listed
Catherpes mexicanus albifrons	*Certhia albifrons*	Not Listed	Not Listed	Not Listed	Not Listed
Thryothorus ludovicianus lomitensis	*Thryothorus ludovicianus lomitensis*	Not Listed	Not Listed	Not Listed	Not Listed
Toxostoma curvirostre oberholseri	*Toxostoma curvirostris oberholseri*	Not Listed	Not Listed	Not Listed	Not Listed
Toxostoma longirostre sennetti	*Harporhynchus longirostris sennetti*	Not Listed	Not Listed	Not Listed	Not Listed
Peucaea botterii texana	*Aimophila botterii texana*	Threatened	Not Listed	Not Listed	Not Listed
Ammospiza maritima sennetti	*Ammodramus maritimus sennetti*	Not Listed	Not Listed	Not Listed	Not Listed
Arremonops rufivirgatus rufivirgatus	*Embernagra rufivirgata*	Not Listed	Not Listed	Not Listed	Not Listed
Melozone fusca texana	*Pipilo fuscus texanus*	Not Listed	Not Listed	Not Listed	Not Listed
Icterus cucullatus sennetti	*Icterus cucullatus sennetti*	Not Listed	Not Listed	Not Listed	Not Listed
Icterus graduacauda audubonii	*Icterus audubonii*	Not Listed	Not Listed	Not Listed	Not Listed
Agelaius phoeniceus megapotamus	*Agelaius phoeniceus megapotamus*	Not Listed	Not Listed	Not Listed	Not Listed
Geothlypis poliocephala ralphi	*Geothlypis poliocephala ralphi*	Not Listed	Not Listed	Not Listed	Not Listed
Geothlypis trichas insperata	*Geothlypis trichas insperata*	Not Listed	Not Listed	Not Listed	Not Listed
Basileuterus culicivorus brasierii	*Muscicapa brasierii*	Not Listed	Not Listed	Not Listed	Not Listed
Sporophila morelleti sharpei	*Spermophila albigularis*	Not Listed	Not Listed	Not Listed	Not Listed

looked when it was published in the aftermath of the Civil War (Dresser 1865–1866). Dresser provided a well-annotated list of 272 species that he observed and collected in the vicinity of San Antonio and the Lower Rio Grande Valley. After the dust from the Civil War settled, the number of papers denoting the avian richness of the state expanded dramatically. The compilation of 252 species observed by **Dr. James C. Merrill** (1878) in the Lower Rio Grande Valley was particularly influential in attracting individuals interested in birds to Texas. The extent of enthusiasm about the Texas avifauna was demonstrated when Oberholser (1974) assembled a list of more than 300 listers, collectors, and describers whose work contributed to the knowledge of Texas birds.

A New York businessman and amateur naturalist, **Jacob Post Giraud, Jr.** (1811–1870), became the first to describe avian species unique to the state. By 1835, Giraud had amassed a large private collection of specimens from the Hudson River area, all of which were prepared by noted taxidermist John P. Bell. Although he never traveled to Texas, Giraud purchased 33 bird skins from western North America to augment his collection. Of these, the labels of 16 specimens bore the notation, "Received from Texas, 1938." Trusting the labels to be accurate, Giraud described each of these as a new species from the state (Giraud 1841). Later workers discovered that at least 12 of the species represented forms found only in central or southern Mexico (Stone 1919). Only four Texas and seven Mexican subspecies that Giraud originally described are recognized today. Giraud's major contribution to Texas ornithology was his encouragement of Spencer F. Baird and George N. Lawrence when they were enthusiastic young collectors. In 1844, Giraud published *The Birds of Long Island*, which is now recognized for its historic perspective. Upon his death, Giraud bequeathed his collection to Vassar College, which later transferred the collection to the United States National Museum.

Many early private collectors and professional biologists avoided the rigors of extensive travel in Texas, choosing instead to rely on the work of local individuals to supply bird (and mammal) specimens. One such natural history collector, **John Marion Priour** (1848–1931), became known as the "Man from Corpus Christi." Priour held various jobs in South Texas, but augmented his income as a market hunter, hunting guide, taxidermist, and natural history collector. For four decades, Priour was employed as a guide and specimen collector by several prominent eastern ornithologists, mammalogists, and naturalists, including George B. Sennett, Frank M. Chapman, Vernon and Florence Merriam Bailey, and Arthur C. Pierce. Priour collected thousands of specimens during his career, including six new subspecies of birds and three new subspecies of mammals. Many of Priour's observations on mammals are included in Vernon Bailey's *Biological Survey of Texas*. Sennett relied on Priour's breeding records for many species of birds. Arthur Pierce published a humorous account of his travels with Priour and Priour's dog, Absalom (Pierce 1894). The book was widely read, making Priour a local celebrity.

During his early twenties, **Frank B. Armstrong** (1863–1915) began collecting birds and other animals in Mexico for his private collection in Boston. In 1890, he moved his collection and taxidermy studio to Brownsville so he could further develop his growing interest in tropical ornithology. His private collection of more than 800 specimens attracted many visitors and he became a well-known supplier of hundreds of bird and mammal specimens from the Lower Rio Grande Valley to museums in Europe and the United States. Nine avian subspecies described from Texas are based on specimens that Armstrong supplied to the Museum of Comparative Zoology, the American Museum of Natural History, and the United States National Museum. Some specimens from his private collection were donated to Southern Methodist University and Texas State University.

After participating in the US Army's military occupation of Texas in 1845 and 1846 and in the Mexican-American War, **Captain John Porter McCown** (1815–1879) served along the Rio Grande on Texas frontier duty (Fischer 2001). Working primarily from Fort Brown in Brownsville, Capt. McCown spent much of his free time collecting birds along the border. Most of his specimens were sent to George N. Lawrence, who published McCown's observations and discoveries including the addition of seven species new to the known Texas avifauna and the description of eight new species. Lawrence named one species, *Rhynchophanes mccownii* (McCown's Longspur) to

honor McCown's contribution to science. When the Civil War began, McCown resigned his commission in the US Army and joined the Army of the Confederacy. Because of his service in the Confederate Army, the AOS recently voted to change the common name of the species to Thick-billed Longspur. McCown also published one of the first papers about the behavior of the Greater Roadrunner.

Born of a Quaker family in eastern Pennsylvania, **John Cassin** (1813–1869) developed an early interest in the natural history of birds, which he expressed through art. After he moved to Philadelphia at the age of 21, he began working for a lithographing business and eventually became the head of the company. Cassin joined the Academy of Natural Sciences of Philadelphia in 1842, where he used his management ability to assist in the operations of the Academy. After becoming the Curator, Cassin devoted himself to the study of the natural history, taxonomy, and systematic relationships of birds. Elliot Coues once remarked that Cassin was "the only ornithologist this country has ever produced who was as familiar with the birds of the Old World as with those of the Americas." Before his death, Cassin became one of the leading systematic ornithologists of the world. For this reason, Stone (1901) regarded Cassin as "the first true ornithologist" in the United States. During his life, Cassin described 194 new species of birds working only from museum specimens. These included four new taxa from Texas. The most notable of his many books and papers was *The Birds of North America*, which he co-authored with Spencer Fullerton Baird and George Newbold Lawrence and published in 1860. Cassin's death in 1869 was caused by arsenic poisoning from his handling of bird skins preserved with the toxic metallic element. After his death, his collection of 4,300 birds was purchased and given to Brown University, which later transferred most of the collection to the United States National Museum.

As a youth in New York City, **George Newbold Lawrence** (1806–1895) developed an interest in birds. At the age of 20, Lawrence became the head of a wholesale drug firm. His business relationships led to an 1841 meeting with Spencer F. Baird of the Smithsonian Institution. Following that introduction, Lawrence began to devote more time to the pursuit of ornithology and soon began to publish papers based on his examination of avian specimens in the US National Museum's collections. He generously organized and financed several of the Smithsonian's expeditions before spending 10 years collaborating with Baird and John Cassin to publish the ninth volume of the Pacific Railway reports. The three men revised and expanded the report on birds to produce and publish *The Birds of North America* in 1860. Lawrence described eight of the avian taxa from Texas, but also is remembered for publishing 120 papers and describing 323 species. Lawrence's private collection of more than 8,000 bird skins was donated to the American Museum of Natural History. His colleagues named one genus and 20 species after him.

One of the most prolific private collectors and describers of Texas birds was **George Burritt Sennett** (1840–1900). After making three collecting trips to the Lower Rio Grande Valley and South Texas in 1877, 1878, and 1882, Sennett thereafter paid collectors, including John M. Priour, William Lloyd, and Marston Abbott Frazar, to supply specimens from Texas and Mexico. Based on the specimens in his collection, Sennett published 17 scientific papers comprising more than 175 pages in which he described two new species and seven new subspecies of Texas birds. Four subspecies of Texas birds and a species of rodent bear his name. Upon his death, his collection of more than 1,000 bird skins and 2,400 eggs was deposited in the American Museum of Natural History.

A letter and a drawing that **Robert Ridgway** (1850–1919) sent at the age of 13, asking about the identity of a bird, initiated an exchange of letters with Spencer Fullerton Baird, Secretary of the Smithsonian Institution, which would lead Ridgway to a lifelong career in ornithology. In 1867, Baird arranged for Ridgway to learn how to prepare study skins and to accompany the survey of the 40th Parallel as a naturalist. During this survey and subsequent trips to Nevada, Utah Territory, and Idaho Territory, Ridgway collected 769 specimens of birds and 753 nests. Upon his return to Washington, he was appointed to be the first Curator of Birds at the Smithsonian Institution. In addition to helping found the American Ornithologists' Union, Ridgway published more than 500 titles, including 14 descriptions of Texas birds. Ridgway's crowning work was the 11-volume, 6,000-page *The Birds of*

North America published by the Smithsonian between 1901 and 1950.

No individual had a greater influence on Texas ornithology than **Harry Church Oberholser** (1870–1963). In 1895, Oberholser began his professional career in Washington, DC, as an ornithological clerk for the agency that would later become the US Fish and Wildlife Service. While working for the government, he earned three academic degrees from George Washington University, including a PhD in 1916. In 1900, he was sent to Texas on the first of three trips in which he was charged with conducting statewide fieldwork to expand knowledge of the Texas avifauna. Twenty-three of the taxa described from Texas were described by Oberholser, and nine new Texas forms were based on specimens he collected. After retiring from government service in 1941, Oberholser became the Curator of Ornithology at the Cleveland Museum of Natural History. During his career, he named 11 new families and subfamilies, 99 genera and subgenera, and 560 species and subspecies of birds worldwide (Chapman and Bolen 2018). Of Oberholser's nearly 900 publications, *The Bird Life of Texas*, a two-volume testament to his extensive knowledge, stands alone as his most monumental achievement. However, the 1,068 pages in the published book represent just a fraction of the original manuscript, which contained nearly 12,000 pages and three million words. The original version of the manuscript is available at the Dolph Briscoe Center for American History in Austin. The Dusky Flycatcher, *Empidonax oberhosleri*, was named in honor of Dr. Harry Church Oberholser (Phillips 1939).

Many other listers, collectors, and describers have contributed significantly to the knowledge of Texas birds, but it is not feasible to include brief biographies about them. Because of their efforts, ornithology has prospered in Texas during the last century. Aided by the publication of the first illustrated field guides that included Texas birds (Peterson 1934, 1941) and the first state-oriented field guide (Peterson 1960), Texas became a birding mecca. Organization of the Texas Ornithological Society in 1953 initiated a continuing collaboration between birders and ornithologists (Casto 1993). Ornithologists such as **Ralph R. Mouldenhauer** (1935–2018) at Sam Houston State University, **M. Kent Rylander** at Texas Tech University, and **Keith A. Arnold** at Texas A&M University, and many others, lent their professional expertise to ensure that the collaboration and the TOS was successful. Although the number of academic institutions maintaining avian specimens in teaching and research collections has diminished in recent years, the value of specimens remains great as biologists attempt to explain variation in natural populations by examining morphology in combination with studies of ecology, behavior, and genetic analysis (Monroe 1982; O'Neill 1982; Storer 1982; Zusi 1982; Remsen 1995).

SUMMARY

Some summaries of interest in the various listings and connections included in this account are as follows:

- Of the 117 names applied to taxa describe from Texas, 85 have holotype specimens designated. The holotype specimen for one hummingbird species was subsequently lost and the taxon it represented is no longer considered a valid taxon because no neotypes have ever been obtained. Prior to 1900, it was common for describers to designate one or more syntypes. The description of 30 forms described from Texas were based on multiple syntype specimens. In four of the catalog entries, the type localities of the syntype specimens are from Texas and different locations outside of the state. Coues (1888) based his description of *Chordeiles popetue sennetti* on two syntype specimens, one from Wharton County, Texas, and the other from 50 miles west of Pembina, Minnesota; the descriptions of *Peucaea illinoensis* and *Otocorys alpestris praticola* were based on syntypes from Texas and Illinois; and the description of *Zonotrichia leucophrys intermedia* came from syntype specimens in Texas and multiple other states. Syntypes for 26 taxa are totally within Texas. Syntypes for *Meleagris gallopavo ellioti* (= *Meleagris gallopavo intermedia*) are from Hidalgo and Cameron counties,

and the syntypes for *Otocorys alpestris giraudi* (= *Eremophila alpestris giraudi*) are from Nueces and Cameron counties. Two syntypes for *Anas maculosa* (= *Anas fulvigula maculosa*) are from different localities in the same county (Nueces). Brown (1882) indicated that the description of *Peucaea ruficeps eremoeca* was based on multiple specimens of both sexes from the same locality, but the number of syntype specimens was not specified.

- Of the 117 names applied to recognized taxa from Texas, 44 are invalid, in most cases because the supposed races prove inseparable, but also, in other cases, because of purely priority considerations, and three are no longer recognized due to nomenclatural reasons (see Table 5 in Introduction). In other words, 40.2% of the names applied originally to Texas birds are now untenable. However, even in these cases it is important to know the accurate type localities, because as concepts and criteria in systematics shift, some of these names could be returned to full taxonomic status. One avian taxon originally described from Texas was not recognized because the holotype specimen was lost and neotype specimens to support the description have not been obtained.

- Of the 117 taxa described from Texas, 32 (27.4%) originally were described as species and 85 (72.6%) as subspecies. Of those originally described as species, 3 remain unchanged, 6 remain valid but are now in a different genus, 1 is a *nomen dubium*, 9 are in synonymy of other taxa, and 13 are now considered to be subspecies. Of the 85 that were described as subspecies, 27 have retained that status, 14 remain valid but are now in a different genus, 6 remain valid but are now assigned to a different species, 35 are synonyms of other species, 2 have been declared invalid because they were described from type specimens that were determined to be hybrids, and 1 has been elevated to full species status.

- In addition to *Phamornis mystica*, which has been declared a *nomen dubium*, *Empidonax obscurus*, a name that Oberholser (1974) maintained had priority over *O. wrightii*, has been assigned the same status. The names of two taxa of Texas birds, *Parus bicolor texensis* and *Parus stricristatus castaneifrons*, are invalid because both are considered hybrids of *Baeolophus astricristatus sennetti* and *Baeolophus bicolor*. According to the International Code of Zoological Nomenclature, names deliberately applied to hybrids have no status nomenclaturally, and those inadvertently applied to interspecific hybrids are occupied but not available (see Smith and Williams 1970).

- Type localities have been designated from 61 locations in 33 of the 254 Texas counties. Type localities for 18 taxa are general in nature and cannot be ascribed to a specific county within Texas (14) or an exact location within a county (4). The counties with type localities for the greatest number of taxa described therein are Cameron (19), Brewster (13), Nueces (10), Hidalgo (9 taxa), Bexar (7), and Val Verde (4) (see Table 2 in Introduction). The two regions of the state with the greatest concentration of types are the three counties (Cameron, Hidalgo, and Starr) comprising the Lower Rio Grande Valley (31 taxa) and the three counties (Brewster, Presidio, and Val Verde) bordering the Rio Grande in the eastern Trans-Pecos (19 taxa).

- Of the 117 taxa described from Texas, 89 (about 78%) are represented by topotype specimens and 57 (about 52%) have near topotype material. Considering all of the catalog entries, it has been on average about 70 years since the original type specimen or topotypes have been collected at the type locality. As would be expected, less time has expired since near topotypes have been obtained near the type localities (mean of approximately 60 years). Although exact numbers are lacking, it appears that most topotype and near topotype specimens lack genetic tissues.

- Texas type specimens were described by 38 senior authors. The most prolific describers were Harry C. Oberholser (23), Robert Ridgway (14), George N. Lawrence (10), and George B. Sennett (9). Five of the 117 taxa in the catalog were described by multiple authors.

- Of the 46 principal (first listed) collectors who obtained Texas type specimens, Frank B. Armstrong, Captain John P. McCown, Harry C. Oberholser, John M. Priour, and George B. Sennett contributed the largest number of specimens (nine each). Both Oberholser and Sennett obtained their own specimens in the field, but they also based taxonomic descriptions on specimens supplied by others and provided specimens to other describers. Type specimens for seven taxa were obtained by collectors whose identities remain unknown.

- Ten museums or university collections house type specimens of birds described from Texas. Of these, the United States National Museum has by far the most (64 types, or 55% of the total), followed by the American Museum of Natural History with 26 (22%). The Museum of Comparative Zoology, Harvard University, and the University of Michigan Museum of Zoology each hold six types and several large series of topotype and near topotype specimens. The current whereabouts of three type specimens, two of which were originally retained in the private collection of Herbert W. Brandt, are unknown.

- Descriptions of types from Texas got off to an early start. Eight taxa were described before Texas became a state, and a total of 27 taxa had been described by 1875. The period of greatest activity in terms of published descriptions was from 1876 to 1925, when 51 forms (44% of the total) were described. The second greatest period of descriptive intensity was from 1926 to 1975, when 36 taxa (31%) were described.

- The collectors for 110 of the 117 taxa described (94%) are known, and of course all of the describers have been identified. Collectively, these people include some of the best known scientific, museum, and local naturalists of their era, and some collected or described both birds and mammals.

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Catalog 3: Type Specimens, Type Localities, Synonymies, and Authors/ Collectors of Amphibians and Reptiles Described from Texas

Carl S. Lieb

Amphibians and reptiles are the "leftovers" in vertebrate zoology, not very similar to each other in any biological sense, and for the most part, lacking in much economic or charismatic value to civilization as compared to mammals, birds, and even fishes. It was not unusual for those publishing in natural history in the 18th and 19th centuries to produce articles in herpetology as a side to their main interest in the more glamorous vertebrates, or even in some invertebrates or plants. As the 20th century progressed, much more specialization occurred, largely driven by development of research programs in zoology, at some level, at nearly every four-year higher education institution in Texas and other states. Another series of developments through the 20th century until modern times was the gradual stiffening of the rules of Zoological Nomenclature regarding availability of names (i.e., proper publication), the validity of names (i.e., the "correct" name), and the appropriate designation of type specimens. The laxity in naming conventions and use of multiple types ("syntypes") and type localities of new species in the 17th and 18th centuries created a series of problems for later taxonomists in herpetology and has impacted the strategy for producing the contents of this catalog.

The scope of the present work on amphibians and reptiles differs significantly from the preceding accounts in being much more complex, with many cases of 19th century type specimen descriptions coming from several type localities (counties, states, or countries). Also, a few prolific and influential 20th century herpetologists exercised their "freedom of taxonomic thought and action" by publishing vague, ambiguous, or multiple 19th century type localities that "restricted" the original version to a more specific place name that suited their perception of the taxon's distribution. In this catalog, I have attempted to address the entire messy history of Texas' herpetological type-locality determinations and manipulations for all extant specific or subspecific taxa with at least one type or syntype specimen that ostensibly originated from Texas. Initially, 180 such taxa of amphibians and reptiles were identified to fit the criterion of having some type specimen material that either originated from Texas or was thought to have come from there. From the mid-1800s to recent times, the 19th century syntypes with multiple type localities involving several states or several different locations in Texas were gradually reduced by credible type locality restrictions to another state, a single county in Texas, a series of counties within Texas, or just the simple acknowledgment that they came from someplace in Texas and not another state or country. Applying these criteria, all but 9 of the original 180 taxa have been included as entries in this catalog. The excluded nine taxa, all described in the 19th century, fall into two distinct categories: 1) taxa originally described from Texas type material, but that type material was later found not to have originated from Texas, or by formal lectotype designation among a series of syntypes from a non-Texas state or country; and 2) species described from syntypes originating from multiple states (including Texas), but neither a lectotype designation nor a credible type locality restriction has yet placed them in a single state. These nine taxa are listed below; those taxa in the second category would benefit from a carefully considered intervention by lectotype designation.

1) Taxa for which type material is not from Texas, or by lectotype designation is now in another state:

Scaphiopus bombifrons (= *Spea bombifrons*): Lectotype designation restricted type locality to Nebraska (Fouquette and Dubois 2014).

Cnemidophorus perplexus (= *Aspidoscelis neomexicanus*): Lectotype found to be from New Mexico, not Texas (Maslin et al. 1958).

Holbrookia approximans: Endemic to Mexico (Axtell, in Degenhardt et al. 1996).

Sceloporus poinsettii poinsettii: Lectotype designation restricted type locality to New Mexico (Webb 1988).

Eutaenia marciana (= *Thamnophis marcianus*): Origin of holotype now known to be Oklahoma (Cochran 1961).

Heterodon catesbyi (= *Heterodon simus*): Syntypes a mixed series with Texas *H. nasicus* (Walley and Eckerman 1999); type locality restriction to South Carolina (Schmidt 1953).

2) Taxa for which type material includes a series of syntypes from Texas and elsewhere and type locality is unresolved:

Diemyctylus miniatus meridionalis (= *Notopthalmus meridionalis*): Syntypes from Texas and Mexico (Brame 1985b); no lectotype designation.

Sceloporus thayeri (= *S. consobrinus* or *S. cowlesi*): Syntypes from both Texas and "Sonora" [= NM]; no lectotype or type location restriction.

Uta ornata (= *Urosaurus ornatus ornatus*): Syntypes from both Texas and "Sonora" [= NM]; no lectotype supporting type locality restriction.

The remaining 171 taxa were used to construct Lists 3.1 and 3.2 of this volume, and the subset of those that could be associated with one county (in one case, two) by either original designation or subsequent type locality restriction were used for List 3.2 and the accompanying county distribution maps. These summaries for amphibians and reptiles simplify the complex histories of the named taxa and their type localities into those that are clearly from Texas, thereby achieving some measure of compatibility to the presentation in the mammal and bird catalogs.

The arrangement the two orders of amphibians (Caudata and Anura) and two orders of reptiles (Testudinata and Squamata) with taxa described from Texas follows a conventional taxonomy, including division the Squamata into suborders for the lizards and the snakes. Within each order or suborder the families are arranged alphabeltically, and within each family the individual accounts for each taxon are alphabetized by the original Latin name proposed by its describer. Each individual account is headed by this original name in boldface italic type. If the name accepted as valid for this catalog differs from that used in the original species description, then on the line under that synonymized taxon there will be the equals sign (=) followed by the accepted valid name in boldface italics. Below the valid scientific name, the current English common name of the taxon is provided in brackets. These common names were mostly drawn from those for North American herpetofauna suggested by the Committee on Standard English and Scientific Names (2017), except where they needed to be modified for disparate valid name choices used by the catalog. Because proposals for junior subjective synonyms are perforce hypotheses, the most recently published name usage (the last name to appear in the synonymy) may not be the same as the valid name accepted in the catalog. Several recent phylogeographic studies have proposed name usages that incompletely address historical taxonomic and nomenclatural issues involving Texas herpetology; these proposals are not rejected but only held in abeyance until those issues (explained in the Remarks section of the affected accounts) are addressed with future genetic sampling and/or analyses. In a few cases, taxonomic changes were not proposed, but the genetic data themselves make taxonomic assignment of Texas populations based on type localities and specimens problematic (e.g., see account for *Urosaurus ornatus schmidti*).

Taxonomic synonymies for each species or subspecies entry are listed chronologically by year and in an abbreviated publication citation format. The citations that appear only in synonymies and not cited elsewhere in the text are not replicated in the Literature Cited. Each synonymy emphasizes *first uses* of names that have been associated with a biological entity naturally occurring in Texas and described in whole or in part from there. Subsequent repetitions of that name in a synonymy occur where there has been taxonomic back-and-forth shifting with respect to the application of that name, or in cases where individual works are significant to pertinent nomenclature issues, recent taxonomic proposals, or other situations relevant to the purposes of this catalog. Also, mere misspellings (*lapsus calami*) of names in the literature have been eschewed, except where they have been sources of controversy. In several cases, there may be two different years of publication for the same article; in these cases (with one exception) the earlier year is used for

ordering the citation, and the alternate later year is in parentheses before the volume and/or page number. The single exception is Cope's posthumous publication in 1900 of *Crocodilians*, *Lizards*, *and Snakes of North America*, a tome finished in 1898; it is a herpetological tradition to cite that work by the latter year.

Naming of monophyletic clades uncovered by recent phylogenetic studies of speciose genera of reptiles and amphibians (especially the latter) have in recent years so strained the capacity of the traditional Linnaean category and rank framework that some taxonomists have resorted to recognizing or creating genus-like names for newly revealed nested clades within established genera. For example, Hillis and Wilcox (2005) pointed out that the current Code of Zoological Nomenclature (International Commission on Zoological Nomenclature 1999) calls for each named nested clade within a genus, beginning with the primary clade on down to its individual terminal clades, to be referred to as a "subgenus." In several cases in this catalog, new combinations of names using subgenera for primary within-genus groupings (or *sous-genre*, and in one case a "crown clade") have been included in synonymies of taxa. These were new name combinations in the work clearly stated in full (all parts of the new name) that could be tied to a page number. The subgeneric terms were sometimes entirely new creations, but in some cases were recycled, previously used generic names with a lengthy history in zoological literature. This catalog's format for these entries was to follow the citation's author(s) stated full genus with a parenthetical inclusion indicating the verbatim within-genus rank in front of the proposed within-genus name itself (a capitalized Latin noun). If the new combination cited in the synonymy could not include the verbatim indication of within-genus rank (which should be "subgenus," see above), the rank the author(s) used elsewhere in the publication was placed in brackets and appropriately situated within the parenthetical expression.

However, a major exception to this format for parenthetical inclusion of subgeneric names in the synonymies occurs in this catalog as they were cited verbatim from Dixon (2013). These eccentric first-use combinations occur in catalog accounts for taxa in the genera *Syrrhophus*, *Anaxyrus*, *Incilius*, *Lithobates*, *Plestiodon*, *Aspidoscelis*, and *Pantheropis*. In these synonymy entries, the first genus was the one the author apparently preferred, and what followed in parentheses was not a subgenus but rather an alternative genus (frequently in common, current use) that Dixon less-favored or even rejected outright. The evidence for this is that whenever he cited one of these taxa elsewhere in that entire work, he always used (or abbreviated) the first genus and not the parenthetically enclosed second. Dixon's (2013) names heading his species accounts that employed parenthetical inclusions cited in this catalog's synonymies thus seem to be expressions of independent taxonomic thought.

The present account was mostly assembled during the months of the Covid pandemic of 2020, when library, museum, and most university facilities were highly restricted to public access. Electronic sources, not only those with public access, but also those subscribed to by the University Library at the University of Texas at El Paso (UTEP), were invaluable in this regard. However, there are still many herpetological works that exist only in printed form; the author of this account was fortunately allowed essential access to the book and reprint collection of the Webb Herpetology Library in the Department of Biological Sciences at UTEP throughout the pandemic shutdown. The most important online sources of information used with respect to determining topotypic and near topotypic museum specimens was the VertNet website specimen portal (http://portal.vertnet.org/search). Unfortunately, three museum collections (AMNH, FMNH, and UTA) with major holdings of Texas amphibian and reptile specimens do not post specific locality information on VertNet more precise than the county level, and thus when individual specimen locality data for these is cited, the information has come from previously published information or sources other than VertNet (e.g., Global Biodiversity Information Facility data mapped on the AmphibiaWeb site). Travis J. LaDuc of the University of Texas [at Austin] Biodiversity Collection (TNHC) was kind enough to provide the author a spreadsheet of the herpetological holdings of the BUMMC, a very important historical collection for Texas. Other than VertNet, the most important website used to obtain biographical information on collectors and the historical context of their activities was the Texas Historical Society's digital encyclopedia, the *Handbook of Texas* (https://www.tshaonline.org/handbook).

Taxonomic synonymies are based on listed names, dates, and citations assembled previously by other scholars, a tradition that goes back to the natural history treatises of the 18th century. Some synonymies are more eclectic and thorough than others, but over the decades they have gradually had omissions filled in and errors corrected. Particularly thorough synonymies modified and/or updated for the present work were drawn principally from the following sources: the Amphibian Species of the World website (https://amphibiansoftheworld.amnh.org/), the Reptile Database website (http://www.reptile-database.org/), species accounts among the Society for the Study of Amphibians and Reptiles Catalog of American Amphibians and Reptiles, species accounts in the Interpretive Atlas of Texas Lizards completed by the late Ralph Axtell, and the venomous snake compendia in Campbell and Lamar (2004). An effort was made to have the final entry in each synonomy match the catalog's accepted valid name; however, verbatim concordance was not always possible to bring about with standard-publication sources. For example, the teiid lizard genus *Aspidoscelis* was determined by Tucker et al. (2016) to be masculine, and the gender endings for *Aspidoscelis* has been used in the verbatim valid usages in this catalog as appropriate. However, conversion of the specific and subspecific epithets from their modern feminine endings has not yet been widely used in current literature to date (although it is promulgated in the online Reptile Database).

The author made small edits to incomplete or misleading type localities, except where the original verbatim statement was patently erroneous. In a few cases, a problematic type locality for a taxon can only be remedied by direct taxonomic or nomenclatural action. These problems and some possible solutions have been pointed out, but should be addressed with well-considered actions supported by additional research. However, the author has been proactive in the present work with his own "freedom of taxonomic thought and action" regarding use of generic names (e.g., *Syrrhophus*, *Masticophis*), taking sides in species versus subspecies debates, and other influences on herpetological thinking provided to him by herpetologists of the last half century that he has met and known personally.

The Remarks section in those accounts of taxa thought to be of critical conservation concern by the Texas Parks and Wildlife Department (TPWD) and the US Fish and Wildlife Service (USFWS) briefly mentions their official status. The most recent information about them can be found at the following website: (https://tpwd.texas.gov/huntwild/wild/wildlife_diversity/nongame/listed-species/media/fedStateListedSpeciesComplete-3302020.pdf.)

List 3.1. Accounts for Amphibian and Reptile Taxa Described from Texas Localities

CLASS AMPHIBIA

ORDER CAUDATA
Family Ambystomatidae

Ambystoma proserpine Baird and Girard, 185
= *Ambystoma mavortium mavortium*
[Barred Tiger Salamander]

1825. *Salamandra tigrina* Green, J. Acad. Nat. Sci. Phila. 5:116.

1831. *Salamandra ingens* Green, J. Acad Nat. Sci. Phila. 6:254.

1839. *Salamandra lurida* Sager, Amer. J. Sci. Arts 36:323.

1850. *Ambystoma mavortia* Baird, J. Acad. Nat. Sci. Phila. 1:284, 292.

1852. *Siredon lichenoides* Baird, in Baird and Girard, Proc. Acad. Nat. Sci. Phila. 6:68.

1852. *Ambystoma proserpine* Baird and Girard, Proc. Acad. Nat. Sci. Phila. 6:173.

1867. *Ambystoma trisruptum* Cope, Proc. Acad. Nat. Sci. Phila. 19:194.

1940. *Ambystoma tigrinum mavortium* Dunn, Copeia 1940:158.

1948. *Ambystoma tigrinum proserpine* Smith and Taylor, U.S. Nat. Mus. Bull. 194:14.

1996. *A*[*mbystoma*] *t*[*igrinum*] *mavortium* Schaffer and McNight, Evolution 50:430.

1997. *A*[*mbystoma*] *m*[*avortium*] *mavoritum* Collins, Stand. Common Curr. Sci. Names North Amer. Amphib. Rept., 4th ed., SSAR Herpetol. Circ. 25:5.

Type specimens.—Originally at least eight or more syntypes, USNM 4082. No specimens were cited by this number in the original description, which refers to six immature specimens obtained without collector attribution, and to an unspecified number of "nearly full grown" individuals collected by Richard H. Kern. Smith and Taylor (1948) indicate that six syntypes of USNM 4082 existed. Cochran (1961) subsequently indicated there were only three syntypes remaining, and these were collected by US Army Surgeon L. A. Edwards from Texas (see below). The images of these three syntypes posted by the USNM database website show three recently transformed subadults with body lengths of 5–6 cm, suggesting that these are from among the immature syntypes, which by inference would be from the syntypic series collected by Edwards (and not by Kern).

Type locality.—The original language for the sources of the type material is "Salado, four miles from San Antonio, Texas" for the immature specimens, and "on the route from Montgomery, Mexico" for the near-adult specimens attributed to Kern. Smith and Taylor (1948) amended the first of these localities to "Salado [River], 4 miles east of San Antonio, Texas" (used also by Cochran 1961 for the USNM 4082 syntypes), and the second altered to "from Mexico" only, possibly "on the route from Montgomery, Mexico." The referenced Salado River would be Salado Creek, the course of which lies mostly within the city limits on the east side of modern San Antonio. Two years later, Smith and Taylor (1950a) restricted the type locality for *Ambystoma tigrinum prosperpine* to San Antonio, Bexar County, Texas, although this restriction seems unnecessarily broad. As for the other type locality, the reference to "Montgomery" is likely a *lapsus* for the lower Rio Grande border city of Matamoros in Tamaulipas. Indeed, the USNM database has the locality data from the three USNM 4082 specimens as being from "Tamaulipas," without further locality data, collector, or collection date. If these were the "nearly grown" Kern-collected specimens, they should have at least 2 cm more body growth evident in the USNM database image. That they are relatively small, transformed individuals suggests they are not Kern's and instead represent the syntypes from Texas reported by Cochran (1961).

Topotypes.—None found.

Near topotypes.—Bexar Co: Helotes, 4 (BUMMC); these are without a collection year, but were collected by Gabriel Marnock and thus date from the late 19th century. No other specimens from Bexar County were located for this catalog. The closest counties to Bexar indicated by Dixon (2013) for this salamander are Burnet to the north, Val Verde to the west, and Duval to the south. However, there is a 2011 image of a specimen posted on the iNaturalist website from the vicinity of Dunlap Lake in adjacent Guadalupe County.

Remarks.—The USNM photographic image of the extant *Ambystoma prosperpine* syntypes show badly faded specimens that appear to be *Ambystoma mavortium*. However, Dixon's (2013) comprehensive survey of Texas county distributions does not record the Barred Tiger Salamander from Bexar County at all. That work does, however, show a Bexar County record for *Ambystoma tigrinum*. This record could have come from old records of Strecker (1922) who referred to this species as the "largest and most abundant" of the Bexar County salamanders, although from his account it is not clear whether he was referring to *Ambystoma mavortium* (known from western Texas and the Panhandle) or *Ambystoma tigrinum* (from east of the Brazos River). A confirmation of the identity of the four near-topotype specimens at BUMMC collected from Helotes (now catalogued as *Ambystoma m. mavortium*) would be helpful in understanding the historical distributions of both tiger salamander species in Texas.

Salamandra texana Matthes, 1855
= *Ambystoma texanum*
[Small-mouthed Salamander]

1855. *Salamandra texana* Matthes, Allegmeine deutsch naturhistorische (N.S.) 1:266.

1856. *Ambystoma porphyriticum* Hallowell, Proc. Acad. Nat. Sci. Phila. 8:8.

1859. *Ambystoma texanum* Baird, Rept. Boundary, U.S. Mex. Bound. Surv., Vol. 2:29.

1861. *Amblystoma microstomum* Cope, Proc. Acad. Nat. Sci. Phila. 13:123.

1889. *Chondrotus microstomus* Cope, Bull. U.S. Nat. Mus. 34:99, 100.

1889. *Chondrotus texanus* Cope, Bull. U.S. Nat Mus. 34:99, 104.

1928. *Ambystoma texanum* Strecker and Williams, Contr. Baylor Univ. Mus. 17:6.

1959. *Linguaelapsus texanus* Freytag, Vierteiljarschrift de Naturforsch. Ges. Zurich 104:88

1989. *Ambystoma schmidti* Kraus and Nussbaum, J. Herpetol. 23:79.

2012. *Ambystoma* (Subgenus *Linguaelapsus*) *texanum* Dubois and Raffaëlli, Alytes 28:148.

2017. *A*[*mbystoma*] *texanum* Highton et al., Caudata-Salamanders, pp. 25–37 in Crother (Chair), Com., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol. Circ. 47:26.

Type specimens.—Obtained by the describer, the Silesian physician Benno Matthes in the Fall of 1853. Matthes reached Fayette County (see below) in September of that year, and collected various other plant and animal species there until the following summer (Geiser 1941). These specimens were deposited in December of 1854 with a museum in Dresden, Germany, and ostensibly destroyed during World War II. Whereas Anderson (1967) asserted the types were "not known to exist," Brame (1985a) indicated there is a surviving syntype at the Naturhistorisches Museum in Wien, Austria (NMW No. 22920).

Type locality.—"Das erste Exemplar fand ich unter einem faulen Baumstamme im Urwalde am Rio Colorado, das zweite ebenfalls … im Cumming's Creeck Bottom Fayette County." A rough translation is: "the first example I found under a fallen tree trunk in primeval [forest] of the Colorado River, the second also in Cummings Creek bottom, Fayette County [Texas]." The "also" is interpreted here to indicate both type localities are within Fayette County, and are so treated here. The type locality was restricted by Schmidt (1953) to "Rio Colorado bottom land," Fayette County, Texas (see Remarks).

Topotypes.—None found.

Near topotypes.—Nearest specimens taken in Colorado County (TCWC) are not near the Colorado River. No other specimens have been found from the Cummings Creek area of eastern Fayette County.

Remarks.—Matthes' biographer (Geiser 1941) hailed him as Texas' "earliest herpetologist." He arrived in the United States in 1851, and established a medical practice in Cincinnati (Ohio) after studying and collecting salamanders in several northeastern states. Matthes planned an extensive collecting trip to Louisiana, Texas, and Mexico for 1853, but ended up spending most of his expedition living with a friend in the town of Round Top, Fayette County, Texas. Matthes would have reached Round Top via the main east-west stage route north of the Colorado River from Houston to La Grange, and then north on a second stage route to Round Top. The syntypes of *Salamandra texana* from the Colorado River likely originated from the vicinity of Colorado River community of La Grange, and the "Cummins Creek" syntypes from that watercourse flowing west to east about a half kilometer south of 19th century Round Top.

Family Plethodontidae

Eurycea chisholmensis Chippindale, Price, Wiens, and Hillis, 2000
[Salado Salamander]

1982. *Eurycea neotenes* (in part) Sweet, Herpetologica 38:441.

2000. *Eurycea chisholmensis* Chippendale et al., Herpet. Monogr. 24:40.

2001. *Eurycea* (subgenus *Septentriomolge*) *chisholmensis* Hillis et al., Herpetologica 57:277.

2012. *E*[*uryce*] *chisholmensis* Tilley et al., Caudata – Salamanders, pp. 23–31 in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 7th ed., SSAR Herpetol. Circ. 39:27.

Type specimen.—Holotype adult male TNHC 58859, obtained 1 August 1998 by Paul T. Chippindale. Original number PC 1998-9.

Type locality.—In about 10 cm of water, side spring immediately adjacent to Main Spring (= Salado, Big Boiling, or Siren Springs), Salado, Bell County, Texas, 30°56'37"N, 97°32'31"W. Later in the description, the authors refer to the type locality as being on the south bank of the creek, within a municipal park.

Topotypes.—Bell Co: Salado, lower spring, 3 (TNHC); Salado, upper spring, 2 (TNHC); Salado Springs, 4 (TNHC); Salado, 1 (TNHC). The last of these topotypes were collected in 1991. Tissue samples were listed by Devitt et al. (2019, Table S6) from Robertson Springs, with georeferenced coordinates essentially the same as for specimens from Salado Springs. There is no record of museum specimen vouchers associated with the tissue samples.

Near topotypes.—Bell Co: Solana Ranch Springs, 7 (AGG [Andrew G. Glusenkamp]), tissue samples only, cited in Devitt et al. (2019, table S6); apparently no museum vouchers specimens were saved.

Remarks.—The Salado Salamander is protected as both a Texas and federal Threatened species (TPWD 2020; Davis and LaDuc 2021).

Eurycea latitans Smith and Potter, 1946
[Cascade Caverns Salamander]

1937. *Eurycea neotenes* Bishop and Wright, Proc. Biol. Soc. Wash. 50:142.

1938. *Eurycea neotenes* Wright and Wright, Trans. Texas Acad. Sci. 21:31.

1946. *Eurycea latitans* Smith and Potter, Herpetologica 3:105.

1953. *Eurycea neotenes latitans* Schmidt, Check List North Amer. Amphib. Rept., 6th ed., p. 55.

1965. *Eurycea tridentifera* Mitchell and Reddell, Tex. J. Sci. 17:14.

1966. *Typhlomolge tridentifera* Wake, Mem. S. California Acad. Sci. 4:64.

1972. *Eurycea tridentifera* Mitchell and Smith, Tex. J. Sci. 23:344.

1977. *Eurycea tridentifera* Sweet, Cat. Amer. Amphib. Rept. 199:199.1.

1984. *Eurycea tridentifera* (in part) Sweet, Copeia 1984:438.

2001. *Eurycea* (subgenus *Blepsimolge*) *latitans* Hillis et al., Herpetologica 57:277.

2001. *Eurycea* (subgenus *Blepsimolge*) *tridentifera* Hillis et al., Herpetologica 57:277

2012. *E*[*urycea*] *latitans* Tilley et al., Caudata – Salamanders, pp. 23–31 in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 7th ed., SSAR Herpetol. Circ. 39:27.

Type specimen.—Holotype, male, USNM 123594, obtained 15 May 1946 by Floyd E. Potter.

Type locality.—Cascade Caverns, 4.6 miles by road (3.5 miles airline) southeast of Boerne, Kendall County, Texas, in "the first large pool deep within the recess of [the cavern]."

Topotypes.—Kendall Co: Cascade Caverns, 5 (BUMMC, TCWC), 3 (TNHC), 2 (MVZ), 1 (CUMV). The last specimens of these were collected in 1959. Sweet (1984) was only able to locate ten other specimens obtained from the type locality after 1965.

Near topotypes.—Kendall Co: Pfeifer's Water Cave, 6 (TNHC). Chippindale (2020) indicated this water cave system is an extension of that in Cascade Caverns. The VertNet database indicates availability of tissue samples from these six specimens; one of them (TNHC 54533, original number DMHH-92-101) was used by Devitt et al. (2019, Table S6) as a sample of *E. latitans* in which he reported "genetic admixture" with *E. neotenes* (see Remarks).

Remarks.—In the 1970s, TPWD listed the Cascade Caverns Salamander as a state Threatened species, ostensibly due to its apparent decline to rarity at the only known locality. It remains so listed today (Davis and LaDuc 2021), and a petition for federal listing is under review by the USFWS (TPWD 2020). The species may advance to candidacy for listing, but federal action is unlikely until some pending taxonomic, distributional, and evolutionary genetics issues are resolved. Genetic studies (Sweet 1977, 1984; Devitt et al. 2019) have identified potentially complex genetic interactions among taxa of the troglobitic plethodontid salamanders of central Texas that call into question the species limits of some of the taxa, including *E. latitans* and *E. troglodytes*. The nominal species *Eurycea latitans*, *E. neotenes*, and *E. tridentifera* are thus considered in this catalog as provisionally valid taxa until the gene flow and evolutionary divergence issues are investigated further.

Eurycea nana Bishop, 1941
[San Marcos Salamander]

1941. *Eurycea nana* Bishop, Occ. Pap. Mus. Zool. Univ. Mich. 451:6.

1953. *Eurycea neotenes nana* Schmidt, Check List North Amer. Amphib. Rept., 6th ed., p. 55.

2001. *Eurycea* (subgenus *Blepsimolge*) *nana* Hillis et al., Herpetologica 57:277.

2012. *E*[*urycea*] *nana* Tilley et al., Caudata – Salamanders, pp. 23–31 in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 7th ed., SSAR Herpetol. Circ. 39:27.

Type specimen.—Holotype, male, UMMZ 89759, obtained 22 June 1938 by Charles E. Mohr.

Type locality.—Lake at the head of the San Marcos River at San Marcos, Hays County, Texas. Created by an 1849 dam on the river and subsequently named Spring Lake, the lake is shaped somewhat like a decapod claw, with the larger lower claw receiving surface water drainage from Sink Creek, and the smaller upper claw overlying the cluster of major springs (San Marcos Springs proper) that form the source of the San Marcos River. At the time of the collection of the holotype, there was only a small hotel in the area, but subsequent tourist development of the Springs area of the lake eventually became a theme park known as Aquarena Springs (in operation from 1951 to 1994). The upper part of the lake (the Springs) is now occupied by the Meadows Center for Water and the Environment at Texas State University.

Topotypes.—Over a thousand museum specimens were located from the San Marcos Springs-fed portion of Spring Lake (although the locality may be cited in the collection in various ways, especially "headwaters of the San Marcos River"). Hays Co: San Marcos, 344 (TNHC), 334 (MVZ), 138 (TCWC), 50 (BUMMC), 40 (LSUMZ), 33 (FMNH), 25 (UMMZ), 24 (AMNH), 23 (MSUM), 17 (ASNHC, USNM), 13 (UTA), 11 (CM, KU), 10 (LACM), 9 (BYU), 7 (UF), 6 (CAS, MCZ), 4 (ASU), 3 (PSM), 2 (CUMV), 1 (IRSNB, SLU, UTEP). The last specimens were collected 2008. VertNet database indicates that blood samples from TNHC 51167–68 (original numbers AHP 3078–79) were taken, but their availability is unknown. Devitt et al. (2019, Table S6) had tissue samples from eleven individuals for their study on Texas *Eurycea* (including AHP 2074-74); of these only TNHC 52757 is represented by a museum voucher specimen.

Near topotypes.—Hays Co: San Marcos, Brown School [currently San Marcos Treatment Center, located on Sink Creek], 2 (CAS), 1 (MCZ). The more recent of these were collected in 1959.

Remarks.—*Eurycea nana* has been listed as a Threatened species by TPWD since the 1970's and by the USFWS since 1980 (see lists in TPWD 2020 and Davis and LaDuc 2021). About 90% of the topotypes were collected prior to this protection, with the balance acquired recently as both state and federal agencies facilitated genetic research on the entire central Texas surface spring and subterranean salamander assemblage.

Eurycea naufragia Chippindale, Price, Wiens, and Hillis, 2000
[Georgetown Salamander]

1982. *Eurycea neotenes* (in part) Sweet, Herpetologica 38:442.

2000. *Eurycea naufragia* Chippendale et al., Herpetol. Monogr. 14:37.

2001. *Eurycea* (subgenus *Septentriomolge*) *naufragia* Hillis et al., Herpetologica 57:277.

2012. *E*[*urycea*] *naufragia* Tilley et al., Caudata – Salamanders, pp. 23–31 in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 7th ed., SSAR Herpetol. Circ. 39:27.

Type specimen.—Holotype, adult male, TNHC 58860, obtained 14 August 1998 by David M. Hillis and Laurie A. Dries, original number PC 1998-10.

Type locality.—Headsprings of Buford Hollow, a small tributary of the South San Gabriel River below Lake Georgetown, Williamson County, Texas, 30°39'39"N, 97°43'36"W.

Topotypes.—Williamson Co: Buford Hollow Spring below Lake Georgetown, 12 (TNHC). Last topotypes collected 1998. Two tissue samples from topotypes were used by Devitt et al. (2019, Table S6); these correspond to preserved vouchers TNHC 51008 and 51011.

Near topotypes.—Williamson Co: Cedar Brakes Hiking Trail Spring, along S shore Lake Georgetown, 1 (TNHC); 3 mi W Georgetown, Capitol Aggregate Inc. property, 1 (TCWC); Knight (Crockett Garden) Spring, 1 (TNHC); Swinbank Spring (4 tissue samples AGG 1914–17 listed by Devitt et al. 2019, Table S6). The last of the museum specimens was collected in 1995; museum specimen vouchers for the Swinbank Spring tissue samples have yet to be documented.

Remarks.—The Georgetown Salamander is listed on state (TPWD) and federal (USFWS) lists as a Threatened species (TPWD 2020; Davis and LaDuc 2021).

Eurycea neotenes Bishop and Wright, 1937
[Texas Salamander]

1937. *Eurycea neotenes* Bishop and Wright, Proc. Biol. Soc. Wash. 50:142.

1943. *Eurycea neotenes neotenes* Schmidt, Check List North Amer. Amphib. Rept., 6th ed., p. 55.

2001. *Eurycea* (subgenus *Blepsimolge*) *neotenes* Hillis et al., Herpetologica 57:277.

2012. *E*[*urycea*] *neotenes* Tilley et al., Caudata – Salamanders, pp. 23–31 in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 7th ed., SSAR Herpetol. Circ. 39:27.

Type specimen.—Holotype, male, USNM 103161, obtained 1 April 1936 by Sherman C. Bishop and Margaret R. Wright.

Type locality.—Culebra Creek, 5 miles north of Helotes, Bexar County, Texas. Brown (1942) corrected the named place to "headspring of Helotes Creek."

Topotypes.—Bexar Co: Helotes Creek, 5 mi N Helotes, 20 (BUMMC), 12 (TNHC), 5 (FMNH), 1 (CM, KU, MCZ, UF), unknown number (AMNH); 5 mi N Helotes, Brooks Ranch, 8 (BUMMC); Helotes Creek Spring, 7 (TNHC). Last topotypes collected in 1990. Nine tissue samples from topotypic salamanders are listed by sample numbers in Devitt et al. (2019, Table S6). These samples are not linked to any preserved museum vouchers, and it is not clear if any tissue remains left over from their study.

Near topotypes.—Bexar Co: Helotes, 2 (USNM); 5.2 mi NNW Helotes, B. Sams Ranch, Helotes Creek, 68 (MVZ). The latter are the most recent of the two, obtained in 1970; no tissues are associated with these specimens.

Remarks.—For much of the 20th century since the species was described, *Eurycea neotenes* was thought to include populations of "spring salamanders" across much of the southern Edwards Plateau of Texas (e.g., see mapped localities in Brown 1967). In the 1970s, when TPWD protected several of the cavernicolous nominal species known only from single populations, threats to *E. neotenes* seemed slight. Research over the last twenty years has revealed a more complex picture of evolutionary relationships among

the spring/cave salamanders of Texas, and the current view is that the name *Eurycea neotenes* in the strict sense is only applicable to terrestrial and subsurface populations in a relatively small area in Bexar and adjacent Kendall County, specifically to the drainage/watershed of Cibolo Creek (see Devitt et al. 2019). When TPWD completely revised its list of threatened and endangered animal species in 2020 to reflect the most recent research on populations of potentially imperiled species, *E. neotones* was accorded Threatened status (Davis and LaDuc 2021), and the USFWS has been petitioned for similar listing at the federal level (TPWD 2020).

Eurycea pterophila Burger, Smith, and Potter, 1950
[Fern Bank Salamander]

1950. *Eurycea pterophila* Burger et al., Proc. Biol. Soc. Wash. 63:51.

1953. *Eurycea neotenes pterophila* Schmidt, Check List North Amer. Amphib. Rept., 6th ed., p. 56.

1967. *Eurycea neotenes pterophila* Brown, Cat. Amer. Amphib. Rept. 36:36.1.

1978. *Eurycea neotenes* Sweet, Herpetologica 34:106.

2001. *Eurycea* (subgenus *Blepsimolge*) *pterophila* Hillis et al., Herpetologica 57:277.

2012. *E*[*urycea*] *pterophila* Tilley et al., Caudata – Salamanders, pp. 23–31 in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 7th ed., SSAR Herpetol. Circ. 39:27.

Type specimen.—Holotype, Floyd Potter [private] Collection Number A-993, obtained 22 May 1946 by Floyd E. Potter. The specimen is now apparently lost (Chippindale et al. 2000). There were originally ten topotypic paratypes, obtained on the same date by the same collector; these include TNHC 4823, 6327–30. There is no pressing nomenclature need for a neotype to be designated.

Type locality.—A shallow stream from Fern Bank Spring, 6.3 miles northeast of Wimberley on Blanco River road, Hays County, Texas. Sweet (1978) has pointed out that the offset direction from Wimberley is in fact east (not northeast) of Fern Bank Spring as stated in the species description; he also noted that the site also is referred to by the local name "Little Arkansas Spring."

Topotypes.—More than 250 have been found. Hays Co: Fern Bank Spring, 77 (TNHC), 70 (MVZ), 36 (TCWC), 29 (UCM), 18 (LACM), 10 (USNM), 7 (CM), 4 (LSUMZ), 2 (OMNH), 1 (ASNHC, KU, MCZ, UF). The last topotypes were collected in 1994. Devitt et al. (2019, Table S6) lists five tissue samples of salamanders from the type locality; these are not associated with museum vouchers, and it is unknown if any remaining tissues are left over from this study.

Near topotypes.—Hays Co: Hallowell's place, 6.3 mi NE Wimberly, 4 (BUMMC); near Fern Bank Spring, 8 (MPM); 3–4 mi E Wimberley, in the small stream E Fern Bank Spring, 8 (TCWC); 6.5 mi SE Wimberley, stream along Blanco River, 3 (TCWC). The last collection from one of these near topotype sites was 1972.

Remarks.—Once known only from the type locality and protected by the TPWD, genetic data (Devitt et al. 2019) reveal this salamander is a lineage that occupies several surface water sources in the Blanco River and nearby watersheds. It is no longer on the list of threatened and endangered species in Texas.

Eurycea sosorum Chippindale, Price, and Hillis, 1993
[Barton Springs Salamander]

1950. *Eurycea neotenes* (in part) Brown, Baylor Univ. Studies, p. 29

1967. *Eurycea neotenes neotenes* (in part, locality designated on distribution map only) Brown, Cat. American Amphib. Reptiles 36:1

1984. *Eurycea* sp. Sweet, Copeia 1984:429.

1993. *Eurycea sosorum* Chippendale et al., Herpetologica 49:249.

2001. *Eurycea* (subgenus *Blepsimolge*) *sosorum* Hillis et al., Herpetologica 57:277.

2012. *E*[*urycea*] *sosorum* Tilley et al., Caudata – Salamanders, pp. 23–31 in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 7th ed., SSAR Herpetol. Circ.39:27.

Type specimen.—Holotype, adult male, TNHC 51184, obtained on the afternoon of 24 November 1992 by David M. Hillis, Paul T. Chippindale, Andrew H. Price, and Doyle Mosier, at a depth of approximately 4 to 5 meters during a SCUBA dive; original number PC/DMH 92-112.

Type locality.—Outflow of Parthenia (Main) Springs in Barton Springs Pool, Zilker Park, Travis County, Texas, 30°15'49"N, 97°46'14"W.

Topotypes.—Travis Co: Austin, Barton Springs, 5 (TNHC), 15 (MVZ); Austin, Parthenia Springs [within Barton Springs complex, or "Main Pool Barton Springs"], 29 (TNHC). The most recent of these topotypes was collected in 2017.

Near topotypes.—Travis Co: Austin, Zilker Park, Eliza Spring [also called "Wading Pool" and "Polio Pit"], 35 (TNHC); Austin, upper Barton Spring, 4 (TNHC); Austin, Old Mill Spring (also "Sunken Garden Spring"), 2 (TNHC); Spillar Ranch Spring, 2 (TNHC). The most recent of these near topotypes was collected in 2018. Devitt et al. (2019, Table S6) had tissue samples from the Spillar Ranch Spring (TNHC vouchers) and also from Cold Spring outside the Barton Creek area. Vouchers from the former location are at TNHC, but no museum vouchers from the latter site are available. The current status of the tissue samples is unknown.

Remarks.—The species is listed by both TPWD and USFWS as Endangered (TPWD 2020; Davis and LaDuc 2021).

Eurycea tonkawae Chippindale, Price, Wiens, and Hillis, 2000
[Jollyville Plateau Salamander]

1961. *Eurycea neotenes* (in part) Baker, Southwest. Nat. 6:30.

1967. *Eurycea neotenes neotenes* (in part, locality designated on distribution map only) Brown, Cat. American Amphib. Reptiles 36:1

2000. *Eurycea tonkawae* Chippendale et al., Herpetol Monogr. 14:32.

2001. *Eurycea* (subgenus *Septentriomolge*) *tonkawae* Hillis et al., Herpetologica 57:277.

2012. *E*[*urycea*] *tonkawae* Tilley et al., Caudata – Salamanders, pp. 23–31 in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 7th ed., SSAR Herpetol. Circ. 39:27.

Type specimen.—Holotype adult female, TNHC 50952, obtained 12 September 1991 by Andrew H. Price and Paul T. Chippindale, original number AHP 3240.

Type locality.—The primary outflows of Stillhouse Hollow Springs, Travis County, Texas, 30°22'28"N, 97°45'55"W.

Topotypes.—Travis Co: Stillhouse Hollow Spring, 6 (TNHC); 6.8 mi NNW (by air) State Capitol, 9 (MVZ). The last topotypes were collected in 1991. Devitt et al. (2019, Table S6) list tissue samples from seven topotypic individuals, none of which seem at present to be represented by preserved museum specimens.

Near topotypes.—Travis Co: Furtado Creek, 1 (TNHC); Sobchak Springs, 1 (TNHC); Spicewood Springs, 1 (TNHC); Stillhouse Hollow, 9 (TNHC); Stillhouse Hollow, several hundred meters downstream from main spring, 2 (TNHC); Barlow [Barrow] Hollow, 13 (TNHC). A single tissue sample from Barrow Hollow is listed by Devitt et al. (2019, Table S6) as AHP (Andrew H. Price) 3288, part of the "Barlow" series deposited at TNHC, but apparently is not represented by a preserved voucher. The status of the remains, if any, of the tissue samples is unknown. The most recent of these near topotypes were collected in 2019.

Remarks.—This salamander currently is listed as Threatened by both TPWD and USFWS (TPWD 2020; Davis and LaDuc 2021).

Eurycea tridentifera Mitchell and Reddell, 1965
[Comal Blind Salamander]

1965. *Eurycea tridentifera* Mitchell and Reddell, Tex. J. Sci. 17:14.

1966. *Typhlomolge tridentifera* Wake, Mem. S. California Acad. Sci. 4:64.

1972. *Eurycea tridentifera* Mitchell and Smith, Tex. J. Sci. 23:344.

2001. *Eurycea* (subgenus *Blepsimolge*) *tridentifera* Hillis et al., Herpetologica 57:277.

2019. *Eurycea latitans* Devitt et al., Proc. Nat. Academy of Sciences USA 116:2629.

2012. *E*[*urycea*] *tridentifera* Tilley et al., Caudata – Salamanders, pp. 23–31 in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 7th ed., SSAR Herpetol. Circ. 39:27.

Type specimen.—Holotype, adult female, USNM 153780, adult obtained 14 January 1965 by James R. Reddell and Robert W. Mitchell.

Type locality.—Honey Creek Cave [elevation 335 meters], 7.7 kilometers southwest of Spring Branch, Comal County, Texas.

Topotypes.—Comal Co: Honey Creek Cave, 36 (MVZ), 13 (TNHC), 12 (ROM), 6 (TCWC, USNM). The last topotype specimens was collected in 1993. Devitt et al. (2019, Table S6, as *Eurycea latitans*) indicates two tissue samples from topotype specimens; one of these, DMH 91.57, corresponds to TNHC 51057, the body (except the head) was frozen. There are thus likely frozen tissue remnants from the Devitt et al. study still at TNHC.

Near topotypes.—None found. The localities mapped by Sweet (1977) suggest the nearest populations to the type locality are more than 7 air kilometers from the type locality.

Remarks.—The Comal Blind Salamander continues to be a state Threatened species (Davis and LaDuc 2021), and it has been similarly proposed to the USFWS for federal listing (TPWD 2020). However, Devitt et al. (2019) concluded from their genetic study that *E. latitans* and *E. tridentifera* should not be considered separate species [the name *E. latitans* has priority], and they documented genetic admixture with *E. neotenes* at Pfeiffer Water Cave. These observations suggest that more sampling and analysis of the entire *latitans-neotenes* complex would be desirable before moving forward with the petitioned federal listing of all three of these nominal species.

Eurycea troglodytes Baker, 1957
[Valdina Farms Salamander]

1957. *Eurycea troglodytes* Baker, Tex. J. Sci. 9:328.

1984. *Eurycea neotenes* (in part) Sweet, Copeia 1984:438.

1984. *Eurycea tridentifera* (in part) Sweet, Copeia 1984:438.

2001. *Eurycea* (subgenus *Blepsimolge*) *troglodytes* Hillis et al., Herpetologica 57:277.

2012. *E*[*urycea*] *troglodytes* Tilley et al., Caudata – Salamanders, pp. 23–31 in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 7th ed., SSAR Herpetol. Circ. 39:27.

Type specimen.—Holotype, adult female, TNHC 21791, obtained 26 January 1957 by James K. Baker.

Type locality.—Valdina Farms Sinkhole, Valdina Farms, 6 miles (9.9 kilometers) north of D'Hanis, Medina County, Texas, from a pool approximately 600 feet from the sinkhole entrance.

Topotypes.—Medina Co: Valdina Farms Sinkhole, 20 (TNHC), 19 (MVZ), 3 (TCWC), 1 (BUMMC). The last topotypes were collected in 1974.

Near topotypes.—Medina Co: 9.4 mi SE (by air) Utopia (Uvalde County), tributary of Seco Creek, Richland Spring, 1 (MVZ). Collected in 1973, this specimen represents the closest documented surface population to Valdina Farms Sinkhole.

Remarks.—There are two or more monophyletic lineages in the "*Eurycea troglodytes* complex" of surface and subsurface populations (Chippindale et al. 2000; Hillis et al. 2001; Bonett et al. 2013; Devitt et al. 2019). Of these, only the currently named species with a type locality is *Eurycea troglodytes*. Previously known only as occurring at that sinkhole/cave type locality, this species was state protected. However, it is not listed at this time.

Eurycea waterlooensis Hillis, Chamberlain, Wilcox, and Chippindale, 2001
[Austin Blind Salamander]

2001. *Eurycea waterlooensis* Hillis, Chamberlain, Wilcox, and Chippandale, Herpetologica 57:268.

2001. *Eurycea* (subgenus *Typhlomolge*) *waterlooensis* Hillis et al., Herpetologica 57:275.

2012. *E*[*urycea*] *waterlooensis* Tilley et al., Caudata – Salamanders, pp. 23–31 in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 7th ed., SSAR Herpetol. Circ. 39:27.

Type specimen.—Holotype, juvenile, TNHC 60201, obtained 13 January 1998 by Robert Hansen and Dee Ann Chamberlain. It was raised in captivity until 13 November 1998.

Type locality.—Sunken Gardens Spring, an outlet of Barton Springs, Zilker Park, Austin, Travis County, Texas.

Topotypes.—Travis Co: Austin, Sunken Gardens Spring (Old Mill Spring), 2 (TNHC). The last topotype collected was in 2014.

Near topotypes.—Travis Co: Austin, Zilker Park, Barton Springs Pool, 1 (TNHC); Zilker Park, upper Barton Springs, 1 (TNHC); Zilker Park, Eliza Springs ("Polio Pit"), 3 (TNHC). The last near topotype was collected in 2017.

Remarks.—*Eurycea waterlooensis* is listed as Endangered both by USFWS and TPWD (TPWD 2020; Davis and LaDuc 2021).

Plethodon glutinosus albagula Grobman, 1944
= *Plethodon albagula*
[Western Slimy Salamander]

1818. *Salamandra glutinosa* Green, J. Acad. Nat. Sci. Phila. 1:357.

1944. *Plethodon glutinosus albagula* Grobman, Ann. New York Acad. Sci. 45:283.

1989. *Plethodon albagula* Highton et al., Ill. Biol. Monogr. 57:71.

Type specimen.—Holotype, adult male, CM 9652, obtained 24 February 1935 by Wesley Clanton.

Type locality.—20 miles north of San Antonio, Classen's Ranch, Bexar County, Texas.

Topotypes.—Bexar Co: 20 mi N San Antonio, 12 (CM), 1 (UIMNH), topotypic paratypes as per McCoy and Richmond (1966) and Smith et al. (1964). There were likely other paratypes distributed to other museums by the collector.

Near topotypes.—Bexar Co: Helotes, 11 (BUMMC); Camp Bullis, 5 mi NW jct 1604 and US Hwy 280, 1 (TNHC); Bexar Cave, 2 (TCWC); Freisenhahn Cave, 1 (TCWC); Bulverde, E of Hwy 281, 7 mi N Loop 1604, 4 (MCZ); Low Priority Cave, near headquarters on Fort Bullis, 2 (TNHC). The last near topotype was collected in 2000, and it provided a tissue sample used by Baird et al. (2006).

Remarks.—The phylogeographic study of Baird et al. (2006) indicated the Texas populations (all from the Edwards Plateau) of this salamander form a monophyletic lineage, and their near topotype genetic sample was placed in a mitochondrial DNA assemblage (Group C) from Bexar, Comal, and Hays counties. The relationship of the Texas populations to the allopatric populations of the species in Arkansas, Oklahoma, and Missouri are less clear, as the two samples that Baird et al. had for comparison (from Missouri) fell outside the Texas lineage and potentially represent a separate sister taxon. Further study of the *Plethodon glutinosus* group may thus reveal *P. albagula* to be an endemic species to Texas.

Typhlomolge rathbuni Stejneger, 1896
= ***Eurycea rathbuni***
[Texas Blind Salamander]

1896. *Typhlomolge rathbuni* Stejneger, Proc. U.S. Nat. Mus. 18:620.

1965. *Eurycea rathbuni* Mitchell and Reddell, Tex. J. Sci. 17:23.

2001. *Eurycea* (subgenus *Typhlomolge*) *rathbuni* Hillis et al., Herpetologica 57:275.

2012. *E*[*urycea*] *rathbuni* Tilley et al., Caudata – Salamanders, pp. 23–31 in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 7th ed., SSAR Herpetol. Circ., 39:27.

Type specimen.—Holotype, an adult, USNM 22686, obtained the end of February 1896, collector unidentified.

Type locality.—San Marcos, Hays County, Texas. Stejneger's (1896) verbatim location is: "from an artesian well, 181 feet deep, recently bored at San Marcos, Texas by the United States Fish Commission." Given the year of the species description, this well was likely the one dug by US Department of Interior Engineer William K. Benton at an outdoor pond hatchery/fish culture station in San Marcos sometime in 1895. This hatchery was located on the Austin-San Marcos-San Antonio Road at the base of Chatauqua Hill, about one-quarter miles northeast of the courthouse (online copy of account by Tula Townsend Wyatt, https://www.sanmarcostx.gov/DocumentCenter/View/18970/Old-Fish-Hatchery-Office-Building---historical-data-PDF). Shortly after the turn of the century, Southwest Texas State Normal School (now known as Texas State University) was constructed on Chatauqua Hill, and in 1965 the hatchery site was deeded over to that educational institution. Thus, the type locality is on the campus of Texas State University.

Topotypes.—Hays Co: San Marcos, artesian well, 21 (USNM), 2 (MCZ), 1 (CAS, CUMV, MVZ); San Marcos, artesian well on SWTSU campus, 3 (TCWC). The most recently collected topotypes were taken in 2001.

Near topotypes.—Hays Co: San Marcos, 6 (CAS), 4 (MCZ, USNM), 1 (BUMMC, CM); San Marcos, Ezell's Cave, 5 (BUMMC), 4 (TNHC), 3 (FMNH), 2 (KU, LACM, TCWC, UCM, USNM), 1 (CAS, LSUMZ); San Marcos, Johnson's Well, 2 (MCZ), 1 (TNHC); Headwaters San Marcos River, Diversion Springs, [within] Spring Lake, 1 (OMNH); Rattlesnake Cave, 4 (TNHC); 1 mi W San Marcos, 1 (BUMMC). The most recently collected of these near topotypes were obtained in 2016. Devitt et al. (2019, Table S6) lists three tissue samples from near-topotype salamanders used in their study of Texas *Eurycea*: AGG [Andrew G. Gluesenkamp] No. 1981 from Johnson's Well, and DMH [David M. Hillis] 91.12 and 91.13 from Rattlesnake Cave. Only 91.13 is tied to a preserved voucher (TNHC 60314); it is not known if any of the three tissues have remnants available for future study. Mitchell and Smith (1972) remarked that the species had been found at Wonder (Beaver) Cave, but no vouchers could be identified from this cave in the VertNet Database.

Remarks.—The Texas Blind Salamander has been protected by both TPWD and USFWS as an Endangered species for many decades (see TPWD 2020; Davis and LaDuc 2021).

Typhlomolge robusta Potter and Sweet, 1981
= ***Eurycea robusta***
[Blanco Blind Salamander]

1978. *Typhlomolge robusta* Longley, Endang. Species Rep., U.S. Fish and Wildlife Service 2:14.

1981. *Typhlomolge robusta* Potter and Sweet, Copeia 1981:70.

1998. *Eurycea robusta* Petranka, Salamanders of the United States and Canada, p. 275.

2001. *Eurycea* (subgenus *Typhlomolge*) *robusta* Hillis et al., Herpetologica 57:275.

2012. *E*[*urycea*] *robusta* Tilley et al., Caudata – Salamanders, pp. 23–31 in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 7th ed., SSAR Herpetol. Circ. 39:27.

Type specimen.—Holotype, adult female, TNHC 20255, obtained 23 July 1951 by MacBride B. Wilson. The full history of the holotype has been recounted by Potter and Sweet (1981). Apparently, it was taken from a small spring in the dry bed of the Blanco River that was excavated during the drought of 1951 by a gravel-washing company in search of a reliable water source. At 6 meters, instead of more water, several salamanders emerged. The work crew leader, MacBride B. Wilson, was able to collect and save two of them. These were given to C. S. Smith at Southwest Texas State College [now Texas State University], but by 1961 only one specimen remained there. One of the College vertebrate zoologists, W. K. "Doc" Davis gave the specimen to Floyd Potter for his master's research, and many years later it was deposited with the TNHC.

Type locality.—Beneath the Blanco River, 178 meters elevation, 5 airline kilometers northeast of the Hays County courthouse, San Marcos, Hays County, Texas.

Topotypes.—The holotype remains the only known specimen.

Remarks.—Potter and Sweet (1981) identified Longley (1978) as the describer/author of this taxon on the basis of the description not effectively published by Potter in a 1963 M.S. thesis at the University of Texas at Austin. Dixon (1987) emphatically rejected the Longley report as a suitable description for the taxon and accepted only the Potter and Sweet (1981) "redescription" as legitimate. This salamander currently is listed as Threatened by TPWD (Davis and LaDuc 2021), and it is under consideration for listing as Threatened by the USFWS (TPWD 2020). Physical evidence that a species has a surviving population (i.e., is not extinct), however, has long been a standard for federal listing. The original spring type locality was covered with alluvial deposits from periodic Blanco River flooding after 1951 and is now west of the main Blanco River channel (Potter and Sweet 1981). The site was located and partly excavated (Russell 1976), but no additional individuals of this subterranean salamander were found.

Family Sirenidae

Siren intermedia texana Goin, 1957
= *Siren intermedia nettingi*
[Western Lesser Siren]

1826. *Siren intermedia* Barnes, Amer. J. Sci. Arts 11:269.

1942. *Siren intermedia nettingi* Goin, Ann. Carneg. Mus. 29:11.

1957. *Siren intermedia texana* Goin, Herpetologica 13:37.

1992. *Siren intermedia nettingi* Flores-Villela and Brandon, Ann. Carneg. Mus. 61:292.

2000. *Siren texana* Dixon, Amphib. Rept. Tex., 2nd ed., p. 52.

2014. *Siren intermedia texana* Fouquette and Dubois, Checklist North Amer. Amphib. Rept., 7th ed., p. 57.

2017. *S*[*iren*] *i*[*ntermedia*] *nettingi* Highton et al, Caudata – Salamanders, pp. 25–37 in Crother (Chair), Com., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol. Circ. 47:37.

Type specimen.—Holotype, TCWC 10567, obtained 7 June 1953 by W. P. Kerr. Flores-Villela and Brandon (1992) examined the type series and found that, although the holotype represents *Siren intermedia nettingi*, mixed in among the paratypes were specimens of a large, *Siren lacertina*-like form from southern Texas known also to occur in northeastern Mexico.

Type locality.—7 miles north of Brownsville, Cameron County, Texas.

Topotypes.—No exact matches found among the available museum records.

Near topotypes.—Cameron Co: 3 mi S Harlingen, 6 (BUMMC); 2 mi S Palm Jungle, 2 (BUMMC); Ol-

mito Fish Hatchery 81 (TNHC) 4 (LACM), 1 (UMNH). Last near topotype collected 1964. It is not clear if the "large form" examples, especially subadults, are mixed in with these specimens.

Remarks.—Texas populations of the Lesser Siren, *Siren intermedia*, are not protected by state or federal endangered/threatened wildlife regulations. However, the mysterious and unnamed "large form" that also occurs in southern Texas and northeastern Mexico is placed on the current list of state Threatened amphibians (Davis and LaDuc 2021). As mentioned above, Flores-Villela and Brandon (1992), following identifications by Noble and Marshall (1932) of Maverick County *Siren*, allocated this form to *Siren lacertina*. That southeastern species occurs no farther west than southern Alabama, whereas the "large form" of *Siren* may well extend south of Texas into the Gulf Coastal Plain of Mexico to Veracruz. Dixon's (2000) suggestion of resurrection of the name *S. texana* for this species would be difficult, given that the name-bearing holotype is morphologically a *S. intermedia*, and the individuals in the type series that Flores-Villela and Brandon (1992) ascribed to *S. lacertina* are only paratypes. Thus, in spite of the recommendation by Fouquette and Dubois (2014) that the subspecies be provisionally retained, the name *texana* should remain a junior synonym of *S. i. nettingi*. A research team at the University of Texas Rio Grande Valley has been working on the evolutionary and ecological genetics of *Siren* in southern Texas to clarify the status of the so-called "large form."

ORDER ANURA
Family Bufonidae

Bufo aduncus Cope, 1888
= *Anaxyrus woodhousii woodhousii*
[Rocky Mountain Toad]

1854. *Bufo woodhousii* Girard, Proc. Acad. Nat. Sci. Phila. 7:86

1863. *Incilius woodhousei* Cope, Proc. Acad. Nat. Sci. Phila. 15:50.

1888. *Bufo aduncus* Cope, Proc. U.S. Nat. Mus. (1889) 11:317.

1961. *Bufo woodhousii woodhousii* Cochran, U.S. Nat. Mus. Bull. 220:31.

2006. *Anaxyrus woodhousii* Frost et al., Bull. Amer. Mus. Nat. Hist. 297:363.

2008. *A*[*naxyrus*] *w*[*oodhousii*] *woodhousii* Frost et al., Anura – Frogs, pp. 2–12 in Crother (Chair), Com., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 6th Ed, SSAR Herpetol. Circ. 37:3.

2014. *Bufo* ([subgenus] *Anaxyrus*) *woodhousii* Fouquette and Dubois, Checklist North Amer. Amphib. Rept., 7th ed., Vol. 1, Amphib., p. 311.

2017. *A*[*naxyrus*] *w*[*oodhousii*] *woodhousii* Frost et al., Anura – Frogs, pp. 6–24 in Crother (Chair), Com., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol. Circ. 43:10.

Type specimen.—Holotype, subadult, USNM 14100, obtained 9 April 1885 by G. H. Ragsdale.

Type locality.—Texas. A note at the end of the description added "probably Gainesville," Cooke County, Texas, which is now accepted as the type locality.

Topotypes.—Cooke Co: Gainesville, 4 (USNM); Gainesville city cemetery, 1 (ASNHC). Only the ASNHC topotype has a collection date, 1969.

Near topotypes.—Cooke Co: 0.25 mi N Gainesville, 3 (TCWC). Oklahoma: Love Co: 3 mi SE Thackerville, 2 (OMNH); 3 mi SE Thackerville at KW Stewart Farm, 1 (TNHC). The most recently obtained of these near topotypes is from 1993.

Bufo debilis Girard, 1854
= *Anaxyrus debilis debilis*
[Eastern Chihuahuan Green Toad]

1854. *Bufo debilis* Girard, Proc. Acad. Nat. Sci. Phila. 7:84.

1950. *Bufo debilis debilis* Smith, Misc. Publ. Mus. Nat. Hist. Univ. Kans. 2:75.

2006. *Anaxyrus debilis* Frost et al., Bull. Amer. Mus. Nat. Hist. 297:363.

2008. *A*[*naxyrus*] *d*[*ebilis*] *debilis* Frost et al., Anura – Frogs, pp. 2–12 in Crother (Chair), Com., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 6th Ed, SSAR Herpetol. Circ. 37:3.

2014. *Bufo* ([subgenus] *Anaxyrus*) *debilis* Fouquette and Dubois, Checklist of North Amer. Amphib. Rept., 7th ed., Vol. 1, Amphib., p. 300.

2017. *A*[*naxyrus*] *d*[*ebilis*] *debilis* Frost et al., Anura – Frogs, pp. 6–24 in Crother (Chair), Com., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol. Circ. 43:8.

Type specimens.—Eight syntypes, USNM 2621 (Hillis 1985), seven of which were obtained by Darius N. Couch (Cochran 1961).

Type locality.—Originally "Lower part of the valley of the Rio Grande, Texas, and in Tamaulipas, Mexico." Restricted to vicinity of Brownsville, Cameron County, Texas, by Sanders and Smith (1951).

Topotypes.—None found.

Near topotypes.—Cameron Co: Harlingen, 2 (BUMMC), 1 (CAS). Hidalgo Co: 10 mi NW Edinburg, 1 (CHAS). Only the latter has a collection year, 1935.

Bufo granulosus Baird and Girard, 1852
= *Incilius nebulifer*
[Gulf Coast Toad]

1852. *Bufo granulosus* Baird and Girard, Proc. Acad. Nat. Sci. Phila. 6:173.

1854. *Bufo nebulifer* Girard, Proc. Acad. Nat. Sci. Phila.7:87.

1862. *Chilophryne nebulifera* Cope, Proc. Acad. Nat. Sci. Phila. 14:358.

1863. *Incilius nebulifer* Cope, Proc. Nat. Acad. Phila. 15:50.

1863. *Bufo valliceps* Peters, Mber. Königl. Akad. Wissen. Berlin 1863:81.

2000. *Bufo nebulifer* Mulcahy and Mendelson, Molec. Phylog. Evol. 17:173.

2006. *Cranopsis nebulifer* Frost et al., Bull. Amer. Mus. Nat. Hist.297:364.

2006. *Ollotis nebulifer* Frost et al., Copeia 2006:558.

2009. *Incilius nebulifer* Frost, Mendelson, and Pramuk, Copeia 2009:418.

2014. *Bufo* ([subgenus] *Incilius*) *nebulifer* Fouquette and Dubois, Checklist North Amer. Amphib. Rept., 7th ed., Vol. 1, Amphib., p. 315.

2017. *I*[*ncilius*] *nebulifer* Frost et al., Anura – Frogs, pp. 6–24 in Crother (Chair), Com., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol. Circ. 43:14.

Type specimen.—Holotype, male, USNM 2595, obtained in the early 1850s by John H. Clark.

Type locality.—Originally: "On the route between Indianola and San Antonio, Texas." Restricted by Smith and Taylor (1950a) to San Antonio, Bexar County, Texas and later by Schmidt (1953) to Indianola, Calhoun County, Texas. Neither of these choices are unreasonable, but the Smith and Taylor (1950a) restriction to San Antonio is accepted for purposes of this catalog. That restriction not only had priority, but there are numerous topotypes from San Antonio and none were found from the immediate vicinity of Indianola.

Topotypes.—Bexar Co: San Antonio, 58 (USNM), 13 (TNHC), 8 (LSUMZ), 6 (CAS, TCWC), 3 (MVZ, SDNHM), 2 (BUMMC, CM, LACM, MCZ, NCSM), 1 (GSU, MSUM, UCM, UTEP). The most recent of these was collected in 1986.

Near topotypes.—Bexar Co: 0.9 mi E San Antonio, 1 (BUMMC); 8 mi SE San Antonio, Cassin's Lake, 1 (CM), obtained in 1935. The route between Indianola and San Antonio in the 1850s entered and left Bexar County on its southeastern edge.

Remarks.—Two years after the description of *Bufo granulosus*, Girard (1854) proposed the substitute name *B. nebulifer* for this taxon as the original was found to be pre-occupied by *Bufo granulosus* Spix. In the following decade, Peters (1863) synonymized *Bufo nebulifer* into *Bufo valliceps* Wiegmann, a species described from Veracruz, Mexico; the latter name

then appeared through the end of the 20th century in an extensive zoological literature mentioning this common and conspicuous Texas toad. At that time, Mulcalhy and Mendelson (2000) resurrected the name *Bufo nebulifer* for US and northeastern Mexico populations from its synonymy with the more southerly *B. valliceps*. As shown in the above synonymy, the most recent name changes applied to this taxon have involved generic allocations; the current appellation is *Incilius*.

Bufo houstonensis Sanders, 1953
= *Anaxyrus houstonensis*
[Houston Toad]

1953. *Bufo houstonensis* Sanders, Herpetologica 9:27.

1957. *Bufo americanus houstonensis* Blair, in Blair, et al., Verts. U.S., p. 250.

2006. *Anaxyrus houstonensis* Frost et al., Bull. Amer. Mus. Nat. Hist. 297:363.

2014. *Bufo* ([subgenus] *Anaxyrus*) *houstonensis* Fouquette and Dubois, Checklist North Amer. Amph. Rept., 7th ed., Vol. 1, Amphib., p. 304.

2017. *A*[*naxyrus*] *houstonensis* Frost et al., Anura – Frogs, pp. 6–24 in Crother (Chair), Com., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol. Circ. 43:9.

Type specimen.—Holotype, adult female, UIMNH 3687, obtained on 18 May 1952 by John C. Wottring and Walter J. Greer.

Type locality.—Fairbanks, Harris County, Texas; emended by L. Brown (1971) to "off Tanner Road, 1–2 miles west of its junction with Campbell Road in northwest Houston", Harris County, Texas.

Topotypes.—Harris Co: northwest Houston, off Tanner Rd, 1–2 mi W jct with Campbell Rd, 7 (BUMMZ), 5 (CM), 4 (MCZ, USNM), 2 (CAS, CUMV, UMMZ), 1 (FMNH, TCWC, UCM, UIMNH). The last of these topotypes was collected in 1959.

Near topotypes.—Harris Co: 1 mi S Houston Airport [Houston-Hobby], 1 (USNM). This specimen was collected in 1951.

Remarks.—*Anaxyrus houstonensis* is listed as Endangered by both TPWD and USFWS (TPWD 2020; Davis and LaDuc 2021). It is thought to be extirpated from the Houston area (Shepard and Brown 2020), although there are extant populations in other parts of eastern Texas.

Bufo punctatus Baird and Girard, 1852
= *Anaxyrus punctatus*
[Red-spotted Toad]

1852. *Bufo punctatus* Baird and Girard, Proc. Acad. Nat. Sci. Phila. 6:173.

1882. *Bufo beldingi* Yarrow, Proc. U.S. Nat Mus. 5:441.

2006. *Anaxyrus punctatus* Frost et al., Bull. Amer. Mus. Nat. Hist. 297:363.

2014. *Bufo* ([subgenus] *Anaxyarus*) *punctatus* Fouquette and Dubois, Checklist N.A. Amph. Rept., 7th ed., Vol. 1, Amphib., p. 306.

2017. *A*[*naxyrus*] *punctatus* Frost et al., Anura – Frogs, pp. 6–24 in Crother (Chair), Com., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol. Circ. 43:9.

Type specimens.—Originally three syntypes, USNM 2618, obtained in the early 1850s by John H. Clark (Cochran 1961). Hillis (1985) indicated all the syntypes were missing, although Korky (1999) reported only one had been lost.

Type locality.—Rio San Pedro of the Rio Grande [= Devils River], Val Verde County, Texas.

Topotypes.—None could be meaningfully designated because the type locality covers a considerable extent of Val Verde County.

Near topotypes.—Val Verde Co: Devils River State Natural Area, 4 (ASNHC); Comstock, Devils River, 1 (CUMV); Mouth of Devils River, 1 (LACM); 1 mi S Juno via TX Hwy 163, 1 (MVZ); Devils River, W. D. Fawcett Ranch, 2 (TNHC); 17.3 mi N US Hwy 90 on TX Hwy 163, 1 (UTA); TX Hwy 163, 29.1 mi N Comstock 1 (UTEP); TX Hwy 163, 8.4 mi N Baker's Crossing 1 (ASNHC); TX Hwy 163, 1 mi S Juno 1 (MVZ). The last of these was collected in 2012.

Bufo speciosus Girard, 1854
= *Anaxyrus speciosus*
[Texas Toad]

1854. *Bufo speciosus* Girard, Proc. Acad. Nat. Sci. Phila. 7:85.

1884. *Bufo lentiginosus speciosus* (by implication) Garman, Bull. Essex Inst. 16:43.

1889. *Bufo compactilis speciosus* Cope, Bull. U.S. Nat. Mus. 34:273.

2006. *Anaxyrus speciosus* Frost et al., Bull. Amer. Mus. Nat. Hist. 297:363.

2014. *Bufo* ([subgenus] *Anaxyrus*) *speciosus* Fouquette and Dubois, Checklist North Amer. Amphib. Rept., 7th ed., Vol. 1, Amphib., p. 308.

2017. *A*[*naxyrus*] *speciosus* Frost et al., Anura – Frogs, pp. 6–24 in Crother (Chair), Com., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol. Circ. 43:9.

Type specimens.—Four syntypes (Kellog 1932; Cochran 1961): USNM 2608 obtained by Arthur Schott; USNM 2610 obtained by Stewart Van Vliet; and USNM 2611 and 131559 collected by Darish N. Couch. Only the Couch specimens have a collection date (April 1853), but all the other collectors' acquisitions in the USNM were from the 1850s. Fouquette and Dubois (2014) designated USNM 2610 as a lectotype.

Type locality.—The original verbatim type locality statement by the describer is: "It appears to inhabit the valley of the Rio Bravo (Rio Grand [sic] del Norte), and to be not uncommon in the province of New Leon." These generalizations were based on three different type localities among the syntypes: Ringgold Barracks, Rio Grande City, Starr County (USNM 2608); Brownsville, Cameron County (USNM 2610); and Pesquiería Grande, Nuevo León, Mexico (USNM 2611, 131559). Smith and Taylor (1950a) restricted the type locality to the Brownsville, Cameron County, Texas option; the Fouquette and Dubois (2014) lectotype designation confirmed this restriction.

Topotypes.—Cameron Co: Brownsville, 6 (MCZ). The most recent collection date associated with these was 1930.

Near topotypes.—1 mi W Bluetown, 1 (BUMMC); 11 mi SE Brownsville, Palm Bottom, 2 (BUMMC); 12 mi WNW Brownsville, 3 (BUMMC); Harlingen, 5 (BUMMC); Fair Park, Harlingen, 10 (BUMMC); 1 mi S Harlingen 1 (BUMMC); 4.5 mi W Los Fresnos, 8 (BUMMC); 4.5 mi SW San Benito, 2 (BUMMC). The last of these topotypes were collected in 1969, with the others before 1950.

Bufo woodhousii velatus Bragg and Sanders, 1951
= *Anaxyrus velatus*
[East Texas Toad]

1854. *Bufo woodhousii* Girard, Proc. Acad. Nat. Sci. Phila. 7:86.

1863. *Incilius woodhousei* Cope, Proc. Acad. Nat. Sci. Phila. 15:50.

1951. *Bufo woodhousii velatus* Bragg and Sanders, Wasmann J. Biol. 9:366.

1958. *Bufo woodhousei velatus* Conant, Field Guide Amph. Rept. U.S. Canada E 100th Mer., p. 269.

1959. *Bufo terrestris* [ancestor] x *B. fowleri* Volpe, Amer. Midl. Nat. 61:310.

1987. *Bufo velatus* Sanders, Evol. Hybrid. Spec. North Amer. Indig. Bufonids, p. 52.

1996. *Bufo woodhousii* x *B. fowleri* Sullivan et al., Copeia 1996:278.

1989. *Bufo woodhousii* Collins, Kans. Herpetol. Soc. Newsl. 78:19.

2002. *Anaxryus woodhousii woodhousii* (by implication) Masta et al., Molec. Phylogen. Evol. 24:310.

2011. *Bufo velatus* Fontenot et al., Mol. Phylogen. Evol. 59:68.

2013. *Bufo* (*Anaxyrus*) *velatus* ("*fowleri*") Dixon, Amphib. Rept. Tex., 3rd ed., p. 119.

2014. *Bufo* ([subgenus] *Anaxyrus*) *fowleri* Fouquette and Dubois, Checklist North Amer. Amphib. Rept., 7th ed., Vol. 1, Amphibia, p. 302.

2017. *A*[*naxyrus*] *woodhousii* x *A*[*naxyrus*] *fowleri* Frost et al., Anura – Frogs, pp. 6–24 in Crother

(Chair), Com., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol. Circ. 43:10.

Type specimen.—Holotype, male, USNM 131869, obtained 8 March 1951 by Ottys E. Sanders and Ruth Maxwell Sanders, original number Sanders 1891.

Type locality.—Elkhart, Anderson County, Texas.

Topotypes.—Anderson Co: Elkhart, 9 (USNM), 6 (OMNH), 3 (CM), 2 (AMNH, CAS, UIMNH), 1 (BUMMC, MCZ, UCM, UMMZ). There were another nine topotypic paratypes in the original Sanders type series that have not been located, all collected in 1951.

Near topotypes.—Anderson Co: 5 mi W Elkhart, 1 (ASNHC), collected 1967.

Remarks.—The above synonymy reflects several assertions of hybrid status for the so-called "East Texas Toad," the last of which cited is in Frost et al. (2017), who drew their conclusion from the study of Masta et al. (2002). If this taxon is indeed based on a hybrid individual, then the species is invalid. Nevertheless, as focused morphological/behavioral/genetic analyses clarifying the status of *Anaxyrus velayus* in Texas has yet to be performed, this catalog follows the specific usage of Dixon (2013).

Family Craugastoridae

Lithodytes latrans Cope, 1880
= ***Craugastor augusti latrans***
[Balcones Barking Frog]

1878. *L*[*ithodytes*] *latrans* Anonymous, Amer. Nat. 12:186.

1879. *Hylodes augusti* Dugés, in Brocchi, Bull. Soc. Philomath. Paris 7:21.

1880. *Lithodytes latrans* Cope, Bull. U.S. Nat. Mus. 17:25.

1917. *Eleutherodactylus latrans* Stejneger and Barbour, Check List North Amer. Amphib. Rept. [1st ed.], p. 34.

1956. *Eleutherodactylus augusti latrans* Zweifel, Amer. Mus. Novit. 1813:17.

1968. *Hylactophryne augusti latrans* (by implication) Lynch, Univ. Kans. Publ. Mus. Nat. Hist. 17:511.

1986. *Eleutherodactylus augusti* Lynch, Herpetologica 43:354.

1989. *Eleutherodactylus* (Subgenus *Craugastor*) *augusti* Hedges, Evol. Biog. West Indian Frogs Genus *Eleutherodactylus*, pp. 305–370 in Wood, Biogeography of the West Indies, p. 318.

2005. *Craugastor augusti* (by implication) Crawford and Smith, Mol. Phylogenet. Evolution 35:551.

2006. *Craugastor augusti* Frost et al., Bull. Amer. Mus. Nat. Hist. 297:360.

2008. *Craugastor* ([Subgenus] *Hylactophryne*) *augusti* Hedges et al., Zootaxa 1737.44.

2008. [*C*]*raugastor a*[*ugusti*] *latrans* Frost et al., Anura – Frogs, pp. 2–12 in Crother (Chair), Com., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 6th ed., SSAR Herpetol. Circ. 37:5.

Type specimens.—Syntypes, ANSP 10757–58 (Piatt 1934; Malnate 1971), and perhaps USNM 10059 (2 specimens, Zweifel 1967), obtained by Gabriel W. Marnock. No holotype was designated from among the specimens available to Cope at the time of his description, nor were specimen catalog numbers among the apparent syntypic series elucidated in the author's later works. See Remarks.

Type locality.—Helotes, Bexar County, Texas (designated by Cochran 1961). Cope (1880) stated the origin of the syntypes as the "cliffs of the cretaceous [sic] limestone which are found in every direction along the borders and river valleys of the first plateau region [of southwestern Texas]." The 15,000-acre Marnock (Marnoch) Ranch was located north of Helotes, with its 1859-constructed stone ranch residence within walking distance of Helotes Creek and the limestone formations mentioned by Cope (see https://texashistoricalmarkers.weebly.com/marnoch-homestead.html).

Topotypes.—Bexar Co: Helotes, 9 (USNM), 2 (ANSP, CAS), 1 (MCZ, UMMZ); Helotes, Iron Horse Canyon, Phils Line Cave, 1 (TNHC); Helotes, Marnoch Rd, 2 (TNHC). The last of these topotypes was collected in 2005.

Near topotypes.—Bexar Co: Helotes vicinity, 3 (TNHC); 1 mi N on Marnock Ranch, 11 (TNHC); 2 mi N Helotes, 1 (TCWC); Madla Ranch [variant spellings of Madla, variant offsets at N or NW headings from Helotes], 14 (MVZ), 1 (LSUMZ, UAZ); Madla Ranch Cave [also with variant offsets from Helotes], 5 (UCM), 3 (TNHC), 2 (LSUMZ), 1 (KU, UF); 3 mi N Helotes, 1 (ASNHC); 5 mi N Lelates [sic, = Helotes], 2 (UCM); 7 mi N Helotes, 1 (USNM); NW Helotes, San Antonio Ranch, 4 (TNHC). The most recent of these near topotypes was collected in 1972.

Remarks.—Cochran (1961) identified additional syntypes to those present at ANSP as follows: USNM 10058 (2 specimens), USNM 10529 (2 specimens), and USNM 10751–53. Later, Zweifel (1967) stated: "The name *latrans* first appeared in an anonymous note in the March 1878 issue of *The American Naturalist* (p. 186): 'G. W. Marnock has recently discovered in southwestern Texas, a new species of the genus *Lithodytes*, which Prof. Cope calls *L. latrans*.' This is a *nomen nudum*, and the name must date from Cope's formal description (1880)." Later in that work, Zweifel (1967) also noted a comment made by Cope (1889) that specimens received post-description from the collector (Marnock) were larger than the original specimens (greater than 76 mm in head-body length), and thus likely were not syntypes.

Family Eleutherodactylidae

Syrrhophus campi Stejneger, 1915
[Rio Grande Chirping Frog]

1915. *Syrrhophus campi* Stejneger, Proc. Biol. Soc. Wash. 28:131.

1962. *Eleutherodactylus campi* (by implication) Myers, Copeia 1962:198.

1970. *Syrrhophus cystignathoides campi* Lynch, Univ. Kans. Publ. Mus. Nat. Hist. 20:15.

1985. *Syrrhophus cystignathoides* Cannatella, in Frost (Ed.), Amphib. Spec. World, p. 340.

1997. *E*[*leutherodactylus*] *c*[*ystignathoides*] *campi* Collins, Stand. Common Curr. Sci. Names North Amer. Amphib. Rept., 4th ed., SSAR Herpetolog. Circ. 25:12.

2008. *Eleutherodactylus* ([Subgenus] *Syrrhophus*) *cystignathoides* Hedges et al., Zootaxa 1737:89.

2012. *E*[*leutherodactylus*] *c*[*ampi*] *cystignathoides* Frost et al., Anura – Frogs, pp. 11–22 in Crother, (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 7th ed., SSAR Herp. Circ. 39:14.

2013. *Syrrhophus* (*Eleutherodactylus*) *cystignathoides campi* Dixon, Amphib. Rept. Tex., 3rd ed., p. 96.

2018. *Eleutherodactylus* ([subgenus] *Syrrhophus*) *campi* Grünwald et al., Mesoam. Herpetol. 5:66.

2023. *Syrrhophus* (*Eleutherodactylus*) *campi* This publication (see Remarks).

Type specimen.—Holotype, USNM 52290, obtained 31 March 1915 by R. D. Camp (Cochran 1961:79).

Type locality.—Brownsville, Cameron County, Texas.

Topotypes.—Cameron Co: Brownsville, 12 (MCZ), 11 (BUMMC), 3 (LSUMZ), 2 (CAS, KU, TCWC), 1 (CM, CUMZ, TNHC); Brownsville, 6005 Danubio Ct., 1 (TNHC); Brownsville, 1550 Grants Street, 4 (ASNHC); Southmost College Campus, Brownsville 2 (UTEP). Following the description in the early 20th century, R. D. Camp and Charles Camp of Brownsville apparently acquired and sold many specimens to museums. There are thus doubtless other topotypes among these institutions (e.g., AMNH). The latest of the above topotypes was collected in 2018.

Near topotypes.—Cameron Co: Brownsville area, 2 (LSUMZ); Hwy 1419, 3 mi N Brownsville, 6 (BUMMC); 3 mi S Harlingen, 2 (BUMMC); Sabal Palm Sanctuary, 4 (TNHC); 8 mi WNW Southmost, 3 (TCWC); Southmost Palm Grove, 7 (TCWC), 1

(ASNHC, TNHC). The last of these near topotypes was collected in 2019.

Remarks.—This catalog follows the preference for the genus *Syrrhophus* by Dixon (2000, 2013) over its inclusion in *Eleutherodactylus*. The current trend is to recognize *Syrrhophus* as one of five diagnosable subgenera of the latter genus, with the most recent comprehensive taxonomic review accomplished by Hedges et al. (2008). These authors have commendably been able to phylogenetically whittle down the once-enormous genus *Eleutherodactylus* to 185 species-level taxa, but nevertheless the elevation to generic standing to the four subgenera for practical purposes is likely inevitable. Hedges et al.'s (2008) analysis clearly indicates from the samples available to them that *Syrrhophus* is a recognizable lineage, but understanding of the within-lineage relationships suffers from a lack of sampling for genetic study of the majority of the species (mostly Mexico endemics) that are now identified and classified only by morphology (Lynch 1970).

With respect to the above species account, Grünwald et al. (2018) have provided evidence for the resurrection of *Syrrhophus campi* out of subspecific synonymy with *S. cystigathnoides*. The restored binomen has been selected for use here.

Syrrhophus gaigeae Schmidt and Smith, 1944
= *Syrrhophus guttilatus*
[Spotted Chirping Frog]

1879. *Malachylodes guttilatus* Cope, Proc. Amer. Philos. Soc. 18:264.

1888. *Syrrhophus guttilatus* Boulenger, Proc. Zool. Soc. London 2:204.

1940. *Syrrhophus smithi* Taylor, Proc. U.S. Nat. Mus. 89:43

1944. *Syrrhophus gaigeae* Schmidt and Smith, Zool. Ser. Field Mus. Nat. Hist. 29:80.

1950. *Syrrhophus marnockii* Milstead et al., Tex. J. Sci. 2:550.

1954. *Syrrhophus pterophilus* Firschein, Copeia 1954:50.

1970. *Syrrhophus guttilatus* Lynch, Univ. Kansas Publ. Mus. Nat. Hist. 20:22.

1996. *Syrrhophus pterophilus* Lynch, J. Herpetol. 30:279.

1997. *E*[*leutherodactylus*] *guttilatus* Collins, Stand. Common Curr. Sci. Names North Amer. Amphib. Rept., 4th ed., SSAR Herpetolog. Circ. 25:12.

2006. *Syrrhophus guttilatus* Frost et al., Bull. Amer. Mus. Nat. Hist. 297:362.

2008. *Eleutherodactylus* ([Subgenus] *Syrrhophus*) *guttilatus* Hedges et al., Zootaxa 1737:91.

2013. *Syrrhophus* (*Eleutherodactylus*) *guttilatus* Dixon, Amphib. Rept. Tex., 3rd ed., p. 96.

Type specimen.—Holotype, FMNH 27361, obtained 24 July 1937 by Tarleton F. Smith.

Type locality.—The Basin, Big Bend National Park, Brewster County, Texas.

Topotypes.—Brewster Co: Big Bend National Park, The Basin, 2 (UMMZ), 1 (MCZ, TCWC, USNM). The last topotype was collected in 2001.

Near topotypes.—Brewster Co: Big Bend National Park, Green Gulch, just below Lost Mine Trailhead, 1 (TCWC); Big Bend National Park, Chisos Mts, Juniper Canyon, 8 (UMMZ). The former was collected in 2008.

Remarks.—Lynch (1970) synonymized this taxon with the widespread east-central Mexico species *S. guttilatus*.

Syrrhophus marnockii Cope, 1878
[Cliff Chirping Frog]

1878. *Syrrhophus marnockii* Cope, Amer. Nat. 12:253.

1953. *Syrrhophus marnocki Sc*hmidt, Check List. North Amer. Amphib. Rept., 6th ed., p. 60.

1989. *Eleutherodactylus* (Subgenus *Syrrhophus*) *marnockii* Hedges, Evol. Biog. West Indian Frogs Genus *Eleutherodactylus*, pp. 305–370 in Wood, Biogeography of the West Indies, p. 318.

1997. *E*[*leutherodactylus*] *marnockii* Collins, Stand. Common Curr. Sci. Names North Amer. Amphib. Rept., 4th ed., SSAR Herpetolog. Circ. 25:12.

2012. *Eleutherodactylus marnockii*, Frost et al., Anura – Frogs, pp. 11–22 in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 7th ed., SSAR Herpetol. Circ. 43:14.

2013. *Syrrhophus* (*Eleutherodactylus*) *marnockii* Dixon, Amphib. Rept. Tex., 3rd ed., p. 96.

Type specimens.—Four syntypes, ANSP 10765–10768, obtained by Gabriel W. Marnock.

Type locality.—The describer did not give a specific geographic origin to the type material, but Malnate (1971) indicates "near San Antonio, Bexar County, Texas" as the collection data associated with the ANSP syntypes. However, Strecker (1922) had pointed out that these type specimens were instead from the "vicinity of the Marnock homestead on Helotes Creek," based on his observation that the species had been found nowhere else in the four decades after its description. The original type locality situation is thus similar to that of *Lithodytes latrans*, and in this case Strecker's verbatim type locality restriction is accepted for purposes of this catalog.

Topotypes.—Bexar Co: 1 mi N Helotes on Marnock Ranch, 6 (TNHC); Helotes, Marnoch Rd, 2 (TNHC). The former were collected 1952, the latter 2012.

Near topotypes.—Helotes, 5 (BUMMZ), 1 (MCZ, TCWC, USNM); Helotes Park, 1 (USNM); Helotes vicinity, 5 (TNHC); 1 mi NNW Helotes, 2 (BUMMZ); 2 mi N Helotes, 2 (TCWC); 2.5 mi N Helotes, 3 (UCM); 3.0 mi NW Helotes, 1 (ASNHC); Madla Ranch, 3 mi N Helotes, 12 (MVZ); Madla Ranch, 3 mi NE Helotes, 1 (UMMZ); Madla Ranch Cave [various offsets from Helotes and spelling of "Madla"], 7 (TNHC), 3 (LSUMZ), 2 (UCM), 1 (KU); NW of Helotes on San Antonio Ranch [subdivision] property, 4 (TNHC). The last of these was the most recently collected, in 1972.

Family Hylidae

Acris gryllus paludicola Burger, Smith, and Smith, 1949
= *Acris blanchardi paludicola*
[Coastal Cricket Frog]

1825. *Rana gryllus* Le Conte, Ann. Lyc. Nat. Hist. New York 1:282.

1854. *Acris crepitans* Baird, Proc. Acad. Nat. Sci. Phila. 7:59.

1947. *Acris gryllus blanchardi* Harper, Proc. Biol. Soc. Wash. 60:39

1947. *Hyla ocularis blanchardi* Mittleman, Amer. Midl. Nat. 38:472.

1949. *Acris gryllus paludicola* Burger et al., J. Tenn. Acad. Sci. 24:131.

1977. *Acris crepitans paludicola* Duellman, Das Tierreich 95:2.

2006. *Acris crepitans crepitans* McCallum and Trauth, Zootaxa 1104:20.

2008. *Acris blanchardi* Gamble et al., Mol. Phylo. Evol. 48:112.

2013. *Acris blanchardi paludicola* Dixon, Amphib. Rept. Tex., 3rd ed., p. 98.

Type specimen.—Holotype, UIMNH 872, obtained 2 May 1948 by Nancy E. Worsham.

Type locality.—Sabine Pass, Jefferson County, Texas.

Topotypes.—Jefferson Co: Sabine Pass, 13 (UIMNH), 4 (UIMNH), 1 (USNM). All of these are topotypic paratypes collected in 1948 (Cochran 1961; Smith et al. 1964).

Near topotypes.—Jefferson Co: 20 mi SW Port Arthur, 1 (BYU); 5 mi W Sabine Pass, 1 (MCZ); J. D. Murphee State Wildlife Management Area, 17 (TCWC); Big Hill Bayou State Wildlife Management

Area, 8 (TCWC); 20 mi SW Port Arthur, in marsh, 4 (MSUM). The most recently collected of these in 2004.

Remarks.—Rose et al. (2006) argued for the validity of this subspecies (as *Acris crepitans paludicola*) and demonstrated a closer relationship of it to *A. c. blanchardi* than to *A. c. crepitans*. That same year, McCallum and Trauth (2006) contrarily concluded that neither *A. c. paludicola* nor *A. c. blanchardi* could be recognized morphologically. Gamble et al. (2008) subsequently recognized *A. blanchardi* as a distinct species, but they did not entertain subspecies in that work. The first use of the combination *Acris blanchardi paludicola* appeared in Dixon (2013), and that name is tentatively accepted here as valid pending further study of Texas populations.

Helocaetes clarkii Baird, 1854
= *Pseudacris clarkii*
[Spotted Chorus Frog]

1854. *Helocaetes clarkii* Baird, Proc. Acad. Nat Sci. Phila. 7:60

1875. *Chorophilus triseriatus clarki* Cope, Bull. U.S. Nat. Mus. 1:30.

1932. *Pseudacris triseriata clarkii* Burt, Amer. Midl. Nat. 13:80.

1933. *Pseudacris nigrita clarkii* Stenjneger and Barbour, Check List North Amer. Amphib. Rept., 3rd ed., p. 31.

1934. *Pseudacris clarkii* Smith, Amer. Midl. Nat. 15:462.

1984. *Hyla* ([subgenus] *Pseudacris*) *clarkii* Dubois, Alytes 3:85.

2014. *Pseudacris* ([subgenus] *Pseudacris*) *clarkii* Fouquette and Dubois, Checklist North Amer. Amphib. Rept., p. 347.

2017. *P*[*seudacris*] *clarkii* Frost et al., Anura – Frogs, pp. 6–24 in Crother (Chair), Com., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol. Circ. 43:19.

Type specimens.—Lectotype, an adult, USNM 3313, obtained by M. Dean. The lectotype, selected by Fouquette and Dubois (2014), is the only extant specimen of three original syntypes, USNM 3313, 3315, and 3317 (Cochran 1961; Duellman 1977).

Type localities.—Galveston, Galveston County, and Indianola, Calhoun County, Texas. Restricted to Galveston by Schmidt (1953); the lectotype designation of Fouquette and Dubois (2014) confirmed that action.

Topotypes.—No preserved specimens were found at either of the original type localities.

Near topotypes.—Galveston Co: Texas City, 1 (TCWC), collected in 1968.

Hyla copii Boulenger, 1887
= *Dryophytes arenicolor*
[Canyon Treefrog]

1854. *Hyla affinis* Baird [*nec* Spix 1924], Proc. Acad. Nat. Sci. Phila. 7:61

1859. *Hylarana fusca* Baird, Rept. Boundary, U.S. Mex. Bound. Survey, Vol. 2:35.

1866. *Hyla arenicolor* Cope, J. Acad. Nat. Sci. Phil. Ser. 2, 6:84.

1887. *Hyla copii* Boulenger, Ann. Mag. Nat. Hist., Ser. 5, 20:53.

1888. *Hyla coper* [misspelling of *copii*] Cope, Amer. Nat. 20:80.

1899. *Hyliola digueti* Mocquard, Bull. Soc. Philomath., Paris, Ser. 9, 1:165.

1932. *Hyla copii* Kellogg, U.S. Nat. Mus. Bull. 60:157.

2014. *Hyla* ([subgenus] *Dryophytes*) *arenicolor* Fouquette and Dubois, Checklist North Amer. Amphib. Rept., 7th ed., Vol. 1, Amphib., p. 333.

2016. *Dryophytes arenicolor* Duellman et al., Zootaxa 4104:23.

Type specimens.—There are two syntypes, NHMUK 1947.2.23.26–27 (formerly 87.5.12.48–49), date and collector not found (Condit 1964).

Type locality.—El Paso, El Paso County, Texas. See Remarks.

Topotypes and near topotypes.—None found.

Remarks.—The original allocation of Boulenger's *Hyla copii* to *H. arenicolor* is by a footnote in a very brief announcement of Boulenger's description by Cope (1888). However, as Cope misspelled the specific epithet (see synonymy, above), this citation is thus not a first use of a correct binomen. A full justification for the synonymy (with correct spelling of *copii*) appeared much later (Kellogg 1932). The currently proposed valid name for this taxon, *Dryophytes arenicolor*, arises from a proposed generic re-allocation of North American *Hyla* (Duellman et al. 2016).

The Canyon Treefrog does not occur in the vicinity of El Paso today, and the original specimens of *Hyla copii* may have been collected elsewhere in Texas or New Mexico, shipped from El Paso, and eventually reached London. Alternatively, the Rio Grande of the 1800s was notorious for seasonal flooding of the El Paso del Norte region with waters originating from mesic New Mexico canyonlands upriver. Waif individuals of Canyon Treefrog from such floods might have turned up from time to time in rocky riparian habitats downriver. The "falls" of the Rio Grande near the 19th century pre-El Paso settlement of Hart's Mill would have been a likely such site. To the north of El Paso, Degenhardt et al.'s (1996) map of the species distribution for New Mexico show two records for Doña Ana County that appear to be the Organ or the San Andres Mountains, plus one on the Rio Grande in Las Cruces. Museum specimens have not been located for either of these New Mexico records.

Hyla femoralis chrysoscelis Cope, 1880
= *Dryophytes chrysoscelis*
[Cope's Gray Treefrog]

1880. *Hyla femoralis chrysoscelis* Cope, Bull. U.S. Nat. Mus. 17:29.

1910. *Hyla versicolor chrysoscelis* Strecker, Proc. Biol Soc. Wash. 23:117.

1966. *Hyla chrysoscelis* Johnson, Tex. J. Sci. 18:361.

2014. *Hyla* ([subgenus] *Dryophytes*) *chrysoscelis* Fouquette and Dubois, Checklist North Amer. Amphib. Rept., 7th ed., Vol. 1, Amphib., p. 336.

2016. *Dryophytes chrysoscelis* Duellmane et al., Zootaxa 4104:23.

Type specimen.—Holotype ANSP 13762 (Malnate 1971, in error), obtained by Jacob Boll. A typographical error in the above holotype catalog number was corrected to ANSP 13672 by Malnate (in litt.), an accompaniment to the distribution of reprints to his published account. Jacob Boll of Dallas was primarily a collector for Louis Agassiz at MCZ during the 1870s, but some of his specimens ended up with Cope at ANSP/USNM. Based on cytological examination of preserved tissues from the holotype, Fitzgerald et al. (1981) were able to demonstrate that it was actually a member of the cryptic tetraploid species *Hyla versicolor* (= *Dryophytes versicolor*, see Remarks). Rather than apply the next available name for the historically and widely used name *Hyla chrysoscelis* (see catalog entry for *Hyla versicolor sandersi*), Smith et al. (1983, 1988, 1992) petitioned the International Commission on Zoological Nomenclature (ICZN) to use their plenary powers to conserve the name *H. chrysoscelis* for the diploid species and to allow a neotype designation for the taxon. The ICZN (1993) eventually agreed to most of the Smith et al. revised proposals, and authorized the neotype to be an adult male, TNHC 37293, obtained April 1970 by James P. Bogart and J. E. Bogart (original number JPB 2043). The ICZN (1993) did not, however, agree to the Smith et al. proposal that the attribution of the name *Hyla chrysoscelis* be changed from Cope to Johnson. Johnson (1966) had recognized the latter taxon as a cryptic biological species apart from *Hyla versicolor*, and he was first to use the *H. chrysoscelis* binomial combination.

Type locality.—The original holotype was from Dallas, Dallas County, Texas. The neotype is from 2 miles west of the Colorado River on FM Rd 969, Bastrop County, Texas As this matter has been settled by the ICZN, the Bastrop County type locality is accepted for this catalog.

Topotypes.—Bastrop Co: Colorado River, 2 mi W on FM Rd 969, 4 (TNHC). Collected 1970. The offset direction on FM Rd 969 from the Colorado River bridge is northwest, not west.

Near topotypes.—Bastrop Co: Utley, school pool, N Avon Rd, 6 (TNHC); Utley, across rd from school-

house, 40 (TNHC). The last of these collected in 1950; these may be exact topotypes. Others include Bastrop Co: 1.5 mi NW Utley schoolhouse, 15 (TNHC); 23 mi E Austin, FM 969, 1 (TNHC, plus two voice recordings in the Macaulay Library, Cornell University Ornithology Laboratory, recorded in 1970).

Remarks.—The phenotypic similarity of this species ("Cope's Gray Treefrog") to *Dryophytes versicolor* (the "Gray Treefrog") makes reliable identification challenging. The two species are sympatric over large areas of Texas, and both have been recorded from Dallas County (Dixon 2013). The simplest method to allocate populations to one or the other of the two species is with recordings of the breeding calls of males (different in the two species) at a given site. Those recordings can then be compared with calls from populations that have been genetically or cytologically confirmed as either *Dryophytes chrysoscelis* (the diploid species) or *D. versicolor* (the tetraploid). In practice, these tasks are easier described than accomplished. For this reason, few specimens of Gray Treefrogs collected after the late 1960s appear in museum records under the name *Hyla chrysoscelils*. Most museum holdings remain cataloged as *H. versicolor* as a fallback placeholder (because of the impracticability of determining the ploidy level for individual specimens). As both species have been recorded from Bastrop County (Dixon 2013), the near-topotypes listed above, compiled from VertNet database records, could well be either taxon.

Hyla flavigula Glass, 1946
= ***Dryophytes squirellus***
[Squirrel Treefrog]

1800. *Hyla squirella* Bosc, in Daudin, Hist. Nat. Quadrup. Ovip., Livr. 1:9.

1820. *Calamita squirella* Merrem, Versch. Syst. Amphib., Tent. Syst. Amphib., p. 171.

1825. *Hyla delitescens* Le Conte, Ann. Lyc. Nat. Hist. New York 1:281.

1830. *Auletris squirella* Wagler, Nat. Syst. Amphib. p. 201.

1838. *Dendrohyas squirella* Tschudi, Classif. Batrach., p. 75.

1946. *Hyla flavigula* Glass, Herpetologica 3:101.

1949. *Hyla squirella* Neill, Copeia 1949:78.

2014. *Hyla* ([subgenus] *Epedaphus*) *squirella* Fouquette and Dubois, Checklist North Amer. Amphib. Rept., p. 344.

2016. *Dryophytes squirellus* Duellman et al., Zootaxa 4104:23.

Type specimen.—Holotype, TCWC 1192, obtained 20 June 1946 by Bryan P. Glass.

Type locality.—Aransas National Wildlife Refuge, Aransas County, Texas.

Topotypes.—Aransas Co: Aransas National Wildlife Refuge, 4 (UF). These specimens were collected in 1946.

Near topotypes.—Aransas Co: 1.7 mi N south tip Lamar Peninsula, 5 (TNHC). These near topotypes were collected in 1948.

Remarks.—*Hyla flavigula* was synonymized into *H. squirella* by Neil (1949).

Hyla semifasciata Hallowell, 1856
= Dryophytes cinereus
[Green Treefrog]

1799. *Calamita cinereus* Schneider, Hist. Amph. Nat., p. 174.

1799. *Calamita carolinensis* Schneider, Hist. Amph. Nat., p. 174.

1800. *Hyla lateralis* Daudin, Hist. Nat. Ovip. Quad. 2:16.

1802. *Rana bilineata* Shaw, Gen. Zool. 3:136.

1802. *Hyla blochii* Daudin, Hist. Natur. Rainett. Gren. Crapauds, p. 43.

1820. *Calamita lateralis* Merrem, Vert. Syst. Amphib., Tent. Syst. Amphib., p. 171.

1828. *Rana lateralis* Audouin et al., Diction, Classique D'hist. Natur. 14:453.

1856. *Hyla semifasciata* Hallowell, Proc. Acad. Nat. Sci. Phila. (1857) 8:307.

1858. *Hyla carolinensis* Günther, Cat. Batr. Salientia Coll. Brit. Mus. (1859), p. 105.

1875. *Hyla carolinensis semifasciata* Cope, Bull. U.S. Nat. Mus. 1:31.

1890. *Hyla cinerea cinerea* Garman, Bull. Ill. State Lab. Nat. Hist. 3:189.

1890. *Hyla cinerea semifasciata* Garman, Bull. Ill. State Lab. Nat. Hist. 3:189.

1899. *Hyla evittata* Miller, Proc. Biol. Soc. Wash. 13:76.

1918. *Hyla cinerea civittata* Dunn, Copeia 53:21.

1953. *Hyla cinerea cinerea* Schmidt, Check List North Amer. Amphib. Rept., 6th ed., p. 70.

1958. *Hyla cinerea* Duellman and Schwartz, Bull. Florida St. Mus. 3:241.

2014. *Hyla* ([subgenus] *Epedaphus*) *cinerea* Fouquette and Dubois, Checklist North Amer. Amphib. Rept., p. 341.

2016. *Dryophytes cinereus* Duellman et al., Zootaxa 4104:23.

Type specimens.—Two syntypes, ANSP 2024–25 (Malnate 1971), obtained by Dr. Adolphus L. Heerman, probably obtained in 1854 or 1855 (see Remarks).

Type locality.—Given by describer as "Texas," later restricted to "vicinity of Houston" by Schmidt (1953). This restriction was considered by Fouquette and Dubois (2014) as invalid. Both the describer and the restrictor seem to have ignored the title of the publication, which specifically alluded to a collection of specimens from the area of San Antonio, Texas. Dr. Heerman resided for a time in San Antonio, and his brother had a large ranch south of the city that he visited frequently. Because of the uncertainty of the type locality, I regard Bexar County, Texas, as the most appropriate locality for the purposes of this catalog (see Remarks).

Topotypes.—Bexar Co: San Antonio, 7 (CAS), 1 (BUMMC), all likely to have been collected no later than the early 1900's. No extant museum specimens of Green Treefrog were located in the VertNet database within the 19th century extent of San Antonio, or from the Medina River area east of Von Ormy (that is, near the historical Heerman Ranch). There is, however, a 2016 image of this treefrog on the iNaturalist website from the grounds of the Alamo in downtown San Antonio.

Near topotypes.—Bexar Co: 5 mi S San Antonio, 5 (LACM); 6 mi S San Antonio, at or near Mitchell Lake, 12 (TNHC), 10 (BUMMC); Pleasanton Rd, 9.5 mi S San Antonio, 10 (LACM). The most recent of these near topotypes was collected in 1954.

Remarks.—Dr. Adolfus Heerman, an ornithologist/fellow of the ANSP, collected birds (and presumably other organisms) on a US Army survey out of California that stayed briefly in San Antonio in the prewinter of 1854. He made return visits to San Antonio from Philadelphia in the winters of 1854–1855 and 1855–56, and likely stayed with his younger brother, Theodore Heerman, who owned properties in central San Antonio as well as a thousand-acre ranch on the Medina River SSE of the village of Von Ormy (ca. 29°16'N, 98°36'W). It is highly probable that one or the other of these two Bexar County sites is the locality of origin for the type specimen of *H. semifasciata*.

Shortly after its description by Hallowell (1856), *Hyla semifasciatus* was relegated to a subspecies of *Hyla carolinensis* by Cope (1875); shortly thereafter Boulenger (1882) completely synonymized *H. semifasciatus* with *H. carolinensis*. A few years later Garman (1890) revived the subspecific name to the more correct combination of *H. cinerea semifasciata*. In the middle of the next century, Schmidt (1953) declined to recognize *semifasciata* as a valid taxon and relegated it to the nominal subspecies *H. cinerea cinerea*. The last taxonomic review of the species, that of Duellman and Schwartz (1958), offered a range-wide analysis (including Texas) that demonstrated all of the historically proposed subspecies of *Hyla cinerea* were not justifiable.

Hyla vanvlietii Baird, 1854
= ***Smilisca baudinii***
[Mexican Treefrog]

1841. *Hyla Baudinii* Duméril and Bibron, Erpét. Gén. Hist. Nat. Comp. Rept., Liv. 8:564

1854. *Hyla vanvlietii* Baird, Proc. Acad. Nat. Sci. Phila. 7:61.

1859. *Hyla vociferans* Baird, Rept. Boundary, U.S. Mex. Bound. Surv. Vol. 2:35.

1862. *Hyla muricolor* Cope, Proc. Acad. Nat. Sci. Phila. 14:359.

1865. *Smilisca daulinia* Cope, Proc. Acad. Nat. Sci. Phila. 17:194.

1875. *Smilisca baudinii* Cope, Bull. U.S. Nat. Mus. 1:31.

1877. *Hyla pansosana* Brocchi, Bull. Soc. Philom. Paris, ser. 7, 1:125.

1923. *Hyla baudinii baudinii* Stejneger and Barbour, Check List North Amer. Amphib. Rept., 2nd ed., p. 34.

1942. *Hyla beltrani* Taylor, Univ. Kans. Sci. Bull. 28:206.

1947. *Smilisca baudini baudini* [sic] Smith, J. Wash. Acad. Sci. 37:408.

1966. *Smilisca baudinii* Duellman and Trueb, Univ. Kansas Publ, Mus. Nat. Hist. 17:289.

Type specimen.—Holotype, a juvenile, USNM 3256, obtained by Captain Stewart Van Vliet.

Type locality.—Brownsville, Cameron County, Texas.

Topotypes.—Cameron Co: Brownsville, 4 (MCZ), 1 (MVZ, UMMZ). Last collection years indicated among these were 1920, and it unknown if these originated from within the 19th century town limits. Additionally, Travis LaDuc (TNHC) has drawn my attention to a 2019 collection of *Smilisca baudinii* specimens cataloged in that museum from the University of Texas Rio Grande Valley Brownsville Campus. That campus is closer to the town limits of old Brownsville than any of the near topotypes listed below.

Near topotypes.—Cameron Co: Los Fresnos High School, Agua Negra [lake], 2 (TNHC); Hwy 1847, 0.5 mi N Los Fresnos, 1 (TCWC); 4 mi W Los Fresnos, 10 (BUMMC); 12 mi WNW Brownsville, 9 (BUMMC); Southmost Nature Preserve (= Southmost Palm Grove), 1 (TCWC). The most recent collection year for one of these was 2019.

Remarks.—When Barbour (1923) described *Hyla baudinii dolomedes*, he created a *de facto* trinomial name for a nominative subspecies; that trinomial later appeared in Stejneger and Barbour (1923). Dunn (1931) subsequently demonstrated that *H. b. dolomedes* was based on *Smilisca phaeota*, thus eliminating the need for the *Hyla baudinii baudinii* subspecies name. That trinomial was nevertheless retained when *Hyla baudinii* was allocated to the genus *Smilisca* (Smith 1947; Smith and Taylor 1948). The currently accepted binomen name, with no subspecies recognized, follows the revision of the genus *Smilisca* by Duellman and Trueb (1966).

The only populations of *Smilisca baudinii* in Texas (or the United States) are in Cameron and Hidalgo counties. The species has been designated by TPWD as Threatened since the 1970s (see Davis and LaDuc 2021). It persists in Cameron County in localized populations where breeding sites are still available. South of the Rio Grande, however, it is common from Mexico to Costa Rica.

Hyla versicolor sandersi Smith and Brown, 1947
= *Dryophytes chrysoscelis*
[Cope's Gray Treefrog]

1880. *Hyla femoralis chrysoscelis* Cope, Bull. U.S. Nat. Mus. 17:29.

1910. *Hyla versicolor chrysoscelis* Strecker, Proc. Biol Soc. Wash. 23:117.

1947. *Hyla versicolor sandersi* Smith and Brown, Proc. Biol. Soc. Wash. 23:117.

1966. *Hyla chrysoscelis* Johnson, Tex. J. Sci. 18:361.

1993. *Hyla chrysoscelis* [by inference] International Commission on Zoological Nomenclature, Bull. Zool. Nomen. 50:92.

2016. *Dryophytes chrysoscelis* Duellman, Marion, and Hedges, Zootaxa 4104:23.

Type specimen.—Holotype USNM 123978 obtained 27 April 1946 by Albert J. Kirn.

Type locality.—8 miles southwest of Somerset, Atascosa County, Texas. This offset and heading from Somerset suggests that the specimens are from the vicinity of Kirn's farm/residence.

Topotypes.—Atascosa Co: 8 mi SW Somerset, 12 (TCWC), 11 (BUMCC), 1 (CUMV). These were collected in 1946.

Near topotypes.—Atascosa Co: 7 mi SW Somerset, 1 (BUMCC); northwest part of county, 4 (CM), 1 (CUMV, UMMZ); 7 mi SE Lytle, 2 (CUMV). However, the identities of these near topotype specimens are questioned, given the difficulties in distinguishing individuals of this taxon from the potentially sympatric Cope's Gray Treefrog (see Remarks in the account for *Hyla femoralis chrysoscelis*).

Remarks.—The initial proposal of Smith et al. (1983) to the ICZN to fix the nomenclature problem that accompanied the discovery that the holotype of *Hyla femoralis chrysoscelis* was actually the tetraploid *Hyla versicolor* and not the diploid *Hyla chrysoscelis* (discussed in the previous entry) was to have the Cope holotype set aside in favor of the type specimen for *Hyla versicolor sandersi*. The Commission agreed in principle, but declined to act because the ploidy number of *sandersi* was not known. In their subsequent revision of the proposal, Smith et al. (1988) requested a neotype designation for *H. chrysoscelis* and also asked for suppression of the name *sandersi* on the basis of priority of use. The final ICZN ruling (1993) agreed to the former and not the latter; thus, *Hyla versicolor sandersi* remains an available, although not currently valid, name. That ruling may have been far-sighted, as research by Holloway et al. (2006) has revealed a fairly complex evolutionary pedigree of tetraploid lineages assigned to *Dryophytes versicolor*.

Pseudacris streckeri Wright and Wright, 1933
[Strecker's Chorus Frog]

1933. *Pseudacris streckeri* Wright and Wright, Handbook of Frogs and Toads, p. 26.

1951. *Pseudacris streckeri streckeri* P. W. Smith, Bull. Chicago Acad. Sci. 9:190.

1984. *Hyla* ([subgenus] *Pseudacris*) *streckeri streckeri* Dubois, Alytes 3:85.

2014. *Pseudacris* ([subgenus] *Pycnacris*) *streckeri streckeri* Fouquette and Dubois, Checklist N. A. Amphib. Rept., 7th ed., Vol.1, Amphib., p. 364.

2017. *P*[*seudacris*] *streckeri* Frost et al., Anura – Frogs, pp. 6–24 in Crother (Chair), Com., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol. Circ. 43:20.

Type specimens.—Five syntypes, CUMV 2485, obtained 10 February 1932 by Albert J. Kirn (Wright and Wright 1949). The type series was reported as "currently misplaced or lost" by P. W. Smith (1966).

Type locality.—Not originally designated by describer. Later designated, incorrectly, as "Waco, McClennan County, Texas" by Schmidt (1953). P. W. Smith (1966) changed the type locality to Somerset, Bexar County, Texas, which conforms to the database collection data for CUMVZ 2485.

Topotypes.—None located.

Near topotypes.—Bexar Co: 0.9 mi SE Somerset, 1 (TNHC). Atascosa Co: 7 mi SE Lytle, at Kirn Ranch, 38 (TNHC). The most recent near topotypes were collected in 1968.

Family Microhylidae

Engystoma areolata Strecker, 1909
= Gastrophryne olivacea
[Western Narrow-mouthed Toad]

1856. *Engystoma olivaceum* Hallowell, Proc. Acad. Nat. Sci. Phila. 8 (1857):252.

1858. *Engystoma rugosum* (in part) Günther, Cat. Batr. Salientia Coll. Brit. Mus. Mus. (Nat. Hist), London (1859), p. 52.

1859. *Engystoma texense* Girard, Proc. Acad. Nat. Sci. Phila. (1860) 11:169.

1882. *Engystoma carolinense* (in part) Boulenger, Cat. Batrach. Salient. Eucaud. Coll. Brit. Mus., 2nd ed., Brit. Mus. Mus. (Nat. Hist), London, p. 52.

1909. *Engystoma areolata* Strecker, Proc. Biol. Soc. Wash. 22:118.

1910. *Gastrophryne areolata* Stejneger, Proc. Biol. Soc. Wash. 23:166.

1910. *Gastrophryne texana* Stejneger, Proc. Biol. Soc. Wash. 23:166.

1915. *Gastrophryne texensis* Strecker, Baylor Univ. Bull. 18:47.

1933. *Gastrophyrne olivacea* Smith, Copeia 1933:217.

1934. *Microhyla areolata* Parker, Monogr. Frogs Fam. Microhylidae, p. 147.

1934. *Microhyla olivacea* Parker, Monogr. Frogs Fam. Microhylidae, p. 201.

1938. *Microhyla olivacea* Burt, Pap. Michigan Acad. Sci. Arts Lett. 23:608.

1946. *Mircohyla carolinensis olivacea* Hecht and Matalas, Amer. Mus. Novit. 1315:5

1954. *Microhyla olivacea olivacea* Langbartel and Smith, Herpetologica 10:126.

1954. *Gastrophryne carolinensis olivaceus* Carvalho, Occ. Pap. Mus. Zool. Univ. Mich. 555:13.

1956. *Gastrophryne olivacea olivacea* Chrapliwy, Herpetologica 12:13.

1972. *Gastrophryne olivacea* Nelson, Cat. Amer. Amphib. Rept. 122:122.3.

Type specimen.—Holotype, a juvenile, USNM 38999, obtained January 1909 by Joseph D. Mitchell, original number Mitchell 501. Nelson (1972), who examined the specimen, indicated it may be *Gastrophryne olivacea*, but could also be a hybrid between this species and *G. carolinensis*. The original describer (Strecker 1909) alluded to a syntype in the Baylor University collection (No. 4086), but it is not clear if that syntype is extant. Similarly, Strecker alluded to a third specimen, Mitchell Number 501a, also collected with the type. Both of these specimens may be in the BUMMC collection.

Type locality.—From Guadalupe River bottom, Victoria, Victoria County, Texas.

Topotypes.—Victoria Co: Guadalupe River bottom, 2 (BUMMC), collected 1909.

Near topotypes.—Victoria Co: Victoria, 5 (USNM); Victoria, jct Old Bloomington Rd and FM Rd 1432, 1 (TCWC); 1 mi SW Victoria on US Hwy 77A, 33 (TNHC); 2 mi NW Victoria, 7 (TNHC); 8 mi below Victoria, 8 (USNM); 5 mi S Nursery, 1 (BUMMC). The most recent of these specimens was collected in 2007.

Remarks.—*Engystoma areolata* was placed into the synonymy of *Microhyla olivacea* by Burt (1938), and the genus *Gastrophryne* was removed from the Asian genus *Microhyla* by Carvalho (1954). Texas populations were once allocated to the subspecies *Gastrophrne olivacea olivacea*, but Nelson (1972) considered the taxon monotypic (without recognizable subspecies). His conclusion is supported by the results of Streicher et al. (2012) in their range-wide study of genetic variation in the species.

Engystoma texense Girard, 1859
= *Gastrophryne olivacea*
[Western Narrow-mouthed Toad]

1857. *Engystoma olivaceum* Hallowell, Proc. Acad. Nat. Sci. Phila. (1856) 8:252.

1858. *Engystoma rugosum* (in part) Günther, Cat. Batr. Salientia Coll. Brit. Mus. Mus. (Nat. Hist), London (1859), p. 52.

1859. *Engystoma texense* Girard, Proc. Acad. Nat. Sci. Phila. 11:169.

1882. *Engystoma carolinense* Boulenger, Cat. Batrach. Salient. Eucaud. Coll. Brit. Mus., 2nd ed., Brit. Mus. Mus. (Nat. Hist), London, p. 52.

1909. *Engystoma areolata* Strecker, Proc. Biol. Soc. Wash. 22:118.

1910. *Gastrophryne areolata* Stejneger, Proc. Biol. Soc. Wash. 23:166.

1910. *Gastrophryne texana* Stejneger, Proc. Biol. Soc. Wash. 23:166.

1915. *Gastrophryne texensis* Strecker, Baylor Univ. Bull. 18:47.

1933. *Gastrophyrne olivacea* Smith, Copeia 1933:217.

1934. *Microhyla areolata* Parker, Monogr. Frogs Fam. Microhylidae, p. 147.

1934. *Microhyla olivacea* Parker, Monogr. Frogs Fam. Microhylidae, p. 201.

1946. *Mircohyla carolinensis olivacea* Hecht and Matalas, Amer. Mus. Novit. 1315:5

1954. *Gastrophryne carolinensis olivaceus* Carvalho, Occ. Pap. Mus. Zool. Univ. Mich. 555:13.

1954. *Microhyla olivacea olivacea* Langbartel and Smith, Herpetologica 10:126.

1956. *Gastrophryne olivacea olivacea* Chrapliwy, Herpetologica 12:13.

1972. *Gastrophryne olivacea* Nelson, Cat. Amer. Amphib. Rept. 122:122.3.

Type specimens.—Two syntypes, both juveniles, USNM 2644, attributed to have been obtained by Captain John Pope.

Type locality.—Originally "Procured in Texas." The syntypes, however, have this locality associated with them: "Rio Seco, Medina County, Texas," which is consistent with Strecker's (1915) listing as "Rio Seco, Texas" as the type locality. Most modern maps refer to this watercourse in Medina County as "Seco Creek," an appellation also used for other small streams in Texas.

Topotypes.—No topotypes could be found that could be specifically tied to Seco Creek, even though this watercourse has a long linear extent in Medina County.

Near topotypes.—Medina Co: 1.0 mi S D'Hanis, 5 (TCWC); 2 mi N D'Hanis, 1 (MVZ); 5.5 mi SE Tarpley, 1 (BUMMC); Valdina Farms Sinkhole, 1 (MVZ); on FM Rd 462 [sic], 1 (BUMMC). The last of these was collected in 1966.

Remarks.—*Engystoma texense* was placed into the synonymy of *Gastrophryne olivacea* by Smith (1933).

Hypopachus cuneus Cope, 1889
= Hypopachus variolosus
[Sheep Frog]

1866. *Engystoma variolosum* Cope, Proc. Acad. Nat. Sci. Phila. (1867) 18:131.

1867. *Systoma variolosum* Cope, J. Acad. Nat. Sci. Phila., Ser. 2, 6:194

1867. *Hypopachus seebachi* Keferstein, Nachr. Ges. Wiss. Götting. 18:352.

1869. *Hypopachus inguinalis* Cope, Proc. Amer. Philos. Soc. (1870) 11:166.

1875. *Hypopachus variolosus* Cope, J. Acad. Nat. Sci. Phila. Ser 2, 8:101.

1877. *Engystoma inguinalis* Brocchi, Bull. Soc. Philomath., Paris, Ser. 7, 1:189.

1883. *Hypopachus oxyrrhinus* Boulenger, Ann. Mag. Nat. Hist., Ser. 5, 11:344.

1887. *Hypopachus variolosus inguinalis* Cope, Bull. U.S. Nat. Mus. 32:18.

1889. *Hypopachus cuneus* Cope, Bull. U.S. Nat. Mus. 34:388.

1900. *Hypopachus variolosus* Günther, parts CLIII–CLVII, in Godman and Salvin, Biol. Centr.-Amer., p. 211.

1939. *Hypopachus globulosus* Schmidt, Zool. Ser. Field Mus. Nat. Hist. 24:2.

1939. *Hypopachus caprimimus* Taylor, Univ. Kans. Sci. Bull. 26:52.

1940. *Hypopachus cuneus cuneus* Taylor, Univ. Kans. Sci. Bull. 26:516.

1940. *Hypopachus cuneus nigroreticulatus* Taylor, Univ. Kans. Sci. Bull. 26:518.

1940. *Hypopachus ovis* Taylor, Univ. Kans. Sci. Bull. 26:520.

1940. *Hypopachus alboventer* Taylor, Univ. Kans. Sci. Bull. 26:522.

1940. *Hypopachus maculatus* Taylor, Univ. Kans. Sci. Bull. 26:525.

1940. *Hypopachus caprimimus* Taylor, Univ. Kans. Sci. Bull. 26:527.

1940. *Hypopachus championi* Stuart, Proc. Biol. Soc. Wash. 53:19.

1955. *Hypopachus alboventer alboventer* Davis, Herpetologica 11:71.

1955. *Hypopachus alboventer reticulatus* Davis, Herpetologica 11:71.

1958. *Hypopachus oxyrrhinus taylori* Shannon and Humphrey, Herpetologica 14:89.

1958. *Hypopachus oxyrrhinus oxyrhinus* Shannon and Humphrey, Herpetologica 14:94.

1958. *Hypopachus oxyrrhinus ovis* Shannon and Humphrey, Herpetologica 14:94.

1965. *Hypopachus reticulatus* Lynch, Trans, Kans. Acad. Sci. 68:369.

1974. *Hypopachus variolosus* Nelson, Herpetologica 30:261.

Type specimens.—There were once several syntypes, but only one remains (Cochran 1961), an adult, USNM 15676, obtained by William Taylor. No date was indicated, but other type material collected by Taylor in Duval County (e.g., the snake *Contia taylori*) was probably collected around 1880–1881 (Boulenger 1894).

Type locality.—"In the neighborhood of San Diego, Nueces County, in southwestern Texas" (Cope 1889). The Nueces County reference is an obvious *lapsus calami*, as Duval County was created decades before (1858) out of parts of Nueces and other surrounding South Texas counties. Schmidt (1953) restated the type locality to San Diego, Duval County, Texas.

Topotypes.—Duval Co: San Diego, 6 (KU), collected in 1930.

Near topotypes.—Duval Co: 2 mi W San Diego, 5 (OMNH); 5 mi N San Diego, 1 (TCWC). The more recent was obtained in 2005.

Remarks.—*Hypopahus cuneus* represents one of several synonyms of the highly variable taxon *H. variolosus* as elucidated by Nelson (1974). However, based on mitochondrial and nuclear gene data, Greenbaum et al. (2012) have identified a clade within the nominal species *Hypopachus variolus* that is associated with the Gulf Coast lowlands of Mexico from Campeche north to Tamaulipas and southern Texas. The oldest available name for these populations is *H. cuneus*.

The Sheep Frog has been protected as a state Threatened species since the 1970s (see Davis and LaDuc 2021), even though several new South Texas populations that expanded the known distribution were discovered between 1973 and 2000 (Judd and Irwin 2020), and large choruses in the lower Rio Grande populations have been heard after torrential rainstorms (Dixon 2013). This species also is widespread in the subtropical and tropical deciduous areas of Mexico and Central America.

Family Ranidae

Rana areolata Baird and Girard, 1852
= *Lithobates areolatus areolatus*
[Southern Crawfish Frog]

1852. *Rana areolata* Baird and Girard, Proc. Acad. Nat. Sci. Phila. 6:173.

1875. *Rana areolata areolata* Cope, Bull. U.S. Nat. Mus. 1:32.

1992. *Rana* ([*sous-genre*] *Pantherana*) *areolata* Dubois, Bull. Mens. Soc. Linné. Lyon 61:332.

2006. *Lithobates areolatus* Frost et al., Bull. Amer. Mus. Nat. Hist. 297:369.

2006. *Lithobates* ([subgenus] *Lithobates*) *areolatus* Dubois, Comp. Rend. Biol. 329:829.

2008. *Lithobates areolatus areolatus* Frost et al., Anura – Frogs, pp. 2–12 in Crother (ed.), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 6th ed., SSAR Herpetol. Circ. 37:7.

2014. *Rana* ([subgenus] *Lithobates*) *areolata areolata* Fouquette and Dubois, Checklist North Amer. Amphib. Rept., p. 402.

2017. *L*[*ithobates*] *a*[*reolatus*] *areolatus* Frost et al., Anura – Frogs, pp. 6–24 in Crother (Chair), Com., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol. Circ. 43:15.

Type specimens.—A lectotype, an adult, USNM 3304, obtained by John H. Clark, was apparently chosen as the "holotype" by Cochran (1961) from two original syntypes (Fouquette and Dubois 2014). The collection year, not specified, would have been in the early 1850s.

Type locality.—Indianola, Calhoun County, Texas, as per the origin of the lectotype. The other syntype was reportedly obtained "on the Rio San Pedro of the Gila," which is a nonsensical amalgamation of the Devils River in Texas and the Gila River of Arizona and New Mexico. The westernmost distributional limit of this frog is hundreds of miles from both of these drainages, and thus the reported type locality for the non-lectotype syntype is demonstrably erroneous, and/or based on a misidentification of specimens.

Topotypes.—None found.

Near topotypes.—Refugio Co: 5.5 mi E, 15 mi N Refugio, 1 (TNHC), collected in 1998.

Remarks.—Dubois (1992), in his novel classification of the frog family Ranidae, placed this species and the two other ranid frog species included in this catalog into his new *souse-genre* [literally, "undergenus"] *Pantherana*. Thirteen years later Hillis and Wilcox (2005) proposed from their genetic data a new phylogeny of the New World species of *Rana*. They identified nineteen nested clades within the genus and allocated subgeneric Latin names to all but three of them. The order of these nested subgeneric names applied to *Rana areolate*, from the basal subgenus to its terminal clade, is *Novirana*, *Sierrana*, *Pantherana*, and *Nenirana*; of these, only *Pantherana* had been used before (by Dubois), whereas the others were all new names. However, none of the novel subgeneric names appear in their new combinations with both genus and specific epithet anywhere in the work, and thus they were not cited verbatim in the synonymy of this catalog.

Rana berlandieri Baird, 1859
= *Lithobates berlandieri*
[Rio Grande Leopard Frog]

1859. *Rana berlandieri* Baird, Rept. Boundary, U.S. Mex. Bound. Survey 2:27.

1875. *Rana halecina berlandieri* (in part) Cope, Bull. U.S. Nat. Mus. 1:32.

1886. *Rana halecina austricola* (in part) Cope, Proc. Amer. Philos. Soc. 23:517.

1889. *Rana virescens austricola* (in part) Cope, Bull. U.S. Nat. Mus. 34:390.

1889. *Rana virescens berlandieri* (in part) Cope, Bull. U.S. Nat. Mus. 34:398.

1889. *Rana virescens virescens* (in part) Cope, Bull. U.S. Nat. Mus. 34:401.

1941. *Rana pipiens berlandieri* Schmidt, Zool. Ser. Field Mus. Nat. Hist. 22:487.

1947. *Rana pipiens austricola* (in part) Smith, J. Wash. Acad. Sci. 37:409.

1973. *Rana berlandeiri berlandieri* Sanders, J. Herpetol. 7:87.

1973. *Rana pipiens brownorum* (in part) Sanders, J. Herpetol. 7:87.

1983. *Rana brownorum* (in part) Hillis et al., Syst. Zool. 32:134

1992. *Rana* ([Sous-genre] *Pantherana*) *berlandieri* Dubois, Bull. Mens. Soc. Linné. Lyon 61:331.

2006. *Lithobates berlandieri* Frost et al., Bull. Amer. Mus. Nat. Hist. 297:369.

2006. *Lithobates* (*Lithobates*) *berlandieri* Dubois, Comp. Rend. Biol. 329:829.

2014. *Rana* ([subgenus] *Lithobates*) *berlandieri*, Fouquette and Dubois, Checklist North Amer. Amphib. Rept, p. 403.

2017. *L*[*ithobates*] *berlandieri* Frost et al., Anura – Frogs, pp. 6–24 in Crother (Chair), Com., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol. Circ. 43:15.

Type specimens.—No single type specimen was designated in the description, but Frost (1985) indicated the type material comprised the syntypes USNM 131513 and USNM 3293 (nine specimens, two of which were exchanged to Harvard and are now cataloged as MCZ 2155). Of these syntypes, Pace (1974) designated as the lectotype an adult male, USNM 131513, obtained in the early 1880s by Captain Stewart Van Vliet.

Type locality.—The describer summarized the distribution as "Southern Texas, generally." Pace's (1974) lectotype designation restricted the type locality to Brownsville, Cameron County, Texas.

Topotypes.—Cameron Co: Brownsville, 26 (CM), 6 (KU), 2 (MCZ), 1 (TCWC, USNM); Brownsville near Rio Grande, 3 (UAZ); Brownsville, ditch 0.5 mi W airport, 8 (TNHC). The last of these was collected in 1966.

Near topotypes.—Cameron Co: vic. Brownsville, 5 (NCSM); 1 mi S Brownsville, 3 (BUMMC); Port Brownsville, 2 (CAS); 3 mi N Brownsville, 3 (BUMMC, TCWC). The most recent of these was collected in 1981.

Remarks.—See the Remarks section for the earlier account (*Rana areolata*) where the subgenera proposed by Dubois (1992) and Hillis and Wilcox (2005) are discussed. The subgeneric nesting of *Rana berlandieri* is identical to the one the latter authors proposed for *H. areolata*, except the terminal clade is different (subgenus *Scurrilirana*).

Rana blairi Mecham, Littejohn, Oldham, Brown, and Brown, 1973
= *Lithobates blairi*
[Plains Leopard Frog]

1973. *Rana blairi* Mecham et al., Occ. Pap. Mus. Texas Tech Univ. 18:3.

1992. *Rana* ([*sous-genre*] *Pantherana*) *blairi* Dubois, Bull. Mens. Soc. Linné. Lyon 61:332.

2006. *Lithobates blairi* Frost et al., Bull. Amer. Mus. Nat. Hist. 297:369.

2006. *Lithobates* ([subgenus] *Lithobates*) *blairi* Dubois, Comp. Rend. Biol. 329:829.

2014. *Rana* ([subgenus] *Lithobates*) *blairi*, Fouquette and Dubois, Checklist North Amer. Amphib. Rept, p. 405.

2017. *L*[*ithobates*] *blari* Frost et al., Anura – Frogs, pp. 6–24 in Crother (Chair), Com., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol. Circ. 43:15.

Type specimen.—Holotype, adult male, UMMZ 131690, obtained 6 August 1971 by Charles Everett.

Type locality.—1.6 kilometers west of New Deal, Lubbock County, Texas.

Topotypes.—Lubbock Co: 1.6 km W New Deal, 3 (UMMZ). These paratypes were collected with the holotype in 1971.

Near topotypes.—Lubbock Co: 0.5 mi W New Deal, 5 (TNHC); 1.2 mi W New Deal, 22 (USNM); 1 mi E New Deal, 6 (USNM); 3 mi E New Deal, 3 (USNM). The most recent of these specimens was collected in 1971.

Remarks.—See the Remarks section for *Rana areolata* and *Rana berlandieri* for subfamily names proposed for groupings within North American *Rana* (now *Lithobates*). The Hillis and Wilcox (2005) terminal clade subgenus (*Scurrilirana*) is the same as for *Rana berlandieri*.

Family Scaphiopodidae

Scaphiopus hurterii Strecker, 1910
[Hurter's Spadefoot]

1835. *Rana holbrookii* Harlan, Med. Phys. Res., p. 105.

1836. *Scaphiopus solitarius* Holbrook, North Amer. Herp. 1:85.

1859. *S*[*caphiopus*] *holbrookii* Baird, Rep. Pacific R.R. Survey 10(4):12.

1877. *Scaphiopus albus* Garman, Proc. Amer. Assoc. Adv. Sci. 25:194.

1910. *Scaphiopus hurterii* Strecker, Proc. Biol. Soc. Wash. 23:116.

1933. *Scaphiopus holbrookii hurterii* Wright and Wright, Handb. Frogs and Toads, p. 44.

1991. *Scaphiopus hurterii* Collins, Herpetol. Rev. 27:43.

Type specimen.—Holotype, adult male, BUMMC, obtained 14 April 1910 by John K. Strecker, Jr., original number Baylor University 417. Bryce C. Brown, in a communication to Wasserman (1968), indicated that the type specimen cannot be found.

Type locality.—3.5 miles east of Waco, McClennan County, Texas.

Topotypes.—No exact matches found, the closest is McClennan Co: 3 mi E Waco, 4 (BUMMC), collected in 1968.

Near topotypes.—McClennan Co: Waco, 2 (BUMMC), 1 (TNHC 30829); Waco, 10th St. at La Salle Ave., 6 (BUMMC); 3 mi S Waco, South 3rd St., 2 (BUMMC); 3.5 mi S Waco, South 3rd St., 1 (BUMMC); 4 mi S Waco, 3 (BUMMC); 5 mi SE Waco, 2 (BUMMC); 5.5 mi SE Waco, 1 (BUMMC); 5 mi N Waco, 1 (BUMMC). One of these collections was in 1950, the rest were obtained between 1966 and 1968.

Spea laticeps Cope, 1893
= Scaphiopus couchii
[Couch's Spadefoot]

1854. *Scaphiopus couchii* Baird, Proc. Acad. Nat. Sci. Phila. 7:62.

1863. *Scaphiopus varius* Cope, Proc. Acad. Nat. Sci. Phila. 15:52.

1863. *Scaphiopus rectifrenis* Cope, Proc. Acad. Nat. Sci. Phila. 15:53.

1866. *Scaphiopus couchii varius* Cope, Proc. Acad. Nat. Sci. Phila. 18:313.

1875. *Scaphiopus varius varius* Cope, U.S. Natl. Mus. Bull. 1:31.

1875. *Scaphiopus varius rectifrenis* Cope, U.S. Natl. Mus. Bull. 1:32.

1893. *Spea laticeps* Cope, Amer. Nat. 27:155.

1923. *Scaphiopus laticeps* Nieden, Das Tierreich 46:49.

1952. *Scaphiopus couchii couchii* Smith and Sanders, Tex. J. Sci. 4:209.

1952. *Scaphiopus couchii rectifrenis* Smith and Sanders, Tex. J. Sci. 4:209.

1956. *Scaphiopus couchii* Zweifel, Amer. Mus. Novit. 1762:35.

Type specimen.—Holotype, ANSP 13610, obtained 1890 by William L. Black, accompanying the W. F. Cummins Texas Geological Survey party.

Type locality.—Between Seymour, in northwest Texas south of the Red River, and Austin, Texas.

Topotypes and near topotypes.—The Cummins expedition traversed quite a bit of the north-central Texas landscape in its back-and-forth tracing of coal seams between the Red and Brazos rivers. Cummins' (1892) report relates that after leaving a base camp at Seymour, and not including an extensive sojourn

into Oklahoma, the survey team traversed or worked in fourteen different Texas counties. There are 339 museum specimens listed in the VertNet database from these counties as follows: Wichita (216 specimens), Eastland (22), Palo Pinto (20), Baylor (15), Lampasas (14), Clay (13), Montague (10), Archer (8), Brown (7), San Saba (5), Jack (4), Young (4), Callahan (2), and Throckmorton (1),

Remarks.—The holotype of *Spea laticeps* was apparently misplaced after Cope's (1893) description, and thus there is little mention of the taxon in published literature until the middle of the 20th century. Chrapliwy and Malnate (1961) examined the recovered holotype at ANSP and determined it represented a *Scaphiopus couchii*. No subspecies of *S. couchii* have been recognized since the review of Zweifel (1956).

CLASS REPTILIA

ORDER TESTUDINATA
Family Emydidae

Deirochelys reticularia miaria Schwartz, 1956
[Western Chicken Turtle]

1802. *Testudo reticularia* Latreille, in Sonnini de Manoncourt and Latrelle, Hist. Natur. Rept., Vol. I, Primièrie Pt., Quadr. Bipès Ovip., p. 124.

1802. *Testudo reticulata* Daudin, Hist. Natur., Gén. Partic. Rept. 2:144.

1814. *Emys reticulata* Schweigger, Prodr. Monog. Chelon., p. 31.

1825. *Emys reticularia* Say, J. Acad. Nat. Acad. Sci. 4:204.

1830. *Terrapene reticularia* Bonaparte, Sulla Sec. Ed. Regno Anim. Barone Cuvier (1831), p. 155.

1857. *Deirochelys reticulata* Agassiz, Contrib. Nat. Hist. U.S.A., Vol. I, Pt. II, p. 441.

1862. *Clemmys reticulata* Strauch, Mém. Acad. Imper. Sci. St. Pétersb., Sér. 7 (1863), 5:32.

1870. *Deirochelys reticularia* Gray, Suppl. Cat. Shield Rept. Part I, Testud., p. 39.

1875. *Chrysems reticulatus* Cope, Bull. U.S. Nat. Mus. 1:53.

1956. *Deirochelys reticularia miaria* Schwartz, Fieldiana, Zool. 34:486

Type specimen.—Holotype, adult male, FMNH 37478, obtained 17 April 1941 by Karl P. Schmidt, Charles M. Barbour, and Alvin G. Flury.

Type locality.—College Station, Brazos County, Texas.

Topotypes.—Brazos Co: College Station, 1 (TCWC); College Station, Texas A&M University campus, 1 (TCWC). The most recently collected topotype was in 1964.

Near topotypes.—Brazos Co: 1 mi S College Station, 1 (TCWC); Bryan, 1 (TCWC); 4 mi N Bryan, 1 (TCWC); 0.5 rd mi W FM Rd 159 on FM Rd 2154, 1 (TCWC). The last of these was collected in 2009.

Graptemys caglei Haynes and McKown, 1974
[Cagle's Map Turtle]

1959. *Graptemys versa* Olson, Herpetologica 15:48

1959. *Graptemys pseudogeographica* Raun, Tex. J. Sci. 11:165.

1974. *Graptemys caglei* Haynes and McKown, Tulane Stud. Zool. Bot. 18:143.

Type specimen.—Holotype, adult male, TNHC 36061, obtained 29 June 1967 by Ronald McKown.

Type locality.—Guadalupe River, 8 kilometers northwest of Cuero, DeWitt County, Texas.

Topotypes.—DeWitt Co: 8 km NW Cuero, 34 (TNHC, paratypes); 5 mi N [sic = NNW] Cuero at FM Rd 766 crossing of Guadalupe River, 3 (CM), 21 (TNHC); 5 mi W [sic] Cuero at FM Rd 766 bridge, 3 (TCWC); Hwy 766 at the Guadalupe River, 37 (TCWC); FM Rd 766 bridge N Cuero, 12 (TCWC); 8 mi W Cuero, Hell's Gate Bridge on Hwy 766, 9 (TCWC); 8 mi N Cuero, on Guadalupe River at Hell's Gate, 2 (TCWC). The last of these topotypes was collected in 1990.

Near topotypes.—DeWitt Co: Guadalupe River above FM Rd 766, 2 (TCWC); 6 km upstream from Hell's Gate Bridge, 8 (TCWC); Guadalupe River from FM Rd 3402 [= TX Hwy 72 since 1994] and FM Rd 766, 6 (TCWC); FM Rd 3402 at the Guadalupe River, 29 (TCWC); Guadalupe River above FM Rd 3402, 20 (TNHC); FM Rd 3402, above [*G. caglei*] study area, 5 (TCWC); Guadalupe River, 0.07 mi N TX Hwy 72, 1 (UF). The most recently collected near topotype was obtained in 2013.

Remarks.—Cagle's Map Turtle is a Texas endemic currently listed by TPWD as a Threatened species (Davis and LaDuc 2021).

Graptemys pseudogeographica versa Stejneger, 1925
= *Graptemys versa*
[Texas Map Turtle]

1831. *Emys pseudogeographica* Gray, Synop. Rept., p. 31.

1863. *Graptemys pseudogeographica* Gray, Ann. Mag. Nat. Hist. 12:180.

1925. *Graptemys pesudogeographica versa* Stejneger, J. Wash. Acad. Sci. 15:463.

1946. *Graptemys versa* Smith, Proc. Trans. Texas Acad. Sci. 30:60.

1964. *Malaclemys versa* McDowell, Proc. Zool. Soc. London 143:274.

1994. *G*[*raptemys*] *versa* McCoy and Vogt, Cat. Amer. Amphib. Rept. 584:584.1.

Type specimen.—Holotype, adult male, USNM 27473, obtained July 1900 by Herbert H. and Clement S. Brimley.

Type locality.—Austin, Travis County, Texas.

Topotypes.—Travis Co: Austin, 6 (TNHC, paratypes), 1 (MCZ, paratype); Austin, Town Lake, 1 (TNHC). The last topotype was collected in 2000.

Near topotypes.—Travis Co: 12 mi W Austin on Barton Creek, 10 (TNHC); 15 mi W Austin, at Barton Springs, 1 (TNHC); Barton Creek Habitat Preserve, 1 (TNHC); Barton Creek at Lost Creek Blvd, 1 (TNHC); Onion Creek, E of IH 35, 1 (TNHC); Bull Creek at Hwy 360, 1 (TNHC). The last of these near topotypes was collected in 2013. Although all of these locations are today within the greater Austin area, none were within the 1900 town limits when the type material was obtained.

Malaclemys littoralis Hay, 1904
= *Malaclemys terrapin littoralis*
[Texas Diamond-backed Terrapin]

1793. *Testudo terrapin* Schoepff, Hist. Testud. Incon. Illvs., p. 64.

1802. *Testudo concentrica* Shaw, Gen. Zool., Syst. Nat. Hist., 3, Pt. I, p. 43.

1807. *Testudo ocellata* Link, Beschr. Natural. Univ. Rostock 2:52.

1842. *Emys terrapin* Holbrook, North Amer. Herp., Vol. I, p. 87.

1844. *Malaclemys tuberculifera* Gray, Cat. Tort. Croc. Amphisb. Coll. British Mus, p. 29.

1889. *Malococlemmys terrapin* Boulenger, Cat. Chelon. Rhynch. Croc. British Mus., p. 89.

1896. *Malaclemys terrapin* Bangs, Proc. Boston Soc. Nat. Hist. 27:159.

1904. *Malaclemys littoralis*, Hay, Bull. U.S. Bur. Fish. 24:18.

1909. *Malaclemys centrata littoralis* Siebenrock, Zool. Jahrb., Suppl. 10, Pt. 3, p. 473.

1917. *Malaclemys pileata littoralis* Stejneger and Barbour, Check List North Amer. Amphib. Rept. [1st ed.], p. 117.

1929. *M*[*alaclemys*] *terrapin littoralis* Lindholm, Zool. Anz. 81:294.

Type specimen.—Holotype, adult female, USNM 33913, acquired August 1904 by William P. Hay, although according to Reynolds et al. (2007) it probably was obtained earlier than this. Hay "secured" the type and at least two paratypes from a large-scale vendor in

Crisfield, Maryland, who assembled live *Malaclemys terrapin* for the east coast turtle soup market from commercial dealers in all parts of the Massachusetts-to-Texas distribution of this coastal/estuarine species. The Cristfield business apparently kept good records of the provenance of each incoming shipment (hence the known type locality, below). Moreover, Hay (1904) claimed to have examined 250 individuals of this particular subspecies, all probably made available to him in Maryland.

Type locality.—Rockport, Aransas County, Texas.

Topotypes.—Aransas Co: Rockport, 7 (USNM), 1 (BUMMC, MCZ). The Baylor Museum specimen was collected in 1950, the others are Hay's acquisitions from 1903 to 1904.

Near topotypes.—Aransas Co: Copano Bay, 1 (TCWC); Aransas Bay, 1 (TNHC). The most recent near topotype was collected in 1952. An image of this species dated 2016, from just north of Rockport, is posted on the iNaturalist website.

Pseudemys scripta gaigeae Hartweg, 1939
= *Trachemys gaigeae gaigeae*
[Big Bend Slider]

1939. *Pseudemys scripta gaigeae* Hartweg, Occ. Pap. Mus. Zool. Univ. Mich. 397:1.

1939. *Pseudemys gaigeae* Stejneger and Barbour, Check List North Amer. Amphib. Rept., 4th ed., p. 165

1966. *Chrysemys scripta gaigeae* Smith and Taylor, in Herp. Mexico, p. 11.

1967. *Chrysemys gaigeae* Weaver and Rose, Tulane Stud. Zool. 14:63.

1967. *Chrysemys gaigeae gaigeae* Weaver and Rose, Tulane Stud. Zool. 14:70.

1984. *Trachemys n*[*ebulosa*] *gaigeae* Ward, Spec. Publ. Mus. Texas Tech Univ. 21:45.

1985. *Trachemys scripta gaigeae* Iverson, Checkl. Turtles. World, SSAR Herpet. Circ. 14:4.

1987. *Trachemys gaigeae* Dixon, Amphib. Rept. Tex. [1st ed.], p. 85.

2002. *Trachemys gaigeae gaigeae* Seidel, J. Herpetol. 36:289.

Type specimen.—Holotype, adult female, UMMZ 66472, obtained 15–17 July 1928 by Helen T. Gaige.

Type locality.—Boquillas, Brewster County, Texas. This named place is now within Big Bend National Park. At the time of Helen Gaige's visit, this former mining town had dwindled to a store, a café, and less than a score of human inhabitants. Well after the National Park Service acquired the Big Bend Park property from Texas in 1944, a ranger station and campground was established on the townsite. That campground developed into today's "Rio Grande Village" complex (see topotypes, below).

Topotypes.—Brewster Co: Boquillas, 1 (FMNH, a paratype); Big Bend National Park, Rio Grande Village settling pond, 3 (TCWC), 2 (TNHC); Rio Grande Village, Rio Grande River, 2 (TCWC). The last of these was collected in 1988.

Near topotypes.—Brewster Co: Big Bend National Park, Rio Grande above Hot Springs rapids, 4 (TCWC). These were collected 2005.

Pseudemys texana Baur, 1893
[Texas Cooter]

1893. *Pseudemys texana* Baur, Proc. American Philos. Soc. 31:223.

1915. *Chrysemys texana* Strecker, Baylor Univ. Mus. Bull. 18:12.

1938. *Pseudemys floridana texana* Carr, Copeia 1938:108.

1958. *Pseudemys concinna texana* Conant, Field Guide Amph. Rept. East 100th Meridian [1st ed.], p. 59.

1975. *Chrysemys concinna texana* Conant, Field Guide Amph. Rept. East. Centr. North Amer., 2nd ed., p. 65.

1985. *Pseudemys texana* Iverson, Checkl. Turtles World, SSAR Herpet. Circ. 14:4

Type specimen.—Holotype, ANSP 246, female, stuffed whole mount, obtained in 1893 by Dr. Adolphus L. Heerman (verified by Malnate 1971). Reynolds et al. (2007) indicate that none of the three paratypes in the USNM were from the type locality and all represented entirely different species of turtles.

Type locality.—San Antonio, Bexar County, Texas.

Topotypes.—San Antonio, near Pearl Brewery, 1 (BUMMC), collected in 1944.

Near topotypes.—San Antonio River, 1 mi S Hwy 13, 1 (TCWC); Leon Creek, on Kelly Air Force Base, 10 (TCWC). The most recent of these was collected in 1988.

Terrapene ornata luteola Smith and Ramsey, 1952
[Desert Box Turtle]

1857. *Cistudo ornata* Agassiz, Contrib. Nat. Hist. U.S. Amer., Vol. I, Pt. II, p. 445.

1891. *Terrapene ornata* Baur, Science 17:191.

1952. *Terrapene ornata luteola* Smith and Ramsey, Wasmann J. Biol. 10:45.

2013. *Terrapene ornata* Martin et al., Molec. Phylog. Evol. 68:132.

2021. *T*[*errapene*] *o*[*rnata*] *luteola* Martin et al., Molec. Ecol. Resour. 21:2812.

Type specimen.—Holotype, adult male, TCU 1280, obtained 22–23 October 1950 by W. E. Smith.

Type locality.—17 miles south of Van Horn, Culberson County, Texas. This locality is most likely in the vicinity of the present-day farming community of Lobo on US Hwy 90, a few miles north of the Jeff Davis County line.

Topotypes.—None.

Near topotypes.—Culberson Co: 12.3 mi W Van Horn on TX Hwy 80, 1 (UIMNH). Hudspeth Co: Indio Mountains Research Station, Double Tanks Corral, 1 (UTEP). Jeff Davis Co: C. E. Miller Ranch, near 2 Section Tank, 2 (TNHC); C. E. Miller Ranch, Armando Tank, 1 (TNHC). The most recent of the near topotypes was collected in 2012.

Remarks.—The phylogeographic study of box turtles by Martin et al. (2013) concluded that there was not enough divergence between the two subspecies of *Terrapene ornata* to warrant their recognition. In a greatly expanded follow-up analysis, Martin et al. (2021) indicated that *Terrapene ornata luteola* could at most be considered a subspecies apart from the nominal form.

Family Kinosternidae

Kinosternon murrayi Glass and Hartweg, 1951
= *Kinosternon hirtipes murrayi*
[Mexican Plateau Mud Turtle]

1830. *Cinosternon hirtipes* Wagler, Nat. Syst. Amphib., p. 137.

1855. *Kinosternon hirtipes* Gray, Cat. Shield Rept. Coll. British Mus., Part I. Testud., p. 47.

1857. *Thryosternum hirtipes* Agassiz, Contrib. Nat. Hist. U.S.Amer., Vol. I, Pt. II, p. 429.

1859. *Ozotheca hirtipes* Le Conte, Proc. Acad. Nat. Sci. Phila. 11:6.

1869. *Ozotheca odorata* (in part) Dugés, La Naturaleza 1:143.

1887. *Cinosternum hirtipes* Cope, Bull. U.S. Nat. Mus. 32:23.

1896. *Cinosternum pennsylvanicum* Dugés, Mem. Revta. Soc. Cient. ‘Antono Alzate’ 9:479.

1936. *Kinosternon sonoriense* (in part) Dunn, Proc. Acad. Nat. Sci. Phila. 88:472.

1950. *Sternotherus odoratus* (in error) Brown, Check List Rept. Amphib. Texas, p. 230.

1951. *Kinosternon murrayi* Glass and Hartweg, Copeia 1951:50.

1953. *Kinosternon hirtipes murrayi* Schmidt, Check List North Amer. Amphib. Rept., 6th ed., p. 89.

1955. *Kinosternon hirtipes hirtipes* Mertens and Wermuth, Zool Jb. Abt. Allg. Zool. 83:336

1966. *Kinosternon flavescens* (in part) Stebbins, Field Guide West. Amphib. Rept., p. 82

1981. *Kinosternon hirtipes murrayi* Iverson, Tulane Stud. Bot. Zool. 23:49.

Type specimen.—Holotype, young male, TCWC 650, obtained 12 August 1941 by S. H. Wheeler (Iverson 1985).

Type locality.—Harper Ranch, 37 miles south of Marfa, Presidio County, Texas. Fred R. Gehlbach (Baylor University) provided Conant and Berry (1978) the notes of his 1971 visit to the type locality area in which he indicated the type locality would be "best stated as Jack Brown Spring on the Ted and Francis Harper Ranch, approximately 30 miles south of Marfa".

Topotypes.—Presidio Co: Harper Ranch, 3 (AMNH), 2 (UMMZ, USNM), 1 (BUMMC, TCWC). The last of these topotypes was collected in 1973.

Near topotypes.—Presidio Co: Schoolhouse Tank, 4 (TCWC); Tate Tank, 5 (TNHC), 8 (TCWC); Vasquez Tank, 2 (TCWC); 30 mi S Marfa, 1 (BUMMC). All but the last of these were collected in 1989.

Remarks.—The subspecific usage used here follows the last systematic and literature reviews of the species, those of Iverson (1981, 1985). *Kinonsternon hirtipes murrayi* has been listed as a state Threatened taxon since 1977 (see Davis and LaDuc 2021).

Ozotheca tristycha Agassiz, 1857
= *Sternotherus odoratus*
[Eastern Musk Turtle]

1802. *Testudo odorata* Latreille, in Sonnini de Manoncourt and Latreille, Hist. Nat. Rept., Vol. I, Primièrie Pt., Quadr. Bipès Ovip., p. 122.

1802. *Testudo glutinata* Daudin, Hist. Nat. Gén. Partic. Rept., Vol. 3, p. 194.

1812. *Emys odorata* Schweigger, Konigsb. Arch. Naturwiss. Mathem. 1:313.

1820. *Terrapene boscii* Merrem, Versh. Syst. Amphib., Tent. Syst. Amphib., p. 27.

1825. *Cistuda odorata* Say, J. Acad. Nat. Sci. Phila. 4:206.

1825. *Sternotherus odorata* Gray, Ann. Philos. 40:211.

1825. *Sternothaerus odoratus* Bell, Zool. J. 2:307.

1828. *Clemmys glutinata* [von] Ritgen, Nov. Acta Physico-Med. Acad. Caes. Leopoldino-Carol. Natur. Curios. 14:272

1830. *Kinosternon odoratum* (in part) Bonaparte, Sulla Sec. Ed. Regno Anim. Barone Cuvier, p. 168.

1832. *Didicia odorata* Rafinesque, Atlantic J., Friend Knowl. 1:64.

1835. *Staurotypus odoratus* Duméril and Bibron, Erpét. Gén. Hist. Nat. Comp. Rept. Liv. 2:358.

1854. *Kinosternon guttatum* Le Conte, Proc. Acad. Nat. Sci. Phila. 7:185.

1855. *Aromochelys odoratum* Gray, Cat. Shield Rept. Coll. British Mus., Pt. I, p. 46.

1857. *Ozotheca tristycha* Agassiz, Contrib. Nat. Hist. U.S. America, Vol. I, Pt. II, p. 425.

1862. *Aromochelys guttata* Struach, Mém. Acad. Imper. Sci. St. Pétersb., Sér. 7 (1863), 5:39.

1862. *Aromochelys trisycha* Struach, Mém. Acad. Imper. Sci. St. Pétersb., Sér. 7 (1863), 5:39

1889. *Cinosternum odoratum* Boulenger, Cat. Chelon. Rhynch. Croc. British Mus., p. 37.

1953. *Sternotheus odoratus* Schmidt, Check List North Amer. Amphib. Rept., 6th ed., p. 87.

Type specimens.—Eleven USNM specimens loaned to Louis Agassiz were used in his description of *Ozotheca tristycha*. Five of these were retained by the MCZ: MCZ 1576 (two males), obtained by George Stolley, no date; MCZ 1574 (one male and two females), also collected by George Stolley, on 1 January 1817. The history of other six syntypes has been recounted by Reynolds et al. (2007). These six were all obtained by Caleb B. R. Kennerly, with no

dates recorded; four of these were juveniles cataloged as USNM 69–72, and the other two had USNM 64–65 assigned to them. The two groups had different Texas type localities (see below). Both USNM 64 and 65 have gone missing, but one of these was likely to have been renumbered as USNM 7890. Also, USNM 70 was retained by Agassiz and cataloged as MCZ 1922.

Type localities.—Four localities have been associated with the syntypes for this taxon: 1) Osage River, Missouri (the two MCZ 1576 syntypes); 2) Williamson County, Texas (the three MCZ 1574 syntypes); 3) San Pedro, near San Antonio, Bexar County, Texas (USNM 69–72 syntypes, with 70 now MCZ 1922); and 4) Medina River [no county designated], Texas (USNM 64–65, now missing, but one of these likely USNM 7890). From all of these choices, Schmidt (1953) restricted the type locality to San Antonio, Bexar County, Texas, which has been followed in this catalog (see Remarks).

Topotypes.—None found that are a good match for the original Bexar County syntype locality. "San Pedro near San Antonio" is almost certainly a reference to San Pedro Springs, associated with a small but permanent spring-fed lake and nearby grazing area/campsite since Spanish colonial times. By the mid-19th century there was a stablery and facilities for travelers there. The city of San Antonio acquired the site for a park in 1852, but by the end of the 19th century the city had grown to surround the park and its springs. Groundwater extractions for municipal and other purposes eventually resulted in intermittent spring flow and eventually total failure by 1940.

Near topotypes.—None.

Remarks.—Boulenger (1889) synonymized *Ozotheca trystica* into *Cinosternum odoratum*, tying the Aggasiz name for this taxon to *Sternotherus odoratus* Gray. However, *Sternotherus* was considered a synonym of the genus *Kinosternon* well into the 20th century. Schmidt (1953) recognized the generic split, and in the entry for *Ozotheca tristycha* within his synonymy for *Sternotherus odoratus*, he restricted the type locality of the latter as indicated above. There is no pressing need to designate a lectotype for this taxon, despite the confusing situation with so many syntypes and type localities. However, with regard to Schmidt's (1953) type locality restriction to San Antonio, a lectotype choice that would set aside his restriction would be USNM 7890, the type locality for which was emended by Reynolds et al. (2007) to "Medina River, Medina County, Texas." As noted by these authors, this specimen was clearly designated in the written USNM catalog as a syntype used by Agassiz.

Platythyra flavescens Agassiz, 1857
= *Kinosternon flavescens*
[Yellow Mud Turtle]

1857. *Platyrhya flavescens* Agassiz, Contrib. Nat. Hist. U.S. Amer., Vol. I, Pt. II, p. 430.

1857. *Cinosternum flavescens* Agassiz, Contrib. Nat. Hist. U.S. Amer., Vol. I, Pt. II, Plate 5.

1892. *Kinosternum flavescens* Cope, Proc. Acad. Nat. Sci. Phila. 44:333.

1903. *Kinosternon flavescens* Stone, Proc. Acad. Nat. Sci. Phila. 55:540.

1938. *Kinosternon flavescens flavescens* Hartweg, Occ. Pap. Mus. Zool. Univ. Mich. 371:2.

1951. *Kinosternon flavescens spooneri* P. W. Smith, Bull. Chicago Acad. Sci. 9:195.

2001. *Kinosternon flavescens* Serb, Phillips, and Iverson, Molec. Phylog. Evol. 18:156.

Type specimens.—Lectotype, USNM 50, an adult male, obtained by Dr. Caleb B. R. Kennerly (Iverson 1979). The history of the type material is convoluted and is explained under Remarks.

Type locality.—Blanco River, near San Marcos, Hays County, Texas (Iverson 1979). The history of the type localities is also convoluted (see Remarks).

Topotypes.—None found.

Near topotypes.—Hays Co: San Marcos, 2 (NCSM); 1 mi N San Marcos, 1 (BUMMC); 5 mi W San Marcos, 1 (BUMMC). The most recent of these was collected in 1964.

Remarks.—Originally "several specimens" were sent to Louis Agassiz in the mid-1850s by the Smithsonian for study, but in his subsequent publication (1857) he did not enumerate the specimens associated with different localities for the type material. Seidel (1978) listed the following five specimens as syntypes: 1) an adult female, MCZ 1918, obtained by Captain Randolf B. Marcy; 2) a juvenile, MCZ 1919, also obtained by Captain Marcy; 3) an adult male, USNM 7892, obtained by R. O. Abbott; and 4) USNM 50 [see above], and an adult female, USNM 131823 (formerly USNM 7867), both obtained by Dr. Kennerly. There are no collection dates associated with any of these specimens. Subsequent to this listing of type material by Seidel (1978), Iverson (1979) designated USNM 50 as the lectotype. Reynolds et al. (2007) regarded all the other syntypes as "paralectotypes," except for USNM 7867, which represents an entirely different species (*Kinosternon sonoriense*).

Agassiz's description (1857) enumerated four type localities for the type specimens as follows: "Some of them were obtained in Texas, near San Antonio, and upon the Lower Rio Grande, others on the Red River, Arkansas; and others at Camp Yuma, on the Gila River." A century later the type locality was restricted to Waco, Texas, by Smith and Taylor (1950a), an action that does not include any locations mentioned by Agassiz. Moreover, one of Agassiz's locations, "near San Antonio," was corrected by Cochran (1961) to "Rio Blanco, Texas." Noting that Smith and Taylor's restrictive action was "incorrect," Seidel (1978) listed the type localities for the syntypes as follows: Marcy's MCZ 1918 from Rio Grande, Texas; Marcy's MCZ 1919 from Red River of Arkansas [*sic*, Marcy never actually went into Arkansas]; Abbott's USNM 7892 (the *Kinosternon sonoriense*) from the Gila River at Camp Yuma [Arizona]; and Kennerly's USNM 50 and 131825 from Rio Blanco, Texas. Iverson (1979) also found the Smith and Taylor type locality restriction to Waco as unjustifiable, and by designating USNM 50 as the lectotype, he formally restricted the type locality to the Blanco River, near San Marcos in Hays County.

Three subspecies of *Kinosternon flavescens* have been historically recognized (Iverson 1979; Berry and Berry 1984). However, the last systematic review of the species (Serb et al. 2001) declined to recognize any subspecies of this taxon; they determined that all the previously proposed subspecies were either invalid or represented distinct, species level taxa.

Family Testudinidae

Xerobates berlandieri Agassiz, 1857
= *Gopherus berlandieri*
[Berlandier's Tortoise]

1857. *Xerobates berlandieri* Agassiz, Contrib. Nat. Hist. U.S. Amer., Vol. I, Pt. II, p. 447.

1880. *Testudo berlandieri* Cope, Bull. U.S. Nat. Mus. 17:13.

1893. *G*[*opherus*] *berlandieri* Stejneger, North Amer. Fauna 7:161.

1955. *Gopherus polyphemus berlandieri* Mertens and Wermuth, Zool Jb. Abt. Allg. Zool. 83:371.

1976. *Gopherus berlandieri* (by inference) Auffenberg, Florida State Mus. Biol. Sci. 20:49.

Type specimens.—Two syntypes, juveniles in alcohol, USNM 60, obtained by Arthur Schott. Reynolds et al. (2007) have pointed out there were several additional syntypes used by Agassiz, including a combination of wet preserved and dry skeletal materials cataloged separately in the USNM alcoholic and osteological collections. Among these syntypes are those collected by Lt. Darius Nash Couch, and at least one specimen actually collected by Berlandier himself. The Reynolds et al. (2007) account of the history of this type material is a complex rendition of a series of renumbering events of these syntypes, but the end result for purposes of the present account is their suggestion that the two syntypes cited above under the single number of USNM 60 were probably at one time separately tagged as USNM 59 and 60.

Type locality.—No type locality was designated by the describer, but Baird (1859) designated it as the "Lower Rio Grande." Schmidt (1953) and Cochran (1961) independently restricted the type locality to Brownsville, Cameron County, Texas (accepted for purposes of this catalog in the absence of an actual lectotype designation for one of the Schott syntypes). The syntypes in the Reynolds et al. (2007) account obtained by Lt. Couch were collected in Nuevo Leon,

Mexico (see Conant 1968), and the Berlandier syntype was from Matamoros, Tamaulipas.

Topotypes.—Cameron Co: Brownsville, 4 (UF), 3 (CM, USNM), 1 (BUMMC). The most recent of these topotypes was collected in 1975.

Near topotypes.—Cameron Co: 5 mi N Brownsville, 2 (MSUM); 1 mi S Harlingen, 1 (BUMMC); Palo Alto Battlefield Park 1 (TNHC); Holly Beach Road, 13 mi E San Benito, 1 (BUMMZ). The most recent of these near topotypes was collected in 2019. There are dozens of additional specimens of this tortoise from ten or more miles east and southeast of Brownsville.

Remarks.—The Texas Tortoise has been protected within Texas for many decades; it currently is classified as a state Threatened species (Davis and LaDuc 2021).

Family Trionychidae

Aspidonectes emoryi Agassiz, 1857
= *Apalone spinifera emoryi*
[Texas Spiny Softshell]

1827. *Trionyx spiniferus* Lesueur, Mém. Mus. Hist. Nat. Paris 15:258.

1827. *Trionyx ocellatus* Lesueur, Mém. Mus. Hist. Nat. Paris 15:261.

1832. *Apalone Hudsonica* Rafinesque, Atlantic J., Friend Knowl. 1:64.

1835. *Gymnopus Spiniferus* Duméril and Bibron, Erpét. Gén. Hist. Nat. Comp. Rept. Liv. 2:477.

1839. *Trionyx annulifer* Wied-Neuwied, Reise Innr. Nord Amer. Jahren 1832 bis 1834. I Bund., p. 40.

1844. *Tyrse Argus* Gray, Cat. Tort. Croc. Amphisb. Coll. British Mus., p. 48.

1855. *Trionyx Argus* Gray, Cat. Shield Rept. Coll. British Mus., Pt. I, p. 68

1857. *Aspidonectes nuchalis* Agassiz, Contr. Nat. Hist. U.S. Amer., Vol. I, Pt. II, p. 406.

1857. *Aspidonectes asper* Agassiz, Contrib. Nat. Hist. U.S. Amer., Vol. I, Pt. II, p. 407.

1857. *Aspidonectes Emoryi* Agassiz, Contrib. Nat. Hist. U.S. Amer., Vol. I, Pt. II., p. 407.

1869. *Callinia spinifera* Gray, Proc. Zool. Soc. London 1869, p. 222.

1889. *Trionyx emoryi* Boulenger, Cat. Chelon. Rhynch. Croc. British Mus., p. 358.

1893. *P*[*latypeltis*] *emoryii* Baur, Proc. Amer. Philos. Soc. 31:220.

1911. *Amyda spinifera* Hurter, Trans. Acad. Sci. St. Louis 20:251.

1917. *Amyda emoryi* Stejneger and Barbour, Check List North Amer. Amphib. Rept. [1st ed.], p. 124.

1951. *Amyda ferox emoryi* Neil, Publ. Res. Div. Allen's Rept. Inst. 1:15.

1953. *Trionyx ferox emoryi* Schmidt, Check List North Amer. Amphib. Rept., 6th ed., p. 109.

1956. *T*[*rionyx*] *s*[*pinifer*] *emoryi* Schwartz, Charleston Mus. Leafl. 26:11.

1987. *Apalone* ([subgenus] *Apalone*) *spinifera* Meylan, Bull. Amer. Mus. Nat. Hist. 186:92

1989. *Apalone spinifera emoryi* Ernst and Barbour, Turtles of this World, p. 104.

Type specimens.—A lectotype, USNM 7855, obtained by Dr. Caleb B. R. Kennerly was designated by Webb (1962) from among the putative syntypes used by Agassiz (1857). In his description, Agassiz did not indicate how many specimens he actually had before him. According to Reynolds et al. (2007), however, Agassiz borrowed all the US Boundary Survey specimens of turtles from the USNM. For this reason, Reynolds et al. adopted the position that all the USNM specimens that Agassiz had before him constituted syntypes, and they subsequently tracked all but one of these individuals down to their present museum locations and numbers.

Type locality.—Originally two type localities: the "lower Rio Grande of Texas, near Brownsville"

[Cameron County, Texas]; and "Williamson County, in a stream emptying into the Rio Brazos." Webb's designation of the lectotype restricted the type locality to the former of these two options.

Topotypes.—Cameron Co: Brownsville, 4 (USNM), 9 (BUMMC). The latter were collected in 1955.

Near topotypes.—Cameron Co: 1 mi S Brownsville, Rivera Road, 1 (BUMMC); Cameron City, 1 (TCWC); Resaca on NE edge Brownsville Airport, 3 (UF); 3 mi S Harlingen, 1 (BUMMC); Olmito Fish Hatchery, 2 (UMNH). The last of these specimens was collected in 1983.

Trionyx spiniferus guadalupensis Webb, 1962
= *Apalone spinifera guadalupensis*
[Guadalupe Spiny Softshell]

1827. *Trionyx spiniferus* Lesueur, Mém. Mus. Hist. Nat. Paris 15:258.

1827. *Trionyx ocellatus* Lesueur, Mém. Mus. Hist. Nat. Paris 15:261.

1832. *Apalone Hudsonica* Rafinesque, Atlantic J., Friend Knowl. 1:64.

1835. *Gymnopus Spiniferus* Duméril and Bibron, Erpét. Gén. Hist. Nat. Comp. Rept. Liv. 2:477.

1839. *Trionyx annulifer* Wied-Neuwied, Reise Innr. Nord Amer. Jahren 1832 bis 1834. I Bund., p. 140.

1844. *Tyrse Argus* Gray, Cat. Tort. Croc. Amphisb. Coll. British Mus., p. 48.

1855. *Trionyx Argus* Gray, Cat. Shield Rept. Coll. British Mus., Pt. I, p. 68

1857. *Aspidonectes nuchalis* Agassiz, Contrib. Nat. Hist. U.S. Amer., Vol. I, Pt. II, p. 406.

1857. *Aspidonectes asper* Agassiz, Contrib. Nat. Hist. U.S. Amer., Vol. I, Pt. II, p. 407.

1869. *Callinia spinifera* Gray, Proc. Zool. Soc. London 1869, p. 222.

1911. *Amyda spinifera* Hurter, Trans. Acad. Sci. St. Louis 20:251.

1962. *Trionyx spiniferus guadalupensis* Webb, Univ. Kans. Publ. Mus. Nat. Hist. 13:517.

1987. *Apalone* ([subgenus] *Apalone*) *spinifera* Meylan, Bull. Amer. Mus. Nat. Hist. 186:92

1989. *Apalone spinifera guadalupensis* Ernst and Barbour, Turtles of the World, p.104.

Type specimen.—Holotype, adult male, UMMZ 89926, obtained 13 May 1938 by Stanley Clayton.

Type locality.—15 miles northeast of Tilden, McMullen County, Texas.

Topotypes.—McMullen Co: 15 mi NE Tilden, 2 (UMMZ). Paratypes collected in 1938.

Near topotypes.—McMullen Co: 10.5 mi N Tilden, 1 (LSUMZ); 20 mi S Jourdanton, 2 (TCWC). The last of these was collected in 1985.

ORDER SQUAMATA
SUBORDER LACERTILIA
Family Anguidae

Gerrhonotus infernalis Baird, 1858
[Texas Alligator Lizard]

1858. *Gerrhonotus infernalis* Baird, Proc. Acad. Nat. Sci. Phila. (1859), 10:255.

1877. *P*[*terogasterus*] *infernalis* Cope, Proc. Amer. Philos. Soc. (1878), 17:96.

1900. *Gerrhonotus liocephalus infernalis* Cope, Ann. Rept. U.S. Nat. Mus. (1898), p. 517.

1954. *Gerrhonotus liocephalus taylori* Tihen, Amer. Mus. Novit. 1687:7.

1988. *Gerrhonotus liocephalus* Good, Univ. Calif. Publ. Zool. 121:68.

1989. *Gerrhonotus liocephalus aguayoi* Contreras-Aquieta, 10th Congr. Nac. Zool., Resumen, p. 75.

1994. *Gerrhonotus infernalis* Good, Herpetol. Monogr. 8:198.

Type specimen.—Holotype, USNM 3090, obtained 8 November 1854 (Good and Wiedenfeld 1995) by Dr. Caleb B. R. Kennerly.

Type locality.—Devils River, Val Verde County, Texas. From a careful reconstruction of Kennerly's field notes, an evaluation of the habitat requirements of this lizard species, and the crossing points of the Devils River on the 1854 Boundary Survey's route along the San Antonio-El Paso trail, Good and Wiedenfeld (1995) concluded the type locality for this species could be stated in current place-name terms "Devil's River [sic] Canyon, 0–13 kilometers north of Baker's Crossing."

Topotypes.—None.

Near topotypes.—Val Verde Co: 28 mi N Comstock, 1 (LSUMZ); Devils River State Natural Area, 1 (ASNHC). The more recent of these was collected in 1999.

Remarks.—The name *Gerrhonotus infernalis* (no subspecies) used by Good (1994) is accepted for purposes of this catalog. The most recent phylogenetic review of this lineage of alligator lizards, however, was by García-Vázquez et al. (2018).

Opheosaurus ventralis attenuatus Cope, 1880
= *Ophisaurus attenuatus attenuatus*
[Western Slender Glass Lizard]

1776. *Anguis ventralis* Linnaeus, Syst. Nat., 12th ed., p. 391.

1803. *Ophisaurus ventralis* Daudin, Hist. Nat. Gen. Part. Rept. 7:352.

1820. *Hylalinus ventralis* Merrem, Versch. Syst. Amphib., Tent. Syst. Amphib., p. 79.

1880. *Opheosaurus ventralis attenuatus* Cope, Bull. U.S. Nat. Mus. 17:18.

1880. *Opheosaurus ventralis attenuatus* var. *sulcatus* Cope, Bull. U.S. Nat. Mus. 17:18.

1885. *Ophisaurus attenuatus* Boulenger, Cat. Liz. Brit. Mus. (Nat. Hist.), 2nd ed., Vol. 2, p. 282.

1900. *Ophisaurus ventralis ventralis* Cope, Ann. Rep. U.S. Nat. Mus. 1898, p. 497.

1900. *Ophisaurus ventralis sulcatus* Cope, Ann. Rep., U.S. Nat. Mus. 1898, p. 498.

1952. *Ophisaurus attenuatus attenuatus* McConkey, Chicago Acad. Sci., Nat. Hist. Misc. 102:2.

1999. *Anguis attenuatus* (by inference) Macey et al., Molec. Phylog. Evol. 12:268.

2017. *O*[*phisaurus*] *a*[*ttenuatus*] *attenuatus* De Quieroz et al., Squamata (in part) – Lizards, pp. 38–58 in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol. Circ., 43:47.

Type specimen.—No holotype was ever designated for this taxon. A neotype, a male, USNM 15537, obtained by Texas ornithologist George H. Ragsdale, was designated by McConkey (1954).

Type locality.—The type locality for the neotype is "Cook [= Cooke] County, Texas," with no further data. The Ragsdale family farm was established in 1867 about 5 kilometers southeast of Gainesville, but the collector's County Surveyor duties took him to many parts of Cooke County over 1870–1878 (Casto 1980).

Topotypes.—Cooke Co: [no specific location], 2 (USNM). Collection dates are not available for these specimens.

Near topotypes.—Denton Co: 4 mi N, 12 mi E Denton, 1 (ASNHC), collected in 1969.

Remarks.—Attribution of the name *Opheosaurus ventralis attenuatus* to Baird in Cope (1880) was erroneous (P. W. Smith 1961; Holman 1971). McConkey (1954) indicated that Cope knew he was using a manuscript name of Baird's that was never published. Also, the spelling of the genus *Ophisaurus* used by Cope (1880) was apparently an inadvertent error on his part.

Opheosaurus ventralis sulcatus Cope, 1880
= *Ophisaurus attenuatus attenuatus*
[Western Slender Glass Lizard]

1776. *Anguis ventralis* Linnaeus, Syst. Nat., 12th ed., p. 391.

1803. *Ophisaurus ventralis* Daudin, Hist. Nat. Gen. Part. Rept. 7:352.

1820. *Hylalinus ventralis* Merrem, Versch. Syst. Amphib., Tent. Syst. Amphib., p. 79.

1880. *Opheosaurus ventralis attenuatus* var. *sulcatus* Cope, Bull. U.S. Nat. Mus. 17:18.

1885. *Ophisaurus attenuatus* Boulenger, Cat. Liz. Brit. Mus. (Nat. Hist.), 2nd ed., Vol. 2, p. 282.

1900. *Ophisaurus ventralis ventralis* Cope, Ann. Rep. U.S. Nat. Mus. 1898, p. 497.

1900. *Ophisaurus ventralis sulcatus* Cope, Ann. Rep., U.S. Nat. Mus. 1898, p. 498.

1952. *Ophisaurus attenuatus attenuatus* McConkey, Chicago Acad. Sci., Nat. Hist. Misc. 102:2.

Type specimen.—Holotype, ANSP 12755, obtained by E. D. Cope. Holman (1971) indicated that the location of the type specimen was unknown. Coincidentally, that same year Malnate (1971) reported it to be in the Academy of Natural Sciences of Philadelphia collection (as ANSP 12755).

Type locality.—Dallas, Dallas County, Texas.

Topotypes.—None.

Near topotypes.—Dallas Co: Dallas, Oak Cliff, banks of branch of Trinity River, 1 (UIMNH); Rawhide Creek, 1 (YPM). The second of these has a collection date in 1972.

Family Crotaphytidae

Crotaphytus reticulatus Baird, 1858
[Reticulate Collared Lizard]

1858. *Crotaphytus reticulatus* Baird, Proc. Acad. Nat. Sci. Phila. (1859), 10:253.

Type specimens.—Lectotype, USNM 2692a, collected probably in 1852, by John H. Clark. There were originally three syntypes under the single number of USNM 2692. Cochran (1961) listed a fourth syntype (USNM 2731), obtained by Arthur Schott, an action likely precipitated by Smith and Taylor's earlier (1950a) type locality restriction (see below). Montanucci (1976) observed that the Schott specimen was not actually used by the describer, and that Cope (1900) had utilized one of the Baird syntypes for his concept of the species; therefore, he further designated the Cope specimen, USNM 2692a, as the lectotype.

Type locality.—Ringgold Barracks, Starr County, Texas. This locality is consistent with Montanucci's (1976) lectotype designation and the Clark syntypes mentioned by Cochran (1961, who erroneously placed Ringgold Barracks in Montague County). Smith and Taylor (1950a) had arbitrarily restricted the type locality to Laredo, Webb County (the Schott syntype). Rejecting this restriction, Montanucci (1976) refined the type locality to "Fort Ringgold Military Reservation [26°22'N, 98°48'W], Starr County," which is used in this catalog.

Topotypes.—None found.

Near topotypes.—Starr Co: Rio Grande City, 2 (USNM); 5 mi E Rio Grande City, 1 (UIMNH). The most recent of these was collected in 1935.

Remarks.—Formerly a protected species in Texas, the Reticulate Collared Lizard no longer appears on the state's list of threatened and endangered species.

Family Eublepharidae

Coleonyx brevis Stejneger, 1893
[Texas Banded Gecko]

1858. *Stenodactylus variegatus* (in part) Baird, Proc. Acad. Nat Sci. Phila. (1859), 10:254.

1880. *Coleonyx variegatus* [*nec* Baird] Cope, Bull. U.S. Nat. Mus. 17:13

1885. *Eublepharis variegatus* [*nec* Baird] Boulenger, Cat. Lizards British Mus. (Nat. Hist), 2nd ed., Vol. I, p. 233.

1893. *Coleonyx brevis* Stejneger, N. Amer. Fauna 7:163.

1953. *Coleonyx variegatus brevis* Schmidt, Check List of North Amer. Amphib. Rept., 6th ed., p. 114.

1954. *Coleonyx brevis* Stebbins, Amphib. Rept. Western North Amer., p. 208.

Type specimen.—Holotype, USNM 13627, obtained on 30 November 1883 by Gabriel W. Marnock (Cochran 1961). There were originally six syntypes, all cataloged under USNM 13627; one of these was later marked in the USNM catalog to be the holotype, and the other five were renumbered USNM 42471–73 and 50040–41 and are considered topotypic paratypes.

Type locality.—Helotes, Bexar County, Texas.

Topotypes.—Bexar Co: Helotes, 24 (BUMMZ), 10 (USNM, including above paratypes), 5 (ANSP), 3 (CAS, KU). The most recent of these was collected in 1931.

Near topotypes.—Bexar Co: Helotes, Marnock's Hill, 3 (CUMV); 1 mi N Helotes at Marnock's Ranch, 2 (TNHC); Helotes Creek, 1 (CUMV). The most recent of these was obtained in 1947. In addition, localities mapped in the Helotes region by Vermersch (1992) represent other museum and observational records.

Coleonyx reticulatus Davis and Dixon, 1958
[Reticulate Banded Gecko]

1958. *Coleonyx reticulatus* Davis and Dixon, Proc. Biol. Soc. Wash. 71:151.

Type specimen.—Holotype, adult female, TCWC 12855, obtained 20 June 1956 by Charles K. Winkler.

Type locality.—Black Gap, 50 miles south-southeast of Marathon, 2,500 feet elevation, Brewster County. This site is located within Black Gap State Wildlife Management Area.

Topotypes.— No exact topotypic matches found.

Near topotypes.—Brewster Co: Black Gap State Wildlife Management Area (BGWMA), RM Rd 2627, 1 (UTA); BGWMA, 9.7 km E Headquarters, 1 (UTA); BGWMA, 11.3 km E Headquarters, 1 (UTA); BGWMA, 5.1 km NW jct with Rio Grande, 2 (UTA); 3.2 mi W La Linda, 2 (UTA). The last of these was collected 1991.

Remarks.—After being protected for many years, the Reticulate Banded Gecko is no longer on the Texas endangered and threatened list. Most of the known populations of this species in Texas occur on state or federal lands in the Big Bend region where they are protected from incidental take or commercial exploitation.

Family Phrynosomatidae

Cophosaurus texanus Troschel, 1852
= *Cophosaurus texanus texanus*
[Texas Greater Earless Lizard]

1852. *Cophosaurus texanus* Troschel, Arch. Naturg. 16:389.

1852. *Holbrookia texana* Baird and Girard, Proc. Acad. Nat. Sci. Phila. 6:124.

1852. *Holbrookia affinis* Baird and Girard, Proc. Acad. Nat. Sci. Phila. 6:125.

1951. *Holbrookia texana texana* Peters, Occ. Pap. Mus. Zool. Univ. Mich. 537:5.

1965. *Cophosaurus texanus* Clarke, Emporia St. Res. Stud. 13:78.

1977. *Cophosaurus texanus texanus* Cox and Tanner, Great Basin Nat. 35:37.

Type specimen.—There were originally two syntypes, collected by the German geologist Ferdinand von Roemer, probably in 1848 or 1849 (Axtell 1991), and deposited with German museums in Bonn and Hidesheim am Rhein. Peters (1951) declared these syntypes lost ("destroyed"), and designated UMMZ 100811, an adult female, as a neotype. The neotype was obtained 11 October 1949 by John E. Werler, then the herpetology curator at the San Antonio Zoo, at the request of Peters for specimens from the type locality (see below).

Type locality.—Troschel's (1852) original type locality was "der deutchen Colonie Neubraunfels an der Guadalupe in westlichen Texas, unter 28° Nordl. Br. Gefangen", that is, from New Braunfels on the Guadalupe River. The full original text, plus an English translation, of Troschel's comments on the origin of the type specimens can be found in Axtell (1991). For

the neotype, Peters (1951) gives the northeastern edge of the city of New Braunfels, Comal County, Texas, specifically indicating from Werler's notes as being found near an old rock quarry.

Topotypes.—Comal Co: New Braunfels, 4 (UMMZ), 1 (CUMV, USNM). The only date among these collections is for 1949, and these specimens are likely exact neotopotypes.

Near topotypes.—Comal Co: TX Hwy 306 at the Guadalupe River, 1 (LSUMZ); ca. 1.5 km (air) SSW Startzville, 1 (UTEP); Hunter, York Creek, 1 (BUMMC). The most recent of these was collected in 1987.

Holbrookia affinis Baird and Girard 1852
= *Cophosaurus texanus texanus*
[Texas Greater Earless Lizard]

1852. *Cophosaurus texanus* Troschel, Arch. Naturg. 16:389.

1852. *Holbrookia texana* Baird and Girard, Proc. Acad. Nat. Sci. Phila. 6:124.

1852. *Holbrookia affinis* Baird and Girard, Proc. Acad. Nat. Sci. Phila. 6:124.

1951. *Holbrookia texana texana* Peters, Occ. Pap. Mus. Zool. Univ. Mich. 537:5.

1965. *Cophosaurus texanus* Clarke, Emporia St. Res. Stud. 13:78.

1977. *Cophosaurus texanus texanus* Cox and Tanner, Great Basin Nat. 35:37.

Type specimens.—Three syntypes, USNM 2662, obtained by John H. Clark.

Type locality.—Rio San Pedro [= Devils River], Val Verde County, Texas.

Topotypes.—The type locality is too vague for a meaningful assignment of topotypes.

Near topotypes.—Val Verde Co: ca. 90 m N US Hwy 90, ca. 185 m NW from its bridge over Lake Amistad, 1 (UTA); Devils River, 1 mi N, Rio Grande, 0.5 mi W [sic], 2 (TNHC); Devils River, 3 mi W, Rio Grande, 2 mi N [sic], 3 (TNHC); Devils River, 3 mi W Rio Grande, 2 mi N [sic], 3 (TNHC); Devils River, 7.0 mi NW Del Rio, 1 (UTA); Devils River, 8 mi W Del Rio, 2 (TNHC). The more recent of these was collected in 1985.

Holbrookia lacerata Cope, 1880
[Plateau Spot-tailed Earless Lizard]

1880. *Holbrookia lacerata* Cope, Bull. U.S. Nat. Mus. 17:15.

1890. *Holbrookia maculata lacerata* (in part) Stejneger, North Amer. Fauna 3:109.

1956. *Holbrookia lacerata lacerata* Axtell, Bull. Chicago Acad. Sci. 10:164.

1991. *Holbrookia lacerata* (by inference) Collins, Herpetol. Rev. 27:43.

2018. *Holbrookia lacerata lacerata* Roelke et al., J. Nat. Hist. 52:7.

2019. *Holbrookia lacerata* Hibbitts et al., Zootaxa 4619:147.

Type specimens.—Lectotype, adult male, USNM 10160A, obtained May 1879 by Gabriel W. Marnock. No type material was cited by Cope in the original description, but Cochran (1961) indicated that there were two syntypes, both collected by Marnock. Axtell (1956) designated one of the syntypes, USNM 101601a, as the lectotype; the other syntype, USNM 10160b, has been renumbered as USNM 563713.

Type locality.—The restricted type locality of the lectotype is "within a circle of a three-mile radius from Helotes the village in Bexar County, where Gabriel Marnock had his residence" (Axtell 1956). Axtell later (1998b) provided coordinates for Helotes, Texas, 29°35'N, 98°41'W.

Topotypes.—Bexar Co: Helotes, 8 (BUMMC), 3 (ANSP), 2 (USNM). As far as can be determined, the only specimens from the type locality are those obtained by Gabriel Marnock, between 1879 when he arrived in Helotes and found the first individuals and 1920 when he died there.

Near topotypes.—Bexar Co: 4 mi S San Antonio, 1 (FMNH), collected in 1940 (Axtell 1988b). Otherwise, there are no museum specimens within 50 kilometers in any direction from the type locality.

Remarks.—The verbatim original statement of the type locality by Cope (1880) read: "Erath County; west of the upper Brazos. Mr. [Jacob] Boll found it rather abundantly there and in Comanche County. Southward, it has been found by Mr. Marnock on the Guadalupe River in Kendall or Comal County." No actual specimens from any of these locations were cited by the describer, and Axtell (1998b) pointed out emphatically that none for the species exist from Erath and Comanche counties. He noted that what occurs in those two counties instead is a form of another species of *Holbrookia*, *H. maculata perspectiva*. The Marnock 1879 syntypes specimens and a topotype of *H. lacerata*, however, were present in the USNM (as were the three ANSP topotypes) when Axtell (1956) restricted the type locality to the Helotes area of Bexar County. His action was based on a handwritten tag in the bottle of the specimen he had designated as the lectotype from among the Marnock syntypes. Axtell (1998b) later developed some reservations about his restriction to Helotes, since no additional specimens have been found there after Marnock's death. Moreover, the last specimen of this taxon collected in Bexar County is the near topotype from 1940. The Strecker Museum topotype(s) listed by Axtell (1988b) may represent those reported by Strecker (1922) from the Helotes area that were in the "Marnock Collection." A portion of that collection was sold to Baylor University by Marnock's widow (and are accounted for in the BUMMC topotypes listed above), but the other specimens were donated to the Scientific Society of San Antonio and their current whereabouts are unknown.

Holbrookia lacerata subcaudalis Axtell, 1956
= *Holbrookia subcaudalis*
[Tamaulipan Spot-tailed Earless Lizard]

1880. *Holbrookia lacerata* Cope, Bull. U.S. Nat. Mus. 17:15.

1890. *Holbrookia maculata lacerata* (in part) Stejneger, North Amer. Fauna 3:109.

1956. *Holbrookia lacerata subcaudalis* Axtell, Bull. Chicago Acad. Sci. 10:174.

1991. *Holbrookia subcaudalis* Collins, Herpetol. Rev. 27:43.

2018. *Holbrookia lacerata subcaudalis* Roelke et al., J. Nat. Hist. 52:7.

2019. *Holbrookia subcaudalis* Hibbitts et al., Zootaxa 4619:148.

Type specimen.—Holotype, adult male, TNHC 20000, obtained on 6 June 1955 by Ralph W. Axtell, original number RWA 1163.

Type locality.—In a plowed field, 4.8 miles east-northeast of Bishop (27°36'30"N, 97°43'52"W), Nueces Count, Texas. The coordinates were later emended by Axtell (1998b) to 27°36'30"N, 94°44'52"W, and an elevation of 48 feet was provided.

Topotypes.—None.

Near topotypes.—Nueces Co: 2.75 mi E Bishop, 1 (TNHC); County Rd 6, 1 (TCWC); County Rd 77, 1 (TCWC). The last two near topotypes were collected in 2015, and tissue samples from them were used in the DNA study of Roelke et al. (2018), but it is not known if residual tissues from these samples still exist.

Remarks.—In the latter part of the 20th century, a perception of widespread catastrophic decline and disappearance of this species and its sister taxon, *Holbrookia lacerata*, was common among herpetologists familiar with their relative abundance. Apparently, many populations of *H. lacerata* (formerly *H. lacerata lacerata*) did disappear, but others have been since found in new locations on the Edwards Plateau. However, the South Texas form, currently considered the distinct species-level taxon *H. subcaudalis* (see Hibbitts et al. 2019), remains of conservation concern in the state.

Holbrookia propinqua Baird and Girard, 1852
= *Holbrookia propinqua propinqua*
[Northern Keeled Earless Lizard]

1852. *Holbrookia propinqua* Baird and Girard, Proc. Acad. Nat. Sci. Phila. 6:126.

1875. *Holbrookia maculata propinqua* Cope, Bull. U.S. Nat. Mus. 1:47.

1932. *Holbrookia propinqua propinqua* Harper, Proc. Biol. Soc. Wash. 45:15

1932. *Holbrookia propinqua stonei* Harper, Proc. Biol. Soc. Wash. 45:15.

1981. *Holbrookia propinqua* Axtell, J. Herpetol. 15:211. Lectotype designated.

1983. *Holbrookia propinqua propinqua* Axtell, Cat. Amer. Amphib. Rept. 341:341.1.

Type specimen.—Lectotype, an adult male, USNM 2671, obtained between 25 April and 5 May 1851 by John H. Clark, original number USNM 2671A. This lectotype was selected by Axtell (1981) from a series of seven syntypes, 2671A–G (Cochran 1961; Axtell 1998a). The remaining six syntypes were subsequently renumbered as USNM 292574–79.

Type locality.— Originally given as "between Indianola and San Antonio [Texas]." Cochran (1961) restricted it to nine miles southwest of Somerset in Atascosa County, with no attribution as to the source for this restriction. Subsequently, Axtell (1981) determined the type locality was restricted to a 12 kilometer circle centered at 29°16'20"N, 98°09'50"W in Wilson County, Texas, which is recognized in this catalog.

Topotypes.—Wilson Co: between Indianola and San Antonio, 6 (USNM, paralectotypes); County Rd 331, 5.4 mi NE jct with US Hwy 181, 1 (TCWC), collected in 2006.

Near topotypes.—Wilson Co: 0.5 km S, 0.2 km W jct Calaveras Rd and US Hwy 181, 6 TNHC); 0.4 km S, 0.2 km E jct of US Hwy 87 and FM Rd 775 in La Vernia, 2 (TNHC). The most recent of these near topotypes (3–4 km outside the type locality radius) was collected in 1981.

Holbrookia propinqua stonei Harper, 1932
= Holbrookia propinqua propinqua
[Northern Keeled Earless Lizard]

1852. *Holbrookia propinqua* Baird and Girard, Proc. Acad. Nat. Sci. Phila. 6:126.

1875. *Holbrookia maculata propinqua* Cope, Bull. U.S. Nat. Mus. 1:47.

1932. *Holbrooka propinqua stonei* Harper, Proc. Biol. Soc. Wash. 45:15.

1998. *Holbrookia propinqua propinqua* Axtell, Interp. Atlas Texas Lizards 19:1.

2017. *H*[*olbrookia*] *p*[*ropinqua*] *propinqua* De Quieroz et al., Squamata (in part) – Lizards, pp. 38–58 in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol. Circ. 43:46.

Type specimen.—Holotype, adult male, ANSP 19879, obtained 20 July 1929 by B. P. Roberts, original number 52b.

Type locality.—"North end of Padre Island, Texas." No county is mentioned, but the very north tip of the island is in Nueces County, with a sand track extending down the island through Kleberg County into Kenedy County before reaching the insular geographic midpoint. The describer remarked near the end of his account that the specimen was "probably from Mustang Island," but that location is not physically part of Padre Island.

Topotypes.—[No county designated] Padre Island, 13 (ANSP, used in species description by Harper 1932).

Near topotypes.—Because the type locality for this lizard extends linearly more than 50 air km of vehicle-assessable beach dunes, and this taxon is perhaps the most commonly encountered lizard throughout these habitats, there are a large number of potential topotypes and near topotypes. Kenedy Co: 8.3 km S Kenedy–Kleberg Co line, 1 (TNHC); 5 mi S Kleberg–Kenedy Co line Dunn Ranch, 1 (CM). Kleberg Co: Padre Island, 14 (TNHC), 3 (MVZ), 1 (UTEP); 10.1 mi S Corpus Christi, 6 (TNHC); 2 mi S fishing [Bob Hall] pier, 3 (TNHC); 3 mi S Bob Hall Pier, 296 (ASNHC); 8 mi S Bob Hall Pier, 8 (TCWC); 5 mi S Bob Hall Pier, 3 (TNHC); Padre Island, on Park Rd 22, between National Seashore boundary and TX Hwy 361, 1 (TNHC); Northern boundary of Padre Island National Seashore, 1 (LSUMZ); 100 yds N Padre Island National Seashore Boundary, 6 (TNHC); 16 mi S Corpus Christi, 1 (TCWC); ca. 20 mi S Corpus Christi, 1 (LSUMZ); Trap No. 3, PAIS, 2 (TCWC). Nueces

Co: Padre Island, 4 (TCWC), 3 (USNM); North tip of Padre Island, 2 (UCM), 1 (FHSM); Padre Island, S of Corpus Christi, 1 (TNHC); Padre Island, SSW of Corpus Christi, 3 (TCWC); Padre Island, 10 mi S Corpus Christi, 12 (ASNHC); Padre Island, 0.6 mi E Park Rd 22 on Beach Access Rd 2, then 0.25 mi N and 0.25 mi S, 8 (USNM); Nueces County Park, 4 (MCZ), 1 (UCM). Kenedy-Kleberg-Nueces Co: [no specific locality], 8 (USNM). The most recently collected of these near topotypes was obtained in 2002. Axtell (1998a) lists other near topotypes from Nueces County at AMNH, BUMMC, and UTA.

Remarks.—The subspecies *Holbrookia propinqua stonei* was not treated as valid by Axtell (1998a), but he remarked that it was "diagnosable" and "probably should be" recognized.

Phrynosoma brevicorne Boulenger, 1916
= *Phrynosoma cornutum*
[Texas Horned Lizard]

1824. *Agama cornuta* Harlan, J. Acad. Nat. Sci. Phila. 4:299.

1828. *Phrynosoma bufoniium* Wiegmann, Isis von Oken 21:367.

1831. *Phrynosoma cornutum* Gray, in Griffith, Anim. Kingd., p. 45.

1834. *Phrynosoma harlanii* Wiegmann, Herp. Mexicana, p. 54.

1852. *Phrynosoma plancieps* Hallowell, Proc. Acad. Nat. Sci. Phila. (1854), 6:178.

1916. *Phrynosoma brevicorne* Boulenger, Proc. Zool. Soc. London 1916, p. 537.

1923. *Phrynosoma cornutum* Stejneger and Barbour, Check List North Amer. Amphib. Rept., 2nd ed., p. 60.

Type specimen.—Holotype, NHMUK 1946.8.10.44, original number 1916.7.20.2.

Type locality.—"Texas", restricted to vicinity of Laredo by Schmidt (1953). However, Price (1990) gives the type locality as "Galveston, Galveston County, Texas" in his synonymy for *Phyrnosoma cornutum* as if that was part of Boulenger's description (which it is not). Price did examine the British Museum holotype, so this may represent a type locality restriction based on his own observations of Texas specimens. For this catalog, I have tentatively accepted Galveston over Laredo as a restricted type locality for the taxon.

Topotypes.—Galveston Co: Galveston, 1 (BUMMZ, CUMV, MCZ, TCWC); no number (USNM, listed by Axtell 1996). The last topotype was collected in 1950.

Near topotypes.—Galveston Co: 2 mi W Galveston, 1 (BUMMZ); Port Bolivar, 4 (TCWC); Texas City, 17th Ave & 18th Ave drainage ditch, 1 (SFAVC = Stephen F. Austin Vertebrate Collection, listed by Axtell 1996). The last of these was collected in 1969.

Remarks.—Since 1977, the Texas Horned Lizard has been protected within Texas from collection or commercial exploitation, and it is currently designated a state Threatened species (Davis and LaDuc 2021).

Phrynosoma bufonium Wiegmann, 1828
= *Phrynosoma cornutum*
[Texas Horned Lizard]

1824. *Agama cornuta* Harlan, J. Acad. Nat. Sci. Phila. 4:299.

1828. *Phrynosoma bufoniium* Wiegmann, Isis von Oken 21:367.

1831. *Phrynosoma cornutum* Gray, in Griffith, Anim. Kingd., p. 45.

1834. *Phrynosoma harlanii* Wiegmann, Herp. Mexicana, p. 54.

1852. *Phrynosoma plancieps* Hallowell, Proc. Acad. Nat. Sci. Phila. (1854), 6:178.

1916. *Phrynosoma brevicorne* Boulenger, Proc. Zool. Soc. London, p. 537.

1953. *Phrynosoma cornutum* Schmidt, Check List North Amer. Amphib. Rept., 6th ed., p. 133.

Type specimen.—Holotype lost, attributed to an 1805 collection by Graf. Albert von Sack.

Type locality.—"Surinam" in error (*Phrynosoma* does not occur in South America). The closest von Sack got to Texas was a trip with Ferdinand Deppe to tropical and north-central Mexico in 1824. The type locality was re-designated as San Antonio, Bexar County, Texas, by Schmidt (1953) who apparently missed Smith and Taylor's (1950a) earlier restriction to Los Nogales, Sonora, Mexico. The latter is at the far western edge of the species distribution, and thus the more centrally placed San Antonio, Texas restriction provisionally is accepted for this catalog.

Topotypes.—Bexar Co: San Antonio, 35 (CAS), 4 (USNM), 3 (LACM), 2 (KU, TCWC), 1 (BUMMC, CM, MSB); San Antonio, Brackenridge Park, 1 (TNHC); Brooks Air Force Base, 2 (LSUMZ); NE San Antonio, Salado Creek at Eisenhauer Rd, 1 (MPM); Fort Sam Houston, 1 (CAS). The most recent of these topotypes was obtained in 1968.

Near topotypes.—Bexar Co: NW [of] San Antonio, 4 (TCWC); 4 mi E San Antonio, 2 (TCWC). The last of these near topotypes was collected in 1956.

Phrynosoma harlanii Wiegmann, 1834
= *Phrynosoma cornutum*
[Texas Horned Lizard]

1824. *Agama cornuta* Harlan, J. Acad. Nat. Sci. Phila. 4:299.

1828. *Phrynosoma bufoniium* Wiegmann, Isis von Oken 21:367.

1831. *Phrynosoma cornutum* Gray, in Griffith, Anim. Kingd., p. 45.

1834. *Phrynosoma harlanii* Wiegmann, Herp. Mexicana, p. 54.

1852. *Phrynosoma plancieps* Hallowell, Proc. Acad. Nat. Sci. Phila. (1854) 6:178.

1916. *Phrynosoma brevicorne* Boulenger, Proc. Zool. Soc. London 1916, p. 537.

1953. *Phrynosoma cornutum* Schmidt, Check List North Amer. Amphib. Rept., 6th ed., p. 133.

Type specimen.—No type specimen was designated in the description.

Type locality.—"Mexico," usually by inference from the title of Wiegman's work in which the description is found. The describer's exact language regarding the origin of the taxon was "Habitat in vastis campis, Ruprmontibus versus oreitum adiacentibus," very roughly translated as "vast plains adjacent to the eastern Rocky Mountains." Restricted to San Antonio, Texas, with no explanation by Schmidt (1953).

Topotypes and near topotypes.—See account for *P. bufonium* (above).

Phrynosoma modestum Girard, 1852
= *Phrynosoma modestum*
[Round-tailed Horned Lizard]

1852. *Phrynosoma modestum* Girard, in Baird and Girard, Proc. Acad. Nat. Sci. Phila. 6:69.

1852. *Phrynosoma modestum* Girard, in Stansbury's Expl. Surv. Valley Great Salt Lake, pp. 361, 365.

1858. *Doliosaurus modestus* Girard, Herpetol., in U.S. Expl. Exped, 1838–41, Charles Wilkes, Vol. 20:409.

1896. *A*[*nota*] *modesta* Cope, Amer. Nat. 30:834.

1899. *Phrynosoma platyrhynus* Herrick et al., Bull. Sci. Lab. Denison Univ. 11:136.

1917. *Phrynosoma modestum* Stejneger and Barbour, Check List North Amer. Amphib. Rept. [1st ed.], p. 59.

2006. *Phrynosoma* ([crown clade] *Doliosaurus*) *modestum* Leaché and McGuire, Molec. Phylog. Evol. 39:641.

2013. *Phrynosoma modestum* Dixon, Amphib. Rept. Tex., 3rd ed., p. 182.

Type specimen.—According to Axtell (1988b) there originally were nine syntypes. The description in Girard (1852a) indicates one specimen obtained by General [Sylvester] Churchill in 1846 and the rest were specimens obtained by Colonel James D. Graham. The subsequent, more expanded description by Girard (1852b), refers to the later type material as "a series of adult specimens collected … by the party of Colonel J. D. Graham, late of the US and Mexico

boundary survey." The Churchill specimen eventually was cataloged as USNM 163, and the Graham series (8 specimens) cataloged as USNM 164. Cochran (1961) reported the presence of only seven syntypes in the USNM 164 series, and that one syntype was exchanged with the UIMNH in 1956 (now UIMNH 40746; Smith et al. 1964). Cochran also mentioned that John H. Clark, a biologist/surveyor attached to the Col. Graham's surveys, was the actual collector of these specimens. Whiting and Dixon (1996) indicated that the USNM 164 series consisted of one subadult male, an adult male, and five adult females. They also noted that the ninth syntype (once in the syntype USNM 164 series, but individually renumbered to USNM 165660) was the specimen exchanged with the University of Illinois (now UIMNH 40746). They described this syntype as an adult male, collected in May or June of 1851 (citing Axtell 1988b). There is no mention of the status of the Churchill syntype (USNM 163) by either Cochran (1961) or Whiting and Dixon (1996). It may now be lost.

Type localities.—There are two type localities. The vague type locality associated with the eight Graham/Clark syntypes under USNM 164 was "from San Antonio to El Paso." The western two-thirds of this route has many sites along it where this species is abundant today. The type locality of the Churchill specimen (USNM 163) is even more confusing. Girard's first (1852a) statement of its origin was "in his [Churchill's] march along the Rio Grande in 1846." The second description (Girard 1852b) restates this origin as "brought from the Rio Grande west of San Antonio by General Churchill." Smith and Taylor (1950a) restricted the type locality to Las Cruces, New Mexico, a location that does not lie on the routes between the named places of origin. The Smith and Taylor action unequivocally was rejected by Axtell (1988b), a rejection subsequently supported by Degenhardt et al. (1996) and Whiting and Dixon (1996). Moreover, the historical and species distribution evidence available at the time strongly indicated western Texas origins for all the syntypes. Axtell (1988b), focusing his attention on the Churchill specimen, surmised that it was collected at the crossing of the Rio Grande at Presidio, Texas/Ojinaga, Chihuahua. However, subsequent research by Webb and Eckerman (1998) on the origin of the lost holotype of the snake *Heterodon nasicus*, demonstrated that Churchill's actual entry point into Mexico was a ford on the Rio Grande about 7 air kilometers southwest of the present-day town of El Indio in Maverick County, Texas. Their type locality restriction for this snake also applies to the geographic origin of the Churchill syntype of *Phrynosoma modestum*, possibly to a syntype of the snake *Caudisona lepida* (= *Crotalus lepidus*), and to the holotype of the snake *Churchillia bellona* (= *Pituophis catenifer sayi*). Further investigation for this catalog indicated the "Presidio del Norte" site was actually downstream of Webb and Eckerman's determination; support for this new interpretation is presented in the *Churchillia bellona* account.

Topotypes.—The vague nature of the type localities precludes any meaningful list of specimens that would be true topotypes.

Near topotypes.—The VertNet database for this species over the eight counties through which the Graham survey route yielded the following 396 county-level museum specimen records as follows: Crockett Co: 2 (LACM, TNHC), 1 (SLU), last specimen collected 1981. Culberson Co: 9 (TNHC), 7 (UMMZ), 6 (TCWC), 3 (KU, UCM), 2 (UAZ, USNM), 1 (CUMV, FMNH, LSUMZ, MSB), last collected in 2013. El Paso Co: 29 (UTEP), 15 (LACM), 9 (SDNHM), 10 (CAS), 6 (FMNH), 4 (KU), 3 (AMNH, CUMV, TNHC, USNM), 1 (CM, TCWC, UMMZ), last of these in 1982. Hudspeth Co: 18 (UTEP), 7 (TNHC), 5 (MVZ), 3 (UAZ), 2 (TCWC), last one collected in 2002. Pecos Co: 22 (TNHC), 3 (USNM), 2 (CAS, FMNH, MVZ), 1 (LACM, OMNH), last specimen collected in 1994. Reeves Co: 42 (ANSP), 6 (KU), 5 (UMMZ), 3 (TNHC), 2 (LSUMZ, MCZ, USNM), 1 (AMNH, UCM), last collected in 1970. Terrell Co: 36 (TNHC), 3 (TCWC, UAZ), 2 (LACM, SLU), 1 (KU, MVZ, UMMZ, UTEP, UCM), last collected in 1981. Val Verde Co: 44 (AMNH), 12 (TCWC), 11 (TNHC), 6 (ASNHC), 2 (KU, UMMZ), 1 (AUM, LSUMZ, NCSM, MVZ, UAZ, UF, UMMZ), the last collected in 1996. Unfortunately, no supporting museum records or observations of *Phrynosoma modestum* for the Churchill specimen from Maverick County have been found. However, this lizard is present upstream in the canyon lands of the Rio Grande, Pecos, and Devils River of Val Verde County, and would have been subject to waif dispersal downstream during the periodic floods that

flushed out those canyons over the millennia prior to the construction of Amistad Reservoir Dam in the 1960s.

Remarks.—The Baird and Girard (1852b) publication is the type description authority for this taxon cited in herpetological works through much of the 20th century. However, Banta (1971) argued for the authorship of the name *Phrynosoma modestum* being attributed to Girard's 1852 monograph of the genus *Phrynosoma*. That text follows the coauthored Baird and Girard section in their Stansbury Expedition account. Whiting and Dixon (1996) accepted Banta's argument, and this catalog also recognizes Girard as the actual sole describer of the Round-tailed Horned Lizard.

Phrynosoma planiceps Hallowell, 1852
= *Phrynosoma cornutum*
[Texas Horned Lizard]

1824. *Agama cornuta* Harlan, J. Acad. Nat. Sci. Phila. 4:299.

1828. *Phrynosoma bufoniium* Wiegmann, Isis von Oken 21:367.

1831. *Phrynosoma cornutum* Gray, in Griffith, Anim. Kingd., p. 45.

1834. *Phrynosoma harlanii* Wiegmann, Herp. Mexicana, p. 54.

1852. *Phrynosoma planiceps* Hallowell, Proc. Acad. Nat. Sci. Phila. (1854), 6:178.

1916. *Phrynosoma brevicorne* Boulenger, Proc. Zool. Soc. London 1916, p. 537.

1953. *Phrynosoma cornutum* Schmidt, Check List North Amer. Amphib. Rept., 6th ed., p. 134.

Type specimen.—Holotype, ANSP 8641, obtained by Dr. Samuel W. Woodhouse.

Type locality.—Western Texas, near the Rio Grande. Restricted to El Paso, El Paso County, Texas, by Smith and Taylor (1950a).

Topotypes.—El Paso Co: El Paso, 16 (UMMZ), 7 (UTEP), 4 (SDNHM), 2 (CAS), 1 (BUMMC, CM, MVZ). The last of these was collected in 1975. Axtell (1996) also indicates additional topotypes are at LTU and FMNH.

Near topotypes.—El Paso Co: 0.5 mi (by Carlsbad Hwy) W jct with Hueco Gasline Rd, 1 (UTEP); 0.1 mi (by Stan Roberts Sr. Ave) E jct with War Rd (FM Rd 3255), 1 (UTEP); 1.5 mi (by FM Rd 2529) E jct with War Rd [= FM Rd 3255], 1 (UTEP). The most recent near topotypes was collected in 1972.

Sceloporus disparilis Stejneger, 1916
= *Sceloporus grammicus microlepidotus*
[Mesquite Lizard]

1828. *Sceloporus grammicus* Wiegmann, Isis von Oken. 21:370.

1828. *Sceloporus pleurostictus* Wiegmann, Isis von Oken. 21:370.

1830. *Tropiduris grammicus* Wagler, System Amphib, p. 146.

1905. *Sceloporus dispar* Stejneger, in Bailey, North Amer. Fauna 25:42.

1916. *Sceloporus disparilis* Stejneger, Proc. Biol. Soc. Wash. 29:227.

1936. *Sceloporus microlepidotus disparilis* Dunn, Proc. Acad. Nat. Sci. Phila. 88:472.

1945. *Sceloporus grammicus disparilis* Smith and Laufe, Trans. Kans. Acad. Sci. 48:332.

1981. *Sceloporus grammicus microlepidotus* Sites and Dixon, J. Herpetol. 15:67.

Type specimen.—Holotype, male, USNM 33041, obtained 17 June 1891 by William Lloyd of the US Biological Survey.

Type locality.—Lomita Ranch, 6 miles north of Hidalgo, Hidalgo County, Texas. Axtell (1988c) observed that the type locality is now a part of the city of McAllen, but portions of the former ranch also are associated with the present town of Mission. At the time of the collection of the syntypes in 1891, Lomita Ranch was a large mission, residential, and ranchland property owned and operated by the Missionary Oblates

of Mary Immaculate. Most of the property was sold off, but some was retained for a new railroad town, Mission, and acreage south of the new settlement was retained near the Rio Grande. All that remains of that Lomita Ranch parcel today is La Lomita Historical Park with its famously haunted La Lomita Chapel (a Texas State Landmark).

Topotypes.—Hidalgo Co: 6 mi N Hidalgo, Lomita Ranch, 4 (USNM, paralectotypes), also collected in June of 1891.

Near topotypes.—Hidalgo Co: 1.8 mi S McAllen, 2 (TCWC); 4 mi S Mission, 12 (TCWC); 10 mi W Mission, Lake La Joya, 5 (BUMMC). The most recent were collected in 1977.

Remarks.—Stejneger's (1905) use of the name *Sceloporus dispar* is considered a *nomen nudum* (a name without a description) and thus unavailable.

Sceloporus marmoratus Hallowell, 1852 and
Sceloporus delicatissimus Hallowell, 1852
= *Sceloporus variabilis marmoratus*
[Texas Rose-bellied Lizard]

1852. *Sceloporus marmoratus* Hallowell, Proc. Acad. Nat. Sci. Phila. (1854), 6:178

1852. *Sceloporus delicatissimus* Hallowell, Proc. Acad Nat. Sci. Phila. (1854), 6:178.

1891. *Sceloporus marmoratus* Stejneger, Proc. U.S. Nat. Mus. 14:485.

1934. *Sceloporus variabilis marmoratus* Smith, Proc. Biol. Soc. Wash. 47:121.

1998. *Sceloporus marmoratus* Mendoza-Quijano Flores-Villela, and Sites, Copeia 1998:359.

2017. *S*[*celoporus*] *v*[*ariabilis*] *marmoratus* De Quieroz et al., Squamata (in part) – Lizards, pp. 38–58 in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol. Circ., 43:54.

Type specimens.—For *Sceloporus marmoratus*, holotype USNM 2892, adult female, obtained by Dr. Samuel D. Woodhouse (determined by Axtell 1988a); for *S. delicatissimus*, holotype USNM 16020, adult male, also collected by Woodhouse (located by Stejneger 1891). According to Axtell (1988a), Cope (1900) erroneously (a *lapsus calami*) designated USNM 2892 as the type of *Sceloporus variabilis* Wiegmann; Cope meant for it to be the type of Hallowell's *S. marmoratus*, for which no type had been indicated. Axtell's evidence for this conclusion is that Cope's type specimen was from the same type locality (see below) and by the same collector (Woodhouse). Thus, USNM 2892 is the valid type specimen for *S. marmoratus*, even though it has been missing for decades and was not listed among USNM type specimens by Cochran (1961).

Type locality.—San Antonio, Bexar County, Texas.

Topotypes.—Bexar Co: San Antonio, 4 (TCWC), 3 (MVZ), 1 (CAS, CUMV, USNM). Of these, only the USNM topotype is likely to have been collected within the 1850s town limits of San Antonio; the others are from the 20th century, and the last was collected in 1976.

Near topotypes.—NW San Antonio, 2 (UCM); NW City Limits San Antonio, Quill Dr off Bandera Rd, 1 (TNHC); San Antonio, Brackenridge Park, 1 (CM); Fort Sam Houston, 3 (CAS); Salado Creek, Fort Sam Houston, Military Training Complex, 2 (SDNHM); Salado Creek, creek in Southside Lions Park, 1 (TNHC); North Salado Creek at I Hwy 410, 1 (LACM); San Antonio, Medina River near Blue Wing Lake, 1 (CUMV). The most recent of these was collected in 1991; the VertNet record indicates that tissue samples were taken from a TNHC specimen (catalog number 56339).

Remarks.—These two named taxa are considered together because they represent the same species, described by the same author in the same publication, with names appearing on the same page (*S. marmoratus* first, female individual, followed by *S. delicatissimus*, male), from the same type locality, and by the same collector. This species exhibits pronounced sexual dimorphism, which led Axtell (1988a) to speculate that Hallowell did not realize these two represented both sexes of the same taxon. The ensuing 19th century errors with the type material, and the distributional confusion associated

with the species-level taxon involved, were recounted by Stejneger (1891) who under the "first reviser" rule endorsed the *marmoratus* name to have priority over *delicatissimus*.

Sceloporus merriami Stejneger, 1904
= *Sceloporus merriami merriami*
[Merriam's Canyon Lizard]

1904. *Sceloporus merriami* Stejneger, Proc. Biol. Soc. Wash. 17:17

1937. *Sceloporus merriami merriami* Smith, Proc. Biol. Soc. Wash. 50:83.

Type specimen.—Holotype, adult male, USNM 33039, obtained 2 September 1890 by William Lloyd, US Biological Survey.

Type locality.—East Painted Cave, near mouth of Pecos River, Val Verde County, Texas. This site is now in Amistad National Recreation Area.

Topotypes.—Val Verde Co: East Painted Cave, 3 (USNM, listed in Stejneger 1904).

Near topotypes.—Val Verde Co: Mouth of Pecos River, 1 (USNM); Devils River, 7.0 mi NW Del Rio, 2 (UTA); Devil's Cave, 20 mi NW Del Rio, 1 (BUMMC); TX Loop 408, bridge at Devil's River, 1 (UTA). The last near topotype was collected in 1967.

Sceloporus merriami annulatus Smith, 1937
[Big Bend Canyon Lizard]

1904. *Sceloporus merriami* Stejneger, Proc. Biol. Soc. Wash. 17:17

1937. *Sceloporus merriami annulatus* Smith, Proc. Biol. Soc. Wash. 50:83.

Type specimen.—Holotype, adult male, UIMNH 25058, obtained August 1931 by Edward H. Taylor and John S. Wright, original number EHT A787.

Type locality.—East slope of the Chisos Mountains, Brewster County, Texas. This site is now located in Big Bend National Park.

Topotypes.—Brewster Co: East slope of Chisos Mountains, 9 (KU). These topotypes were collected in September 1931, a month after the type specimen.

Near topotypes.—Brewster Co: E side of Chisos Mountains, Juniper Canyon, 5000 ft, 1 (UAZ); Chisos Mountains, Juniper Canyon, 4800 ft, 1 (CHAS); Glenn Springs, 1 (USNM); 8 mi S Chisos Mountains at Glenn Springs, 1 (KU); Big Bend National Park, 2 mi N Glenn Springs, 1 (LACM); Head of Glenn Draw, 3 (MCZ). The most recent near topotypes were collected in 1970.

Sceloporus merriami longipunctatus Olson, 1973
[Presidio Canyon Lizard]

1904. *Sceloporus merriami* Stejneger, Proc. Biol. Soc. Wash. 17:17

1937. *Sceloporus merriami merriami* Smith, Proc. Biol. Soc. Wash. 50:83.

1973. *Sceloporus merriami longipunctatus* Olson, Herpetologica 29:124.

Type specimen.—Holotype, an adult male, USNM 192744, obtained 31 May 1971 by R. Earl Olson.

Type locality.—Closed Canyon, 23 kilometers southeast of Redford, Presidio County, Texas. This locality is now within Big Bend Ranch State Park.

Topotypes.—Presidio Co: Closed Canyon, 48 (TNHC), 41 (UCM), 29 (LSUMZ), 10 (BYU), 5 (TCWC), 1 (USNM). The most recently collected topotypes were collected in 1984.

Near topotypes.—Presidio Co: 13.9 mi SE Redford on TX Hwy 170, 14 (TNHC); 13.5 rd mi SE Redford, 4 (OMNH); 10.5 mi SE Redford, 4 (LSUMZ), 1 (BYU). The last near topotypes were collected in 1982.

Sceloporus olivaceus Smith, 1934
[Texas Spiny Lizard]

1905. *Sceloporus spinosus floridanus* (part) Stejneger, in Bailey, North Amer. Fauna 25:42.

1934. *Sceloporus olivaceus* Smith, Trans. Kans. Acad. Sci. 37:277.

Type specimen.—Holotype, male, UIMNH 25057, obtained 23 August 1931 by Edward H. Taylor and John S. Wright, original number EHT 2508.

Type locality.—Near the lower end of Arroyo los Olmos, about 3 miles southeast of Rio Grande City, Starr County, Texas. Axtell (1992) provided these coordinates for the locality: 26°21'37"N, 98°47'10"W.

Topotypes.—Starr Co: 3 mi SE Rio Grande City, 2 (BUMMC, CHAS). The most recent of these collected 1948.

Near topotypes.—None.

Sceloporus poinsettii axtelli Webb, 2006
[Texas Crevice Spiny Lizard]

1852. *Sceloporus poinsettii* Baird and Girard, Proc. Biol. Soc. Wash. 6:126.

1869. *Tropidolepis poinsetti* Dugès, La Naturaleza 1:143.

1874. *Sceloporus torquatus* var. *poinsettii* Bocourt, in Duméril, Bocourt, and Mocquard, Miss. Sci. Mex. Amer. Centr., Liv. 3:173.

1885. *S*[*celoporus*] *t*[*orquatus*] *poinsettii* Cope, Proc. Amer. Philos. Soc. 22:402.

2006. *Sceloporus poinsettii axtelli* Webb, Bull. Maryland Herpetol. Soc. 42:82.

Type specimen.—Holotype, adult male, UTEP 10613, obtained 17 May 1985 by Jerry D. Johnson.

Type locality.—21 road miles south (TX Hwy 118) of Alpine, Brewster County, Texas. The full verbatim locality in the UTEP catalog adds the phrase "at roadcut." Using a by-road offset distance from Alpine, that roadcut was determined for this catalog entry, based on a 2020 inspection of the site, to be at 30°07.060'N, 103°34.938'W.

Topotypes.—Brewster Co: 21 rd mi (by TX Hwy 118) S Alpine, 4 (UTEP); 20 mi S Alpine, 1 (TNHC). The most recent topotype was obtained in 1988.

Near topotypes.—Brewster Co: TX Hwy 118 at Calamity Creek, 1 (LSUMZ); 18 mi S Alpine on TX Hwy 118, on Red House Ranch (SRSU, listed by Axtell 1987); ca. 20 mi S on TX Hwy 118, on Anderson Ranch (SRSU, also by Axtell 1987). The only date associated with any of these localities is 1988.

Uta ornata schmidti Mittleman, 1940
= Urosaurus ornatus schmidti
[Big Bend Tree Lizard]

1852. *Uta ornata* Baird and Girard, Proc. Acad. Nat. Sci. Phila. 6:126.

1921. *Uta ornata ornata* Schmidt, Amer. Mus. Nov. 22:6

1940. *Uta ornata schmidti* Mittleman, Herpetologica 2:3.

1942. *Urosaurus ornatus schmidti* Mittleman, Mus. Comp. Zool. 91:125.

2007. *Urosaurus ornatus* Haenel, Molec. Ecol. 16:4333.

2017. *U*[*rosaurus*] *o*[*rnatus*] *schmidti* De Quieroz et al., Squamata (in part) – Lizards, pp. 38–58 in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol. Circ. 43:56.

Type specimen.—Holotype, male, USNM 32929, obtained 3 June 1901 by Vernon O. Bailey.

Type locality.—Fort Davis, Davis Mountains, Jeff Davis County, Texas.

Topotypes.—Jeff Davis Co: Fort Davis, 4 (USNM), 3 (TNHC), 1 (LACM, UTEP), unknown number (SRSU, UIMNH, UMMZ, listed in Axtell 1997). The most recent of these was collected in 1958.

Near topotypes.—Jeff Davis Co: 1 mi N, 0.5 mi W county courthouse in Fort Davis, 1 (ASNHC); 1 mi N Fort Davis, 11 (KU), 2 (TCWC); 1 mi SE Fort Davis, 1 (BUMMC). The last of these was collected in 1968.

Remarks.—Haenel (2007) studied genetic/phylogeographic Cytochrome B mitochondrial DNA

variation across the US distribution of *Urosaurus ornatus*. However, the author (perhaps prudently) did not address the subspecific taxonomic implications of his findings. Haenel's analysis of Texas populations comprised mtDNA samples from five localities. Among these localities, the MOD locality samples (from Modesta Canyon, Davis Mountains) originated from less than 9 air kilometers southeast of the type locality for *U. o. schmdti*. A second sample locality, BG (for Black Gap Wildlife Management Area) is also from within the usually depicted distribution of this subspecies in Texas (e.g., Dixon 2013). Two other Texas localities sampled for Haenel's work, EP (from the Kerr Wildlife Management Area), and SEM (from Seminole Canyon, Val Verde County) are from within the traditional view of the distribution of the nominative subspecies, *U. o. ornatus*. Moreover, the SEM locality is in the general area for the locality for the Texas syntypes of *Urosaurus ornatus* (not considered in this catalog, as the other syntypes are from New Mexico and no lectotype has yet been designated). Hanel's Bayesian tree generated from his data contains a large polytomy. One branch off the polytomy suggest a common ancestor among these four Texas populations sampled, with the *U. o. schmidti* populations grouped together in a separate lineage from the *U. o. ornatus* populations. The fifth of the Texas localities in this analysis, HT (for Hueco Tanks, El Paso County) comes off the polytomy separately, and clusters with nearby New Mexico localities DA (for Doña Ana Mountains) and OR (Organ Mountains). A third recognizable subspecies of *Urosaurus ornatus* may thus occur in far West Texas and southern New Mexico. Clearly, more analysis based on more extensive sampling in these two states is indicated, and that analysis should precede any attempt to designate a lectotype for the species *Urosaurus ornatus* from among the Texas versus New Mexico syntypes.

Family Scincidae

Eumeces brevilineatus Cope, 1880
= *Plestiodon tetragrammus brevilineatus*
[Short-lined Skink]

1858. *Plestiodon tetragrammus* Baird, Proc. Acad. Nat. Sci. Phila. (1859), 10:256.

1875. *Eumeces tetragrammus* Cope, Bull. U.S. Nat. Mus. 1:45.

1880. *Eumeces brevilineatus* Cope, Bull U.S. Nat. Mus. 17:18

1917. *Plestiodon brevilineatus* Stejneger and Barbour, Check List of North Amer. Amphib. Rept. [1st ed.], p. 69.

1975. *Eumeces tetragrammus brevilineatus* Conant, Field Guide Rept. Amphib. East. Cent. North Amer., 2nd ed., p. 126.

2009. *P*[*lestiodon*] *t*[*etragrammus*] *brevilineatus* Collins and Taggart, Stand. Comm. Curr. Sci. Names North Amer. Amphib. Turt. Rept. Croc., 6th ed., Cent. North Amer. Herpetol., p. 26.

2013. *Eumeces* (*Plestiodon*) *tetragrammus brevilineatus* (by implication) Dixon, Ampib. Rept. Tex., 3rd ed., p. 203.

2015. *P*[*lestiodon*] *t*[*etragrammus*] *brevilineatus* Moseley et al., Biol. J. Linnaen Soc. 116:830.

Type specimen.—Lectotype, adult, USNM 10159, collected May 1870 by Gabriel Marnock. There were originally two syntypes, USNM 10159A and 10159B, but Taylor (1935) designated 10159B as a paralectotype.

Type locality.—Near Helotes Creek, 20 miles northwest of San Antonio, Bexar County, Texas.

Topotypes.—Bexar Co: near Helotes Creek, 20 mi NW San Antonio, 1 (USNM, paralectotype); ca. Helotes, Marnock Ranch, 1 (KU, UMMZ); Helotes, hill above camp in woods above creek, 1 (CUMV); 1 mi N Helotes, 1 (MVZ). The last topotype was collected in 1959.

Near topotypes.—Bexar Co: Helotes, 2 (KU, USNM), 1 (CAS, CUMV); Camp Butler [= Bullis], 13 mi NW San Antonio 2 (BUMMZ). The most recent of these was obtained in 1974. Axtell (2001) listed additional Helotes specimens that should be at ANSP, MSB, LSUMZ, and UF, but these could not be found in the VertNet database.

Remarks.—Moseley et al. (2015) found the subspecies *Plestiodon tetragrammus brevilineatus* quite divergent from the nominative subspecies, but they declined to take the taxonomic step of splitting these

into monophyletic species given their lack of samples from the area of geographic overlap (or intergradation) in south Texas. They also found some divergence between central and western Texas populations of *P. t. brevilineatus*; this observation corresponds with geographic shifts in morphological character state frequencies observed by Lieb (1985). Moreover, an understanding of the genetic structure of short-lined skinks in Texas is unlikely to be attained without consideration of the possibility of hybridization with yet another taxon in the four-lined skink group, *Eumeces septentrionalis pallidus* (Axtell 1999, and see catalog entry for that taxon). The few specimens of this morph of the Southern Prairie Skink are known only from areas of geographic sympatry with *Plestiodon tetragrammus brevilineatus* in Texas.

Eumeces epipleurotus Cope, 1880
= ***Plestiodon multivirgatus epipleurotus***
[Variable Skink]

1857. *Plestiodon multivirgatum* Hallowell, Proc. Acad. Nat. Sci. Phila. 9:215.

1875. *Eumeces multivirgatus* Cope, Bull. U.S. Nat. Mus. 1:45.

1880. *Eumeces epipleurotus* Cope Bull. U.S. Nat. Mus. 17:40.

1887. *Eumeces leptogrammus* (in part) Boulenger, Cat. Liz. Brit. Mus. (Nat. Hist.), 2nd ed., Vol. 3, p. 378.

1935. *Eumeces gaigei* Taylor, Univ. Kans. Sci. Bull. 22:219.

1935. *Eumeces multivirgatus* Taylor, Univ. Kans. Sci. Bull. 23:342.

1942. *Eumeces taylori* Smith, Proc. New Engl. Zool. Club 21:94.

1955. *Eumeces multiviragtus taylori* Lowe, Herpetologica 11:234.

1955. *Eumeces multivirgatus gaigei* Lowe, Herpetologica 11:234.

1957. *Eumeces multivirgatus gaigei* Mecham, Copeia 1957:113.

1961. *Eumeces multivirgatus epipleurotus* Axtell, Tex. J. Sci. 13: 347.

2009. *P*[*lestiodon*] *m*[*ultivirgatus*] *epipleurotus* Collins and Taggart, Stand. Comm. Curr. Sci. Names North Amer. Amphib. Turt. Rept. Croc., 6th ed., Cent. North Amer. Herpetol., p. 25.

2013. *Eumeces* (*Plestiodon*) *multivirgatus epipleurotus* (by implication) Dixon, Amphib. Rept. Tex., 3rd ed., p. 200.

2017. *P*[*lestiodon*] *m*[*ultivirgatus*] *epipleurotus* De Quieroz et al., Squamata (in part) – Lizards, pp. 38–58 in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol. Circ. 43:50.

Type specimens.—Two syntypes, USNM 5263, obtained in 1858 or 1859 by John H. Clark (Axtell 2000a), and USNM 9219, obtained by C. S. McCarthy, original number USNM 5411 (Cochran 1961).

Type localities.—The "northern boundary of Texas" for the Clark syntype, and the Platte River, Fort Kearney, Buffalo County, Nebraska, for the McCarthy specimen. The type locality was restricted by Axtell (1961) to the Guadalupe Mountain region of Culberson County, Texas, which is used in this catalog.

Topotypes.—The type locality as restricted is still too vague to assign any topotypic specimens (see Remarks).

Near topotypes.—Culberson Co: Guadalupe Mountains National Park, Smith Spring, 2 (TNHC); McKittrick Canyon, 1 (TNHC); southern part of the Guadalupe Mountains, near Friole, 6000 ft, 1 (UMMZ). The last near topotypes were collected in 1978.

Remarks.—The collector of the specimen to which the restricted type locality is tied, John H. Clark, was a zoologist-turned-surveyor and astronomer tasked with surveying the 32nd parallel boundary between New Mexico and Texas over January–May of 1859 (Baker 1902). His route passed through the southern end of the Guadalupe Mountains (in Texas), and was used briefly by the Butterfield Stage Line from 1858 to 1859. As vague as the restricted type locality is,

a "near topotype" could be any specimen found in the relatively small extent of moderate elevations at the southern end of the Guadalupe Mountains near the old Butterfield Stage route. However, nearly all the museum specimens of this skink collected in the Guadalupe Mountains are from the higher elevations (particularly, "The Bowl," a 7,800 foot elevation plateau located about 4 air kilometers north of the Pinery Butterfield Station site). Axtell (2000a) lists more than a dozen such high elevation specimens, mostly in the TNHC, TCWC, and UMMZ.

Eumeces obtusirostris Bocourt, 1879
= *Plestiodon septentrionalis obtusirostris*
[Southern Prairie Skink]

1858. *Plestiodon septentrionalis* Baird, Proc. Acad. Nat. Sci. Phila. (1859), 10:256.

1879. *Eumeces obtusirostris* Bocourt, in Duméril, Bocourt, and Mocquard, Miss. Sci. Mex. Amer. Centr., Liv. 6:423.

1935. *Eumeces septentrionalis obtusirostris* Taylor, Univ. Kans. Sci. Bull. 23:405.

1991. *Eumeces obtusirostris* Collins, Herpetol. Rev. 27:43.

2000. *Plestiodon septentrionalis* (by inference) Griffith et al., Russian J. Herpet. 7:9.

2009. *P*[*lestiodon*] *o*[*tusirostris*] *obtusirostris* Collins and Taggart, Stand. Comm. Curr. Sci. Names North Amer. Amphib. Turt., Rept., Croc., 6th ed., Cent. North Amer. Herpetol., p. 25.

2012. *Plestiodon septentrionalis obtusirostris* De Quieroz and Reeder, in Crother, Comm. Stand. English Names North Amer. Amphib. Rept. Excl. Mexico, 7th ed., SSAR Herp. Circ. 39:44.

2013. *Eumeces* (*Plestiodon*) *septentrionalis obtusirostris* (by implication) Dixon, Amphib. Rept. Tex., 3rd ed., p. 202.

2014. *Plestiodon obtusirostris* Powell et al., Peters. Field Guide Rept. Amphib. East. Centr. North Amer., 4th ed., p. 311.

2017. *P*[*lestiodon*] *s*[*eptentrionalis*] *obtusirostris* De Quieroz et al., Squamata (in part) – Lizards, pp. 38–58 in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol. Circ. 43:50.

Type specimen.—Holotype, ZMB 8689, collected by Jacob Boll, exact date unknown.

Type locality.—Originally, "Texas" with no specific locality. The locality information accompanying the relocated holotype (see Remarks) indicates it originated from Dallas in Dallas County, Texas.

Topotypes.—Dallas Co: Dallas, 1 (BUMMC); Dallas, 2 mi N, 4 mi E Southern Methodist University at White Rock Lake, 1 (UTA). The more recent of these specimens was obtained in 1961.

Near topotypes.—Dallas Co: no specific locality, 1 (YPM); Segoville, 2 (BUMMC). The most recent of these was collected in 1967.

Remarks.—Taylor (1935) pointed out that the 1879 date on the species name referred to the first use of the name and an illustration of the holotype because the actual full description of the species did not appear until two years later (see Bocourt 1881). Taylor also indicated that he thought the type specimen was at the Muséum National d'Historie Naturalle in Paris. Half a century later, Brygoo (1985) determined the type was not in the Paris museum, but might be in Berlin, a suggestion missed by Axtell (1999), who expressed frustration that his inquiry to Paris about the type went unanswered. The matter was resolved by Bauer et al. (2008), who located the holotype in the ZMB, with the number, specific locality in Texas, and collector as given above. These authors also pointed out that a junior synonym of *E. obtusirostris*, *E. pachyrurus* Cope (the next entry in this catalog), was described from a different individual with the same type locality and collector.

As an outcome of their analysis of the population genetics data on the Northern Prairie Skink (*Eumeces septentrionalis septentrionalis*), Fuerst and Austin (2004) concluded that this taxon was divergent at the

species level from the Southern Prairie Skink, *E. s. obtusirosris*. Their finding was not widely accepted except by those already recognizing *E. obtusirostris* (e.g., Powell et al. 1998). However, the binomen *Plestiodon obtusirosris* has now been used in a recent field guide (Powell et al. 2016). This usage has not been adopted for this catalog because there has never been a range-wide study of morphological or genetic variation of the Southern Prairie Skink to complement that recently conducted on the Northern form. A complete phylogeographic evaluation is necessary, one that includes near topotypic sampling for *obtusirostris*, and for the perplexing nominal subspecies *pallidus* (see accounts, below), both of which were described from Texas.

Eumeces pachyurus Cope, 1880
= *Plestiodon septentrionalis obtusirostris*
[Southern Prairie Skink]

1879. *Eumeces obtusirostris* Bocourt, in Duméril, Bocourt, and Mocquard, Miss. Sci. Mex. Rept. Amer. Centr., Liv. 6:423.

1880. *Eumeces pachyurus* Cope, Bull. U.S. Nat. Mus. 17:19.

1917. *Plestiodon pachyurus* Stejneger and Barbour, Check List North Amer. Amphib. Rept. [1st ed.], p. 76.1935. *Eumeces septentrionalis obtusirostris* Taylor, Univ. Kans. Sci. Bull. (1936), 23:405.

2012. *Plestiodon septentrionalis obtusirostris* De Quieroz and Reeder, in Crother, Comm. Stand. English Names North Amer. Amphib. Rept. Excl. Mexico, 7th ed., SSAR Herp. Circ. 39:44.

2013. *Eumeces* (*Plestiodon*) *septentrionalis obtusirostris* (by implication) Dixon, Amphib. Rept. Tex., 3rd ed., p. 202.

2017. *P*[*lestiodon*] *s*[*eptentrionalis*] *obtusirostris* De Quieroz et al., Squamata (in part) – Lizards, pp. 38–58, in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol. Circ. 43:50.

Type specimen.—Holotype, ANSP 13545, obtained by Jacob Boll, probably in 1879 (Axtell 1999).

Type locality.—Dallas, Dallas County, Texas.

Topotypes and near topotypes.—These are identical to those in the preceding entry for *Eumeces obtusirostris*, which shares the same type locality (and collector) with *E. pacyurus*.

Eumeces septentrionalis pallidus Smith and Slater, 1949
= *Plestiodon septentrionalis obtusirostris*
[Southern Prairie Skink]

1879. *Eumeces obtusirostris* Bocourt, in Duméril, Bocourt, and Mocquard, Miss. Sci. Mex. Amer. Centr., Liv. 6:423.

1880. *Eumeces pachyurus* Cope, Bull. U.S. Nat. Mus. 17:19, 20, 39.

1917. *Plestiodon pachyurus* Stejneger and Barbour, Check List North Amer. Amphib. Rept. [1st ed.], p. 76.

1935. *Eumeces septentrionalis obtusirostris* Taylor, Univ. Kans. Sci. Bull. (1936), 23:405.

1949. *Eumeces septentrionalis pallidus* Smith and Slater, Trans. Kans. Acad. Sci. 52:438.

1999. *Eumeces s*[*eptentrionalis*] *obtusirostris* Axtell, Interp. Atlas Texas Lizards 22:2.

2009. *P*[*lestiodon*] *o*[*btusirostris*] *pallidus* Collins and Taggart, Comm. Curr. Sci. Names North Amer. Amphib. Turt. Rept. Croc., 6th ed., p. 25

2012. *P*[*lestiodon*] *s*[*eptentrionalis*] *pallidus* de Quieroz and Reeder, in Crother, Comm. Stand. English Names North Amer. Amphib. Rept. Excl. Mexico, 7th ed., SSAR Herp. Circ. 39:44.

2013. *Eumeces* (*Plestiodon*) *septentrionalis obtusirostris* (by implication) Dixon, Amphib. Rept. Tex., p. 202.

2017. *P*[*lestiodon*] *s*[*eptentrionalis*] *pallidus* De Quieroz et al., Squamata (in part) – Lizards, pp. 38–58 in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol. Circ. 43:50. See Remarks.

Type specimen.—Holotype, UIMNH 1961, obtained 1 May 1946 by Philip Harter.

Type locality.—Palo Pinto, Palo Pinto County, Texas.

Topotypes.—Palo Pinto Co: Palo Pinto, 1 (CUMZ), 1 (UIMNH, paratype; Smith et al. 1964). The Cornell topotype was collected by Harter in 1940, six years prior to the collection of the holotype.

Near topotypes.—Palo Pinto Co: 2 mi E Palo Pinto, 1 (BUMMC, UIMNH); 2.8 mi N Palo Pinto on Graford Rd, 4 (TNHC); 5 mi N Palo Pinto, 1 (BUMMC); 6 mi N Palo Pinto on FM Rd 4, 1 (ASNHC). The most recent of these collected 1969.

Remarks.—Axtell (1999) declined to recognize *Eumeces septentrionalis pallidus* as a valid taxon because it had no "coherent, definable" range, and seemed to be only a color pattern morph with reduced posterior striping that occurred within Texas populations of more typically patterned Prairie Skinks. He also speculated that this morph may instead result from occasional hybridization with the Short-lined Skink (*Plestiodon tetragrammus brevilineatus*, next account). A third possibility is that this color morph of *P. septentrionalis* is a by-product of character displacement reinforcing reproductive isolation between two geographically sympatric skink species. If either of these hypotheses are validated, then *pallidus* should not be a recognized taxon. Because of the uncertainties associated with this very poorly studied nominal taxon in Texas, this catalog follows Axtell (1999) and Dixon (2013) in provisionally retaining the *pallidus* form within the synonymy of *P. septentrionalis obtusirostris*.

Eumeces taylori Smith, 1942
= ***Plestiodon multivirgatus epipleurotus***
[Variable Skink]

1857. *Plestiodon multivirgatum* Hallowell, Proc. Acad. Nat. Sci. Phila. 9:215.

1875. *Eumeces multivirgatus* Cope, Bull. U.S. Nat. Mus. 1:45.

1932. *Eumeces humilis* Mosauer, Occ. Pap. Mus. Zool. Univ. Mich. 246:10.

1932. *Eumeces multivirgatus* Mosauer, Occ. Pap. Mus. Zool. Univ. Mich. 246:12.

1935. *Eumeces humilis* (in part) Taylor, Bull. Univ. Kans. Sci Bull. 23:358.

1942. *Eumeces taylori* Smith, Proc. New Engl. Zool. Club 21:94.

1955. *Eumeces multivirgatus taylori* Lowe, Herpetologica 11:234.

1957. *Eumeces multivirgatus gaigei* Mecham, Copeia 1957:113.

1961. *Eumeces multivirgatus epipleurotus* Axtell, Tex. J. Sci. 13:347.

2009. *P*[*lestiodon*] *m*[*ultivirgatus*] *epipleurotus* Collins and Taggart, Stand. Comm. Curr. Sci. Names North Amer. Amphib. Turt. Rept. Croc., 6th ed., Cent. North Amer. Herpetol., p. 25.

2013. *Eumeces* (*Plestiodon*) *multivirgatus epipleurotus* (by implication) Dixon, Amphib. Rept. Tex., 3rd ed., p. 200.

2017. *P*[*lestiodon*] *m*[*ultivirgatus*] *epipleurotus* De Quieroz et al., Squamata (in part) – Lizards, pp. 38–58 in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol. Circ. 43:50.

Type specimen.—Holotype, UMMZ 70516, obtained by Walter Mosauer, probably during August of 1930.

Type locality.—The "southern part of the Guadelupe Mountains, at 6,000 feet altitude, near Frijole, Texas." This named place doubtless refers to Frijole Ranch in Culberson County, which was sold to the National Park Service in 1966 and is now enclosed within Guadalupe Mountains National Park. However, the exact location of the type locality is unknown. Mosauer (1932) described the holotype as collected at the "margin of a pond formed by the spring near Friole," presumably at or near the campsite at about 6,000 feet where extensive collections were made and from which he made forays into the "high plateau" areas of the Guadalupe Mountains (e.g., "The Bowl," from which many museum specimens of this skink have now been collected).

Topotypes.—Culberson Co: southern part of the Guadalupe Mountains, near Frijole, 1 (UMMZ). This specimen (UMMZ 70517) was collected at the same spring near Frijole by Mosauer (1932) where he obtained the holotype of *Eumeces taylori*; the two were so different in color pattern (see Remarks below) that he did not realize they were of the same species. The exact location of the spring where Mosaurer's party camped remains unknown as there are several springs in the vicinity of the Frijole Ranch headquarters (elevation 5,500 feet) that could qualify.

Near topotypes.—Culberson Co: Guadalupe Mountains National Park, Smith Spring, 2 (TNHC), collected 1978. This spring lies at an appropriate elevation of 6,000 feet, about 1.4 air km from the Frijole Ranch headquarters. These would thus also qualify as near topotypes for *Eumeces epipleurotus*, and this site could very well be the actual origin of the Mosauer type of *E. taylori*.

Remarks.—The color pattern in this species in the Guadalupe Mountains of Texas and nearby New Mexico, especially at elevations below 7,000 feet, is dimorphic with striped and unstriped (uniformly brown) individuals occurring within the same populations. Mosauer (1932) collected two skinks at a spring/pond site "near Frijoles" (at about 6,000 feet), a striped individual that was subsequently identified by Edward H. Taylor as *Eumeces multivirgatus* (UMMZ 70517), and a second, patternless one (initially identified as *E. humilis*, UMMZ 70516), that was used by Hobart M. Smith as the holotype of *E. taylori*. Moreover, the patternless "species" was subsequently found to occur outside of the Guadalupe Mountains in the grasslands of southeastern New Mexico and in a few other locations as well. John Mecham's (1957) discovery of both pattern morphs hatching out from a single egg clutch led to the revelation that patternless and patterned forms of *Eumeces multivirgatus* represent within-species variation.

Plestiodon obsoletum Baird and Girard, 1852
= Plestiodon obsoletus
[Great Plains Skink]

1852. *Plestiodon obsoletum* Baird and Girard, Proc. Acad. Nat. Sci. Phila. 6:129.

1852. *Lamprosaurus guttulatus* Hallowell, Proc. Acad. Nat. Sci. Phila. (1854), 6:206.

1866. *Plistodon obsoletus* Cope, Proc. Acad. Nat. Sci. Phila. (1867), 18:304.

1866. *Plistodon guttulatus* Cope, Proc. Acad. Nat. Sci. Phila. (1867), 18:304

1875. *Eumeces obsoletus* Cope, Check List North Amer. Batr. Rept. Bull. U.S. Natl. Mus. 1:45

1875. *Eumeces guttulatus* Cope, Check List North Amer. Batr. Rept. Bull. U.S. Natl. Mus. 1:45

1929. *Eumeces fasciatus* (*nec* Linnaeus) Burt, Occ. Pap. Mus. Zool. Univ. Mich. 201:6.

2000. *Plestiodon obsoletus* (by inference) Griffith, Ngo, and Murphy, Russian J. Herpetol. 7:9.

2009. *P*[*lestiodon*] *obsoletus* Collins and Taggart, Stand. Comm. Curr. Sci. Names North Amer. Amphib. Turt. Rept. Croc., 6th ed., Cent. North Amer. Herpetol., p. 25.

2013. *Eumeces* (*Plestiodon*) *obsoletus* Dixon, Amphib. Rept. Tex., 3rd ed., p. 201.

2017. *P*[*lestiodon*] *obsoletus* De Quieroz et al., Squamata (in part) – Lizards, pp. 38–58, in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol. Circ. 43:50.

Type specimen.—Holotype, USNM 3133, obtained in 1851 by John H. Clark (Webb 1988).

Type locality.—Valley of the Rio San Pedro [= Devils River], an affluent of the Rio Grande del Norte, Val Verde County, Texas. Restricted by Axtell (2000b) to Devils River, at approximately 30°03'40"N, 101°07'22"W, about 500 meters [north] of [junction with] the Rio Grande del Norte, in Val Verde County, Texas.

Topotypes.—Val Verde Co: 0.5 mi upstream from mouth of Devils River, 1 (TNHC), collected in 1965. Except for the offset units, this record is very suggestive of Axtell's restricted locality (and perhaps a transcriptional error).

Near topotypes.—Val Verde Co: Amistad Recreational Area at Gouenois [= Governors] Landing, 1 (TCWC), collected in 1977.

Family Teiidae

Cnemidophorus dixoni Scudday, 1973
= *Aspidoscelis dixoni*
[Gray Checkered Whiptail]

1965. *Cnemidophorus tesselatus* Zweifel, Amer. Mus. Novit. 2235:7.

1973. *Cnemidophorus dixoni* Scudday, J. Herpetol. 7:364.

1986. *Cnemidophorus tesselatus* Price, Cat. Amph. Rept. 398:1.

1993. *Cnemidophorus dixoni* Wright, in Wright and Vitt, Biol. Whipt. Liz., p. 56.

2002. *A*[*spidoscelis*] *dixoni* Reeder et al., Amer. Mus. Novit. 3365:22.

2013. *Cnemidophorus* (*Aspidoscelis*) *dixoni* Dixon, Amphib. Rept. Tex., 3rd ed., p. 206.

2017. *A*[*spidoscelis*] *tesselata* De Quieroz et al., Squamata (in part) – Lizards, pp. 38–58, in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol. Circ. 43:42.

2018. *Aspidoscelis dixoni* McGinnis and Stebbins, Peters. Field Guide Western Rept. Amphib., 4th ed., p. 339.

Type specimen.—Holotype, TCWC 40691, obtained 4 July 1970 by Doug Stine.

Type locality.—Ireneo Gonzales Ranch, 24.5 miles northwest of Presidio, Presidio County, Texas.

Topotypes.—Presidio Co: Ireneo Gonzales Ranch, 24.5 mi NW Presidio, 11 (TCWC), 5 (LACM), 2 (UCM), all paratypes (Scudday 1973) collected in 1970.

Near topotypes.—Presidio Co: ca. 26 nu NW (by rd) Presidio, 6 (LACML); 25.5 mi NW Presidio, Gonzales Ranch, 5 (SRSU); 20 mi NW Presidio, 3 (TCWC); 19 mi NW Presidio, Gonzales Ranch, 2 (SRSU); Pinto Canyon, E of Ruidosa, 3 (TNHC); Chinati Mountains, Pinto Canyon, 1 (LACM); Chinati Mountains, San Antonio Canyon, 4 (LACM); Chinati Mountains State Natural Area, 6 (TCWC), 2 (TNHC). The last two near topotypes were the most recently collected (1998); these specimens may be represented by tissue samples in their respective collections.

Remarks.—De Quieroz et al. (2017) declined to recognize *Aspidoscelis dixoni* as a distinct taxon from *A. tesselatus* based on the skin-graft histocompatibility study of Cordes and Walker (2006) with these two parthenogenetic lizards of hybrid origin. The latter authors experimentally observed a lack of immunological rejection of skin grafts between individuals of *A. tessellatus* and *A. dixoni*, and hypothesized that, contrary to the proposals of earlier workers (e.g., Wright 1993), both of these taxa were thus produced by a single hybridization event. However, to extend that observation to a nomenclatural proposal to treat one of the two species as a junior synonym, is a controversial practice. Indeed, Cordes and Walker (2006) provided a thoughtful and even-handed review of the whiptail lizard literature involving taxonomic changes proposed from compatibility and non-compatibility of reciprocal-taxon skin grafts. By the end of their paper, it is not clear at all that they would endorse discarding the name *Aspidoscelis dixoni* as was subsequently proposed by De Quieroz et al. (2017).

Cnemidophorus grahamii Baird and Girard, 1852
= *Aspidoscelis tesselatus*
[Common Checkered Whiptail]

1822. *Ameiva Tessellata* Say, in James (ed.), Long's Exped. Rocky Mtns. (1823), Vol. II:351.

1852. *Cnemidophorus grahamii* Baird and Girard, Proc. Acad. Nat. Sci. Phila. 6:128.

1857. *Cnemidophorus tesselatus* (part) Baird, Pacific Railroad Surv. 10:18.

1874. *Cnemidohorus sexlineatus grahamii* (in part) Bocourt, in Duméril, Bocourt, and Mocquard, Miss. Sci. Mex. Amer. Centr., Liv. 4:277.

1874. *Cnemidophorus sexlineatus gularis* (in part) Bocourt, in Duméril, Bocourt, and Mocquard, Miss. Sci. Mex. Amer. Centr., Liv. 4:278.

1875. *Cnemidophorus tessellatus tessellatus* (in part) Cope, Check List North Amer. Batr. Rept., U.S. Nat. Mus. Bull. 1:46.

1885. *Cnemidophorus sex-lineatus tessellatua* (in part) Günther, in Godman and Salvin, Biol. Centr.-Amer., p. 26.

1900. *Cnemidophorus grahamii grahamii* Cope, Rept. U.S. Nat. Mus. 1898, p. 598.

1906. *Cnemidophorus perplexus* (in part) Gadow, Proc. Zool. Soc. London, p. 369.

1949. *Cnemidophorus tesselatus* Smith and Burger, Bull. Chicago Acad. Sci. 8:362.

1958. *Cnemidophorus tessellatus grahami* Minton, Southwest. Nat. (1959), 3:43.

1965. *Cnemidophorus tesselatus* Zweifel, Amer. Mus. Novit. 2235:6.

1993. *Cnemidophorus grahami* Wright, in Wright and Vitt (eds.), Biol. Whiptail Lizards, p. 56.

2002. *A*[*spidoscelis*] *tesselatus* Reeder et al., Amer. Mus. Novit. 3365:22

2013. *Cnemidophorus* (*Aspidoscelis*) *tesselatus* Dixon, Amphib. Rept. Tex., 3rd ed., p. 215.

2017. *A*[*spidoscelis*] *tesselata* De Quieroz et al., Squamata (in part) – Lizards, pp. 38–58 in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol. Circ. 43:42.

Type specimens.—Lectotype, adult male, USNM 3046a, obtained by John H. Clark. The lectotype was designated by Smith and Burger (1949), chosen from the original two syntypes, both numbered USNM 3046 and collected by Clark (Cochran 1961).

Type locality.—The original Baird and Girard (1852a) locality statement was, "found within the preceding species," which was the species description of *Cnemidophorus marmoratus*. The locality statement for that species was "between San Antonio (Texas) and Paso del Norte, Texas." In one of many poorly considered actions concerning type localities, Smith and Taylor (1950a) restricted the type locality for *Cnemdiophorus grahami* to Fort Davis, Jeff Davis County, Texas. However, both Cochran (1961) and Price (1986) indicate that the USNM catalog entry for original syntypes have only El Paso for locality data. Since Smith and Taylor neither justified their type locality restriction nor designated a lectotype to anchor it to that location, El Paso, Texas, is treated in this catalog as the more appropriate restriction.

Topotypes.—None. Using the same rationale as for the type locality of *Cnemidophorus marmoratus* in a previous account, a true topotype for the nascent community of El Paso in the early 1850s would be from a small riverside area just west of the "Paso del Rio." No museum specimens could be found that could clearly be a good match to that original area.

Near topotypes.—El Paso Co: El Paso, Sunset Heights, 105 Kelly Way (residence), 2 (UTEP); University of Texas at El Paso [Campus], 15 (UTEP). The last of these was collected in 1980.

Cnemidophorus gularis Baird and Girard, 1852
= Aspidoscelis gularis gularis
[Texas Spotted Whiptail]

1852. *Cnemidophorus gularis* Baird and Girard, Proc. Biol. Soc. Wash. 6:128.

1854. *Cnemidophorus guttatus* Hallowell (*nec* Wiegmann), Proc. Acad. Nat. Sci. Phila.,7:192.

1892. *Cnemidophorus gularis sericeus* Cope, Amer. Nat. 25:1136.

1892. *Cnemidophorus gularis gularis* Cope, Trans. Amer. Phil. Soc. 17:45.

1906. *Cnemidophorus gularis meeki* Gadow, Proc. Zool. Soc. London, p. 332.

1931. *Cnemidophorus sexlineatus gularis* (in part) Burt, Proc. Biol. Soc. Wash. 44:97.

1950. *Cnemidophorus sacki gularis* Smith and Taylor, U.S. Nat. Mus. Bull. 199:183.

1962. *Cnemidophorus gularis* Duellman and Zweifel, Bull. Amer. Mus. Nat. Hist. 123:186.

1962. *Cnemidophorus gularis gularis* Duellman and Zweifel, Bull. Amer. Mus. Nat. Hist. 123:186.

2002. *A*[*spidoscelis*] *gularis* Reeder et al., Amer. Mus. Novit. 3365:22

2002. *A*[*spidoscelis*] *g*[*ularis*] *gularis* Reeder et al., Amer. Mus. Novit. 3365:22

2013. *Cnemidophorus* (*Aspidoscelis*) *gularis gularis* (by implication) Dixon, Amphib. Rept. Tex., 3rd ed., p. 208.

2017. *A*[*spidoscelis*] *g*[*ularis*] *gularis* De Quieroz et al., Squamata (in part) – Lizards, pp 38–58, in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol. Circ. 43:40.

Type specimens.—Lectotype, USNM 3022a, obtained by John D. Graham. There were originally thirteen syntypes, listed by Cochran (1961) as follows: USNM 2989, 8 specimens, and USNM 3022, 5 specimens, all obtained by John D. Graham. From this series, USNM 3022a was designated the lectotype without explanation by Smith and Taylor (1950b).

Type localities.—The original description states "from Indianola (Texas) and the valley of the Rio San Pedro, a tributary of the Rio Grande del Norte." The USNM 2989 syntypes were from Indianola [Calhoun County] and the USNM 3022 syntypes were from the "valley of the Rio San Pedro" [= Devils River in Val Verde County]. Following their lectotype designation, Smith and Taylor (1950b) restricted the type locality to the "Mouth of the Devils River, Val Verde County, Texas." That site is now mostly inundated by Amistad Reservoir.

Topotypes.—Val Verde Co: Mouth [pre-inundation] of the Devils River, 7 (LACM), 1 (TNHC), collected in 1965.

Near topotypes.—Val Verde Co: Valley of the Rio San Pedro, 4 (USNM, remaining syntypes); Devils River, 1 (BUMCC, USNM); Baker's Crossing of Devils River, 1 (LSUMZ); Devils River, 0.75 mi from US Hwy 90, 2 (TNHC); Lake Walk, Devils River, 1 (ASNHC); 14.7 mi S Juno, 1 (TCWC); 7 mi NW Del Rio, Box Canyon, 1 (BUMMC). The last collection of near topotypes was made in 1975.

Cnemidophorus gularis sericeus Cope, 1892
= Aspidoscelis gularis gularis
[Texas Spotted Whiptail]

1892. *Cnemidophorus gularis gularis* Cope, Trans. Amer. Phil. Soc. 17:45.

1892. *Cnemidophorus gularis sericeus* Cope, Trans. Amer. Phil. Soc. 17:48.

1950. *Cnemidophorus sacki gularis* Smith and Taylor, U.S. Nat. Mus. Bull. 199:183.

1962. *Cnemidophorus gularis gularis* Duellman and Zweifel, Bull. Amer. Mus. Nat. Hist. 123:186.

2002. *A*[*spidoscelis*] *gularis* Reeder et al., Amer. Mus. Novit. 3365:22

2002. *A*[*spidoscelis*] *g*[*ularis*] *gularis* Reeder et al., Amer. Mus. Novit. 3365:22

2013. *Cnemidophorus* (*Aspidoscelis*) *gularis gularis* (by implication) Dixon, Amphib. Rept. Tex., 3rd ed., p. 208.

2017. *A*[*spidoscelis*] *g*[*ularis*] *gularis* De Quieroz et al., Squamata (in part) – Lizards, pp. 38–58 in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol. Circ. 43:40.

Type specimen.—Holotype, an adult, USNM 15650, obtained by William Taylor. No date was indicated, but other type material collected by Taylor in Duval County (e.g., the snake *Contia taylori*) was probably collected around 1880–1881 (Boulenger 1894).

Type locality.—San Diego, Duval County, Texas.

Topotypes.—Duval Co: San Diego, 2 (USNM), collected in 1900.

Near topotypes.—Duval Co: 1 mi W San Diego, 1 (TNHC); 3 mi W San Diego, 1 (TNHC). The last near topotype was obtained in 1953.

Cnemidophorus guttatus Hallowell, 1854
= *Aspidoscelis gularis gularis*
[Texas Spotted Whiptail]

1852. *Cnemidophorus gularis* Baird and Girard, Proc. Biol. Soc. Wash. 6:128.

1854. *Cnemidophorus guttatus* Hallowell, Proc. Acad. Nat. Sci. Phila. (1854–55), 7:192.

1892. *Cnemidophorus gularis gularis* Cope, Trans. Amer. Phil. Soc. 17:45.

1892. *Cnemidophorus gularis sericeus* Cope, Trans. Amer. Phil. Soc. 17:48.

1950. *Cnemidophorus sacki gularis* Smith and Taylor, U.S. Nat. Mus. Bull. 199:183.

1962. *Cnemidophorus gularis gularis* Duellman and Zweifel, Bull. Amer. Mus. Nat. Hist. 123:186.

2002. *A*[*spidoscelis*] *gularis* Reeder et al., Amer. Mus. Novit. 3365:22

2002. *A*[*spidoscelis*] *g*[*ularis*] *gularis* Reeder et al., Amer. Mus. Novit. 3365:22

2013. *Cnemidophorus* (*Aspidoscelis*) *gularis gularis* (by implication) Dixon, Amphib. Rept. Tex., 3rd ed., p. 208.

2017. *A*[*spidoscelis*] *g*[*ularis*] *gularis* De Quieroz et al., Squamata (in part) – Lizards, pp. 38–58 in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol. Circ. 43:40.

Type specimens.—Syntypes, ANSP 9579 and 9580, obtained 1853 (?), by Dr. Adolphus L. Heerman (Malnate 1971).

Type locality.—Originally, "Texas," but restricted to Brownsville, Cameron County, Texas, by Smith and Taylor (1950b). However, as the collector, Dr. Heerman, resided for a time in San Antonio, and his brother had a large ranch south of the city that he visited frequently, it is likely that the ANSP syntypes were obtained near San Antonio. Because of the uncertainty of the type locality, I regard Bexar County, Texas, as the most appropriate locality for the purposes of this catalog (see account for *Hyla semifasciata*).

Topotypes and near topotypes.—Given the invalid taxonomic name as well as the vagueness of the type locality within Texas, compilation of the hundreds of potential localities and specimens associated with the valid senior synonym has not been attempted.

Remarks.—Hallowell's (1854) use of the specific epithet *guttatus* in combination with *Cnemidophorus* formed a junior homonym already used by Wiegmann (1834) for a species in tropical Mexico. The older homonym has priority, and thus Hallowell's name for this taxon is objectively invalid. Beginning with Cope (1892b), *Cnemidophorus guttatus* Hallowell appears thereafter as a synonym of *Cnemdiophorus gularis gularis* (e.g., Smith and Taylor 1950b; Schmidt 1953; Duellman and Zweifel 1962).

Cnemidophorus inornatus heptagrammus Axtell, 1961
= *Aspidoscelis inornatus heptagrammus*
[Northern Striped Whiptail]

1858. *Cnemidophorus inornatus* Baird, Proc. Acad. Nat. Sci. Phila. (1859), 10:255.

1858. *Cnemidophorus octolineatus* Baird, Proc. Acad. Nat. Sci. Phila. (1859), 10:255.

1897. *Cnemidophorus arizonae* Van Denburgh, Proc. Calif. Acad. Sci., Ser. 2, 6:344.

1906. *Cnemdophorus sexlineatus* (in part) Gadow, Proc. Zool. Soc. London 1:302.

1944. *Cnemidophorus perplexus* (in part) Schmidt and Smith, Zool. Ser. Field Mus. Nat. Hist 29:86.

1955. *Cnemidophorus sacki stictogrammus* (in part) Chrapliwy and Fugler, Herpetologica 11:126.

1961. *Cnemidophorus inornatus heptagrammus* Axtell, Copeia 1961:153.

2002. *A*[*spidoscelis*] *i*[*ornata*] *heptagramma* Reeder et al., Amer. Mus. Novit. 3365:22.

2013. *Cnemidophorus* (*Aspidoscelis*) *inornatus*] *heptogrammus* ([sic], and by implication) Dixon, Amphib. Rept. Tex., 3rd ed., p. 209.

2017. *A*[*spidoscelis*] *i*[*nornata*] *heptagramma* De Quieroz et al., Squamata (in part) – Lizards, pp. 38–58 in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol. Circ. 43:40.

Type specimen.—Holotype, adult male, TNHC 96144, obtained 16 May 1959 by Ralph W. Axtell, original number RWA 1758.

Type locality.—5 miles east-southeast of Marathon, Brewster County, Texas, elevation 4,150 feet, 30°11'30"N, 103°09'W. These coordinates were later emended by Axtell (1994a) to 30°11'57"N, 103°10'04"W.

Topotypes.—Brewster Co: 5 mi ESE Marathon 1 (TNHC), collected same date as holotype.

Near topotypes.—Brewster Co: 5.5 mi due SE Marathon, 1 (TNHC); 5.5 mi SE Marathon, 11 (UAZ); 5.6 mi S Marathon, 1 (TNHC); 4.3 mi E Marathon, 10 (TNHC). The last of these near topotypes was collected in 1990.

Cnemidophorus laredoensis McKinney, Kay, and Anderson, 1973
= *Aspidoscelis laredoensis*
[Laredo Striped Whiptail]

1973. *Cnemidophorus laredoensis* McKinney et al., Herpetologica 29:361.

2002. *A*[*spidoscelis*] *laredoensis* Reeder et al., Amer. Mus. Novit. 3365:22.

2013. *Cnemidophorus* (*Aspidoscelis*) *laredoensis* Dixon, Amphib. Rept. Tex., 3rd ed., p. 210.

2017. *A*[*spidoscelis*] *laredoensis* De Quieroz et al., Squamata (in part) – Lizards, pp. 38–58 in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol. Circ. 43:41.

Type specimen.—Holotype, adult female, USNM 194520, obtained 14 July 1971 by Fenton R. Ray and Robert A. Anderson.

Type locality.—Chacon Creek at US Highway 83 in Laredo, Webb County, Texas. Axtell (1994b) provided these coordinates and elevation for the type locality: 27°29'35"N, 99°28'15"W, 122 meters (400 feet).

Topotypes.—Webb Co: Laredo, Chacon Creek at US Hwy 83, 1 (CM); Laredo, Chacon Creek at US Hwy 81, 1 (TNHC). Last of these topotypes was collected in 1980.

Near topotypes.—Webb Co: Laredo, near jct Chacon Creek, US Hwy 83, 12 (LACM); Laredo, W of US Hwy 83 bridge at Chacon Creek Arroyo, 5 (KU); Laredo, 1.6 km S Chacon Creek Arroyo and E of US Hwy 83, 26 (KU). The most recent of these near topotypes was collected in 1984.

Cnemidophorus marmoratus Baird and Girard, 1852
= *Aspidoscelis marmoratus marmoratus*
[Western Marbled Whiptail]

1852. *Cnemidophorus marmoratus* Baird and Girard, Proc. Acad. Nat. Sci. Phila. 6:128.

1905. *Cnemidophorus tessellatus* Stejneger, in Bailey, North Amer. Fauna 25:44.

1950. *Cnemidophorus tigris marmoratus* Burger, Chicago Acad. Sci. Nat. Hist. Misc. 65:7.

1986. *Cnemidophorus marmoratus marmoratus* Hendricks and Dixon, Tex. J. Sci. 38:374.

1991. *C*[*nemidophorus*] *t*[*igris*] *marmoratus* Dessauer and Cole, Copeia 1991:635.

2002. *A*[*spidoscelis*] *t*[*igris*] *marmorata* Reeder et al., Amer. Mus. Novit. 3365:22.

2003. *A*[*spidoscelis*] *marmorata* De Quieroz et al., "Squamata – Lizards," pp. 198–201 in Crother et al., Herpetol. Rev. 34:199.

2003. *A*[*spidoscelis*] *s*[*armorata*] *marmorata* De Quieroz et al., "Squamata – Lizards," pp. 198–201 in Crother et al., Herpetol. Rev. 34:199.

2013. *Cnemidophorus* (*Aspidoscelis*) *marmoratus* Dixon, Amphib. Rept. Tex., 3rd ed., p. 211.

2016. *Aspidoscelis marmorata marmorata* Powell et al., Peters. Field Guide Rept. Amph. East. Cent. North Amer., 4th ed., p. 317.

Type specimens.—Lectotype, USNM 3024, apparently obtained by John H. Clark. There were originally two syntypes under the number USNM 3024, both females (Hendricks and Dixon 1986). USNM 3024a was designated as a lectotype by Burger (1950). The other syntype (now a paralectotype) has been recataloged as USNM 563863.

Type locality.—Between San Antonio (Texas) and Paso del Norte, Texas. This indefinite locality was later restricted to El Paso, El Paso County, Texas, by Schmidt (1953), which is the restriction used in this catalog.

Topotypes.—None.

Near topotypes.—The closest specimens to the 1850s communities that would coalesce into the town El Paso are the following: El Paso, Arroyo south of Ridgemont Drive, 11 (UTEP); El Paso, 7804 Bois D'Arc Dr, 12 (LACM), 2 (UTEP). The Bois d'Arc specimens, the most recently collected, were obtained from a pitfall array in the backyard of a residence in 1983–84. The LACM specimens were used for John W. Wright's mitochondrial DNA study of the genus, but it is not known if any remnant tissues from that study still exist.

Remarks.—The Marbled Whiptail Lizard is considered a distinct species by some herpetologists, but also considered to be only a subspecies of the Western Whiptail (*Aspidoscelis tigris*) which is widespread across the arid regions of North America (e.g., McGinnis and Stebbins 2018). Gene flow between the two has been documented where they geographically contact one another through the narrow Steins Pass in Hidalgo County, New Mexico. They are thus, at best, "incompletely separated species" (De Quieroz et al. 2013), and the current herpetological literature now mostly leans toward use of the *A. marmoratus* binomen.

The original geographic source of the two syntypes and their years of collection are obscure. Based on what is known of the extensive travels of naturalist-turned-surveyor John Clark, combined with knowledge of the distribution of the species, the types could have been obtained within at least seven modern Texas counties: Culberson, El Paso, Hudspeth, Pecos, Reeves, Terrell, and Val Verde. Dixon (2013) indicated specimens have been found in all of these, and the VertNet database suggest they are numerous (more than 500 from El Paso County alone). Focusing instead on the restricted type locality, which in the 1850s was a relatively small cluster of communities on the Texas side of the Rio Grande, the number of topotypes found is zero.

Cnemidophorus septemvittatus Cope, 1892
= *Aspidoscelis septemvittatus*
[Big Bend Spotted Whiptail]

1892. *C*[*nemidophorus*] *gularis scalaris* Cope, Amer. Nat. 25:113.

1892. *Cnemidoophorus gularis semifasciatus* Cope, Trans. Amer. Philos. Soc. 17:59.

1892. *Cnemidophorus gularis scalaris* Cope, Trans. Amer. Philos. Soc. 17:47.

1892. *Cnemidophorus septemvittatus* Cope, Trans. Amer. Philos.Soc. 17:49

1950. *Cnemidophorus sacki semifasciatus* Burger, Chicago Acad. Sci., Nat. Hist. Misc. 65:4.

1931. *Cnemidophorus sexlineatus perplexus* Burt, U.S. Nat. Mus. Bull. 154:124.

1962. *Cnemidophorus septemvittatus septemvittatus* Duellman and Zweifel, Bull. Amer. Mus. Nat. Hist. 123:195.

1962. *Cnemidophorus septemvittatus pallidus* Duellman and Zweifel, Bull. Amer. Mus. Nat. Hist. 123:196.

1962. *Cnemidophorus septemvittatus scalaris* Duellman and Zweifel, Bull. Amer. Mus. Nat. Hist. 123:197.

1962. *Cnemdophorus septemvittatus semifasciatus* Duellman and Zweifel, Bull. Amer. Mus. Nat. Hist. 123:199.

1981. *Cnemidophorus gularis septemvittatus* Walker, Copeia 1981:847.

2002. *A*[*spidoscelis*] *g*[*ularis*] *septemvittata* Reeder et al., Amer. Mus. Novit. 3365:22.

2002. *A*[*spidoscelis*] *g*[*ularis*] *scalaris* Reeder et al., Amer. Mus. Novit. 3365:22.

2002. *A*[*spidoscelis*] *g*[*ularis*] *semifasciata* Reeder et al., Amer. Mus. Novit. 3365:22.

2003. *A*[*spidosccelis*] *septemvittatus* De Quieroz et al., "Squamata – Lizards," pp. 198–201 in Crother et al., Herpetol. Rev. 34:199.

Type specimen.—Holotype, USNM 42141 (Cochran 1961; Duellman and Zweifel 1962). The collector indicated by these authors was "C. C. Boyle," more properly Dr. Charles Elisha Boyle, who acquired amphibians and reptiles in California for the USNM in 1850 (Jennings 1987).

Type locality.—El Dorado County, California, "obviously in error" (Duellman and Zweifel 1962). Burt (1931) noted that the type specimen of *Cnemidophorus septemvittatus* supposedly from California looked identical to a specimen of *Cnemidophorus* [USNM 33073] from Marfa (Presidio County), Texas. Smith and Taylor (1950a) followed up Burt's observation by restricting the type locality of the species to Marfa. Missing this restriction, Schmidt (1953) provided his own type locality restriction to Boquillas, Brewster County, Texas. Cochran (1961) accepted the former and ignored the latter.

Topotypes.—Presidio Co: Marfa, 1 (USNM), collected 1890.

Near topotypes.—Presidio Co: 6.5 mi S Marfa on US Hwy 67, 2 (LSUMZ), collected in 1970. No museum specimens were found in the VertNet database from the vicinity of Boquillas/Rio Grande Village, although there are several from other parts of Big Bend National Park.

Remarks.—There has been considerable back and forth use of the specific epithets *septemvittatus* versus *scalaris* for this taxon in Texas. The crucial argument has centered on the assertion of Smith et al. (1996) that three sentences in the two-paragraph, non-taxonomic work of Cope (1892a), and not Cope (1892b), represents the earliest description of this taxon. James R. Dixon, the Dean of Texas herpetology from the late 1960s well into the second decade of the 20th century, argued for the use of the name *septemvittatus* throughout his career, even as support for *scalaris* among his fellow whiptail lizard experts gradually gained predominance of usage. Although he was second author on the Smith et al. (1996) paper, it is clear he only reluctantly and provisionally used the *scalaris* specific epithet in his last published remarks on the subject (Dixon 2013). Indeed, in that work he emphatically stated that *septemvittatus* was actually the correct species-level name for the taxon. That steadfast taxonomic conclusion of Dixon has been chosen for this catalog entry in his memory.

Regardless of the species name applied to US populations of this species, there are continuing issues with understanding potential subspecies. The last uses of a trinomial including the taxon *septemvittatus* were by Reeder et al. (2002) and by Collins and Taggart (2009). The former resurrected the Cope (1892b) subspecies *Cnemdiophorus gularis septemvittatus* (and *C. gularis scalaris*) into the genus *Aspidoscelis*. Collins and Taggart (2009) similarly restored the subspecies *Cnemdiophorus septemvittatus septemvittaus* (first used by Duellman and Zweifel 1962). Resolution of the species limits and subspecies recognition issues clearly needs a multi-gene phylogeographical study based on thorough sampling of the Chihuahuan Desert and Mexican Plateau whiptail lizard populations to which the epithets *gularis*, *pallidus*, *rauni*, *septemvittatus*, *scalaris*, and *semifasciatus* have been applied.

Cnemidophorus sexlineatus stephensi Trauth, 1992
= *Aspidoscelis sexlineatus stephensae*
[Texas Yellow-headed Racerunner]

1766. *Lacerta sexlilneata* Linnaeus, Syst. Natur., 12th ed., p. 364.

1820. *Lacerta fallax* Merrem, Vers. Syst. Amphib., Tent. Syst. Amphib., p. 63.

1839. *Cnemidophorus sexlineatus* Duméril and Bibron, Érp. Gen., Liv. 5:131.

1931. *Cnemidophorus sexlineatus sexlineatus* Burt, U.S. Nat. Mus. Bull. 154:76

1992. *Cnemidophorus sexlineatus stephensi* Trauth, Tex. J. Sci. 44:438.

2013. *Cnemidophorus* (*Aspidoscelis*) *sexlineatus stephensae* (by implication) Dixon, Amphib. Rept. Tex., 3rd ed., p. 214.

2017. *A*[*spidoscelis*] *s*[*exlineatus*] *stephensae* De Quieroz et al., Squamata (in part) – Lizards, pp. 38–58 in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol. Circ. 43:42.

Type locality.—Holotype, adult male, USNM 278270, obtained on 18 May 1983 by Stanley E. Trauth.

Type locality.—4.8 kilometers south of Hebbronville [on RM Rd 1017], Jim Hogg County, Texas.

Topotypes.—Hebbronville, 4.8 km S, on Ranch Road 1017, 8 (USNM), collected in 1983.

Near topotypes.—Jim Hogg Co: 10.4 km S Hebbronville on TX Hwy 16, 1 (KU); 1.0 mi E and 12.5 mi S Hebbronville, Hwy 1017, 1 (TCWC). The most recent near topotype was collected in 1983.

ORDER SQUAMATA
SUBORDER SERPENTES
Family Colubridae

Arizona elegans Kennicott, 1859
= *Arizona elegans elegans*
[Kansas Glossy Snake]

1859. *Arizona elegans* Kennicott, in Baird, Rept. Boundary, U.S. Mex. Bound. Survey, Vol. 2, p. 18.

1875. *Pityophis elegans* Cope, U.S. Nat. Mus. Bull. 1:39.

1886. *Rhinechis elegans* Cope, Proc. Amer. Philos. Soc. 23:284.

1894. *Pituophis elegans* Günther, parts CXV–CXVIII, in Godman and Salvin, Biol. Centr.-Amer., p. 125.

1924. *Arizona elegans elegans* Blanchard, Occ. Pap. Mus. Zool. Univ. Mich. 150:3.

1946. *Arizona elegans blanchardi* Klauber, Trans. San Diego Soc. Nat. Hist. 10:328.

1976. *Arizona elegans elegans* Dixon and Fleet, Cat. Amer. Amphib. Rept. 179:179.1.

Type specimens.—Lectotype, USNM 1722. No type was designated in the original description, but Cochran (1961) indicated that there were two syntypes, USNM 1722 obtained by Arthur Schott and USNM 4266 collected by John Henry Clark. The Schott syntype, a male, was designated the lectotype by Blanchard (1924).

Type locality.—The Schott specimen was from the "Rio Grande," [Texas], and the Clark syntype originated from "between Arkansas and Cimarron, Oklahoma." The type locality was restricted to "Lower Rio Grande, Texas" by Yarrow (1882), but that site did not become an "official" restriction until Blanchard (1924) used it for the lectotype. Klauber 1946) expressed reservations about Yarrow's type locality restriction because the collector (Arthur Schott) was more active in the Eagle Pass area of the Rio Grande than farther south. Dixon and Fleet (1976), after comparing the holotype against almost a hundred specimens of *Arizona elegans elegans* from throughout its range, also concluded that Yarrow's restriction to the lower Rio Grande was ill advised. They found that the holotype was similar to specimens from the vicinity of Sanderson in Terrell County, and not from the vicinity of Eagle Pass. For this reason, Dixon and Fleet (1976) designated the type locality to be at Sanderson in Terrell County, Texas, which is followed in this catalog.

Topotypes.—Terrell Co: US Hwy 90, 0.3 mi E jct with US Hwy 285, 1 (TCWC), collected in 1968. This locality is inside the town limits of Sanderson.

Near topotypes.—4.1 mi W Sanderson, 1 (LSUMZ), obtained in 1968.

Arizona elegans arenicola Dixon, 1960
[Texas Glossy Snake]

1859. *Arizona elegans* Kennicott, in Baird, Rept. Boundary, U.S. Mex. Bound. Survey, Vol. 2, p. 18.

1875. *Pityophis elegans* Cope, U.S. Nat. Mus. Bull. 1:39.

1886. *Rhinechis elegans* Cope, Proc. Amer. Philos. Soc. 23:284.

1894. *Coluber arizonae* (in part) Boulenger, Cat. Snakes British Mus. (Nat Hist), Vol. II, p. 66.

1894. *Pituophis elegans* Günther, parts CXV–CXVIII, in Godman and Salvin, Biol. Centr.-Amer., p. 125.

1924. *Arizona elegans elegans* Blanchard, Occ. Pap. Mus. Zool. Univ. Mich. 150:3.

1946. *Arizona elegans blanchardi* Klauber, Trans. San Diego Soc. Nat. Hist. 10:328.

1959. *Arisona elegans arizonae* Dixon, Southwest. Nat. 4:21.

1960. *Arizona elegans arenicola* Dixon, Southwest. Nat. 5:226.

Type specimen.—Lectotype, NHMUK 90.7.30.40, no collector or collection date reported. Dixon (1960) did not designate a type specimen at the time he provided a substitute name for Boulenger's (1894) name *arizonae*. After considerable debate in the literature over the entire controversy of generic and specific names involved (see Dixon and Fleet 1976 for an abbreviated history), the International Commission on Zoological Nomenclature (1965) intervened and validated the genus *Arizona* and the names *elegans* and *arenicola* associated with it. However, before this nomenclatural decision, Williams and Smith (1962) designated the above specimen as a lectotype for *Arizona elegans arenicola*.

Type locality.—Duval County [no specific locality], Texas, for the lectotype.

Topotypes.—The type locality is too vague to assign meaningful topotypes.

Near topotypes.—Duval Co: 7.8 mi SW Realitos, 1 (LSUMZ); 15 mi W San Diego, 1 (TNHC); TX Hwy16, 14 mi N Freer, 1 (TCWC); 2 mi N Freer, 1 (UCM); 3 mi S Freer, 1 (CM); 12 mi S Freer, 1 (MPM); 32 mi S Freer, TX Hwy 16 (LSUMZ); TX 16, 7.3 rd mi S jct with FM Rd 624, 1 (TNHC); US Hwy 59, 10 mi E jct with FM Rd 2050, 1 (TCWC); FM Rd 2359, 4.3 rd mi E jct with US Hwy 59, 1 (TCWC). The last of these collected was in 1999.

Remarks.—Dixon (1959) concluded that the southern and southeastern Texas populations of *Arizona elegans elegans* represented a distinct subspecies, and he used the Boulenger (1894) name *arizonae* for the subspecific epithet (see Remarks section in preceding catalog account for *Arizona elegans*). But, like Klauber (1946) before him, he did not realize that the Boulenger name *Coluber arizonae* was only a substitute name for *Arizona elegans*, and that USNM 1722 was still its holotype. Upon learning that *Arizona elegans arizonae* was inappropriate, Dixon (1960) substituted a new name, *A. e. arenicola*, to apply to the south and southeast Texas form. The unintended consequences of the actions by Boulenger, Klauber, and Dixon precipitated the situation that the ICZN acted to resolve in 1965.

Cemophora coccinea lineri Williams, Brown, and Wilson, 1966
= *Cemophora lineri*
[Texas Scarletsnake]

1788. *Coluber coccineus* Blumenbach, Mag. Neueste Physik Naturg. 5:11.

1820. *Elaps coccineus* Merrem, Versh. Syst. Amphib., Tent. Syst. Amphib., p. 145.

1837. *Heterodon coccineus* Schlegel, Essai Physion. Serpens, Vol. II, p. 102.

1842. *Rhinostoma coccineus* Holbrook, N. Amer. Herpet., 2nd ed., Vol. 3, p. 125.

1854. *Simotes coccineus* Duméril et al., Erpét. Gén. Hist. Nat. Comp. Rept., Vol. 7, Pt. 1, p. 637.

1860. *Cemophora coccinea* Cope, Proc. Acad. Nat. Sci. Phila. (1861), 12:244.

1862. *Stasiotes coccineus* Jan, Arch. Zool. l'Anat. Fisiol. 2:75.

1948. *Cemophora coccinea* Auffenberg, Herpetologica 4:212.

1952. *Cemophora doliata* Smith, Herpetologica 8:26

1966. *Cemophora coccinea lineri* Williams et al., Tex. J. Sci. 18:85.

1991. *Cemophora lineri* Collins, Herpetol. Rev. 27:43.

2017. *Cemophora lineri* Weinell and Austin, J. Herpetol. 51:167.

Type specimen.—Holotype, adult female, AMNH 75307, obtained 29 June 1963 by Ernest A. Liner and Richard Whitten.

Type locality.—34.5 miles south of Riviera, Kenedy County, Texas.

Topotypes.—None.

Near topotypes.—Kenedy Co: King Ranch, 1 (BUMMC); 7.0 mi S Armstrong on US Hwy 77, 1 (TCWC). The most recent of these was collected in 1976.

Remarks.—The first specimen of this endemic South Texas species found was surmised to be an accidental introduction (Auffenberg 1948). That specimen was unfortunately lost and its specific identification cannot be confirmed (Williams and Wilson 1967). Collins (1991) was first to use the combination *Cemophora lineri*, but only in a list of allopatric subspecies in the US that he perceived should be elevated to full species. The taxonomic evidence for species status was more recently presented by Weinell and Austin (2017).

The Texas Scarletsnake, and the other species of scarletsnake that occurs in Texas (*Cemophora coccinea*, the Northern Scarletsnake), are currently listed as Threatened by TPWD (Davis and LaDuc 2021).

Churchillia bellona Baird and Girard, 1852
= ***Pituophis catenifer sayi***
[Bullsnake]

1803. *Coluber melanoleucus* Daudin, Hist. Nat. Gén. Partic. Rept. 6:409.

1827. *Coluber melanoleucus*. var. *Say* Harlan, J. Acad. Nat. Sci. Phila. 5:360.

1835. *Coluber catenifer* Blainville, Nov. Ann. Mus. Hist. Natur. (Paris) 4:290.

1837. *Coluber sayi* Schlegel, Essai Physion. Serpens, Vol. II, p. 157.

1842. *Pituophis melanoleucus* Holbrook, North Amer. Herpetol, Vol. 4, p. 7.

1852. *Churchillia bellona* Baird and Girard, Proc. Acad. Nat. Sci. 6:70.

1853. *Pituophis bellona* Baird and Girard, Smiths. Misc. Coll. 2:19.

1853. *Pituophis mcclennani* Baird and Girard, Smiths. Misc. Coll. 2:68.

1857. *Pityophis Mcclennani* Baird, Reptiles, in Rep., Pacific R.R. Surv. (1859), Vol. 10, No. 1, plate 29, fig. 47.

1859. *Pityophis bellona* Kennicott in Baird, Rep. Rept. Coll. Surv., in Rep. Pacific R.R. Surv., Vol. 10, No. 3, p. 19.

1860. *Pituophis sayi* Cooper, Rep. Rept. Coll. Surv., in Rep. Pacific R.R. Surv., Vol. 12, No. 4, p. 300.

1875. *Pityophis sayi sayi* Cope, Bull. U.S. Nat. Mus. 1:39.

1883. *Pituophis catenifer* var. *sayi* Garman, Mem. Mus. Comp. Zool. (1884), 8:52.

1884. *Pityophis sayi bellona* White, Amer. Nat. 18:20.

1891. *Pityophis catenifer sayi* Taylor, Ann. Report, Nebraska St. Brd. Agric., (1892), p. 335.

1891. *Pityophis catenifer bellona* Taylor, Ann. Report, Nebraska St. Brd. Agric. (1892), p. 337.

1914. *Pituophis catenifer sayi* Gaige, Copeia 11:4.

1925. *Pituophis sayi sayi* Force, Copeia 141:25.

1943. *Pituophis sayi affinis* Stejnegar and Barbour, Check List North Amer. Amphib. Rept., 5th ed., Bull. Mus. Comp. Zool. 93:144.

1951. *Pituophis melanoleucus sayi* Smith and Kennedy, Herpetologica 7:96.

1953. *Pituophis catenifer sayi* Schmidt, Check List North Amer. Amphib. Rept., 6th ed., p. 203.

1990. *Pituophis melanoleucus sayi* Sweet and Parker, Cat. Amer. Amphib. Rept. 474:474.4.

1990. *Pituophis catenifer sayi* Collins, Stand. Comm. Sci. Names North Amer. Amphib. Rept., 3rd ed., SSAR Herpetol. Circ. 19:32.

Type specimen.—Holotype, adult, USNM 1519, now lost (Sweet and Parker 1990), obtained in 1846 by General [Colonel] Sylvester Churchill. The genus was named in his honor.

Type locality.—In the very short original description of Baird and Girard (1852a), the origin of the type specimen was "collected by General Churchill on his march along the Rio Grande in 1846." A second, more expanded description of the collection location from the describers appeared later (Baird and Girard 1852b): "This species was collected by General Churchill, on his march to Mexico, on the left bank of the Rio Grande [i.e., on the Texas side], at the crossing near Presidio del Norte." Cochran (1961) inexplicably revised the type locality to "San Antonio, west of the Rio Grande [given as 'Presidio del Norte' in the original description], Chihuahua, Mexico." Colonel Churchill's Mexican War duties took him into Coahuila (not Chihuahua), and left and right banks of streams (east or west of the Rio Grande in this instance) are traditionally designated from the perspective of a person facing downstream. Webb and Eckerman (1998), located (and restricted) the identical type locality reference "Presidio del Norte" of the Churchill-collected missing holotype for the snake *Heterodon nasicus*, as the "Rio Grande approximately 4.3 air miles (7 km) southwest El Indio or approximately 19 air miles (30.6 km) downstream from Eagle Pass, Maverick County, Texas." These authors were correct in their placement of the type locality for these two taxa (and *Phrynosoma modestum*) in Maverick County, along the Rio Grande southwards of the present-day community of El Indio. However, the exact heading and offset distance from El Indio are probably incorrect (see Remarks).

Topotypes.—None found in the VertNet database.

Near topotypes.—Maverick Co: Eagle Pass, 4 (MSUM), collected in 1962.

Remarks.—Cochran's (1961) erroneous restriction of the type locality of this taxon to Chihuahua had consequences. Several authors seeking to pin down locations of specimens acquired by Churchill have attributed them to the Trans-Pecos Texas town of Presidio in Presidio County. At the time of the Mexican War, there was no "Presidio, Texas." The town now called Ojinaga, Chihuahua, existed only on the Mexican side of the Rio Grande; there was no organized settlement on the US side until after the Mexican War (see *Handbook of Texas* website for the town history). Moreover, the principal US military deployment for the Mexican War into Chihuahua came from forces in New Mexico, not Texas. Webb and Eckerman (1998) concluded correctly that the "Presidio del Rio Grande" was an outpost on the Mexican (Coahuila) side of the river in present-day Maverick County, Texas, but they did not connect the named fortification to the old Spanish Presidio de San Juan Bautista del Rio Grande, built in 1704 in response to French incursions into Texas in the 1680's (Eaton 1981). Garrisoned by Mexico well into the 1850's, this fortification was located only a few miles from three militarily significant Rio Grande fords associated with *El Camino Real de las Tejas* routes in and out of Coahuila and Texas. The "Presidio del Norte" (sometimes "Presidio del Rio Grande") was thus a well-known placename to US Army officers prior to and well after the Mexican War.

Webb and Eckerman (1998) also suggested that all the Churchill collections from Texas were collected over late September–early October of 1846. However, one of Sylvester Churchill's sons constructed a biography (Churchill 1888) from his father's papers and personal journals that provides chronological and route details of the "march along the Rio Grande in 1854." Commanding a rear-guard of General Wool's Coahuila invasion forces, Colonel Churchill left San Antonio, Texas, on 14 October 1846, following the general's route westward to Camp Eagle Pass on the Rio Grande (the town of Eagle Pass would later be built east of this site), and then south-southeast along the Rio to the "Upper Crossing" (the northernmost of the three Presidio del Norte fords) where the main body of Wool's troops constructed a pontoon bridge and crossed over the Rio Grande into Coahuila. Churchill's rearguard force followed Wool's route, crossing into Mexico over 25–26 October, and proceeded south-southwest to rendezvous

with Wool's main force at Monclova, Coahuila, on 6 November. Churchill's collections of reptiles from Texas were thus collected 14–26 October 1854, with his Presidio del Norte type specimens probably acquired in the vicinity of the Rio Grande in the days just prior to the actual crossing.

The online *Handbook of Texas* website entry for the "San Antonio Crossing" (= *Paso de Francia*), the main ford of the three *Camino Real de Tejas* Rio Grande Crossings associated with Presidio del Norte, places it about 6 miles northeast of the old fort at San Juan Bautista (now the town of Guerrero, Coahuila). The "Upper Crossing," variously named *Paso de Pachuche* or *Paso Nogal*, was located about 6 miles north of the San Antonio Crossing near the mouth of Cuervo Creek (also known as San Antonio Creek). This creek outlet is about 18 air kilometers south of El Indio, which offers somewhat more insight into the location of Churchill's pre-crossing bivouac area. This location is the type locality of *Churchilla bellona*, one of the syntypes of the lizard *Phrynosoma modestum*, and perhaps the lost syntypes of the snake *Caudisona lepida* and the lost original holotype of *Heterodon nasicus*.

Coluber bairdi Yarrow, 1880
= Pantherophis bairdi
[Baird's Ratsnake]

1880. *Coluber bairdi* Yarrow, in Cope, Bull. U.S. Nat. Mus. 17:41.

1915. *Callopeltis bairdi* Strecker, Baylor Univ. Bull. 18:34.

1917. *Elaphe bairdi* Stejneger and Barbour, Check List North Amer. Amphib. Rept. [1st ed.], p. 82.

1952. *Elaphe obsoleta bairdi* Dowling, Occ. Pap. Mus. Zool. Univ. Mich. 541:6.

1977. *Elaphe bairdi* Olson, Tex. J. Sci. 29:79.

2002. *Pantherophis bairdi* Utiger et al., Ruf, and Ziswiler, Russian J. Herpetol. 9:110, 114.

2007. *Pituophis bairdi* Burbrink and Lawson, Mol. Phylog. Evol. 43:186.

2008. *Scotophis bairdi* Collins and Taggart, J. Kans. Herpetol. 26:17.

2009. *Pantherophis bairdi* Pyron and Burbrink, Mol. Phylog. Evol. 52:528.

2013. *Elaphe* (*Pantherophis*) *bairdi* Dixon, Amphib. Rept. Tex., 3rd ed., p. 232.

2017. *P*[*antherophis*] *bairdi* Crother et al., Squamata – Snakes, pp. 52–72 in Crother, (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpet. Circ. 43:73.

Type specimen.—Holotype, juvenile male, USNM 10403, obtained 1878 by William F. von Manteufel.

Type locality.—Near Fort Davis, Jeff Davis County, Texas.

Topotypes.—Jeff Davis Co: near Fort Davis, 1 (SRSU, TCWC, USNM). The only date associated with these topotypes is 1959.

Near topotypes.—Jeff Davis: Davis Mountains State Park, 1 (TNHC); TX Hwy 118, less than 1 mi W entrance to State Park, 1 (UTA); TX Hwy 118, 4.0 mi W State Park entrance, 1 (UTA); TX Hwy 118, 1.5 mi N jct with hwy 17, 1 (TNHC); TX Hwy 118, 1.8 mi N jct with TX Hwy 17, 1 (TNHC); TX Hwy 118, 2.6 mi NW jct with TX Hwy 17, 1 (TCWC, UF). The last near topotypes were collected in 1999.

Remarks.—Olson's (1977) proposal to re-elevate Baird's Ratsnake from a subspecies back to species status was subsequently supported by an extensive study of variation in *Elaphe obsoleta lindheimeri* and *E. bairdi*, including their narrow secondary contact hybridization zone in Texas (Lawson and Lieb 1990). The phylogenetic study of Burbrink (2001) also supported the distinctiveness of the *bairdi* lineage compared to *Elaphe obsolete*, as did the analysis using microsatellite/mitochondrial DNA of the hybridization zone by Vandewege et al. (2012).

Coluber constrictor etheridgei Wilson, 1970
[Tan Racer]

1758. *Coluber constrictor* (in part) Linnaeus, Syst. Natur., 10th ed., p. 216.

1853. *Bascanion constrictor* Baird and Girard, Cat. N. A. Rept. Smithsonian Inst. I – Serpents, p. 93.

1854. *Coryphodon constrictor* (in part) Duméril et al., Erpét. Gén. Hist. Nat. Comp. Rept., Liv. 7, p. 183.

1893. *Zamenis constrictor* (in part) Boulenger, Cat. Snakes British Mus. (Nat. Hist). Vol. I, p. 387.

1883. *Coluber constrictor flaviventris* (in part) Garman, Mem. Mus. Comp. Zool. (1884), 8:42.

1970. *Coluber constrictor etheridgei* Wilson, Tex. J. Sci. 22:75.

Type specimen.—Holotype, adult male, LSUMZ 16462, obtained on 30 April 1967 by Larry David Wilson.

Type locality.—Dallardville [= Dallardsville], which is 11 miles north of the junction of Texas highways [FM Rd] 1276 and [FM Rd] 943 in Polk County, Texas.

Topotypes.—None.

Near topotypes.—Polk Co: Alabama-Coushatta Indian Reservation on US Hwy 190, 1 (LSUMZ); 14 mi E Livingston, 1 (TNHC); 8.3 mi S Livingston, 1 (BUMMC). The most recent near topotype was collected in 1956.

Coluber subocularis Brown, 1901
= *Bogertophis subocularis subocularis*
[Northern Trans-Pecos Ratsnake]

1901. *Coluber subocularis* Brown, Proc. Acad. Nat. Sci. Phila. (1902), 53:492.

1917. *Elaphe subocularis* Stejneger and Barbour, Check List North Amer. Amph. Rept. [1st ed.], p. 84

1941. *Elaphe sclerotica* Smith, Copeia 1941:135.

1988. *Bogertophis subocularis* Dowling and Price, The Snake 20:60.

1990. *B*[*ogertophis*] *s*[*ubocularis*] *subocularis* Webb, Tex. J. Sci. 42: 228.

Type specimen.—Holotype, adult male, ANSP 13733, obtained in 1901 by Edmund Meyenburg.

Type locality.—50 miles southwest of Pecos, near head of Toyah Creek, Davis Mountains, Jeff Davis County, Texas. Rhoads and Salmon (2012) have speculated that the holotype originated from a tributary of Toyah Creek, likely Madera Canyon, Little Aguja Canyon, or Big Aguja Canyon (see also catalog account for *Ophibolus alternus*).

Topotypes.—None.

Near topotypes.—Jeff Davis Co: RM Rd 1832, 1.9 mi W jct with TX Hwy 17, 1 (UTEP); RM Rd 1832, 9.4 rd mi W TX Hwy 17, 1 (TNHC); TX Hwy 17, ca. 3 mi S jct with RM Rd 1832, 1 (UTA); TX Hwy 17, 37 km N Fort Davis, 1 (UTA); TX Hwy 17, 9.8 km S jct with US Hwy 290, 1 (UTA). The last of these was collected in 2006.

Contia episcopa torquata Cope, 1880
= *Sonora episcopa*
[Great Plains Groundsnake]

1859. *Lamprosoma episcopum* Kennicott, in Baird, Rept. Boundary, U.S. Mex. Bound. Survey, Vol. 2, p. 22.

1860. *Contia episcopa* Cope, Proc. Acad. Nat. Sci. Phila. (1861), 12:251.

1862. *Homalosoma episcopum* Jan, Archiv. Zool., l'Anat. Fisiol. 2:35.

1880. *Contia episcopa torquata* Cope, Bull. U.S. Nat. Mus. 17:21.

1883. *Contia semiannulata* Garman, Mem. Mus. Comp. Zool. (1884), 8:90.

1900. *Chionactis episcopus torquatus* Cope, Ann. Rep. U.S. Nat. Mus. 1898, p. 939.

1901. *Contia nuchalis* Schenkel, Verhand. Naturfors. Gesellschaft. Basel 12:162.

1943. *Sonora episcopa episcopa* Stickel, Proc. Biol. Soc. Wash. 56:121.

1959. *Sonora semiannulata episcopum* Dowling, Southwest. Nat. 3:233.

1979. *Sonora semiannulata* Frost and Van Devender, Occ. Pap. Mus. Zool. Louisiana St. Univ. 52:6.

1987. *Sonora semiannulata semiannulata* Dixon, Amphib. Rept. Tex. [1st ed.], p. 123.

2018. *Sonora episcopa* Cox et al., J. Nat. Hist. 52:967.

Type specimens.—There are two known syntypes, ANSP 10995–96, obtained in 1880 by Jacob Boll (Malnate 1971).

Type locality.—Northwestern Texas. Jacob Boll resided in Dallas, but was an active naturalist/collector throughout much of that region of Texas.

Topotypes.—The type locality covers too large a geographic space to make the designation of topotypes meaningful.

Near topotypes.—None.

Remarks.—The revision of Frost and Van Devender (1979) was a landmark work that synonymized a then-widely used taxon *Sonora episcopa* (original name *Lamprosoma episcopum*), into *S. semiannulata* but declined to evaluate any of the formerly recognized subspecies in either taxon. Very recently, *Sonora episcopa* was restored to validity by Cox et al. (2018). This conclusion, and other taxonomic proposals in this new revision, have influenced the catalog accounts dealing with historical taxa now allocated to the genus *Sonora*. In this case, Cox and his coauthors did not recognize the *torquata* variant as a valid subspecific taxon within *S. episcopa*, probably because it had long since been synonymized within *Sonora episcopa episcopa* (Schmidt 1953).

Contia nuchalis Schenkel, 1901
= *Sonora episcopa*
[Great Plains Groundsnake]

1859. *Lamprosoma episcopum* Kennicott, in Baird, Rept. Boundary, U.S. Mex. Bound. Surv., Vol. 2, p. 22.

1860. *Contia episcopa* Cope, Proc. Acad. Nat. Sci. Phila. (1861), 12:251.

1862. *Homalosoma episcopum* Jan, Archiv. Zool., l'Anat. Fisiol. 2:35.

1880. *Contia episcopa toquata* Cope, Bull. U.S. Nat. Mus. 17:21.

1883. *Contia semiannulata* Garman, Mem. Mus. Comp. Zool. (1884), 8:90.

1900. *Chionactis episcopus torquatus* Cope, Ann. Rep. U.S. Nat. Mus. 1898, p. 939.

1901. *Contia nuchalis* Schenkel, Verhand. Naturfors. Gesellschaft. Basel 12:162.

1938. *Sonora semiannulata semiannulata* Stickel, Copeia 1938:185.

1943. *Sonora episcopa episcopa* Stickel, Proc. Biol. Soc. Wash. 56:121.

1979. *Sonora semiannulata* Frost and Van Devender, Occ. Pap. Mus. Zool. Louisiana St. Univ. 52:6.

1987. *Sonora semiannulata semiannulata* Dixon, Amphib. Rept. Tex. [1st ed.], p. 123.

2018. *Sonora episcopa* Cox et al., J. Nat. Hist. 52:967.

Type specimen.—Holotype, male, NMB 2117, obtained 1879 by Dr. L. DeWette.

Type locality.—Fort Worth, Tarrant County, Texas.

Topotypes.—None could be found within the 19th century extent of Fort Worth.

Near topotypes.—Tarrant Co: Fort Worth, Texas Christian University Campus, 1 (BUMMC); Lake Worth Dam, 1 (BUMMC); Marys Creek, 1 (BUMMC); Edwards Ranch, 4 (BUMMC); Westcliff Road, 1 (BUMMC); Cragin's Knob, 1 (BUMMC); west of Fort Worth, 1 (KU). The most recent of these were collected in 1948.

Remarks.—*Sonora nuchalis* was placed in the synonymy of *Sonora episcopa episcopa* by Schmidt

(1953), where it remained until Frost and Vandevender (1979) synonymized *S. episcopa* into *S. semiannulata*. With the resurrection of the former as a distinct species by Cox et al. (2018), *S. nuchalis* is now once again a subjective junior synonym of *Sonora episcopa*.

Contia taylori Boulenger, 1894
= *Sonora taylori*
[Southern Texas Groundsnake]

1894. *Contia taylori* Boulenger, Cat. Snakes Brit. Mus. (Nat. Hist). Vol. II, p. 265.

1900. *Chionactis taylori* Cope, Ann. Rep. U.S. Nat. Mus. 1898, p. 936.

1943. *Sonora episcopa taylori* Stickel, Proc. Biol. Soc. Wash. 56:122.

1979. *Sonora seminannulata taylori* Frost and Van Devender, Occ. Pap. Mus. Zool. Louisiana St. Univ. 52:6.

2018. *Sonora taylori* Cox et al., J. Nat. Hist. 52:970.

Type specimens.—Four syntypes, one female NHMUK 1946.1.5.39, collector and date unknown, and the other three included in NHMUK 1946.1.5.57–59, obtained probably over 1880–81 by William Taylor (Boulenger 1894).

Type locality.—The NHMUK 1946.1.5.39 female syntype is from "Nuevo Leon (Mexico)"; the other syntypes are from "Duval County, Texas." The type locality was restricted to Duval County, Texas, by Schmidt (1953) and accepted for purposes of this catalog.

Topotypes.—Duval Co [no specific locality available], 9 (AMNH), 2 (UMMZ); Benavides, 1 (UTA, Cox et al. 2018). The Benavides specimen is the most recently collected (no date available) and represented by a tissue sample at UTA.

Near topotypes.—Jim Wells Co: near Alice, La Copita Ranch, 2 (TCWC). Jim Hogg Co: 3 mi W Hebbronville, 1 (LSUMZ). Webb Co: 12 mi N Bruni, 1 (CM). The last of these near topotypes was collected in 1988.

Remarks.—Frost and Van Devender (1979) first used the combination *Sonora semiannula taylori*, but in the work's conclusion declined to recognize this taxon or any other nominal subspecies of *S. semiannulata*. Subsequently Frost (1983) indicated that the *taylori* form needed more investigation, and Dixon (1987) concluded that *S. s. taylori* of southern Texas was a valid taxon because of its morphological distinctiveness. The usage in this catalog follows that of the most recent generic revision (Cox et al. 2018), which restored it to the original full species rank from the 19th century.

Ficimia streckeri Taylor, 1931
[Tamaulipan Hook-nosed Snake]

1931. *Ficimia streckeri* Taylor, Copeia 1931:5.

1943. *Ficimia olivacea streckeri* Smith, Proc. U.S. Nat. Mus. 93:429.

1949. *Ficimia streckeri* Taylor, Univ. Kanas Sci. Bull. 33:191.

1949. *Ficimia olivacea streckeri* (by implication) Shannon and Smith, Trans. Kans. Acad. Sci. 52:502.

1975. *Ficimia streckeri* Hardy, J. Herpetol. 9:158.

Type specimen.—Holotype, adult female, KU 9140, obtained 13 July 1930 by Edward H. Taylor.

Type locality.—3 miles east of Rio Grande City, Starr County, Texas.

Topotypes.—None.

Near topotypes.—Starr Co: 3 mi from Rio Grande City, 1 (KU); FM Rd 755, between FM Rd 439 and Rio Grande City, 2 (KU); 10.5 mi ESE Rio Grande City, 1 (UCM). The last near topotype was collected in 1991.

Herpetodryas margaritiferus Schlegel, 1837
= *Drymobius margaritiferus margaritiferus*
[Northern Speckled Racer]

1837. *Herpetodryas margaritiferus* Schlegel, Essai Physion. Serp. Vol. II, p. 184.

1854. *Leptophis margaritiferus* Duméril and Bibron, Érp. Gen., Liv. 7, p. 539.

1855. *Zamenis tricolor* Hallowell, J. Acad. Nat. Sci. Phila., Ser. 2, 3:34.

1858. *Dromicus margaritiferus* Günther, Cat. Colub. Snakes Brit. Mus., p. 126.

1860. *Drymobius margaritiferus* Cope, Proc. Acad. Nat. Sci. Phila. 12:561

1863. *Thamnophis margaritiferus* Jan, Elenco Syst. Degli Ofidi Descr. Diseg. l'Iconograf. Gen., p. 82.

1883. *Drymobius margaritiferus margaritiferus* Bocourt, in Duméril, Bocourt, and Mocquard, Miss. Sci. Mex. Amer. Centr., Liv. 9, p. 539.

1974. *Drymobius margaritiferus margaritiferus* Wilson, Cat. Amer. Amphib. Rept. 172:172.1.

Type specimen.—Wilson (1974) reported the holotype to be unknown. However, Guibé and Roux-Estéve (1972) had earlier indicated MNHN 7309, an adult male received from [Joseph] Barabino, is Schegel's holotype.

Type locality.—"Nouvelle Orleáns" [New Orleans] an obvious error, although Joseph Barabino was a French Quarter pharmacist/naturalist of some repute and active over the 1820's and 1830's. The type locality was restricted to Veracruz, Mexico, by Smith (1942), then restricted more tightly to Córdoba, Veracruz, by Smith and Taylor (1950a). Lastly, designated as Brownsville, Texas, by Schmidt (1953), which is provisionally accepted for this catalog.

Topotypes.—Cameron Co: Brownsville, 1 (USNM), collected in 1891.

Near topotypes.—Cameron Co: Southmost Palm Grove, 4 (TCWC), 1 (TNHC). The last near topotype was obtained in 2016.

Remarks.—*Drymobius margaritiferus* is listed by TPWD as a Threatened species (Davis and LaDuc 2021). Although occasionally reported from other South Texas counties (Dixon 2013), Cameron County seems to have the only stable population of this snake in the US It is, however, a widespread and abundant lowland tropical species further south in Mexico and Central America.

Lampropeltis blairi Flury, 1950
= *Lampropeltis alterna*
[Gray-banded Kingsnake]

1901. *Ophibolus alternus* Brown, Proc. Acad. Nat. Sci. Phila. (1902), 53:612.

1912. *Lampropeltis alterna* Stejneger and Barbour, Check List North Amer. Amphib. Rept. [1st ed.], p. 87.

1950. *Lampropeltis blairi* Flury, Copeia 1950:217.

1962. *Lampropeltis mexicana blairi* Gehlbach and Baker, Copeia 1962:298.

1982. *Lampropeltis alterna* Garstka, Breviora 466:28.

1998. *Lampropeltis a*[*lterna*] *blairi* Hilken and Schlepper, Salamandra 34:101.

2008. *L*[*ampropeltis*] *alterna* Crother et al., Squamata – Snakes, pp. 46–65 in Crother (Chair), Sci. Stand. Engl. Nams Amphib. Rept. North Mexico, 6th ed., SSAR Herpetol. Circ. 37:54.

Type specimen.—Holotype, male, TNHC 4772, obtained 3 June 1948 by H. Phillips and Alvin Flury.

Type locality.—8.8 miles west of Dryden on US Hwy 90, Terrell County, Texas.

Topotypes.—None.

Near topotypes.—Terrell Co: 10 mi W Dryden on US Hwy 90, 1 (TNHC); 12 mi W Dryden on US Hwy 90, 1 (LACM); 7.2 mi E Sanderson on US Hwy 90, 1 (TNHC); 7.6 mi E US Hwy 285 junction on US Hwy 90, 1 (MSB); 8.8 mi E of US Hwy 285 and US Hwy 90 junction, 1 (MSB); ca. 9 mi E Sanderson, 1 (TNHC). The last near topotype was obtained in 2012.

Lamprosoma episcopum Kennicott, 1859
= *Sonora episcopa*
[Great Plains Groundsnake]

1859. *Lamprosoma episcopum* Kennicott, in Baird, Rept. Boundary, U.S. Mex. Bound. Surv. Vol. 2, p. 22.

1860. *Contia episcopa* Cope, Acad. Nat. Sci. Phila. (1861), 12:251.

1862. *Homalosoma episcopum* Jan, Archiv. Zool., l'Anat. Fisiol. 2:35.

1880. *Contia episcopa episcopa* Cope, Bull. U.S. Nat. Mus. 17:31.

1880. *Contia episcopa torquata* Cope, Bull. U.S. Nat. Mus. 17:21

1883. *Contia semiannulata* Garman, Mem. Mus. Comp. Zool. (1884), 8:90.

1894. *Contia torquatus* Boulenger, Cat. Snakes British Mus. (Nat. Hist.), Vol. II, p. 264.

1900. *Chionactis episcopus* Cope, Ann. Rep. U.S. Nat. Mus. 1898, p. 937.

1900. *Chionactis episcopus episcopus* Cope, Ann. Rep. U.S. Nat. Mus. 1898, p. 938.

1900. *Chionactis episcopus torquatus* Cope, Ann. Rep. U.S. Nat. Mus. 1898, p. 939.

1901. *Contia nuchalis* Schenkel, Verhand. Naturfors. Gesellschaft. Basel 12:162.

1938. *Sonora episcopa* Stickel, Copeia 1938:185.

1938. *Sonora semiannulata blanchardi* Stickel, Copeia 1938:185.

1943. *Sonora episcopa episcopa* Stickel, Proc. Biol. Soc. Wash. 56:121.

1979. *Sonora semiannulata episcopa* Frost and Van Devender, Occ. Pap. Mus. Zool. Louisiana St. Univ. 52:6.

1987. *Sonora semiannulata semiannulata* Dixon, Amphib. Rept. Tex. [1st ed.], p. 123.

2018. *Sonora episcopa* Cox et al., J. Nat. Hist. 52:967.

Type specimens.—Lectotype, female, USNM 2042, obtained by Arthur Schott. There was a second syntype, USNM 2045, collected by Caleb B. R. Kennerly. The lectotype was designated by Stickel (1938).

Type locality.— Originally two type localities for the syntypes, the non-specific "San Antonio to Rio Grande," for USNM 2045, and "Eagle Pass, Maverick County, Texas" for USNM 2042. Stickel's (1938) lectotype restricted the taxon's type locality to the latter, although he did indicate it may have been only a shipping point for a specimen collected elsewhere. The likelihood that the type did not come from Maverick County is high; see Remarks.

Topotypes.—None.

Near topotypes.—None.

Remarks.—Frost and Van Devender (1979) first used the combination *Sonora semiannulata episcopa*, placing it with *Sonora semiannulata* and declining recognition of any of the numerous subspecies involved. Dixon (1987) rejected this monotypy, and referred the "*episcopa*" populations in central, northern, and western Texas to a nominative subspecies (*Sonora semiannulata semiannulata*) formed by his recognition of *S. s. taylori* in southern Texas and northeastern Mexico (see catalog account for *Contia taylori*). As mentioned in the preceding two catalog accounts, Cox et al. (2018) restored the *Sonora episcopa* binomen to validity; the common name for this taxon used in the 1970's, Great Plains Groundsnake, has herein been revived for it.

Stickel's 1938 reservation that his lectotype may not have come from Eagle Pass was a valid concern, as Maverick County is entirely within the south Texas distribution of the allopatric *Sonora taylori*. This morphologically distinct sister species apparently replaces *S. episcopa* south of the Edwards Plateau in Texas (Cox et al. 2018). A more suitable type locality restriction would have been possible should the other syntype, the one collected by Kennerly from "San Antonio to the Rio Grande," have been chosen as the lectotype instead.

Leptophis majalis Baird and Girard, 1853
= *Opheodrys aestivus*
[Rough Greensnake]

1766. *Coluber aestivus* Linnaeus, Syst. Natur., 12th ed., p. 387.

1826. *Leptophis aestivus* Bell, Zool. J. London 2:329.

1837. *Herpetodryas aestivus* Schlegel, Essai Physion. Serp. Vol. II., p. 151.

1853. *Leptophis majalis* Baird and Girard, Cat. North Amer. Rept. Mus. Smiths. Inst., Part 1 – Serp., p. 107.

1860. *Opheodrys aestivus* Cope, Proc. Acad. Nat. Sci. Phila. 12:560.

1875. *Cyclophis aestivus* Cope, U.S. Nat. Mus. Bull. 1:38.

1892. *Phyllophilophis aestivus* Garman, Illinois State Lab. Nat. Hist. Bull. 3:283.

1894. *Contia aestivus* Boulenger, Cat. Snakes British Mus. (Nat. Hist), Vol. II, p. 258.

1947. *Opheodrys aestivus majalis* Burger, Chicago Meet. Abstracts, Bull. Ecolog. Soc. Amer. 28:54.

1984. *Opheodrys aestivus majalis* Grobman, Bull. Florida St. Mus. 29:162.

2000. *Opheodrys aestivus* Walley and Plummer, Cat. Amer. Amphib. Rept. 718:718.1.

Type specimens.—Lectotype, female, USNM 1436, obtained by James D. Graham. There were originally at least two syntypes, both labeled USNM 1436, one 1436A and the other now re-numbered as USNM 241435. However, there were three type localities mentioned in the description, indicating that additional type material was used in the description. Nevertheless, the two Graham specimens are the only ones mentioned by Cochran (1961); other syntypes may be in the ANSP, but if they are, they were overlooked by Malnate (1971) in his review of that institution's type material. Grobman (1984) designated USNM 1436A as a "lectoholotype."

Type locality.—The original description alluded to three type localities: the vicinity of Indianola [Calhoun County], New Braunfels [Comal County], Texas, and "the Red River," Arkansas. The two syntypes found by Cochran in the USNM collected by Graham were both from the Indianola locality. Walley and Plummer (2000) noted that Grobman (1984) restricted the type locality to New Braunfels, Comal County, Texas, but scrutiny of this work reveals that he did not do so as New Braunfels is not mentioned anywhere, even among the exemplary specimens. Moreover, by designating USNM 1436a as a lectotype, Grobman essentially fixed the type locality to Indianola.

Topotypes.—Calhoun Co: Indianola, 1 (USNM 241435, the former syntype).

Near topotypes.—Calhoun Co: Port O'Connor, 1 (TCWC), collected in 2007.

Remarks.—Crother et al. (2017) revived the south Florida subspecies *Opheodrys aestivus cinctus*, citing a work by Plummer (1987) documenting from that region a morph of significantly larger average body size. That action resurrected the nominal subspecies (including all Texas populations). However, Walley and Plummer (2000) declined to recognize any subspecies for *Opheodrys aestivus*, explicitly so for Grobman's (1984) subspecies *O. a. cinctus*, *O. a. conanti*, and *O. a. majalis*. This catalog follows the stronger argument of Walley and Plummer in not accepting any of the historical subspecies of the Rough Green Snake.

Masticophis ornatus Baird and Girard, 1853
= *Masticophis taeniatus girardi*
[Central Texas Whipsnake]

1852. *Leptophis taeniatus* Hallowell, Proc. Acad. Nat. Sci. Phila. (1854), 6:181.

1853. *Masticophis ornatus* Baird and Girard, Cat. North Amer. Rept. Mus. Smiths. Inst., Part 1 – Serp., p. 102.

1853. *Masticophis taeniatus* Baird and Girard, Cat. North Amer. Rept. Mus. Smiths. Inst., Part 1 – Serp., p. 103.

1860. *Drymobius taeniatus* Cope, Proc. Acad. Nat. Sci. Phila. 12:561.

1875. *Bascanium taeniatum ornatum* Cope, Bull. U.S. Nat. Mus. 1:40.

1883. *Coluber ornatus* Garman, Mem. Mus. Comp. Zool. (1884), 8:46.

1891. *B*[*ascanium*]. *ornatum* Cope, Proc. U.S. Nat. Mus. (1892), 14:629.

1894. *Zamenis ornatus* Günther, Parts CXV–CXVIII, in Godman and Salvin, Biol. Centr.-Amer., p. 122.

1901. *Zamenis taeniatus ornatus* Brown, Proc. Acad. Nat. Sci. Phila. 55:549.

1917. *Coluber taeniatus girardi* Stejneger and Barbour, Check List North Amer. Amph. Rept. [1st ed.], p. 89.

1923. *Masticophis taeniatus girardi* Ortenburger, Occ. Pap. Mus. Zool. Univ. Mich. 139:2.

1944. *Masticophis taeniatus ornatus* Schmidt and Smith, Zool. Ser. Field Mus. Nat. Hist. 29:90.

1994. *Masticophis taeniatus girardi* Camper and Dixon, Ann. Carnegie Mus. 63:2.

2005. *Coluber taeniatus* Utiger et al., Russian J. Herpet. 12:43, 52.

2012. *C*[*oluber*] *t*[*aeniatus*] *girardi* Crother et al., Squamata – Snakes, pp. 52–72 in Crother, (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 7th ed., SSAR Herpet. Circ. 39:56.

2013. *Masticophis* (*Coluber*) *taeniatus girardi* (by implication) Dixon, Amphib. Rept. Tex., 3rd ed., p. 251.

2017. *Masticophis taeniatus* Myers et al., Copeia 105:646.

2017. *M*[*asticophis*] *t*[*aeniatus*] *girardi* O'Connell et al., Molec. Ecol. 26:5731.

Type specimens.—Two syntypes, skin only, USNM 1971 and ANSP 5366, both obtained by James D. Graham.

Type locality.—Between Indianola and El Paso, Texas; restricted to Fort Davis, Jeff Davis County, Texas, by Smith and Taylor (1950a).

Topotypes.—Jeff Davis Co: Fort Davis, 2 (SRSU), 1 (UTA). Collection dates unknown, but the UTA specimen (No. 58992) must be recent, as it is the voucher for a tissue sample used by O'Connell et al. (2017).

Near topotypes.—Fort Davis State Park, 3 (TCWC), 1 (AMNH, BUMMC, NMSU); 1 mi N Fort Davis, 1 (TCWC); 3 mi N Fort Davis, 1 (UMMZ); 1.5 mi NNE Fort Davis on TX Hwy 17, 1 (YPM). The most recent near topotype was obtained in 1988.

Remarks.—Stejneger and Barbour (1917) did not recognize the genus *Masticophis*, using *Coluber* instead. However, that action in 1917 would have converted *Masticophis ornatus* of Baird and Girard to "*Coluber ornatus*," a preoccupied name at that time applied to an Asian species (now *Chrysopelea ornata*). Their solution was to propose the substitute specific epithet "*girardi*" for the original Baird and Girard (1853) version (*ornatus*). Schmidt and Smith (1944) later argued that use of the genus *Masticophis* instead of *Coluber* made the name *ornatus* a senior synonym to *girardi*. After that, Camper and Dixon (1994) interpreted provisions in the 1985 Code of Zoological Nomenclature for acceptance of *girardi* over *ornatus*. None of these issues, however, affect the type and restricted type locality of the species, and the *girardi* epithet is accepted in current literature as the valid usage (e.g., O'Connell et al. 2017). Universal acceptance of the synonymy of the genus *Masticophis* into *Coluber* has not occurred, largely because there are objective reasons for recognizing the former (e.g., see Lemos-Espinal et al. 2015). An informative recapitulation of the entire *Coluber–Masticophis* issue can be found in the most recent attempt to resolve it (Myers et al. 2017).

Masticophis ruthveni Ortenburger, 1923
= *Mastictophis schotti ruthveni*
[Ruthven's Whipsnake]

1923. *Masticophis ruthveni* Ortenberger, Occ. Pap. Mus. Zool. Univ. Mich. 139:2.

1917. *Coluber schottii* (in part) Stejneger and Barbour, Check List North Amer. Amphib. Rept. [1st ed.], p. 80

1934. *Masticophis taeniatus ruthveni* Gloyd and Conant, Occ. Pap. Mus. Zool. Univ. Mich. 287:40.

1939. *Coluber taeniatus ruthveni* Stejneger and Barbour, Check List North Amer. Amphib. Rept., 4th ed., p. 105.

1941. *Masticophis taeniatus australis* (in part) Smith, J. Wash. Acad. Sci. 31:290.

1994. *Masticophis schotti ruthveni* Camper and Dixon, Ann. Carnegie Mus. 63:20.

2012. *C*[*oluber*] *s*[*chotti*] *ruthveni* Crother et al., Squamata – Snakes, pp. 52–72 in Crother, (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 7th ed., SSAR Herpet. Circ. 39:56.

2013. *Masticophis* (*Coluber*) *schotti ruthveni* (by implication) Dixon, Amphib. Rept. Tex., 3rd ed., p. 250.

2017. *Masticophis schotti* Myers et al., Copeia 105:646.

2017. *M*[*asticophis*] *s*[*chotti*] *ruthveni* O'Connell et al., Molec. Ecol. 26:5731.

Type specimen.—Holotype, adult male, UMMZ 57681, obtained by Arthur I. Ortenburger.

Type locality.—Brownsville, Cameron County, Texas.

Topotypes.—Cameron Co: Brownsville, 14 (UMMZ), 5 (MCZ), 3 (CM, UMNH), 2 (ANSP, CAS, UIMNH, USNM), 1 (KU, FMNH, TCWC). The most recent of these was collected in 1987.

Near topotypes.—Cameron Co: 5 mi E Brownsville, palm grove, 1 (TNHC); jct FM Rd 1419 at TX Hwy 4, 1 (LSUMZ); 10000 Southmost Rd, TNC, 1 (TCWC); 1 mi S Harlingen, 1 (BUMMC); Holly Beach Road, 13 mi E San Benito, 1 (BUMMC). The most recent topotype is from 1971.

Masticophis schotti Baird and Girard, 1853
= *Masticophis schotti schotti*
[Schott's Striped Whipsnake]

1853. *Masticophis schotti* Baird and Girard, Cat. North Amer. Rept. Mus. Smiths. Inst., Part 1 – Serp., p. 160.

1891. *B*[*asconium*]. *schottii* Cope, Proc. U.S. Nat. Mus. (1892), 14:622.

1900. *Zamenis schottii* (in part) Cope, Rept. U.S. Nat. Mus. 1898, p. 811.

1917. *Coluber schotti* (in part) Stejneger and Barbour, Check List North Amer. Amphib. Rept. [1st ed.], p. 80.

1934. *Masticophis taeniatus schotti* Gloyd and Conant, Occ. Pap. Mus. Zool. Univ. Mich. 287:4.

1994. *Masticophis schotti schotti* Camper and Dixon, Ann. Carnegie Mus. 63:1.

2012. *C*[*oluber*] *s*[*chotti*] *schotti* Crother et al., Squamata – Snakes, pp. 52–72 in Crother, (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 7th ed., SSAR Herpet. Circ. 39:56.

2013. *Masticophis* (*Coluber*) *schotti schotti* (by implication) Dixon, Amphib. Rept. Tex., 3rd ed., p. 250.

2017. *Masticophis schotti* Myers et al., Copeia 105:646.

2017. *M*[*asticophis*] *s*[*chotti*] *schotti* O'Connell et al., Molec. Ecol. 26:5731.

Type specimen.—Holotype, adult male, USNM 1972, obtained by Arthur Schott.

Type locality.—Eagle Pass, Maverick County, Texas.

Topotypes.—None.

Near topotypes.—Maverick Co: 1 mi W Quemado, 1 (UMMZ), obtained in 1955.

Remarks.—This catalog follows the recommendation of Myers et al. (2017) that the genus *Masticophis* should be recognized as a distinct lineage from the genus *Coluber*. Although these authors did not deal with subspecies issues, their tissue samples appear to represent the nominal subspecies.

Ophibolus alternus Brown, 1901
= *Lampropeltis alterna*
[Gray-banded Kingsnake]

1893. *Coronella mexicana* Günther, parts CVIII–CXIII, in Godman and Salvin, Biol. Centr. Amer., p.110.

1901. *Ophibolus alternus* Brown, Proc. Acad. Nat. Sci. Phila. (1902), 53:612.

1917. *Lampropeltis alterna* Stejneger and Barbour, Check List North Amer. Amphib. Rept. [1st ed.], p. 87.

1920. *Lampropeltis mexicana* Blanchard, Occ. Pap. Mus. Zool. Univ. Mich. 87:7.

1950. *Lampropeltis blairi* Flury, Copeia 1950:217.

1962. *Lampropeltis mexicana alterna* Gehlbach and Baker, Copeia 1962:298

1962. *Lampropeltis mexicana blairi* Gehlbach and Baker, Copeia 1962:298.

1982. *Lampropeltis alterna* Garstka, Breviora 466:28.

1998. *Lampropeltis a*[*lterna*] *alterna* Hilken and Schlepper, Salamandra 34:100.

2008. *L*[*ampropeltis*] *alterna* Crother et al., Squamata – Snakes, pp. 46–65 in Crother (Chair), Sci. Stand. Engl. Nams Amphib. Rept. North Mexico, 6th ed., SSAR Herpetol. Circ. 37:54.

Type specimen.—Holotype, ANSP 14977, obtained by Edmund Meyenberg.

Type locality.—Usually cited as the Davis Mountains, Jeff Davis County, Texas. However, as pointed out by Rhoads and Salmon (2012), Arthur Brown's description clearly states the holotype came from the same locality as *Coluber subocularis* (= *Bogertophis subocularis*), near the head of Toyah Creek in the northeastern part of the Davis Mountains, at an offset of 50 miles from the town of Pecos. These authors suggest that the holotypes of both these taxa likely came from tributaries of Toyah Creek, specifically Madera Canyon, Little Aguja Canyon, or Big Aguja Canyon.

Topotypes.—Even following the suggestions of Rhoads and Salmon (2012), the canyon from which the holotype of this species originated, and the distance up that canyon, cannot be specifically identified. Moreover, as nearly all post-description specimens have been collected only from roads and road-cuts, only one of the designated Toyah Creek tributary canyons (Little Aguja) is road-accessible. That road is RM Rd 1832, which accesses BSA Buffalo Trail Scout Ranch from TX Hwy 17. Due to the remaining uncertainty for the actual type locality, all museum specimens from the Toyah Creek drainage in Jeff Davis are treated as near topotypes (see below).

Near topotypes.—Jeff Davis Co: RM Rd 1832, Scout Canyon, 1 (TCWC); RM Rd 1832, 0.4 mi E Scout camp gate, 1 (TCWC); RM Rd 1832, 0.7 mi E Scout camp gate, 1 (TNHC); RM Rd 1832, 7 mi WSW jct with TX Hwy 17, 2 (TNHC); RM Rd 1832, 7.3 mi WSW jct with TX Hwy 17, 1 (TNHC); RM Rd 1832, 8.3 mi WSW jct with TX Hwy 17, 1 (TNHC); RM Rd 1832, 8.6 mi WSW jct with TX Hwy 17, 1 (TNHC); RM Rd 1832, 10.3 mi WSW jct with TX Hwy 17, 1 (TNHC); RM Rd 1832, 10.4 mi WSW jct with TX Hwy 17, 1 (TNHC); TX 17, 10.5 mi S Balmorhea, 1 (TCWC); TX Hwy 17, 1 rd mi S jct with RM Rd 1832, 1 (TNHC); TX Hwy 17, 3.0 km SE jct RM Rd 1832, 1 (UTA). The last of these were collected in 2007.

Ophibolus gentilis Baird and Girard, 1853
= *Lampropeltis triangulum gentilis*
[Central Plains Milksnake]

1789. *Coluber triangulum* Lacépède, Hist. Nat. Quad. Ovipa. Serp. Vol. 2, p. 86.

1853. *Ophibolus gentilis* Baird and Girard, Cat. N. A. Rept. Smithsonian Inst. I – Serpents, p. 90.

1854. *Ablabes triangulum* Duméril et al., Erp. Gén., Liv. 7, p. 315.

1860. *Lampropeltis multistriata* (in part) Kennicott, Proc. Acad. Nat. Sci. Phila. (1861), 12:328.

1860. *Lampropeltis triangula* Cope, Cat. Colubr. Mus. Adac. Nat. Sci. Phila. Proc. Acad. Nat. Sci. Phila. (1861), 12:256.

1866. *Coronella doliata gentilis* Jan, Iconogr. Gén. Ophid., Plate I.2.

1883. *Ophibolus triangulus* var. *gentilis* Garman, Memoirs of the Museum of Comparative Zoology (1884):66.

1882. *Ophibolus doliatus gentilis* (in part) Yarrow, Check List North Amer. Rept. Batrach. Catalog. Spec. U.S. Nat. Mus. (1883):90.

1894. *Coronella gentilis* Boulenger, Cat. Snakes British Mus. (Nat. Hist.), Vol. II., p. 201.

1900. *Osceola doliata gentilis* Cope, Rept. U.S. Nat. Mus. 1898, p. 894.

1903. *Lampropeltis pyromelana caelenops* (in part) Stejneger, Proc. U.S. Nat. Mus. 25:153.

1913. *Lampropeltis doliatus gentilis* Ellis and Henderson, Univ. Colorado Stud. 10:91.

1917. *Lampropeltis triangulum gentilis* Stejneger and Barbour, Check List North Amer. Amphib. Rept. [1st ed.], p. 90.

2013. *Lampropeltis triangulum gentilis* Dixon, Amphib. Rept. Tex., 3rd ed., p. 246.

Type specimens.—Lectotype, USNM adult male, 1853, obtained 14 June 1852 by Capt. Radolph Barnes Marcy. There were two other syntypes: USNM 2296 obtained by J. Fairie, and USNM 131737 (formerly 1852) obtained by Capt. George B. McClennan. Blanchard (1921) designated the lectotype for this taxon.

Type locality.—Lectotype is from "North Fork Red River, near Sweetwater Creek, Wheeler County, Texas," selected by Blanchard (1921) over the other two syntypes (from Louisiana and Oklahoma).

Topotypes.—None.

Near topotypes.—Collingsworth Co: 1 mi N Quail, 1 (TNHC). The most recent near topotype was collected in 1956.

Remarks.—The first use of the combination *Lampropeltis triangulum gentilis* was by Stejneger and Barbour (1917) and was universally accepted as applicable to a set of Texas populations for the next 96 years. However, the novel phylogeographic analysis of the polytypic species *Lampropeltis triangulum* by Ruane et al. (2014) recommended species status for a clade of western US nominal subspecies for which the oldest valid name would be *Lampropeltis gentilis*. The Ruane et al. partition of *Lampropeltis triangulum* resulted in the Tamaulipan Plain populations being placed into the nominal species *L. annulata* with other populations, and those of the East Texas woodlands, Panhandle, Trans-Pecos, and Edwards Plateau being allocated to *L. gentilis*. Five years later, Chambers and Hillis (2019) published a re-analysis of the Ruane et al. data that indicated *L. annulata* and *L. gentilis* were not recognizable as species-level taxa distinct from *L. triangulum*. However, their work did not address the validity of the several subspecies subsumed under *L. gentilis*, leaving the original Stejneger and Barbou combination *Lampropeltis triangulum gentilis* in taxonomic limbo. This catalog tentatively accepts the Stejneger and Barbour subspecies name, as applied to Texas populations by Dixon (2013).

Pituophis mclennani Baird and Girard, 1853
= *Pituophis catenifer sayi*
[Bullsnake]

1803. *Coluber melanoleucus* Daudin, Hist. Nat. Gén. Partic. Rept. 6:409.

1827. *Coluber melanoleucus* var. *Say* Harlan, J. Acad. Nat. Sci. Phila. 5:360.

1835. *Coluber catenifer* Blainville, Nov. Ann. Mus. Hist. Natur., (Paris) 4:290.

1837. *Coluber sayi* Schlegel, Essai Physion. Serpens, Vol. II, p. 157.

1842. *Pituophis melanoleucus* Holbrook, North Amer. Herpetol, Vol. 4, p. 7.

1852. *Churchillia bellona* Baird and Girard, Proc. Acad. Nat. Sci. 6:70.

1853. *Pituophis bellona* Baird and Girard, Smiths. Misc. Coll. 2:19.

1853. *Pituophis mcclennani* Baird and Girard, Smiths. Misc. Coll. 2:68.

1857. *Pityophis mcclennani* Baird, Reptiles, in Rep. Pacific R.R. Surv. (1859) Vol. 10, No.1, plate 29, fig. 47.

1859. *Pityophis bellona* Kennicott in Baird, Rep. Rept. Coll. Surv., in Rep. Pacific R.R. Surv., Vol. 10, No. 3, p. 19.

1860. *Pituophis sayi* Cooper, Rep. Rept. Coll. Surv., in Rep. Pacific R.R. Surv., Vol. 12, No. 4, p. 300.

1875. *Pityophis sayi sayi* Cope, Bull. U.S. Nat. Mus. 1:39.

1883. *Pituophis catenifer* var. *sayi* Garman, Mem. Mus. Comp. Zool. 8:52.

1884. *Pityophis sayi bellona* White, Amer. Nat. 18:20.

1891. *Pityophis catenifer sayi* Taylor, Ann. Report, Nebraska St. Brd. Agric., (1892), p. 335.

1914. *Pituophis catenifer sayi* Gaige, Copeia 11:4.

1925. *Pituophis sayi sayi* Force, Copeia 141:25.

1951. *Pituophis melanoleucus sayi* Smith and Kennedy, Herpetologica 7:96.

1953. *Pituophis catenifer sayi* Schmidt, Check List North Amer. Amphib. Rept., 6th ed., p. 203.

1990. *Pituophis melanoleucus sayi* Sweet and Parker, Cat. Amer. Amphib. Rept. 474:474.4.

1990. *Pituophis catenifer sayi* Collins, Stand. Comm. Sci. Names North Amer. Amphib. Rept., 3rd ed., SSAR Herpetol. Circ. 19:32.

Type specimen.—Holotype, subadult, USNM 1540, obtained 28 January 1852 by Captains Randolph B. Marcy and George B. McClellan (Sweet and Parker 1990).

Type locality.—Originally "Red River, Ark," although the Marcy/McClennan expedition never actually went into Arkansas, and the catalog ledger entry apparently indicates "Red River, Deaf Smith County, Texas" (Cochran 1961). The Red River proper, however, in modern terms is not currently considered to extend to its contributing headwater drainages of Deaf Smith County (Tierra Blanco Creek and Palo Duro Creek). These coalesce to form the Prairie Dog Town Fork of the Red River in adjacent Randall County.

Topotypes.—None.

Near topotypes.—Deaf Smith Co: Hereford, 1 (TCWC); 15 mi N, 17.4 mi N Hereford, 1 (TCWC), collected 1966 and 1965, respectively. The town of Hereford is located on Tierra Blanco Creek, and the other locality is within the Palo Duro Creek watershed.

Salvadora hexalepis deserticola Schmidt, 1940
= *Salvadora deserticola*
[Big Bend Patch-nosed Snake]

1866. *Phimothyra hexalepis* Cope, Proc. Acad. Nat. Sci. Phila. (1867), 18:304.

1903. *Salvadora hexalpeis* Stejneger, Proc. U.S. Nat. Mus. 25:154.

1940. *Salvadora hexalepis desertícola* Schmidt, Zool. Ser. Field Mus. Nat. Hist. 24:146.

1941. *Salvadora hexalepis celeris* Smith, Smiths. Misc. Coll. 99:9.

1961. *Salvadora deserticola* Bogert and Degenhardt, Amer. Mus. Novit. 1285:13.

1985. *Salvadora hexalepis deserticola* Stebbins, Field Guide West. Amphib. Rept., 2nd ed., p. 185.

1991. *Salvadora deserticola* Conant and Collins, Field Guide Rept. Amphib. East. Centr. North Amer, 3rd ed., p. 193.

2017. *S* [*alvadora*] *h*[*exalepis*] *deserticola* Crother et al., Squamata – Snakes, pp. 52–72 *in* Crother, (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpet. Circ. 43:73.

2021. *Salvadora deserticola* Hernández-Jiménez et al., European J. Taxonomy 764:95.

Type specimen.—Holotype, FMNH 26615, obtained 1935 by Tom Carney.

Type locality.—Government Spring, near Chisos Mountains, Brewster County, Texas. This site now lies within Big Bend National Park.

Topotypes.—None.

Near topotypes.—Brewster Co: 2 mi E [Big Bend National Park] HQ, 1 (UCM); near Chisos Mountains, 2 (FMNH); Mesa de Aguilla, Chisos Mountains, 1 (FMNH); Glenn Spring, vic. Chisos Mountains, 1 (UMMZ); Hayes Ridge, Chisos Mountains, 1 (CHAS,

a paratype); Terlingua Road, near Chisos Mountains, 1 (MCZ). The last of these near topotypes was collected in 1959.

Remarks.—The history and species-subspecies philosophical issues surrounding the recognition of either *Salvadora deserticola* or *Salvadora hexalepis deserticola* were recently reviewed by Hillis (2022b).

Salvadora lineata Schmidt, 1940
= *Salvadora grahmiae lineata*
[Texas Patch-nosed Snake]

1853. *Salvadora grahamiae* Baird and Girard, Cat. North Amer. Rept. Mus. Smiths. Inst., Part 1 – Serp., p. 104.

1866. *P*[*himothyra*] *grahamiae* Cope, Proc. Acad. Nat. Sci. Phila. (1867), 18:304.

1875. *Phymothrya grahamiae* Cope, Bull. U.S. Nat. Mus. 1:38.

1940. *Salvadora lineata* Schmidt, Zool. Ser. Field Mus. Nat. Hist. 24:148.

1975. *Salvadora grahamiae lineata* Conant, Field Guide Rept. Amphib. East. Centr. North Amer., 2nd ed., p. 188.

Type specimen.—Holotype, adult female, FMNH 28605, obtained 1938 by Prof. J. C. Cross.

Type locality.—Kingsville, Kleberg County, Texas.

Topotypes.—None.

Near topotypes.—Kleberg Co: ca. 3 mi SE Kingsville on E campus of A and I College [Texas A&I, now Texas A&M Kingsville], 2 (TNHC). When these two near topotypes were collected (1949), the Texas A&I College campus was located outside of Kingsville proper.

Remarks.—Based on morphological data, Hernández-Jiménez et al. (2021) recently revised the genus *Salvadora* and reinstated the subspecies *Salvadora grahamiae lineata* to full species status (*S. lineata*), as originally described in 1940. The authors also proposed a distant phylogenetic relationship of the *lineata* taxon to *S. grahamiae*. This catalog, however, provisionally retains the subspecific combination *Salvadora grahamia lineata* (accepted as valid since 1975) until additional evidence of such species-level divergence is presented.

Scolecophis fumiceps Cope, 1860
= *Tantilla nigriceps*
[Plains Black-headed Snake]

1860. *Tantilla nigriceps* Kennicott, Proc. Acad. Nat. Sci. Phila. 12:328.

1860. *Scolecophis fumiceps* Cope, Proc. Acad. Nat. Sci. Phila. 12:371.

1883. *Homalocranion praeoculum* Bocourt, in Duméril, Bocourt, and Mocquard, Miss. Sci. Mex. Amer. Centr., Liv. 9:583.

1938. *Tantilla kirnia* Blanchard, Zool. Ser. Field Mus. Nat. Hist. 20:373.

1941. *Tantilla nigriceps fumiceps* Smith, Copeia 1941:11.

1981. *Tantilla nigriceps* Cole and Hardy, Bull. Amer. Mus. Nat. Hist. 171:205.

Type specimen.—Holotype MCZ 46249, formerly USNM 12135, but "returned" to MCZ in 1942 (Cochran 1961).

Type locality.—"Probably Cuba," an obvious error (Cochran 1961). The type locality was redesignated to San Antonio, Bexar County, Texas, by Schmidt (1953).

Topotypes.—Bexar Co: San Antonio 1 (LACM, TNHC). The most recent near topotype was obtained in 1964.

Near topotypes.—Bexar Co: near San Antonio, 1 (USNM); 9 mi SE San Antonio, 1 (SDNMH). The only date associated with either of these is 1943.

Remarks.—Smith (1941) was first to use the combination *Tantilla nigriceps fumiceps*, a subspecies that

would later (Schmidt 1953) be geographically associated with southern and central Texas plus southwestern Oklahoma. In the same work, Smith synonymized both *Tantilla kirnia* Blanchard and *Homalocranion praeocularum* Bocourt into this subspecies. Smith and Larsen (1975) examined the Berlin holotype of *H. praeocularum* (ostensibly lost during World War II) to see if it was referable to *Homalocranion atriceps* (= *Tantilla planiceps atriceps*, now *Tantilla hobartsmithi*) or to *T. nigriceps*. These alternatives were influenced by the verbatim type locality of "Colorado" which could refer to the state, the desert, or rivers in Arizona or Texas. The authors were not able to satisfactorily match the described features of the type to any of these alternatives, and they thus decided to leave *H. praeocularum* in the synonymy of *Tantilla nigriceps fumiceps* pending further revelation.

Cole and Hardy (1981) opted not to recognize the subspecies of *Tantilla nigriceps*, observing that the scalation differences used to define them were slight, and the overall scope of variation in the species was still poorly known. These deficiencies, and the lack of recognition for the two subspecies of *T. nigriceps*, have continued into this century. Cole and Hardy (1981) further noted that the holotype of *Homalocranion praeocularium*, which was still in existence, had been loaned to one of the authors back in 1974 for examination (and with a locality tag of "Denver, Colorado"). Cole and Hardy unequivocally identified that type as a specimen of *Tantilla nigriceps* from the northern part of its range, probably eastern Colorado (= *Tantilla nigriceps nigriceps*).

Scotophis emoryi Baird and Girard, 1853
= *Pantherophis emoryi*
[Great Plains Ratsnake]

1853. *Scotophis laeta* Baird and Girard, Cat. North Amer. Rept. Mus. Smiths. Inst., Part 1 – Serp. 16, p. 77.

1853. *Scotophis emoryi* Baird and Girard, Cat. North Amer. Rept. Mus. Smiths. Inst., Part 1 – Serp. 16, p. 157.

1859. *Scotophis calligaster* Kennicott, Proc. Acad. Nat. Sci. Phila. 11:98.

1860. *Coluber rhinomegas* Cope, Proc. Acad. Nat. Sci. Phila. 12:255.

1917. *Elaphe laeta* [*nec Scotophis laetus* Baird and Girard] Stejneger and Barbour, Check List of North Amer. Amph. Rept. [1st ed.], p. 77.

1942. *Elaphe laeta intermonanus* Woodbury and Woodbury, Proc. Biol. Soc. Wash. 55:140.

1951. *Elaphe emoryi emoryi* Dowling, Copeia 1951:43.

1952. *Elaphe guttata emoryi* Dowling, Occ. Pap. Mus. Zool. Univ. Mich. 541:2.

1994. *Elaphe guttata meahllmorum* Smith, Chiszar, Staley, and Tepedelen, Tex. J. Sci. 46:259.

2002. *Elaphe emoryi* Burbrink, Mol. Phylog. Evol. 25:473.

2005. *Pantherophis emoryi* Potts and Collins, Checkl. Vert. Anim. Kans., 3rd ed., p. 16.

2013. *Elaphe* (*Pantherophis*I) *emoryi emoryi* (by implication) Dixon, Amphib. Rept. Tex., 3rd ed., p. 233.

2017. *P*[*antherophis*] *emoryi* Crother et al., Squamata (in part) – Snakes, pp. 59–80 in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpet. Circ. 43:73.

Type specimen.— Collected by John H. Clark, it was once at USNM, but apparently has been lost (Dowling 1951). The specimen was not listed in Cochran (1961).

Type locality.—Howard Springs, Texas. Dowling (1951) pointed out that this locality is [ca.] 20 miles southwest of Ozona in Crockett County, Texas, and was not "Howard Springs, Oklahoma" as cited in Schmidt (1953). See Remarks.

Topotypes.—None.

Near topotypes.—Crockett Co: 6.2 mi E Sheffield, 1 (CM). Terrell Co: TX Hwy 349 at Independence Creek, 1 (TNHC). Val Verde Co: 30 mi N Langtry at Pandale [Pecos River] Crossing, 1 (TCWC); RM Rd

3083, 31.4 mi S Interstate Hwy 10, 1 (TNHC). The most recent near topotype was the last of these, obtained in 2013.

Remarks.—Of the two names for the same taxon described in the same work by Baird and Girard, *Scotophis laetus* had "page priority" over *S. emoryi* found later in the work; subsequent workers would consider them the same species and employ the specific epithet *laeta*, mostly in combination with the genus *Elaphe* until the middle of the 20th century. At this point, Dowling (1951) reported that the type specimen of *Scotophis laeta* actually represented a specimen of a different species (*Elaphe obsoleta*). The next available name for the taxon was *Scotophis emoryi*, and that specific epithet became associated with this taxon thereafter.

Howard Spring is located near the confluence of Howard Draw with Government Canyon. It was on the El Paso – San Antonio Road, in a stretch of that 1850's wagon route between the Rio San Pedro (Devils River) and the Pecos River crossing (see account for *Crotalus ornatus*). Smith et al. (1994) regarded specimens from this area as belonging to the nominate subspecies *Elaphe guttata emoryi*, whereas Vaughan et al. (1996) showed the type locality to be within the intergradation zone of this subspecies and a largely Mexican subspecies, *Elaphe guttata meahllmorum*. The subspecies of *Pantherophis emoryi* and their potential intergradation zones, as mapped by Marshall et al. (2021), also indicate the type locality of *P. e. emoryi* lies within area of intergradation with *P. e. meahllmorum*. For this reason, and because the subspecific identity of the lost *Scotophis emoryi* holotype cannot be determined, this catalog accepts as valid this taxon only at the species level. The locality of a tissue sample specimen of Marshall et al. (2021) from Val Verde County (on RM Rd 3083 south of Interstate Hwy 10) is on Howard Draw Road, just south of the Crockett County line. Marshall et al. (2021) genetically identified the individual as *P. e. emoryi*.

Scotophis lindheimerii Baird and Girard, 1953
= *Pantherophis obsoletus lindheimeri*
[Texas Ratsnake]

1853. *Scotophis lindheimerii* Baird and Girard, Cat. North Amer. Rept. Mus. Smiths. Inst., Part 1 – Serp., p. 74.

1853. *Scotophis laeta* Baird and Girard, Cat. North Amer. Rept. Mus. Smiths. Inst., Part 1 – Serp., p. 77.

1883. *Elaphis obsoletus* var. *lindheimeri* Garman, Mem. Mus. Comp. Zool. (1884), 8:54.

1901. *Coluber obsoletus lindheimeri* Brown, Proc. Acad. Nat. Sci. Phila. 53:48.

1905. *Callopeltis obsoletus* Stejneger, in Bailey, North Amer. Fauna 25:46.

1917. *Elaphe obsoleta lindheimeri* Stejneger and Barbour, Check List North Amer. Amph. Rept. [1st ed.], p. 83.

1933. *Elaphe obsoleta confinis* [*nec Scotophis confinis* Baird and Girard], Stejneger and Barbour, Check List North Amer. Amph. Rept., 3rd ed., p. 99.

1952. *Elaphe obsoleta lindheimeri* Dowling, Occ. Pap. Mus. Zool. Univ. Mich. 541:6.

2000. *Elaphe obsoleta* Burbrink et al., Evolution 54:2116.

2001. *Elaphe obsoleta* Burbrink, Herpetol. Monogr. 15:38.

2002. *Pantherophis obsoletus* Utiger et al., Russian J. Herpetol. 9:110, 114.

2007. *Pituophis obsoleltus* Burbrink and Lawson, Mol. Phylog. Evol. 43:186

2008. *Scotophis obsoletus* Collins and Taggart, J. Kans. Herpetol. 26:17.

2013. *Elaphe* (*Pantherophis*) *obsoleta lindheimeri* (by implication) Dixon, Amphib. Rept. Tex., 3rd ed., p. 235.

2022. *P*[*antherophis*] *o*[*bsoletus*] *lindheimeri* Hillis, Herpetol. Rev. 53:52.

Type specimen.—Holotype, ostensibly USNM 1733, obtained by Ferdinand Lindheimer. However, Dowling (1952) contested that this bleached-out individual really was the actual type specimen, as he identified it as *Elaphe guttata emoryi* [= *Pantherophis emoryi*]. Dowling speculated that Stejneger inadvertently substituted this misidentified individual for the

actual Baird and Girard holotype, and he concluded that the original type specimen is now lost.

Type locality.— New Braunfels, Comal County, Texas.

Topotypes.—Comal Co: New Braunfels, 1 (CUMV, LSUMZ, TNHC). The last specimen of this trio was collected in 2013.

Near topotypes.—Comal Co: near New Braunfels, 2 (LSUMZ); road to Canyon Dam, 1 (CAS). The most recent near topotype was collected in 1975.

Remarks.—In spite of the findings of Burbrink et al. (2000) that their mitochondrial DNA analysis of *Elaphe obsoleta* did not support discrimination of subspecies, and the subsequent report of Burbrink (2001) that neither the analysis of DNA data nor morphological features favored recognition of subspecies, Dixon (2013) and Hillis (2022a) utilized the *lindheimeri* subspecies name for Texas populations. This name combination is thus provisionally accepted as valid for purposes of this catalog.

Sonora semiannulata blanchardi Stickel, 1938
= *Sonora episcopa*
[Great Plains Groundsnake]

1859. *Lamprosoma episcopum* Kennicott, in Baird, Rept. Boundary, U.S. Mex. Bound. Surv. Vol. 2, p. 22.

1860. *Contia episcopa* Cope, Proc. Acad. Nat. Sci. Phila. (1861), 12:251.

1862. *Homalosma episcopum* Jan, Archiv. Zool., l'Anat. Fisiol. 2:35.

1880. *Contia episcopa torquata* Cope, Bull. U.S. Nat. Mus. 17:21.

1883. *Contia semiannulata* Garman, Mem. Mus. Comp. Zool. (1884), 8:90.

1905. *Chionactis episcopus isozonus* Stejneger, in Bailey, North Amer. Fauna 25:47.

1938. *Sonora semiannulata blanchardi* Stickel, Copeia 1938:185.

1938. *Sonora semiannulata semiannulata* Stickel, Copeia 1938:185.

1943. *Sonora episcopa episcopa* Stickel, Proc. Biol. Soc. Wash. 56:121.

1979. *Sonora semiannulata* Frost and Van Devender, Occ. Pap. Mus. Zool. Louisiana St. Univ. 52:6.

1983. *Sonora semiannulata* Frost, Cat. Amer. Amphib. Rept. 333:333.1.

1987. *Sonora semiannulata semiannulata* Dixon, Amphib. Rept. Tex. [1st ed.], p. 123.

2018. *Sonora episcopa* Cox et al., J. Nat. Hist. 52:967.

Type specimen.—Holotype, female, UMMZ 83122, obtained 28 September 1935 by Frank N. Blanchard and J. Tom Carney.

Type locality.—Northeastern slopes of Chisos Mountains, Brewster County, Texas. The Chisos Mountain Range is now entirely enclosed within Big Bend National Park.

Topotypes.—None.

Near topotypes.—Brewster Co: Big Bend National Park, Green Gulch, 1 (KU); Big Bend National Park, The Basin, 3 (KU), 1 (UTA). The last of these near topotypes was collected in 2003.

Remarks.—The specific name applied to the holotype of this taxon is provisional. The most current phylogenetics-based revision of the genus (Cox et al. 2018) indicates both *Sonora episcopa* and *S. semiannulata* occur in western Texas. The latter in Texas was identified from genetic samples from El Paso County and from near the Rio Grande (the "River Road") in Presidio and Brewster counties. Samples from intervening areas of Jeff Davis County were allocated to *S. episcopa*. Cox et al. (2018) noted that specimens of two species in western Texas cannot be morphologically distinguished from one another, although they do point out that in those specimens that possess crossbands, the crossbands are "rectangular" in *S. semiannulata* and appear as "oval-shaped saddles" in *S. episcopa*. Unfortunately, Stickel's (1938) description of the holotype of *S. semiannulata blanchardi* indicates it is

not a cross-banded morph, and thus objective allocation to either western Texas species is uncertain. The western Texas samples of *S. semiannulata* identified by Cox et al. (2018) are all from relatively low elevation Chihuahuan Desert scrubland, whereas at least two of their Jeff Davis County samples of *S. episcopa* are from higher elevation desert grassland or woodland habitats. The Chisos Mountains origin of the type of *blanchardi* is from a higher elevation environment, and thus the taxon has been tentatively allocated to *S. episcopa* for this catalog.

Spilotes erebennus Cope, 1860
= *Drymarchon melanurus erebennus*
[American Indigo Snake]

1827. *Coluber corais* Boie, Isis von Oken 20:537.

1843. *Drymarchon corais* Fitzinger, Syst. Rept., p. 26.

1854. *Spilotes corais* Duméril et al., Erpét. Gén. Hist. Nat. Comp. Rept., Liv. 7, p. 222.

1860. *Spilotes erebennus* Cope, Proc. Acad. Nat. Sci. Phila. 12:342.

1875. *Spilotes corais erbennus* Cope, J. Acad. Nat. Sci. Phila. 8:135

1905. *Drymarchon corais melanurus* Stejneger, in Bailey, North Amer. Fauna 25:47.

1941. *Drymarchon corais erebennus* Smith, J. Wash. Acad Sci. 31:478.

1944. *Drymarchon corais obsoletus* Schmidt and Owens, Zool. Ser. Field Mus. Nat. Hist. 29:110.

2001. *Drymarchon melanurus erebennus* Wüster et al., Herpetol J. 11:163.

Type specimen.—Two syntypes, skin only, USNM 1862, and young adult female, ANSP 3921, both obtained by Arthur Schott (McCranie 1980).

Type locality.—Eagle Pass, Maverick County, Texas.

Topotypes.—Maverick Co: Eagle Pass, 1 (USNM), no collection date.

Near topotypes.—Maverick Co: 3 mi NNW Eagle Pass, 1 (LSUMZ), collected in 1968.

Tantilla cucullata Minton, 1956
[Trans-Pecos Black-headed Snake]

1956. *Tantilla cucullata* Minton, Fieldiana, Zool. 34:144.

1961. *Tantilla diabola* Fouquette and Potter, Copeia 1961:144.

1969. *Tantilla rubra diabola* Smith and Werler, J. Herpetol. 3:172.

1976. *Tantilla rubra cucullata* Degenhardt et al., Tex. J. Sci. 27:225.

1991. *Tantilla cucullata* Collins, Herpetol. Rev. 27:43

2000. *Tantilla cucullata* Dixon et al., Southwest. Nat. 45:150.

Type specimen.—Holotype, adult male, FMNH 74384, obtained 1 July 1955 by Sherman A. Minton, Jr.

Type locality.—Six miles south-southeast of Alpine, Brewster County, Texas, elevation approximately 5,000 feet.

Topotypes.—Brewster Co: 6.0 mi S Alpine on TX Hwy 118, 1 (UTA). This individual, collected in 2003, may be from the type locality (or very close to it).

Near topotypes.—None found. The next closest museum specimen to the type locality found in the VertNet database is from 70 miles south of Alpine.

Remarks.—This snake currently is listed by TPWD as a Threatened species (Davis and LaDuc 2021).

Tantilla diabola Fouquette and Potter, 1961
= *Tantilla cucullata*
[Trans-Pecos Black-headed Snake]

1956. *Tantilla cucullata* Minton, Fieldiana, Zool. 34:144.

1961. *Tantilla diabola* Fouquette and Potter, Copeia 1961:144.

1969. *Tantilla rubra diabola* Smith and Werler, J. Herpetol. 3:172.

1976. *Tantilla rubra cucullata* Degenhardt et al., Tex. J. Sci. 27:225.

2000. *Tantilla cucullata* Dixon et al., Southwest. Nat. 45:150.

Type specimen.—Holotype, adult male, TNHC 24647, obtained 28 March 1959 by George E. Drewry.

Type locality.—Horace Fawcett Ranch, 37 miles north of Del Rio, Val Verde County, Texas. Under "Location Remarks" in the VertNet entry for the type specimen is a notation by D. C[annatella]. dated 8/95 indicating the specific type has been amended to "Devil's River [sic] Horace Fawcett Ranch, 37 miles north of Del Rio, spring-fed tributary of Dolan Creek."

Topotypes.—None found.

Near topotypes.—Val Verde Co: 3.0 mi S Loma Alta on US Hwy 277, 1 (TCWC), collected 2002.

Tantilla gracilis Baird and Girard, 1853
[Flat-headed Snake]

1853. *Tantilla gracilis* Baird and Girard, Cat. N.A. Rept. Smithsonian Inst. I – Serp., p. 132.

1860. *Tantilla hallowelli* Cope, Proc. Acad. Nat. Sci. Phila. 12:77

1935. *Tantilla gracilis gracilis* Burt, Amer. Midl. Nat. 16:336

1949. *Tantilla gracilis hallowelli* Kirn et al., Amer. Midl. Nat. 42:241.

1968. *Tantilla gracilis* Hardy and Cole, Univ. Kans. Publ. Mus. Nat. Hist. 17: 628.

Type specimen.—Holotype UMMZ 3781, obtained by Capt. John Pope, original number USNM 4500, as listed by Peters (1952) and Kluge (1984). Gotte and Wilson (2005) have presented a detailed argument that neither UMMZ 3781 nor USNM 4500 are the true type specimens for this species and that the collector was not John Pope. USNM 4500 originally was a lot of 11 specimens, one of which was exchanged to the UMMZ and eventually cataloged there as the holotype. The description clearly named John Graham as the actual collector, suggesting to Gotte and Wilson that something was amiss concerning the actual type specimen for *Tantilla gracilis*. A bit of detective work revealed that USNM 2040 (or perhaps 2041) was the type specimen used by Baird and Girard, and the introductory material from their 1853 account clarified that it was John H. Clark amongst the Graham party who collected these two specimens. Gotte and Wilson confirmed that neither USNM 2040 nor 2041 could now be located, and thus this taxon was completely without a referable type specimen.

Type locality.—The original locality data for the eleven specimens of USNM 4500 was "Indianola to Nueces, Texas." The transmittal papers from the USNM to the UMMZ for the specimen indicated only "Indianola, [Calhoun County] Texas." This notation subsequently was used as the type locality in the UMMZ, and its use is continued in this catalog.

Topotypes.—Calhoun Co: Indianola, 5 (BUMMC), collected in 1960.

Near topotypes.—Calhoun Co: 8 mi from [sic] Indianola, 1 (BUMMC), collected in 1960.

Remarks.—Hardy and Cole's (1968) range-wide study of *Tantilla gracilis* found that the variation in character states used to distinguish the subspecies *T. g. hallowelli* from the nominative subspecies overlapped to such an extent that the species should be considered monotypic.

Tantilla kirnia Blanchard, 1938
=Tantilla nigriceps
[Plains Black-headed Snake]

1860. *Tantilla nigriceps* Kennicott, Proc. Acad. Nat. Sci. Phila. 12:328.

1860. *Scolecophis fumiceps* Cope, Proc. Acad. Nat. Sci. Phila. 12:371.

1938. *Tantilla kirnia* Blanchard, Zool. Ser. Field Mus. Nat. Hist. 20:373.

1941. *Tantilla nigriceps fumiceps* Smith, Copeia 1941:112.

1981. *Tantilla nigriceps* Cole and Hardy, Bull. Amer. Mus. Nat. Hist. 171:205.

Type specimen.—Holotype, adult male, FMNH 28102, obtained by Calvin C. Forster "for the A. J. Kirn collection" (Blanchard 1938).

Type locality.—9 miles east of Pleasanton, Atascosa County, Texas, "in loose soil of old barnyard, about three inches beneath the surface where the soil became hard."

Topotypes.—Atascosa Co: 9 mi E Pleasanton, 1 (CM, KU). These were collected in 1933 for local naturalist Albert J. B. Kirn. Kirn had developed a particular interest in this regional variant of *Tantilla nigriceps* and accordingly sent off specimens that ended up in several museums.

Near topotypes.—Atascosa Co: 1 mi S Pleasanton, 1 (MPM), obtained in 1973.

Remarks.—Smith (1941) synonymized *Tantilla kirnia* Blanchard into the subspecies *Tantilla nigriceps fumiceps* (Cope); this subspecies and the accompanying nominative trinomial have not been recognized since Cole and Hardy (1981) made their provisional recommendation that *Tantilla nigriceps* should be regarded as monotypic pending further investigation of species variation.

Tantilla nigriceps Kennicott, 1860
= *Tantilla nigriceps*
[Plains Black-headed Snake]

1860. *Tantilla nigriceps* Kennicott, Proc. Acad. Nat. Sci. Phila. 12:328.

1860. *Scolecophis fumiceps* Cope, Proc. Acad. Nat. Sci. Phila. 12:371.

1883. *Homalocranion praeoculum* Bocourt, in Duméril, Bocourt, and Mocquard, Miss. Sci. Mex. Amer. Centr., Liv. 9:583.

1938. *Tantilla kirnia* Blanchard, Zool. Ser. Field Mus. Nat. Hist. 20:373.

1941. *Tantilla nigriceps nigriceps* Smith, Copeia 1941:112.

1941. *Tantilla nigriceps fumiceps* Smith, Copeia 1941:112.

1981. *Tantilla nigriceps* Cole and Hardy, Bull. Amer. Mus. Nat. Hist. 171:205.

Type specimens.—Neotype, adult, UTEP 1349, obtained 5 June 1971 by Arthur J. Ward. There were originally two syntypes: USNM 2046, obtained by Capt. Page, and USNM 4491, obtained by Dr. S. W. Crawford. Both are now lost (Wilson 1999). The neotype was designated by Gotte and Wilson (2005).

Type localities.—USNM 2046 was from "Indianola to Northwest Texas" and USNM 4491 was from "Fort Bliss, El Paso County, Texas." The Gotte and Wilson (2005) neotype locality is Hueco Tanks Road (FM Rd 2775), 0.25 miles north of the junction with US Hwy 62-180.

Topotypes.—There are no exact topotypes for the neotype.

Near topotypes.—El Paso Co: FM Rd 2775, 2.3 mi S Hueco Tanks State Park, 1 (UTEP); Fort Bliss [a topotype of the original syntypes], 1 (MCZ). The former is the more recently collected, in 1975.

Remarks.—Cole and Hardy (1981) pointed out that *Tantilla nigriceps* was the most poorly studied American species with regard to its variation. They declined to recognize the nominal subspecies *T. nigriceps nigriceps* and *T. nigriceps fumiceps*, and subsequent herpetological treatments have since ignored these subspecific taxa.

Zamenis stejnegerianus Cope, 1895
= *Coluber constrictor oaxaca*
[Mexican Racer]

1863. *Coryphodon oaxaca* Jan, Elenco Sistem. Degl. Ofidi Descr. Diseg. L'Iconogr. Gen., p. 63.

1895. *Zamenis stejnegerianus* Cope, Amer. Nat. 29:678.

1895. *Zamenis conirostris* Cope, Amer. Nat. 29:679.

1923. *Coluber oaxaca* Ortenburger, Occ. Pap. Mus. Zool. Univ. Michgan 139:2.

1928. *Coluber constrictor flaviventris* (in part) Ortenburger, Mem. Mus. Univ. Mich. 1:175.

1934. *Coluber ortenburger* Stuart, Occ. Pap. Mus. Zool. Univ. Mich. 284:1.

1942. *Coluber constrictor stejnegerianus* Muliak and Muliak, Copeia 1942:13.

1966. *Coluber constrictor oaxaca* Wilson, Herpetologica 11:45.

Type specimen.—Holotype, adult male, USNM 17065, obtained by C. K. Worthen.

Type locality.—"Cameron Co., Texas" is indicated in the description (Cope 1895) and repeated by Cochran (1961) and Wilson (1966). Schmidt (1953) gave the type locality as "Brownsville." The other type locality restrictions that Schmidt (1953) made are prefixed with "restricted to," and for purposes of this catalog it is assumed that not so indicating "Brownsville" in this case was an oversight.

Topotypes.—Cameron Co: Brownsville, 1 (USNM), no collection date.

Near topotypes.—Cameron Co: [most, but not all with specific locality data], 7 (CHAS), 6 (AMNH), 5 (TNHC, BUMMC), 2 (KU, TCWC, UF), 1 (MCZ, MVZ, SDNHM, UMMZ). The last of these was obtained in 2009.

Remarks.—Specimens now allocated to *Coluber constrictor oaxaca* from across the Rio Grande from Brownsville in Matamoros [Tamaulipas, Mexico] are topotypes for another of its junior synonyms, *Zamenis conirostris*.

Family Dipsadidae

Diadophis docilis Baird and Girard, 1853
= *Diadophis punctatus regalis*
[Regal Ring-necked Snake]

1766. *Coluber punctatus* Linnaeus, Syst. Nat., 12th ed., p. 376.

1853. *Diadophis docilis* Baird and Girard, Cat. N. A. Rept. Smithsonian Inst. I – Serp., p. 114.

1853. *Diadophis regalis* Baird and Girard, Cat. N. A. Rept. Smithsonian Inst. I – Serp., p. 115.

1863. *Diadophis punctatus docilis* Jan, Arch. Zool. Anat. Fisiol. 2:262.

1863. *Diadophis laetus* Jan, Arch. Zool. Anat. Fisiol. 2:262

1875. *Diadophis pulchellus* Yarrow, Geog. Geol. Expd. W 100th Merid., Vol. 5, p. 538.

1886. *Diadophis punctatus regalis* Bocourt, in Duméril, Bocourt, and Mocquard, Miss. Sci. Mex. Amer. Centr., Liv. 10:624.

1900. *Diadophis amabilis docilis* (in part) Cope, Ann. Rep. U.S. Nat. Mus. 1898, p. 748.

1942. *Diadophis regalis regalis* Blanchard, Bull. Chicago Acad. Sci. 7:60

1944. *Diadophis regalis blanchardi* Schmidt and Smith, Zool. Ser. Field Mus. Nat. Hist. 29:89.

1903. *Diadophis amabilis* Brown, Proc. Acad. Nat. Sci. Phila. 55:550.

1956. *Diadophis punctatus regalis* Mecham, Copeia 1956:52.

Type specimen.—Holotype, USNM 2074, obtained by John H. Clark. According to Blanchard (1942), the single type specimen in the original 1853 description apparently was sent to the Milan Museum in Italy about 1860. Blanchard corresponded with that

museum in 1927 and discovered that the specimen was apparently lost. However, that type was figured by Baird (1859) prior to being sent to Europe.

Type locality.—The type locality for *Diadophis docilis* was discussed at length by Blanchard (1942). In the original description, the type locality was "Rio San Pedro" (= Devils River), with only one specimen listed, the actual type specimen. Unfortunately, Baird (1859) convoluted the situation by listing two additional syntypes of this species with the original type: USNM 2066 from Tucson [Arizona] obtained by Arthur Schott, and USNM 2078, obtained by Dr. Caleb Kennerly from "Pecos to Rio Grande." Nevertheless, the ostensible 1853 type specimen (USNM 2074) figured by Baird (1859) is attributed to a specimen from "San Pedro, Comanche Spring." The former location can be assumed in this case to be either the San Pedro River, now called the Devils River, in Val Verde County, or the large spring at Fort Stockton in Pecos County. Blanchard (1942) documented that the now missing 1853 type was not cataloged until 1858, and that the ledger entry for it in Girard's handwriting stated the locality as "bet. S. Pedro and Comanche Spr." Subsequently, Jan (1863) reported a *Diadophis docilis* described by Baird in the Milan Museum bearing the locality "S. Pedro to Comanche Springs, Texas." Blanchard concluded that the correct placement of the type locality should thus be in Texas between the Devils River and Comanche Springs. A decade later, Schmidt (1953) restricted the type locality to the Devils River in Val Verde County, Texas. However, for purposes of this catalog, the more fully researched type locality of Blanchard (between Devils River in Val Verde County and Comanche Springs [now in Fort Stockton] in Pecos County, Texas) is tentatively accepted. The origin of the type specimen would thus probably be from a portion of the Old El Paso-San Antonio Road wagon route used in the early 1850's by Boundary Survey personnel (e.g., John Clark). That portion of the wagon route went from near the mouth of the Devils River in Val Verde County through parts of Crockett, Terrell, and Pecos County to Comanche Springs; this passage is described in more detail in this catalog's account for the rattlesnake *Crotalus ornatus*.

Topotypes.—The type locality is too vague to permit meaningful assignation of topotypes.

Near topotypes.—Crockett Co: 11.4 mi E Sheffield on US Hwy 290, 2 (TNHC). Terrell Co: Oasis Ranch, 1 (TCWC). Pecos Co: Fort Stockton, 1 (USNM). Val Verde Co; 16 mi (by rd) N Comstock, 1 (LSUMZ); 17.7 mi N Jct with US Hwy 90 and TX Hwy 163, 1 (UAZ). The most recent of these collected 2004.

Diadophis regalis blanchardi Schmidt and Smith, 1944
= *Diadophis punctatus regalis*
[Regal Ring-necked Snake]

1766. *Coluber punctatus* Linnaeus, Syst. Nat., 12th ed., p. 376.

1853. *Diadophis docilis* Baird and Girard, Cat. N. A. Rept. Smithsonian Inst. I – Serp., p. 114.

1853. *Diadophis regalis* Baird and Girard, Cat. N. A. Rept. Smithsonian Inst. I – Serp., p. 115.

1863. *Diadophis punctatus docilis* Jan, Arch. Zool. Anat. Fisiol. 2:262.

1863. *Diadophis punctatus laetus* Jan, Arch. Zool. Anat. Fisiol. 2:262

1875. *Diadophis pulchellus* Yarrow, Geog. Geol. Expd. W 100th Merid., Vol. 5, p. 538.

1882. *Diadophis punctatus pulchellus* Yarrow, Bull. U S. Nat Mus. 24:15.

1886. *Diadophis punctatus regalis* Bocourt, in Duméril, Bocourt, and Mocquard, Miss. Sci. Mex. Amer. Centr., Liv. 10:624.

1942. *Diadophis regalis regalis* Blanchard, Bull. Chicago Acad. Sci. 7:60.

1944. *Diadophis regalis blanchardi* Schmidt and Smith, Zool. Ser. Field Mus. Nat. Hist. 29:89.

1956. *Diadophis punctatus regalis* Mecham, Copeia 1956:52.

Type specimen.—Holotype, adult male, USNM 103641, obtained 7 August 1936 by Tarleton F. Smith, original number National Park Service 161.

Type locality.—The Basin, Chisos Mountains, 5,200 feet, Brewster County, Texas. This location lies within Big Bend National Park. Schmidt and Smith (1944) refer to three paratypes (National Park Collection 201 and 279, and FMNH 25212) without indicating if they also are topotypes.

Topotypes.—Brewster Co: Basin, Chisos Mountains, 1 (MCZ); Nature Trail, Basin, Big Bend National Park, 1 (KU); Chisos Mtns Basin, Big Bend National Park, 1 (UTA); Vernon Bailey Canyon, Chisos Mtns Basin, Big Bend National Park, 1 (MVZ). The last topotype was obtained in 2013.

Near topotypes.—Brewster Co: BBNP, Lost Mine Ridge, Chisos Mtns, 1 (TCWC); 3 mi N Chisos Basin Campground, 1 (CM); Panther Pass, Big Bend National Park, 1 (KU). The last near topotype was collected in 1970.

Remarks.—*Diadophis punctatus blanchardi* includes the "ringless Ring-necked Snake" color morph of the *regalis* subspecies found in the mountains near the Rio Grande in far West Texas, from Brewster to El Paso County. Aside from Wright and Wright (1957), this taxon has not received serious consideration as to its distinctness from *Diadophis punctatus regalis*.

Diadophis texensis Kennicott, 1860
= *Diadophis punctatus stictogenys*
[Mississippi Ring-necked Snake]

1860. *Diadophis punctatus* var. *stictogenys* Cope, Proc. Acad. Nat. Sci. Phila. 12:250.

1860. *Diadophis occipitalis* Cope, Proc. Acad. Nat. Sci. Phila. 12:250

1860. *Diadophis texensis* Kennicott, Proc. Acad. Nat. Sci. Phila. 12:328.

1883. *Diadophis punctatus amabilis* Davis and Rice, Bull. Chicago Acad. Sci. 1:29.

1900. *Diadophis amablis docilis* Cope, Ann Rep. U.S. Nat. Mus. 1898, p. 743.

1908. *Diadophis regalis* Strecker, Proc. Biol. Soc. Wash. 21:73.

1909. *Diadophis regalis* [color variety] *arnyi* Hurter and Strecker, Trans. Acad. Sci. St. Louis 18:25.

1915. *Diadophis amabilis* (in part) Strecker, Baylor Bull. 18:38.

1953. *Diadophis punctatus stictogenys* Blanchard, Bull. Chicago Acad. Sci. 7:88.

Type specimens.—Three syntypes: USNM 1897, received from Prof. E. B. Andrews; USNM 2076, received from John Pope; and USNM 2155, obtained by H. Teunison. Cochran (1961) listed these three as the type material, apparently missing Cope's (1900) designation of USNM 1897 as the sole type specimen.

Type localities.—Originally three type localities, one each per syntype: 1) between New Orleans, Louisiana and Galveston for the Andrews specimen; 2) head of the Trinity River [East Fork?] for the Pope specimen; and 3) Monticello, Mississippi, for the Teunison specimen. *Diadophis punctatus stictogenys* is recorded from Galveston, Chambers, and Jefferson counties (see Dixon 2013). The headwater areas of the Trinity River are occupied by the more westerly (and fairly distinctive) subspecies, *D. punctatus arnyi*. Moreover, Captain John Pope's 1853 expedition, angling northeast from Carlsbad, New Mexico, towards the Red River, terminated at Preston (Grayson County, west of the known range of *D. p. stictogenys*). The type locality of *D. texensis* was restricted to "Texas east of Galveston" by Schmidt (1953), an action accepted for this catalog.

Topotypes.—The accepted type locality (Texas east of Galveston) is too vague for assignation of topotypes.

Near topotypes.—Galveston Co: 1 mi NW League City, 1 (TCWC). Harris Co: Houston, southern part, 1 (UF); south Houston, Intervale, 1 (BUMMC); East Haven, 1 (BUMMC). The most recent of these was collected in 1963.

Remarks.—Ring-necked snake populations in the Gulf Coast area of Texas may be allopatric to those elsewhere in Texas and in Louisiana (see Powell et al. 2016). Should the taxonomic need arise, *Diadophis texensis* will be the oldest available name for these populations.

Dipsas septentrionalis Kennicott, 1859
= *Leptodeira septentrionalis*
[Northern Cat-eyed Snake]

1758. *Coluber annulatus* Linnaeus, Syst. Nat, 10th ed., 1:224.

1858. *Leptodeira annulata* Günther, Cat. Colub. Snakes Brit. Mus., p. 166.

1859. *Dipsas septentrionalis* Kennicott, in Baird, Rept. Boundary, U.S. Mex. Bound. Survey, Vol. 2, p. 16.

1870. *Eteirodipsas annulata*, var. *septentrionalis* Jan and Sordelli, Iconogr. Gen. Ophid., Pt. 1, Fig. 2.

1875. *Sibon annulatum septentrionale* Cope, Bull. U.S. Nat. Mus. 1:38.

1891. *Sibon septentrionale* Cope, Bull. U.S. Nat Mus. (1892), 14:677.

1891. *Leptodeira septentrionalis* Stejneger, Proc. U.S. Nat. Mus. 14:505.

1929. *Leptodeira annulata septentrionalis* Amaral, Mem. Inst. Butantan 4:78.

1936. *Leptodeira septentrionalis septentrionalis* Dunn, Proc. Natl. Acad. Sci., U.SA. 22:697.

1958. *Leptodeira septentrionalis septentrionalis* Duellman, Bull. Amer. Mus. Nat. Hist. 114:68.

2017. *L*[*eptodeira*] *septentrionalis* Crother et al., Squamata (in part) – Serpentes, pp. 59–80 in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol Circ. 43:70.

Type specimens.—There were four syntypes, USNM 4267 (2 specimens), USNM 4273, obtained by Darius N. Couch, and USNM 131739 (formerly a once-lost USNM 2288) obtained by Stewart Van Vliet. Duellman (1958) inferred that when Smith and Taylor (1950a) restricted the type locality to the Van Vliet syntype, USNM 2288 became a designated lectotype. Smith and Taylor's specific action, however, neither refers to any of the syntypes nor engages in the entirely separate taxonomic process of lectotype designation.

Type localities.—The Couch syntypes are from Matamoros, Tamaulipas (Mexico), and the Van Vliet syntype originated from Brownsville, Texas. As mentioned above, the type locality was restricted by Smith and Taylor (1950a), and this action is provisionally accepted for this catalog pending a valid designation of a lectotype from among the syntypes.

Topotypes.—Cameron Co: Brownsville, 1 (ANSP, FMNH, MCZ, USNM). The only date associated with these three topotypes is 1927 for the FMNH topotype.

Near topotypes.—The four Couch syntypes from Matamoros qualify as near topotypes, but there are none from Texas. The nearest museum vouchers in VertNet database are ca. 60 air kilometers northeast in Hidalgo County, and 70 kilometers north in Willacy County.

Remarks.—The trinomial *Leptodeira septentrionalis septentrionalis* has been applied to Texas and adjacent northeastern Mexico (Tamaulipas) populations of cat-eyed snakes from the 1930s until fairly recently. Crother et al. (2017) declined to recognize this subspecies because of revelations of apparent polyphyly in the more southerly races of *L. septentrionalis* by Daza et al. (2009). When the taxonomic consequences of this new information are implemented, *L. septentrionalis* may well be recognized as a monotypic species.

Leptodeira septentionalis is protected as a Threatened species in Texas by TPWD (Davis and LaDuc 2021).

Heterodon cognatus Baird and Girard, 1853
= *Heterodon nasicus nasicus*
[Plains Hog-nosed Snake]

1852. *Heterodon nasicus* Baird and Girard, Stansbury's Expl. Surv. Valley Great Salt Lake, p. 352.

1853. *Heterodon cognatus* Baird and Girard, Cat. N. A. Rept. Smithsonian Inst. I – Serp., p. 54

1858. *Heterodon catesbyi* Günther, Cat. Colubr. Snakes Coll. British. Mus, p. 83.

1875. *Heterodon simus nasicus* Cope, Bull, U.S. Nat. Mus. 1:43.

1900. *Heterodon nasicus nasicus* Cope, Ann. Rept. U.S. Na. Mus. 1898, p. 774.

1904. *Heterodon platyrhinus* Branson, Kansas Univ. Sci. Bull. 11:371.

1953. *Heterodon nasicus nasicus* Schmidt, Check List North Amer. Amphib. Rept., 6th ed., p. 179.

Type specimens.—According to the describers, originally there were three specimens used for the description: USNM 1250 (one specimen) and USNM 1271 (2 specimens). The original catalog ledger *fide* Ronald I. Crombie (USNM, personal communication) to Walley and Eckerman (1999) has entries for the above two numbers, but apparently did not mention the second specimen of 1271. Cochran (1961) gives USNM 1271 as a syntype, the skin of one specimen only, sex undetermined, obtained by James D. Graham. The current USNM catalog has two specimens associated with this number, but only one of these is tagged. Walley and Eckerman (1999) speculated that the untagged individual may be the missing USNM 1271 specimen, or, alternatively, may be USNM 1250 (which also was apparently lost).

Type locality.—Indianola (USNM 1271) in Calhoun County, Texas, and New Braunfels (USNM 1250) in Comal County, Texas.

Topotypes.—Neither of the type localities are represented by additional museum specimens and there are no specimens from Calhoun or Comal County (see distribution map in Dixon 2013).

Near topotypes.—None found in the VertNet database or in the literature. The dot-map of known localities for *Heterodon nasicus* in Walley and Eckerman (1999) and Dixon (2013) shows none for the Texas Coastal plain between the Colorado and Nueces Rivers of Texas. The map of Walley and Eckerman shows three localities in central Texas, one of which (LSUMZ 9275) was collected in 1961 from an indefinite location in Blanco County (also marked on Dixon's map as well). The only other central Texas locality on Dixon's map is for Bexar County, based on MCZ 5919 from San Antonio that was probably collected more than a century ago. However, there is a 2020 image of *Heterodon nasicus* posted on the iNaturalist website from west of New Braunfels in Comal County (accessed 4 Dec 2020). This photograph is the first evidence in this century of the continued presence of the Plains Hog-nosed Snake in central Texas.

Remarks.—Walley and Eckerman (1999) indicated they did not examine the extant syntype (USNM 1271); in the USNM type specimen database, that specimen is now entered as *Heterodon platirhinos*, the Eastern Hognose Snake. Moreover, the Reptile Database entry for that species indicates without comment that *H. cognatus* is a synonym of *H. platirhinos*. This snake is common on the south-central Gulf Coastal plain of Texas, and relatively frequently encountered in Comal County. Potential type material confusion with *H. nasicus* may explain why there are no topotype or near topotype museum specimens of *H. cognatus*.

Heterodon kennerlyi Kennicott, 1860
[Mexican Hog-nosed Snake]

1852. *Heterodon nasicus* Baird and Girard, Stansbury's Expl. Surv. Valley Great Salt Lake, p. 52

1860. *Heterodon Kennerlyi* Kennicott, Proc. Acad. Nat. Sci. Phila. 12:336.

1878. *Heterodon simus kennerlyi* Coues and Yarrow, Bull. U.S. Geol. Geogr. Surv. 4:271.

1900. *Heterodon nasicus kennerlyi* Cope, Ann. Rept. U.S. Nat. Mus. 1898, p. 773.

1905. *Heterodon nasicus* (part) Stejneger, in Bailey, North Amer. Fauna 25:45.

2003. *Heterodon kennerlyi* Smith et al., and Walley, J. Kans. Herpetol. 5:19.

Type specimen.—Lectotype, USNM 1281 (Walley and Eckerman 1999). According to Cochran (1961), there originally were three syntypes: USNM 7290, obtained by Arthur Schott, and USNM 1282 (two specimens) obtained by Darius N. Couch. No dates are associated with either.

Type localities.—The two Couch syntypes were entered in the USNM catalog as being from "Sonora," and the Schott syntype was from "Lower Rio Grande, Texas." Smith and Taylor (1950a) arbitrarily restricted

the species type locality to Brownsville (Cameron County), and then Schmidt (1953), either missing Smith and Taylor's action or deliberately ignoring it, restricted it to "the mouth of the Pecos River" in Val Verde County. Afterwards, and perhaps in response to these previous two actions, Cochran (1961) restored the type locality of the Couch syntypes to "Lower Rio Grande, Texas, and Sonora, Mexico," and repeated the original in-part redundant designation for the Schott syntype. The type locality definition changed again when Walley and Eckerman (1999) selected USNM 1281 as the holotype (actually a lectotype), presumably using a Couch syntype that was associated with the Lower Rio Grande of Texas. There is no evidence that the Sonora type locality is valid, or that it even represents a Couch collection. Reference to "Sonora" by mid-19th century collectors actually refer to collections made in the copper mining areas in what today is Grant County, New Mexico (Webb 1988). The Mexican Hognose Snake does occur in that part of New Mexico. However, Lt. Couch's natural history activities in Mexico were entirely in the lower Rio Grande Valley of Tamaulipas and inland areas of Coahuila (Conant 1968).

Topotypes.—The finalized "Lower Rio Grande" of Texas type locality is still too vague to realistically assign topotypes, so museum specimens from the area have been assigned to the near topotype category.

Near topotypes.—Cameron Co: El Jaboncilla, 1 (USNM). Hidalgo Co: Edinburg, 1 (AMNH, BUMMC, CHAS, CUMV, MCZ); McAllen, 1 (USNM). Starr Co: Rio Grande City, 1 (SDNHM); La Gloria, 2 (TCWC), 1 (LSUMZ); FM Rd 755 at Los Olmos Creek, 1 (KU); FM Rd 2294, 9.6 mi W FM Rd 1017, 1 (TCWC); FM Rd 2686, 1 (TCWC). The most recent near topotypes were collected in 2009.

Heterodon nasicus Baird and Girard, 1852
= *Heterodon nasicus nasicus*
[Plains Hog-nosed Snake]

1852. *Heterodon nasicum* Baird and Girard, Proc. Acad. Sci. Phila. 6:70.

1852. *Heterodon nasicus* Baird and Girard, Stansbury's Expl. Surv. Valley Great Salt Lake, p. 352.

1853. *Heterodon cognatus* Baird and Girard, Cat. N. A. Rept. Smithsonian Inst. I – Serp., p. 54

1858. *Heterodon catesbyi* Günther, Cat. Colubr. Snakes Coll. British. Mus., p. 83.

1875. *Heterodon simus nasicus* Cope, Bull. U.S. Nat. Mus. 1:43.

1900. *Heterodon nasicus nasicus* Cope, Ann. Rept. U.S. Nat. Mus. 1898, p. 774.

1952. *Heterodon nasicus gloydi* Edgren, Chicago Acad. Sci. Nat. Hist. Misc. 112:3.

1998. *Heterodon nasicus nasicus* Walley and Eckerman, Cat. Amer. Amphib. Rept. 698:698.5.

Type specimen.—Holotype, juvenile, ostensibly USNM 1272, received from General Sylvester Churchill. The very brief description (Baird and Girard 1852a) was subsequently followed (1852b) by a more complete version that emended the specific epithet spelling (see above). That holotype was lost some time ago, as the taxon is missing from the list of types in the USNM compiled by Cochran (1961). Webb and Eckerman (1998) have addressed the numerous confusing issues associated with this taxon by designating a neotype, an adult female, USNM 1249, obtained in 1851 or early 1852 by Arthur Schott.

Type locality.—The verbatim type locality in the Baird and Girard (1852a) description was "collected in Texas." In the later redescription (Baird and Girard 1852b) they added "Rio Grande" to the type's locality data and brought attention to the collections of other species by then-Colonel Sylvester Churchill from the "Rio Grande Valley" of Texas. The type locality was arbitrarily restricted to Amarillo, Potter County, by Edgren (1952), a proposal rejected by Webb and Eckerman (1998) for its distance from the Rio Grande. Instead, they tied the provenance of the holotype to the "Presidio del Rio Grande" crossing in Maverick County, potentially used by Churchill in the fall of 1846 as a bivouac area prior to his detachment of troops crossing into Coahuila to engage in the Mexican War. "Presidio del Rio Grande" is an alternative name for the Presidio del Norte; this Rio Grande crossing by Churchill was described in detail in this catalog's earlier account for the snake *Churchillia bellona* (= *Pituophis*

catenifer sayi). Webb and Eckerman also went so far as to restrict the type locality of the original (lost) holotype to "the Rio Grande approximately 4.3 air miles (7 km) southwest El Indio or approximately 19 air miles (30.6 km) downstream from Eagle Pass." I disagree with this placement of Churchill's Rio Grande crossing with respect to the heading and offset distance from El Indio; my position is also explained in the *Churchillia bellona* account. Any disagreement is nevertheless rendered moot by Webb and Eckerman's designation of a neotype with a type locality 19 miles upstream of the Presidio location, at the current city of Eagle Pass. Webb and Eckerman assumed that Churchill took a direct route from San Antonio southwest via one of three *El Camino Real de Tejas* roads to the Rio Grande fords associated with Presidio del Norte. However, F. Churchill's (1888) biography of his father's career revealed the actual troop route to the invasion point of Mexico would have first gone due west from San Antonio to the US military outpost Camp Eagle Pass (on the Rio west of where modern Eagle Pass would be built), and then south-southeast along the Rio Grande to the northermost Presidio crossing.

Topotypes.—No specimens other than the neotype are known from Maverick County (see Remarks).

Near topotypes.—None.

Remarks.—Both the missing holotype and the neotype designated for *Heterodon nasicus* are herein placed as along the Rio Grande in Maverick County, which resides entirely within the geographic distribution of *Heterodon kennerlyi* along the length of the Rio Grande corridor in Texas. It skirts the contiguously allopatric distribution of *H. nasicus*, a species in Texas mostly found in the southern Great Plains (see map in Walley and Eckerman 1999). The type material apparently represents *H. nasicus* and not *H. kennerlyi*. A possible reason for this disconformity is the nineteenth century confusion involving specimens and localities of these hog-nosed snakes at the USNM, as described by Webb and Eckerman (1988). The original specimens of Churchill and Schott from Maverick County that were indeed *H. kennerlyi*, may have been accidentally switched out long ago for specimens of *H. nasicus* from somewhere else. It is tempting to accept the notion that the Maverick County type material was not collected there (and to recognize Edgen's 1952 type locality restriction in the Panhandle as valid). This matter may have to be eventually resolved by the ICZN, and thus for the time being this catalog relegates *Heterodon nasicus nasicus* to a taxon described from Texas whose type locality cannot be credibly assigned to a county at this time.

Heterodon nasicus gloydi Edgren, 1952
[Dusky Hog-nosed Snake]

1852. *Heterodon nasicus* Baird and Girard, Stansbury's Expl. Surv. Valley Great Salt Lake, p. 352

1853. *Heterodon cognatus* Baird and Girard, Cat. N. A. Rept. Mus. Smithsonian Inst. I – Serp., p. 54

1875. *Heterodon simus nasicus* Cope, Bull. U.S. Nat. Mus. 1:43.

1900. *Heterodon nasicus nasicus* Cope, Ann. Rept. U.S. Na. Mus. 1898, p. 774.

1952. *Heterodon nasicus gloydi* Edgren, Chicago Acad. Sci. Nat. Hist. Misc. 112:3.

1969. *Heterodon nasicus* Platt, Univ. Kans. Publ. Mus. Nat. Hist. 18:284.

1999. *Heterodon nasicus nasicus* Walley and Eckerman, Cat. Amer. Amphib. Rept. 698:698.5.

2000. *Heterodon nasicus gloydi* Werler and Dixon, Texas Snakes, p. 131.

2008. *H*[*eterodon*] *gloydi*, Crother et al., Squamata – Snakes, pp. 46–65 in Crother (ed.), Sci. Stand. Engl. Names Amphib. Rept. North Amer. North Mexico, 6th ed., SSAR Herpetol. Circ. 37:53.

2013. *Heterodon nasicus gloydi* Dixon, Amphib. Rept. Tex., 3rd ed., p. 240.

Type specimen.—Holotype, female, USNM 5083, obtained by Francis Kellogg in the early 1860's.

Type locality.—Wheelock, Robertson County, Texas.

Topotypes.—Robertson Co: Wheelock, 2 (USNM, paratypes), also from early 1860's.

Near topotypes.—Robertson Co: 9 mi N Hearne, 1 (BUMMC); Brazos Co: Bryan, 1 (TCWC); Bryan, Finfeather Lake, 1 (TCWC); Bryan, Texas A&M Riverside Campus, TX Hwy 21, 1 (TCWC); 4 mi E Bryan, 1 (TCWC); 13 mi E Bryan, Mayfield Chicken Farm, 1 (BYU); 7 mi SE Bryan, 1 (LACM); 6 mi (by TX Hwy 21) WSW Bryan, 1 (BYU); College Station, 2 (TCWC); 11 mi NE College Station, 1 (KU). The last near topotype was obtained in 1972.

Remarks.—Recognition of this subspecies has been controversial since Platt (1969) called its validity "questionable." Walley and Eckerman (1999) went further, allocating *H. n. gloydi* to a junior synonym within *H. n. nasicus*. Werler and Dixon (2000) continued to recognize the subspecies and redefined its distribution such that subsequent workers (Smith et al. 2003; Crother et al. 2008) were more receptive to its validity. Skepticism has since rebounded, and even Dixon (2013), while still recognizing the subspecies, acknowledged that its status was "unstable."

Hypsiglena texana Stejneger, 1893
= *Hypsiglena jani*
[Chihuahuan Nightsnake]

1865. *Liophis janii* Dugés, Acad. Sect. Lett. Montpellier, Mém. Sect. Sci. 6:32.

1893. *Hypsiglena texana* Stejneger, N. Amer. Fauna 7:205.

1943. *Hypsiglena ochrorhynchus janii* Smith, Proc. U.S. Nat. Mus. 93:433.

1944. *Hypsiglena ochrorhynhca texana* Tanner, Great Basin Nat. 5:51.

1953. *Hypsiglena torquata texana* Schmidt, Check List North Amer. Amphib. Rept., 6th ed., p. 218.

1986. *Hypsiglena t*[*orquata*] *jani* Dixon and Dean, Southwest. Nat. 31:314.

2008. *Hypsiglena jani* Mulcahy, Mol. Phyl. Evol. 46:1111.

Type specimen.—Holotype, USNM 1782, obtained by Arthur Schott.

Type locality.—"Between Laredo and Camargo, Texas" interpreted as being on the Texas side of the Rio Grande between Laredo (Webb County) and that portion of southern Starr County opposite the Municipio de Camargo of Tamaulipas, México.

Topotypes.—The type locality is vague, comprising an extent of more than 140 kilometers. Thus, no topotypes are designated.

Near topotypes.—Starr Co: 2 mi S Falcon on US Hwy 83, 1 (TCWC); 1 mi N Roma, US Hwy 83, 1 (TCWC); 3 mi NE Rio Grande City on FM Rd 755, 1 (KU). Webb Co: Laredo, 1 (USNM). Zapata Co: US Hwy 83, 18.7 mi N San Ygnacio, 1 (LSUMZ); Zapata, ca. 3 mi S Arroyo Valeno at bridge on US Hwy 83, 1 (TNHC); 8.2 mi N Zapata on US Hwy 83, 1 (TCWC); 2.3 mi SW New Zapata, 2 (TCWC). The last near topotype was collected in 1982.

Remarks.—The 20th century confusion surrounding the application of nominal species-level taxa *Hypsiglena ochorhyncha* and *H. torquata* were resolved for Texas populations of Night Snakes by the phylogeographic study of Mulcahy (2008).

Taeniophis imperialis Baird and Girard, 1859
= *Coniophanes imperialis imperialis*
[Tamaulipan Black-striped Snake]

1855. *Taeniophis imperialis* Girard, Rep. U.S.N. Astron. Exped. South. Hemisph. 1855:215.

1859. *Taeniophis imperialis* Baird and Girard, U.S. Mex. Bound. Surv., 2, p. 23.

1861. *Coniophanes imperialis* Cope, Proc. Acad. Nat. Sci. Phila. 13:74.

1863. *Glaphyrophis lateralis* Jan, Arch. Zool. Anat. Fisiol. 2:304–305, 328.

1880. *Rhadinaea imperialis* Cope, Bull. U.S. Nat. Mus. 17:44.

1883. *Tachymenis imperialis* Garman, Mem. Mus. Comp. Zool. (1884), 8:61

1887. *Erythrolamprus imperialis* Cope, Bull. U.S. Nat. Mus. 32:77

1895. *Tachymenis fissidens* (in part) Günther, Part CXX–CXXV, pp 145–195 in Godman and Salvin, Biol. Centr.-Amer., p. 161.

1900. *Coniophanes imperialis imperialis* Cope, Ann. Rep. U.S. Nat. Mus. 1898, p. 1090.

1937. *Coniophanes imperialis imperialis* Bailey, Occ. Pap. Mus. Zool. Univ. Mich. 362:6.

Type specimen.—Holotype, adult male, USNM 2060, obtained by Stewart Van Vliet.

Type locality.—Brownsville, Cameron County, Texas. Bailey (1938 [1939]) and Cochran (1961) have indicated that the locality associated with the holotype is Matamoros [in Tamaulipas, Mexico]. There may have been one or more syntypes under USNM 2060, but what is now present in the USNM is the single type specimen from Brownsville.

Topotypes.—Cameron Co: Brownsville, 4 (UMMZ), 2 (MCZ, TCWC, UCM), 1 (CM, KU); Brownsville, jct Washington/Military Dr, 1 (TNHC). The most recently collected topotype was obtained in 1987.

Near topotypes.—Cameron Co: 1 mi N Brownsville, 5 (TCWC); 9 mi SE Brownsville, 2 (ASNHC); 10000 Southmost Rd, TNC [= Texas Nature Conservancy], 2 (TCWC); Harlingen, 1 (BUMMC); 1 mi S Harlingen, 8 (CHAS), 2 (BUMMC). The most recent near topotypes were obtained in 1977.

Remarks.—The first use of the name *Taeniophis imperialis* was by Girard (1855), which Bailey (1938 [1939]) deemed to be a *nomen nudum*. In the same work he indicated that the description can be attributed to Baird and Girard (1859). Other taxonomic issues associated with the above synonymy include Cope (1880) accidentally referring the species to the genus *Rhadinaea*, a *lapsus calami* he later corrected (Cope 1887). Also, in the first of two works on this genus from the 1930's, Bailey (1937) designated a lectotype from among the Milan Museum cotypes of the Mexican taxon *Glaphyrophis lateralis* Jan and placed the name into the synonymy of *Coniophanes imperialis imperialis*.

Texas populations of this snake are listed as Threatened by TPWD (Davis and LaDuc 2021).

Family Elapidae

Elaps tenere Baird and Girard, 1853
= Micrurus tener tener
[Texas Gulf-Coast Coralsnake]

1766. *Coluber fulvius* Linnaeus System. Nat., 12th ed., p. 381.

1826. *Elaps fulvius* Fitzinger, Neue Klass. Rept. Veerwand. Werze. Reptl. Zoolg. Mus. Wien, p. 61.

1827. *Vipera fulva* Harlan, J. Acad. Nat. Sci. Phila. 5:364.

1853. *Elaps tenere* Baird and Girard, Cat. N. A. Rept. Smithsonian Inst. I – Serpents, p. 22.

1853. *Elaps tristis* Baird and Girard, N. A. Rept. Smithsonian Inst. I – Serpents, p. 23.

1858. *Elaps fitzingeri* Jan, Rev. Mag. Zool. 10:521.

1859. *Elaps tener* Günther, Proc. Zool. Soc. London 12:86.

1863. *Elaps fulvius* var. *fitzingeri* Jan, Elenco Sistem. Degl. Ofidi Descr. Diseg. L'Iconogr. Gen., p. 113.

1875. *Elaps fulvius tener* Cope, Bull. U.S. Nat. Mus. 1:34.

1933. *Micrurus fitzingeri* Schmidt, Zool. Ser. Field Mus. Nat. Hist. 20:38.

1933. *Micrurus fulvius tenere* Schmidt, Field. Mus. Nat. Hist. Zool. Ser. 20:40.

1988. *Micrurus fulvius tener* Frost and Collins, Herpet. Rev. 19:73.

1991. *Micrurus tener* Collins, Herpet. Rev. 22:43.

2004. *Micrurus t*[*ener*] *tener* Campbell and Lamar, Venom. Rept. West. Hemisph., Vol. I, p. 197.

Type specimens.—Lectotype, adult female, USNM 1119 (Roze and Tilger 1983). Originally three syntypes: USNM 1119, obtained by James D. Graham;

and two others (not cataloged) obtained by Ferdinand Lindheimer. The Lindheimer syntypes are now apparently lost (Campbell and Lamar 2004). Roze (1996) designated USNM 1119 as the lectotype.

Type locality.—The locality "San Pedro of the Rio Grande" [= Devils River, Val Verde County, Texas] is associated with the Graham specimen (the lectotype, USNM 1119), and "New Braunfels, Texas" with the missing Lindheimer syntypes. The latter was chosen for type locality restriction by Schmidt (1953), an action voided by Roze's (1996) selection of a lectotype. The San Pedro of the Rio Grande is thus accepted as the type locality for this catalog. Campbell and Lamar (2004) suggested that "San Pedro" is actually a town in Cameron County. This Rio Grande location was not a bad recommendation given the main geographic distribution of the species in Texas (as was Schmidt's choice of New Braunfels), but it goes against the large number of other taxa attributed to the Rio San Pedro being associated with mid-19th century travels by Baird's collectors through the Devils River area of Val Verde County.

Topotypes.—The type locality is too vague to meaningfully tie the lectotype to a single population.

Near topotypes.—Val Verde Co: Dolan Falls Preserve, 1 (TCWC); Hwy 163 S of Juno, 1 (UF). The most recent of these was obtained in 2001.

Remarks.—Frost and Collins (1988) pointed out the specific epithet is an adverb that is properly spelled *tener* instead of the "*ternere*" employed by the describer.

Elaps tristis Baird and Girard, 1853
= *Micrurus tener tener*
[Texas Gulf-Coast Coralsnake]

1766. *Coluber fulvius* Linnaeus System. Nat., 12th ed., p. 381

1826. *Elaps fulvius* Fitzinger, Neue Klass. Rept. Veerwand. Werze. Reptl. Zoolg. Mus. Wien, p. 61.

1827. *Vipera fulva* Harlan, J. Acad. Nat. Sci. Phila. 5:364.

1853. *Elaps tenere* (in part) Baird and Girard, Cat. N. A. Rept. Smithsonian Inst. I – Serpents, p. 22.

1853. *Elaps tristis* Baird and Girard, Cat. N. A. Rept. Smithsonian Inst. I – Serpents, p. 23.

1858. *Elaps fitzingeri* Jan, Rev. Mag. Zool. 10:521.

1859. *Elaps tener* Günther, Proc. Zool. Soc. London 12:86.

1875. *Elaps fulvius tener* Cope, Bull. U.S. Nat. Mus. 1:34.

1933. *Micrurus fulvius tenere* Schmidt, Field. Mus. Nat. Hist. Zool. Ser. 20:40.

1953. *Micrurus fulvius tenere* Schmidt, Check List of North Amer. Amphib. Rept., 6th ed., p. 223.

1988. *Micrurus fulvius tener* Frost and Collins, Herpetol. Rev. 19:73.

1991. *Micrurus tener* Collins, Herpetol. Rev. 22:43.

2004. *Micrurus t*[*ener*] *tener* Campbell and Lamar, Venom. Rept. West. Hemisph., Vol. I, p. 197.

Type specimens.—Two syntypes, both adult males, USNM 1123, obtained 15–26 October 1856 by Sylvester Churchill, and USNM 1124, obtained by D. C. Lloyd (see Roze and Tilger 1983).

Type localities.—The verbatim type locality of the Churchill syntype (USNM 1123) is "Rio Grande west of San Antonio, Bexar County, Texas." The origin of this individual can thus be placed between the Mexican War era Camp Eagle Pass (on the Rio Grande west of the future town of Eagle Pass) and the northernmost Rio Grande crossing near the "Presidio del Norte" at San Juan Bautista, Coahuila. This riverside route was traversed by Colonel Churchill and his troops prior to entering Mexico for the war (Churchill 1888; see also Webb and Eckerman 1998, and this catalog's species account for *Churchillia bellona*).

Topotypes.—Churchill's route along the Rio Grande from Eagle Pass to the Presidio del Norte crossing into Mexico spans about 26 air miles, too large an area to designate a topotype with any accuracy.

Near topotypes.—Maverick Co: Eagle Pass, 1 (USNM); Hwy 277, 36 mi S Eagle Pass, 1 (UF). The most recent near topotype was collected in 1977.

Remarks.—Schmidt (1953), who had a particular interest in coralsnake taxonomy, synonymized *Elaps tristis* with *Micrurus fulvius tenere* and restricted the type locality to that reported for the Churchill syntype (in Texas). The other syntype (USNM 1124) is from Kemper County, Mississippi, and thus now referable to the allopatric eastern US species, *Micrurus fulvius*.

Family Leptotyphlopidae

Leptotyphlops humilis segregus Klauber, 1939
= *Rena segrega*
[Trans-Pecos Threadsnake]

1883. *Rena humilis* Baird and Girard, Cat. N. A. Rept. Smithsonian Inst. I – Serpents, p. 143.

1893. *Glauconia humilis* Boulenger, Cat. Snakes British Museum (Nat. Hist.), Vol. I, p. 70.

1897. *Siagonodon humilis* Van Denburgh, Occ. Pap. Calif. Acad. Sci. 5:150.

1907. *Leptotyphlops humilis* Ruthven, Bull. Amer. Mus. Nat. Hist. 23:573.

1931. *Leptotyphlops humilis humils* Klauber, Trans. San Diego Soc. Nat. Hist. 6:340.

1939. *Leptotyphlops humilis segregus* Klauber, Trans. San Diego Soc. Nat. Hist. 9:67.

1985. *Leptotyphlops humilis chihuahuaensis* Tanner, Great Basin Nat. 41:623.

2007. *Leptotyphlops segregus* Lemos-Espinal and Smith, Anfib. Rept. Est. Chihuahua, Méx., p. 420.

2009. *Rena humilis* Adalsteinsson et al., Zootaxa 2244:11.

2013. *Leptotyphlops* (*Rena*) *segregus* (by implication) Dixon, Amphib. Rept. Tex., 3rd ed., p. 222.

2013. *Rena segrega* Lemos-Espinal and Dixon, Amphib. Rep. San Luis Potosi, p. 244.

Type specimen.— Holotype, USNM 103670, obtained 11 August 1936 by Tarleton F. Smith.

Type locality.— Chalk Draw, Brewster County, Texas.

Topotypes.—None.

Near topotypes.—None.

Remarks.—Lemos-Espinal and Smith (2007), Lemos-Espinal and Dixon (2013), and Lemos-Espinal et al. (2015) cite earlier works that explain the evidence for full species status for this taxon; those publications could not be located for citation.

Rena dulcis Baird and Girard, 1853
= *Rena dulcis dulcis*
[Plains Threadsnake]

1853. *Rena dulcis* Baird and Girard, Cat. N. A. Rept. Smithsonian Inst. I – Serpents, p. 142.

1861. *Stenosoma dulce* Cope, Proc. Acad. Nat. Sci. Phila. 13:305.

1883. *Stenostoma rubellum* Garman, Mem. Mus. Comp. Zool. (1884), 8:130.

1891. *Leptotyphlops dulcis* Stejneger, Proc. U.S. Nat. Mus. 14:501.

1891. *Glauconia dulcis* Cope, Proc. U.S. Nat. Mus. (1892) 14:590.

1940. *Leptotyphlops dulcis dulcis* Klauber, Trans. San Diego Soc. Nat. Hist. 9:108.

2009. *Rena dulcis* Adalsteinsson et al., Zootaxa 2244:11.

2013. *Leptotyphlops* (*Rena*) *dulcis dulcis* (by implication) Dixon, Amphib. Rept. Tex., 3rd ed., p. 220.

2017. *R*[*ena*] *d*[*ulcis*] *dulcis* Crother et al., Squamata (in part) – Serpentes, pp. 59–80 in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol. Circ. 43:75.

Type specimen.—Holotype, adult, USNM 7296, obtained by James D. Graham.

Type locality.—Between San Pedro and Comanche Springs, Texas. The latter location is within the present town limits of Fort Stockton, Pecos County. The former could refer to either the Rio San Pedro (= Devils River, Val Verde County) or San Pedro Springs, a potential army bivouac area that at the time was located north of San Antonio, in Bexar County (see also species account for the turtle *Ozotheca tristycha*). The route usually used by Col. Graham's survey parties between San Antonio and the Devils River followed the Old Spanish Trail (US Hwy 90), but it then turned northward along the Devils River Canyon area for a considerable distance before angling northwestward towards the southwestern corner of modern-day Crockett County at Howard Springs, and then on to the Pecos River. Dixon and Vaughan's (2003) list of specimens examined indicate that the distribution of *L. dulcis dulcis* from the Pecos River area of Pecos, Crockett, and Terrell counties eastward to San Antonio is essentially continuous. Rarely collected in the Pecos/Devils River region, it becomes progressively more abundant from west to east along the Hwy 90 transect. It is a commonly encountered snake at the end of this transect in rural and suburban Bexar County. At some point west of the Pecos River on the Graham route, *Rena dulcis* is mostly replaced by a sister taxon, *R. dissecta* (Dixon and Vaughan 2003; also see map in Dixon 2013).

Topotypes and near topotypes.—As suggested above, the holotype of *Rena dulcis* likely was obtained on Col. Graham's usual route. That route would originate from San Antonio, proceed westward south of the Edwards Plateau escarpment to the Rio Grande, then go northward through the Devil's River area, northwest via Howard Springs in southwestern Crockett County, and then westward up to and across the Pecos River to the west-bank of the Terrell County side. Still within the geographic range of *Rena dulcis*, the old military route proceeded north up the Pecos well past its confluence with Independence Creek before turning west towards Fort Stockton and Comanche Springs, places ostensibly outside of the distribution of the species. About 70 specimens in the VertNet database qualify as topotypes/near topotypes from along this multicounty route, but they are not listed here because of the taxonomic issues associated with the holotype of *Rena dulcis dulcis* (see Remarks below and the next entry for *Stenostoma rubellum*).

Remarks.—Dixon and Vaughan (2003) apparently did not examine the USNM type specimen, and thus its meristic data was not interpreted in their analysis of geographic variation in these species. With those data it might be possible to assign the type to one of their geographic morphology-based assemblages in Texas, thus narrowing the type-locality's vague scope and providing the basis for a credible restriction. Additionally, placement of the type within the South Texas assemblage would affect the validity of *Rena dulcis rubella* (next entry).

Stenostoma rubellum Garman, 1883
= *Rena dulcis rubella*
[South Texas Threadsnake]

1853. *Rena dulcis* Baird and Girard, Cat. N. A. Rept. Smithsonian Inst. I – Serpents. p. 142.

1883. *Stenostoma rubellum* Garman, Mem. Mus. Comp. Zool. (1884), 8:130.

1891. *Leptotyphlops dulcis* Stejneger, Proc. U.S. Nat. Mus. 14:502.

1940. *Leptotyphlops dulcis dulcis* Klauber, Trans. San Diego Soc. Nat. Hist. 9:93.

2003. *Leptotyphlops dulcis rubellum* Dixon and Vaughan, Tex. J. Sci. 55:14.

2009. *Rena dulcis* Adalsteinsson et al., Zootaxa 2244:11.

2013. *Leptotyphlops* (*Rena*) *dulcis rubellum* (by implication) Dixon, Amphib. Rept. Tex., 3rd ed., p. 220.

2017. *R*[*ena*] *d*[*ulcis*] *rubella* Crother et al., Squamata (in part) – Serpentes, pp. 59–80 in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol. Circ. 43:75.

Type specimen.—Holotype, MCZ 4584, obtained in 1880 by Dr. Edward Palmer.

Type locality.— Uvalde, Uvalde County, Texas.

Topotypes.—None.

Near topotypes.—Uvalde Co: just E of Uvalde on US Hwy 90, 2 (TNHC); 3 mi E Concan, 2 (BUMCC). These were collected in 1973.

Remarks.—Dixon and Vaughan (2003) resurrected the name *rubellum* to apply to a subspecies of *Leptotyphlops dulcis* they detected in their analysis of morphological variation from southern Texas and northeastern Tamaulipas/Coahuila (sample 5 of Dixon and Vaughan 2003). The type locality of *Stenostoma rubellum* is directly on the 1850 San Antonio–El Paso route (now US Highway 90, in part), and thus it would have been desirable to have explicit meristic data for the type of *Rena dulcis dulcis* to compare with the morphological parameters of their Sample 5. If it does fall within these values, then Dixon and Vaughan's recognition of *R. dulcis rubellum* as a valid subspecies would not be supported.

Family Natricidae

Eutaenia cyrtopsis ocellata Cope, 1880
= *Thamnophis cyrtopsis ocellatus*
[Eastern Black-necked Gartersnake]

1860. *Eutaenia cyrtopsis* Kennicott, Proc. Acad. Nat. Sci. Phila. (1861), 12:333.

1861. *Thamnophis cyrtopsis* Cope, Proc. Acad. Nat. Sci. Phila. 13:299.

1880. *Eutaenia cyrtopsis* subsp. *ocellata* Cope, Bull. U.S. Nat. Mus. 17:22

1896. *Eutaenia eques ocellata* [*nec* Reuss] Cope, Amer. Nat. 30:1009.

1953. *Thamnophis cyrtopsis cyrtopsis* Schmidt, Check List of North Amer. Amphib. Rept., 6th ed., p. 168.

1953. *Thamnophis cyrtopsis ocellata* Milstead, Texas J. Sci. 5:373.

1961. *Thamnophis dorsalis ocellata* Fitch and Milstead, Copeia 1961:112.

1980. *Thamnophis cyrtopsis ocellatus* Webb, Cat. Amer. Amphib. Rept. 245:245.2.

Type specimens.—Two syntypes, ANSP 10633–34, obtained by Gabriel W. Marnock (Malnate 1971). These specimens formerly were cataloged under USNM 10528 (Cochran 1961:179).

Type locality.—Near Helotes, Bexar County, Texas.

Topotypes.—Bexar Co: Helotes, 1 (BUMMC, TCWC), the more recent collected in 1971.

Near topotypes.—Bexar Co: 7.4 mi NW Helotes on Bandera Rd, 1 (TNHC), collected in 1947.

Eutaenia ornata Baird, 1859
= *Thamnophis sirtalis dorsalis*
[New Mexico Gartersnake]

1758. *Coluber sirtalis* Linnaeus, Syst. Nat., 10th ed., p. 22.

1853. *Eutaenia sirtalis* Baird and Girard, Cat. N.A. Rept. Smithsonian Inst. I – Serp., p. 31.

1853. *Eutaenia dorsalis* Baird and Girard, Cat. N.A. Rept. Smithsonian Inst. I – Serp., p. 31.

1859. *Eutaenia ornata* Baird, Rept. Boundary, U.S. Mex. Bound. Surv., Vol. 2, p. 16.

1863. *Tropidonotus Kennicotti* Jan, Elenco Sistem. Deg. Ofidi, p. 70.

1883. *Tropidonotus sirtalis* Garman, Mem. Mus. Comp. Zool. (1884), 8:23.

1892. *Thamnophis sirtalis* Garman, Bull. Essex Inst. 24:104.

1896. *Eutaenia sirtalis* Cope, Amer. Nat. 30:183.

1908. *Eutaenia eques* Ruthven, U.S. Nat. Mus. Bull. 61:158.

1946. *Thamnophis sirtalis parietalis* Smith and Brown, Herpetologica 3:72.

1966. *Thamnophis sirtalis dorsalis* Webb, Tulane Stud. Zool. 13:55.

Type specimens.—Originally three syntypes, unnumbered and now lost. The holotype is usually considered to be USNM 960, obtained by Col. J. D. Graham in the 1850s, but that specimen has been lost for some time (Fitch 1980).

Type locality.—For USNM 960, El Paso, El Paso County, Texas (see Remarks).

Topotypes.—None. The type is the only specimen of the subspecies represented by this taxon from El Paso and the only one from Texas.

Near topotypes.—New Mexico, Doña Ana Co: 2 mi W, 1 mi S Mesilla, 2 (LACM).

Cockerell (1896) reported that this snake was the next most common snake after gopher snakes in the Mesilla Valley of New Mexico. That is no longer the case, and these near topotypes from 1965 seem to be the last specimens to have been collected between Las Cruces, New Mexico, and El Paso, Texas.

Remarks.—This taxon has a confusing and complex history (see Smith and Brown (1946). The description by Spencer Baird of *Eutaenia ornata* indicated three type localities: Indianola (Calhoun County), San Antonio (Bexar County), and "lower Rio Grande." The syntypes from these three localities, ostensibly used by Baird to formulate his concept of the species, are all missing. Baird's 1859 description, however, apparently was based on Baird and Girard's earlier (1853) reference (and figure) of a specimen of *Thamnophis sirtalis parietalis* (a western form of the widespread eastern species) that had been collected "between El Paso and San Antonio". Forty years later (1900), Edward D. Cope listed a "type" specimen of unidentified *Eutaenia* from El Paso (USNM 960, the holotype cited above) that had been obtained by Col. James D. Graham. Smith and Brown (1946) inferred from this information that the Baird and Girard (1853) specimen was in fact another type specimen of *E. ornata* that Baird neglected to itemize in his 1858 description. Moreover, they asserted that the only *Thamnophis sirtalis* that occurred between San Antonio and El Paso were the ones that "had been recorded" from the El Paso area, an assertion that was not true because Cockerell (1896) had noted others from the Mesilla Valley of the Rio Grande in adjoining New Mexico. Additionally, Smith and Brown's (1946) reference to San Antonio *Thamnophis sirtalis* was probably based on the report of Strecker (1922) from Bexar County; that record is supported by a specimen that is now identified as *T. s. annectans* in the BUMMC collected at Helotes by Gabriel Marnock. In any case, Smith and Brown (1946) end their account with the "unquestionable" conclusion that *Eutaenia ornata* is a junior synonym of *Thamnophis sirtalis parietalis*. That finding did not survive challenge. Smith and Brown (1946) definitively connected the type of *Eutaenia ornata* to the very southern end of a series of populations in the Upper Rio Grande Valley of New Mexico and Colorado. Fifteen years later, however, Fitch and Maslin (1961) allocated this Upper Rio Grande series of populations to *Thamnophis sirtalis ornata*, a recognizably distinct and completely allopatric subspecies apart from *Thamnophis sirtalis parietalis*. That same year, Fitch and Milstead (1961) proposed that another subspecies, *Thamnophis sirtalis dorsalis* (type locality from Coahuila, Mexico) had been misidentified as to species. On largely ecological and geographic grounds, these authors allocated it to *Thammophis cyrtopsis*. Webb (1966) took umbrage with their proposal and wrote a detailed rebuttal that compared the figure and species description of *Eutaenia dorsalis* to all the Mexican subspecies of *Thamnophis cyrtopsis*. Webb was not only able to refute Fitch and Milstead's suggestion that *Eutaenia dorsalis* was an older name for *E. cyrtopsis*, he also persuasively matched the description of the type of *dorsalis* with the populations of *Thamnophis sirtalis* in the Upper Rio Grande of New Mexico. *Eutaenia dorsalis* (= *Thamnophis sirtalis dorsalis*) has precedence over the use of the name *E. ornata*, and thus it is now applied to populations of these snakes in the Upper Rio Grande corridor of New Mexico, southern Colorado, and to some allopatric populations in northern Chihuahua that flowed to the Rio Grande in the pluvial Pleistocene (Morafka 1977). However, the only specimen of *dorsalis* from Texas continues to be Graham's missing holotype.

One last detail is worth mentioning here. The USNM type specimen of *Eutaenia dorsalis* also is unfortunately lost, and only by using the description and figure of the holotype was Webb (1966) able to allocate the species it represented to populations in the northern

Rio Grande of New Mexico. The stated type locality, rejected by Webb, "between Monclova, Coahuila and the Rio Grande," was speculated upon by Fitch (1980) as a possible error for the Rio Grande of New Mexico. The collector, Sylvester Churchill, however, matches well to the type locality as surmised by Fitch (see account for *Churchillia bellona = Pituophis catenifer sayi*), but the Mexican type locality fits Colonel Churchill's likely Mexican War route in Coahuila after crossing the Rio Grande to reach General Wool's headquarters in Monclova (Churchill 1888). Thus, Churchill probably collected *something* in Coahuila, probably a *Thamnophis*, and perhaps even a *T. cyrtopsis* (as Fitch and Milsted suspected), but it was not the holotype specimen of *Eutaenia ornata*.

Natrix harteri Trapido, 1941
= *Nerodia harteri*
[Brazos River Watersnake]

1941. *Natrix harteri* Trapido, Amer. Midl. Nat. 25:673.

1961. *Natrix harteri harteri* Tinkle and Conant, Southwest Nat. 6:37.

1977. *Nerodia harteri* Rossman and Eberle, Herpetologica 33:42.

1978. *Nerodia harteri harteri* Collins et al., Stand. Comm. Sci. Names North Amer. Amphib. Reptiles, SSAR Misc. Publ. Herp. Circ. 7:31

2017. *Nerodia harteri* Crother et al., Squamata (in part) – Serpentes, pp. 59–80 in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol Circ. 43:72.

Type specimen.—Holotype, male, USNM 110927, obtained April 1940 by Philip Harter.

Type locality.—Brazos River north of Palo Pinto, Palo Pinto County, Texas.

Topotypes.—Palo Pinto Co: north of Palo Pinto, at the FM Rd 4 crossing, 31 (TCWC), 13 (MPM), 11 (LSUMZ), 5 (BUMMC), 4 (ASNH), 3 (BYU), 2 (PMNS, TNHC), 1 (CUMV, LACM, OSUM, UF). The last topotype was collected in 2006.

Near topotypes.—Palo Pinto Co: Brazos River, 6 (BUMMC); Brazos River at US Hwy 180 crossing, 4 (LSUMZ), 1 (TNHC, TCWC); Brazos River at TX Hwy 16 crossing, 1 (LSUMZ, SDNHM); Possum Kingdom Lake, 1 (LSUMZ, TCWC). The last near topotype was collected in 1988.

Remarks.—The Brazos River Watersnake (*Nerodia harteri*) is endemic to Texas, and it currently is listed as a Threatened species by TPWD (Davis and LaDuc 2021).

Natrix harteri paucimaculata Tinkle and Conant, 1961
= *Nerodia paucimaculata*
[Concho Watersnake]

1941. *Natrix harteri* Trapido, Amer. Midl. Nat. 25:673.

1961. *Natrix harteri paucimaculata* Tinkle and Conant, Southwest. Nat. 6:34.

1977. *Nerodia harteri* Rossman and Eberle, Herpetologica 33:42.

1978. *Nerodia harteri paucimaculata* Collins et al., Stand. Comm. Sci. Names North Amer. Amphib. Reptiles, SSAR Misc. Publ. Herp. Circ. 7:31.

1989. *Nerodia paucimaculata* Rose and Selcer, J. Herpetol. 23:266.

2013. *Nerodia harteri paucimaculata* Dixon, Amphib. Rept. Tex., 3rd ed., p. 256.

2017. *Nerodia paucimaculata* Crother et al., Squamata (in part) – Serpentes, pp. 59–80 in Crother (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpetol Circ. 43:72.

Type specimen.—Holotype, adult male, AMNH 85542, obtained 8 October 1960 by Donald W. Tinkle and Don L. McGregor.

Type locality.—Colorado River south of the city limits of Robert Lee, Coke County, Texas (Tinkle and Conant 1961).

Topotypes.—Coke Co: Colorado River south of the city limits of Robert Lee, 2 (CM, UMINH), 1 (MCZ) [these three specimens were paratypes, those following are non-paratypes], 43 (TNHC), 8 (KU), 3 (TCWC). The last topotype was collected in 1970.

Near topotypes.—Coke Co: 0.9 mi S Robert Lee, 4 (TNHC); 1.1 mi S Robert Lee on Colorado River, 4 (TNHC); 1.1 mi S Robert Lee on Colorado River, 1 (TCWC); 2 mi E Robert Lee, 13 (TNHC); west of Robert Lee, 21 (KU). The last near topotype was collected in 1993. In addition, there are more than three dozen specimens of this snake collected from 1990 to 1993 at the TCWC from Lake Spence, a reservoir just west of Robert Lee created by a dam on the Colorado River in 1969.

Remarks.—The Concho Watersnake, *Nerodia paucimaculata* (formerly *Nerodia harteri paucimaculata*), was previously listed as a threatened species by the USFWS and TPWD. After a review of all available scientific and commercial data, the Service found the species to have been recovered, and in 2011 removed (delisted) this snake from the US list of threatened and endangered species (Department of Interior, Fish and Wildlife Service 2011). The new list of Texas' threatened and endangered species (TPWD 2020) no longer contains this taxon.

Nerodia woodhousii Baird and Girard, 1853
= *Nerodia erythrogaster transversa*
[Blotched Watersnake]

1771. *Coluber erythrogaster* Bossu, Travels North Amer. Louisiana, Vol. 1, p. 364.

1842. *Tropidonotus erythrogaster* Holbrook, North Amer. Herpetol., Vol. 4, p. 33.

1852. *Tropidonotus transversus* Hallowell, Proc. Acad. Nat. Sci. Phila. (1854), 6:177.

1853. *Nerodia erythrogaster* Baird and Girard, Cat. N. A. Rept. Smithsonian Inst. I – Serp., p. 40.

1853. *Nerodia woodhousii* Baird and Girard, Cat. N. A. Rept. Smithsonian Inst. I – Serp., p. 42.

1853. *Nerodia transversa* Baird and Girard, Cat. N. A. Rept. Smithsonian Inst. I – Serp., p. 148.

1860. *N*[*erodia*] *Couchii* Kennicott, Proc. Acad. Nat. Sci. Phila. (1861), 12:335.

1860. *Tropidonotus Couchii* Cope, Proc. Acad. Nat. Sci. Phila. (1861), 12:342.

1875. *Tropidonotus sipedon woodhousei* Cope, Bull. U.S. Nat. Mus. 1:42.

1875. *Tropidonotus sipedon couchii* Cope, Bull. U.S. Nat. Mus. 1:42

1891. *Natrix fasciata transversa* Cope, Proc. U.S. Nat. Mus. (1892), 14:672.

1892. *Natrix sipedon* Var. *woodousheii* Hay, Ann. Rep. Indiana Dept. Geol. Nat. Res. 17:507.

1901. *Tropidonotus sipedon transversus* (in part) Brown, Proc. Acad. Nat. Sci. Phila. 53:37.

1903. *Natrix sipedon transversus* Stone, Proc. Acad. Nat. Sci. Phila. 55:541.

1905. *Natrix fasciata tranversa* Stejneger, in Bailey, North Amer. Fauna 25:47.

1915. *T*[*ropidonotus*] *f*[*asciatus*] *transversus* Wright and Bishop, Proc. Acad. Nat. Sci. Phila. 67:175.

1924. *Natrix erythrogaster woodhousii* Viosca, Copeia 1924:12.

1929. *Natrix ertyhrogaster transversa* Taylor, Univ. Kans. Sci. Bull. 19:58.

1929. *Natrix transversa* Burt and Burt, Amer. Mus. Novit. 381:13.

1953. *Natrix erythrogaster transversa* Schmidt, Check List of North Amer. Amphib. Rept., 6th ed., p. 160.

1977. *Nerodia erythrogaster* Rossman and Eberle, Herpetologica 33:42.

1977. *Nerodia e*[*rythrogaster*] *transversa* Bernard and Brown, Distr. Mamm. Rept. Amphib. BLM Physiogr. Regions, p. 149.

2010. *Nerodia erythrogaster* Makowsky et al., Molec. Phylogen. Evol. 55:993.

2013. *Nerodia erythrogaster transversa* Dixon, Amphib. Rept. Tex., 3rd ed., p. 254.

Type specimens.—Originally seven syntypes, of which six were documented by Cochran (1961) as follows: USNM 1308 and USNM 1321 (now USNM 131742) obtained by Col. James D. Graham, and USNM 1327–28 (4 specimens) collected by Ferdinand Lindheimer. The original description indicates that there were two additional syntypes collected by Graham, and that there were only three (not four) syntypes from Lindheimer. The fourth Lindheimer syntype may well be one of the two missing Graham specimens. No dates are attached to any of this type material.

Type localities.—The original description listed three type localities from Texas: Lindheimer's specimens from New Braunfels in Comal County, and Graham's specimens from Indianola in Calhoun County (USNM 1308) and from between Indianola and San Antonio (USNM 1321). Another missing/misplaced individual was from Sabinal (presumably in Uvalde County). Schmidt (1953) restricted the type locality to Indianola without explanation or designation of a lectotype, and this restriction is herein accepted insofar as it is supported by an extant syntype.

Topotypes.—Calhoun Co: Indianola, 1 (USNM, the remaining syntype).

Near topotypes.—Calhoun Co: just outside Port Lavaca, Little Chocolate Bayou at US Hwy 87, 1 (TNHC). The last near topotype was collected in 2010.

Remarks.—The first use of the name for the senior synonym for the species (*Coluber erythrogaster*) usually is attributed to John R. Forster, who in the original publication was listed as the translator of a work to English by the French biologist Jean-Bernard Bossu (1720–1792). The brief description of the taxon in this work (Bossu 1771) was of a large black snake with a red venter that "twists" around swimmers in the water (and drowns them). This color pattern, in combination with the clinging, swimming behavior is more characteristic of *Farancia abacura* than *Nerodia erythrogaster*, although neither of these reaches the body size (or menace to human beings) the describer provided.

As noted above, Schmidt (1953) proposed the herein accepted *Nerodia woodhousii* type locality restriction; he also synonymized this taxon with *Natrix erythrogaster transversa*. Although it subsequently was returned to the genus *Nerodia*, the subspecific combination has been very stable well into the 21st century. Although the phylogeographic study of the species *Nerodia erythrogaster* by Makowsky (2010) recognized no subspecies, the iconic geographic polymorphisms within this widespread species, including the Blotched Water Snake, continue to be used by the unpersuaded (e.g., Dixon 2013) and in this catalog.

Regina clarkii Baird and Girard, 1853
= Nerodia clarkii clarkii
[Gulf Saltmarsh Watersnake]

1853. *Regina clarkii* Baird and Girard, Cat. N. A. Rept. Smithsonian Inst. I – Serp., p. 48.

1858. *Tropidonotus medusa* Günther, Cat. Colubr. Snakes Brit. Mus., p. 78

1938. *Natrix sipedon clarkii* Clay, Copeia 1938:180.

1978. *Nerodia fasciata clarkii* Collins et al., Stand. Comm. Sci. Names North Amer. Amphib. Reptiles, SSAR Misc. Pub. Herp. Circ. 7:31

1991. *N*[*erodia*] *c*[*larkii*] *clarkii* Lawson et al., Copeia 1991:66.

Type specimen.—Holotype, USNM 2264, obtained by James D. Graham.

Type locality.— Indianola, Calhoun County, Texas.

Topotypes.—Calhoun Co: Indianola, 4 (USNM, two of which are paratypes). No specific dates are associated with any of these, but they likely originated from the 1850s.

Near topotypes.—Calhoun Co: 8 mi from [sic] Indianola, 1 (BUMMC); Carancahua Bay, 2 (USNM); west of Well Point in [adjoining] Matagorda County, 1 (TNHC); Point Lavaca Marine Park, 1 (TCWC). The most recent near topotype was obtained in 2005.

Regina grahamii Baird and Girard, 1853
[Graham's Crawfish Snake]

1853. *Regina grahamii* Baird and Girard, Cat. N. A. Rept. Smithsonian Inst. I – Serp., p. 47

1858. *Tropidonotus grahamii* Günther, Cat. Colubr. Snakes Brit. Mus., p. 78.

1863. *Tropidonotus leberis grahamii* Jan, Elenco Sistem. Deg. Ofidi, p. 72.

1883. *Tropidonotus leberis* Davis and Rice, Bull. Chicago Acad. Sci. 1:30.

1889. *Regina leberis* Garman, Bull. Ilinois State Lab. Nat. Hist. 3:132.

1892. *Natrix grahamii* Cope, Proc. U.S. Nat. Mus. 14:668.

1960. *Regina grahamii* Smith and Huheey, Trans. Kans. Acad. Sci. 63:159.

Type specimen.—Holotype, adult female, USNM 1376, obtained by James D. Graham (Anton 2019).

Type locality.—"Rio Salado," restricted in error to Salado Creek, Bell County, Texas by Schmidt (1953). Corrected to Rio Salado, 4 miles from San Antonio, Bexar County by Cochran (1961), which can be further emended to Salado Creek, 4 miles east of San Antonio, Texas, which would have been 4 miles east of the city in the early 1850s.

Topotypes.—None.

Near topotypes.—Bexar Co: tributary of San Antonio River, 2 (UF); southern part of San Antonio, 5 (GSU); near San Antonio, 1 (USNM); San Antonio, 3 (CAS), 1 (CHAS, CM, MVZ). The last near topotype was obtained in 1977.

Regina rigida sinicola Huheey, 1959
= *Liodytes rigida sinicola*
[Gulf Swampsnake]

1825. *Coluber rigidus* Say, J. Acad. Nat. Sci. Phila. 4:29.

1842. *Tropidonotus rigidus* Holbrook, North Amer. Herpetol. 4:39.

1853. *Regina rigida* Baird and Girard, 1853. Cat. N. A. Rept. Smithsonian Inst. I – Serp., p. 46

1865. *T*[*ropidonotus leberis*, var] *rigidus* Jan, Arch. Zool. Anat. Phys. 3:230.

1891. *Natrix rigida* Cope, Proc. U.S. Nat. Mus. (1892), 14:668.

1963. *Regina rigida* Rossman, Occ. Pap. Mus. Zool. Louisiana St. Univ. 29:20.

1959. *Regina rigida sinicola* Huheey, Copeia 1959:305.

2013. *Liodytes rigida* McVay and Carstens, Molec. Phylog. Evol. 68:430.

2017. *L*[i*odytyes*] *r*[*igida*] *sinicola* Crother et al., Squamata – Snakes, pp. 52–72 in Crother, (Chair), Comm., Stand. Engl. Names North Amer. Amphib. Rept. Excl. Mexico, 8th ed., SSAR Herpet. Circ. 39:71.

Type specimen.—Holotype, UIMNH 1159, obtained in 1948 by W. B. Robertson and a herpetology class.

Type locality.— Beaumont, Jefferson County, Texas.

Topotypes.—Jefferson Co: Beaumont, 2 (TCWC), collected in 1967.

Near topotypes.—Jefferson Co: 6 mi N Beaumont, 1 (TCWC). Orange Co: 9 mi W Orange, 1 (TNHC, a paratype). The most recently collected near topotype was in 1953.

Storeria dekayi texana Trapido, 1944
[Texas Brownsnake]

1836. *Coluber Dekayi* Holbrook, N. Amer. Herp., 1st ed., Vol. 1 (2nd version, prob. 1839), p. 121.

1842. *Tropidonotus Dekayi* Holbrook, North Amer. Herp., 2nd ed., Vol. 4, p. 53.

1853. *Storeria Dekayi* Baird and Girard, Cat. N. A. Rept. Smithsonian Inst. I – Serp., p. 135.

1854. *Ischognathus Dekayi* Duméril et al., Erpét. Gén. Hist. Nat. Comp. Rept. Liv. 7, pt. 1:507.

1880. *Ischognatus* (*Storeria*) *Dekayi* Müller, Verhandl. Naturf. Gesell. Basel (1875–1885) 7:149.

1944. *Storeria dekayi texana* Trapido, Amer. Midl. Nat. 31:63.

2013. *Storeria dekayi texana* Dixon, Amphib. Rept. Tex., 3rd ed., p. 268.

Type specimen.—Holotype, CM 21656, obtained 16 June 1942 by Albert J. Kirn. The original number, CUMV 3530, is often cited.

Type locality.—Edge Falls, 4 miles south of Kendalia, Kendall County, Texas.

Topotypes.—Kendall Co: 4 mi S Kendalia, Edge Falls, 1 (CUMV); 4 mi S Edge Falls, 1 (BUMMC). The CUMV specimen has the same date and collector as the holotype, and the BUMMC individual was collected at the same offset from Kendalia in the same year (1942), but obtained three months earlier.

Near topotypes.—Blanco Co: Blanco, 1 (TCWC). Kendall Co: Boerne, 2 (BUMMC); 3 km N Waring, 1 (LACM). The most recent near topotype was collected in 2006.

Remarks.—This catalog continues to recognize the subspecies *S. d. texana* as recommended by Dixon (2013). A recent range-wide study of *Storeria dekayi* and relatives by Pyron et al. (2016) used next-generation sequencing from a large multi-locus data set (and unfortunately small sample sizes of individual snakes) to identify three distinct lineages within the historical taxon *Storeria dekayi*. One of these, which could be differentiated on morphological grounds (dorsal scale rows) as well as their genetic analysis, was resurrected from subspecific status as *Storeria victa* (of Florida). The other two lineages, designated as *dekayi* "East" and *dekayi* "West," represent a total of seven nominal subspecific taxa of *S. dekayi*, all of which the authors declined to recognize for their lack of even a single defining, discontinuous morphological character in each case, and their "qualitative variation in color pattern" subject to continuous clinal intergradation across large geographic distributions. However, their genetic data by itself, as presented in their maximum likelihood phylogeny, alternatively suggests valid subspecies for each of the two previously undetected clades. In the case of the *dekayi* "West" lineage, the oldest available subspecies name is *Storeria dekayi texana* as used in this account.

Thamnophis proximus rubrilineatus Rossman, 1963 [Red-striped Ribbonsnake]

1822. *Coluber proximus* Say, in James (comp.), Long's Exped. Rocky Mtns., Vol. I, (1823):187.

1853. *Eutainia proxima* (in part) Baird and Girard, Cat. N. A. Rept. Smithsonian Inst. I – Serp., p. 25.

1908. *Thamnophis sauritus proximus* Ruthven, U.S. Nat. Mus. Bull. 61:98.

1963. *Thamnophis proximus rubrilineatus* Rossman, Bull. Florida St. Mus. 7:134.

Type specimen.—Holotype, adult male, UF 12188.3, obtained 26 June 1960 by Martin J. Fouquette, Jr. and Douglas A. Rossman.

Type locality.—State Fish Hatchery, 8.2 miles northwest of Ingram, Kerr County, Texas. This fish hatchery is now the Texas Parks and Wildlife Heart of the Hills Fisheries Science Center.

Topotypes.—Kerr Co: State Fish Hatchery, 1 (LSUMZ, UF); 15 mi NW Kerrville at fish hatchery, 1 (TNHC). The fish hatchery is located on TX Hwy 27, about 8 miles NW Ingram, and 2 miles SE Mountain Home. Additional topotypes include: Kerr Co: 2 mi SE Mountain Home, 1 (CM); 8 mi NW Ingram, 1 (LSUMZ); 8.2 mi NW Ingram, 1 (LSUMZ). The last topotype was collected in 1966.

Near topotypes.—Kerr Co: 1.3 mi E Federal Fish Hatchery, 2 (TCWC); Mountain Home, 1 (TCWC); near Mountain Home, 1 (TCWC). The last near topotype was collected in 1953.

Thamnophis sirtalis annectans Brown, 1950
[Texas Gartersnake]

1758. *Coluber sirtalis* Linnaeus, Syst. Nat., 10th ed., p. 22.

1853. *Eutaenia sirtalis* Baird and Girard, Cat. N. A. Rept. Smithsonian Inst. I – Serp., p. 31.

1863. *Tropidonotus Kennicotti* Jan, Elenco Sistem. Deg. Ofidi, p. 70.

1883. *Tropidonotus sirtalis* Garman, Mem. Mus. Comp. Zool. (1884), 8:23.

1892. *Thamnophis sirtalis* Garman, Bull. Essex Inst. 24:104.

1950. *Thamnophis sirtalis annectans* Brown, Baylor Univ. Stud., p. 203.

Type specimen.—Holotype, adult male, BUMMC 3038, obtained 24 February 1946 by Bryce C. Brown, original number BCB 3038 (Fitch 1980).

Type locality.— A small branch of Boggy Creek, 1 mile east of Austin, Travis County, Texas.

Topotypes.—Travis Co: Capt. Aldrich's place, 1 mi E Austin, 12 (BUMMC, paratypes); Austin, 2 (TNHC). The two TNHC specimens are from 1947 and 1949, and probably represent the remaining topotypic paratypes (originally 7 specimens) cited by Brown (1950).

Near topotypes.—Travis Co: Austin, 2 (USNM), 1 (ISM); 2 mi E Austin on Manor Rd, 1 (TNCH); Walnut Creek at new Manor Rd, 1 (TNHC); 8 mi NE Univ. Texas Tower, 1 (TNHC); tributary of Onion Creek near Nuckols Crossing Rd, 3 (TNHC); Shoal Creek, Austin, 1 (BUMCC, paratype). The most recent near topotype was collected in 1974, although there is an image from 2020 of this taxon posted on the iNaturalist website from ca. 2 air kilometers southwest of the confluence of Boggy Creek with the Colorado River.

Tropidonotus medusa Günther, 1858
= *Nerodia clarkii clarkii*
[Gulf Saltmarsh Watersnake]

1853. *Regina clarkii* Baird and Girard, Cat. N. A. Rept. Smithsonian Inst. I – Serp., p. 48.

1858. *Tropidonotus medusa* Günther, Cat. Colubr. Snakes Brit. Mus, p. 78.

1938. *Natrix sipedon clarkii* Clay, Copeia 1938:180.

1953. *Natrix sipedon clarki* Schmidt, Check List North Amer. Amphib. Rept., 6th ed., p. 163.

1978. *Nerodia fasciata clarkii* Collins et al., Stand. Comm. Sci. Names North Amer. Amphib. Reptiles, SSAR Misc. Pub. Herp. Circ. 7:31.

1991. *N*[*erodia*] *clarkii* Lawson et al., Copeia 1991:66.

1991. *N*[*erodia*] *c*[*larkii*] *clarkii* Lawson et al., Copeia 1991:66.

Type specimen.—Originally two syntypes, adult female and juvenile, in the NHMUK, from "Brandt's Collection" (= Johann Friedrich von Brandt, 1802–1879). These specimens have not been located.

Type locality.—"Texas." Restricted to Indianola, Calhoun County, by Schmidt (1953).

Topotypes and near topotypes.—Identical to those listed in the catalog account for *Regina clarkii*.

Remarks.—Schmidt (1953) synonymized *Tropidonotus medusa* with *Nerodia sipedon clarkii*, a taxon since restored to full species rank. Schmidt also restricted the type locality to that identical for the senior synonym.

Tropidoclonion lineatum texanum Ramsey, 1953
[Texas Lined Snake]

1856. *Microps lineatum* Hallowell, Proc. Acad. Nat. Sci. Phila. 8:241.

1860. *Tropidoclonion lineatum* Cope, Proc. Acad. Nat. Sci. Phila. 12:76.

1884. *Storeria lineata* Garman, Bull. Essex Inst. 16:34.

1953. *Tropidoclonion lineatum texanum* Ramsey, Herpetologica 9:14.

1990. *Tropidoclonion lineatum* Collins, Stand. Comm. Sci. Names North Amer. Amphib. Rept., 3rd ed., SSAR Herpetol. Circ. 19:36.

1994. *Tropidoclonion lineatum texanum* Smith and Chiszar, Bull. Maryland Herp. Soc. 30:10.

Type specimen.—Holotype, adult female, TNHC 262, obtained 14 April 1947 by W. F. Blair.

Type locality.—F. W. Allen Ranch, 13 miles south [sic, actually north] of Bertram, Burnet County, Texas.

Topotypes.—Burnet Co: F. W. Allen Ranch, 13 mi N Bertram, 5 (TNHC), paratypes, four of which were collected six days after the holotype was collected.

Near topotypes.—13 mi W Bertram, Nichols Ranch, 4 (BUMMC), collected 1975.

Remarks.—As noted by Smith and Chiszar (1994), Kansas herpetologist J. T. Collins changed from recognizing four subspecies of *Tropidoclonion* in his 2nd edition Standard and Common Names Checklist (Collins et al. 1982) to deleting them entirely in the 3rd edition (Collins 1990), and that Roger Conant's Eastern Field Guide 2nd edition (1975) also had subspecies recognized, but they were deleted in the next edition (the 3rd, Conant and Collins 1991). However, the Stebbins Western Field Guides continued to recognize the nominal subspecies up through its 3rd and 4th editions (Stebbins 2003; McGinnis and Stebbins 2018). Furthermore, Dixon's (1987, 2000, 2013) treatments of the Texas herpetofauna were consistent with respect to polytypy in the species. A search of the literature for this catalog was unable to locate any information or commentary justifying the non-recognition of subspecies (weakly defined as they may be).

Virginia inornata Garman, 1883
= Haldea striatula
[Rough Earthsnake]

1766. *Coluber striatulus* Linnaeus, Syst. Natur., 12th ed., p. 375.

1836. *Calamaria striatula* Schlegel, Essai Physiogn. Serp., Vol. I, p. 250.

1843. *Potamophis striatulus* Fitzinger, System. Rept., p. 25.

1853. *Haldea striatula* Baird and Girard, Cat. N. A. Rept. Smithsonian Inst. I – Serp., p. 122.

1854. *Conocephalus striatulus* Dumèril et al., Érpet. Gen. 7:140.

1883. *Virginia inornata* Garman, Mem. Mus. Comp. Zool. (1884), 8:97.

1883. *Virginia striatula* Garman, Mem. Mus. Comp. Zool. 8:97.

1888. *Amphiardis inornatus* Cope, Proc. U.S. Nat. Mus. 11:391.

1922. *Amphiardis inornatus* Van Denburg, Copeia 1922:24.

1924. *Potamophis striatula* Blanchard, Copeia 1924:85.

1943. *Haldea striatula* Stejneger and Barbour, Check List North Amer. Amphib. Rept., 5th ed., p. 165.

1958. *Virginia striatula* Zillig, Copeia 1958:153.

2013. *Haldea striatula* McVay and Carstens, Mol. Phylog. Evol. 68:430.

Type specimens.—The original description does not indicate any type specimen(s). However, Powell et al. (1994) indicated four syntypes, one adult male, three adult females, MCZ 2453, obtained by Jacob Boll with an unknown collection date (but received by the MCZ in December of 1870).

Type locality.—The description indicates only "Texas" as the type locality. Powell et al. (1994) indicate "Texas (Dallas)" for the origin of the specimens, which is consistent with the town of residence for Jacob Boll, who was a Swiss immigrant pharmacist turned naturalist recruited upon his arrival in the United States by Louis Agassiz as a collector of specimens for the MCZ.

Topotypes.—Although there are many mid-20th century museum specimens of this common suburban snake from the current city of Dallas in the VertNet database (see near topotypes, below), none could be verified as coming from the less than 15 square miles on the northeast bank of the Trinity River that comprised Dallas at the end of the 19th century. There is, however, a specimen in the database at ANSP from Dallas County (no number, date), that may qualify as such.

Near topotypes.—Dallas Co: Dallas, 1 (ASNHC, PMNS, UAZ), 3 (TNHC); South Dallas, 1 (ASNHC); Dallas Zoo, 1 (YPM); Dallas, 1314 Cedar Hill Ave, 1 (CUMV); SW Dallas, Whispering Cedars Girl Scout Camp, 1 (PMNS); Roadbank of TX Loop 12, S of Dallas, 300 yds E Trinity River, 1 (TCWC); 0.5 mi E SMU [Southern Methodist University], 1 (PMNS); 1 mi N, 4 mi E SMU, 16 (PMNS); 2 mi N, 4 mi E SMU, N of White Rock Lake, 1 (PMNS); across Northwest Hwy, White Rock, 1 (PMNS); Ferguson Rd, near White Rock Lake, 1 (PMNS); 4 mi N Dallas, White Rock Lake, 1 (SDNHM). The last near topotype was obtained in 1976.

Remarks.—The generic name *Potamophis* Fitzinger (1843) used with this species is an invalid junior homonym preoccupied by two Asiatic snake genera, a homalopsid and an acrochordid, named in 1836 and 1852, respectively (see Parker 1938).

There is considerable herpetological literature concerning this common snake under the name *Virginia striatula* that appeared from the time of Zillig's (1958) recommendation for this generic usage up until the recent restoration of *Haldea* proposed by McVay and Carstens (2013).

Family Viperidae

Agkistrodon mokasen laticinctus Gloyd and Conant, 1934
= *Agkistrodon laticinctus*
[Broad-banded Copperhead]

1766. *Boa contortrix* Linnaeus, Syst. Nat., 12th ed., p. 373.

1799. *Agkistodon mokasen* Palisot de Beauvois, Trans. Philos. Soc. 4:370.

1802. *Scytale contortrix* Latreille, in Sonnini de Manoncourt and Latreille, Hist. Nat. Rept., Vol. III, Seconde Pt., Serpens, p. 159.

1803. *Cencrhis mokeson* Daudin, Hist. Nat. Gen. Part. Rept. 5:365.

1818. *Scytalus Cupreus* Rafinesque, Amer. J. Sci. 1:257.

1819. *Scytale mockeson* Say, Amer. J. Sci. 1:257.

1826. *Tisiphone cuprea* Fitzinger, Neue Klassif. Rept., p. 63.

1836. *Acontias atro-fuscus* Troost, Ann. Lyc. Nat. Hist. New York 3:181.

1836. *Toxicophis atrofuscus* Troost, Ann. Lyc. Nat. Hist. New York 3:190.

1837. *T*[*rigonocephlaus*] *cenchris* Schlegel, Essai Physiogn. Serp., Vol. II, p. 553.

1838. *Trigonocephalus Contortrix* Holbrook, North Amer. Herpetol., 1st ed., Vol. 2, p. 69.

1842. *Cenchris contortrix* Gray, Zool. Misc. 2:50.

1842. *Trigonocephalus atro-fuscus* Holbrook, North Amer. Herpetol., 2nd ed., Vol. 3, p. 43.

1849. *Cenchris atrofuscus* Gray, Cat. Spec. Snakes Brit. Mus. (Nat. Hist), p. 16.

1853. *Agkistrodon contortrix* (part) Baird and Girard, Cat. N. A. Rept. Smithsonian Inst. I – Serpents, p. 17.

1853. *T*[*rigonocephalus*] *histrionicus* Duméril, Mem. Acad. Sci. Paris 23:534.

1854. *Ancistrodon contortrix* Baird, Serp. New York, p. 13.

1875. *Ancistrodon atrocinctus* Cope, Bull. U.S. Nat. Mus. 1:34.

1908. *Ancistrodon mokasen* Brown, Proc. Acad. Nat. Sci. Phila. 60:124.

1934. *Agkistrodon mokasen laticnctus* Gloyd and Conant, Occ. Pap. Univ. Mich. Mus. Zool. 283:2.

1943. *Agkistrodon mokeson pictigaster* Gloyd and Conant, Bull Chicago Acad. Sci. 7:156.

1948. *Agkistrodon contortrix laticinctus* Klauber, Copeia 1948:8.

1948. *Agkistrodon contortrix pictigaster* Klauber, Copeia 1948:8

1953. *Ancistrodon contortrix laticinctus* Schmidt, Check List North Amer. Amphib. Rept., 6th ed., p. 224

1990. *Agkistrodon contortrix laticinctus* Gloyd and Conant, SSAR Contr. Herpetol. 6:185.

2015. *Agkistrodon laticinctus* Burbrink and Guiher, Zool. J. Linn. Soc. 17:521.

Type specimen.—Holotype, adult male, UMMZ 75599, obtained in 1933 by R. F. Harvey in 1933.

Type locality.—26 miles northwest of San Antonio, Bexar County, Texas.

Topotypes.—Bexar Co: 26 mi NW San Antonio, 2 (UMMZ, paratypes), 1 (KU). The last topotype was collected in 1958.

Near topotypes.—Bexar Co: 25 mi NW San Antonio, Camp Bullis, 1 (CHAS); near Camp Bullis, 1 (CM); 1 mi N Helotes, Marnock Ranch, 1 (BUMMZ); 8 mi N Helotes, 1 (TCWC); Leon Springs, 1 (CAS). The last of these were obtained in 1946.

Agkistrodon mokeson pictigaster Gloyd and Conant, 1943
= *Agkistrodon laticinctus*
[Broad-banded Copperhead]

1766. *Boa contortrix* Linnaeus, Syst. Nat., 12th ed., p. 373.

1799. *Agkistodon mokasen* Palisot de Beavoir, Trans. Philos. Soc. 4:370.

1802. *Scytale contortrix* Latreille, in Sonnini de Manoncourt and Latreille, Hist. Nat. Rept., Vol. III, Seconde Pt., Serpens, p. 159.

1803. *Cencrhis mokeson* Daudin, Hist. Nat. Gen. Part. Rept. 5:365.

1818. *Scytalus Cupreus* Rafinesque, Amer. J. Sci. 1:257.

1819. *Scytale mockeson* Say, Amer. J. Sci. 1:257.

1826. *Tisiphone cuprea* Fitzinger, Neue Klassif. Rept., p. 63.

1836. *Acontias atro-fuscus* Troost, Ann. Lyc. Nat. Hist. New York 3:181.

1836. *Toxicophis atrofuscus* Troost, Ann. Lyc. Nat. Hist. New York 3:190.

1837. *T*[*rigonocephlaus*] *cenchris* Schlegel, Essai Physiogn. Serp., Vol. II, p. 553.

1838. *Trigonocephalus Contortrix* Holbrook, North Amer. Herpetol., 1st ed., Vol. 2, p. 69.

1842. *Cenchris contortrix* Gray, Zool. Misc. 2:50.

1842. *Trigonocephalus atro-fuscus* Holbrook, North Amer. Herpetol., 2nd ed., Vol. 3, p. 43.

1849. *Cenchris atrofuscus* Gray, Cat. Spec. Snakes Brit. Mus. (Nat. Hist), p. 16.

1853. *Agkistrodon contortrix* (part) Baird and Girard, Cat. N. A. Rept. Smithsonian Inst. I – Serpents, p. 17.

1853. *T*[*rigonocephalus*] *histrionicus* Duméril, Mem. Acad. Sci. Paris 23:534.

1854. *Ancistrodon contortrix* Baird, Serp. New York, p. 13.

1875. *Ancistrodon atrocinctus* Cope, Bull. U.S. Nat. Mus. 1:34.

1908. *Ancistrodon mokasen* Brown, Proc. Acad. Nat. Sci. Phila. 60:124.

1928. *Agkistrodon mokasen* Strecker, Baylor Univ. Mus. 15:9

1934. *Agkistrodon mokasen laticnctus* Gloyd, Occ. Pap. Univ. Mich. Mus. Zool. 283:2.

1943. *Agkistrodon mokeson pictigaster* Gloyd and Conant, Bull Chicago Acad. Sci. 7:156.

1948. *Agkistrodon contortrix pictigaster* Klauber, Copeia 1948:8

1953. *Ancistrodon contortrix pictigaster* Schmidt, Check List North Amer. Amphib. Rept., 6th ed., p. 225.

1990. *Agkistrodon contortrix pictigaster* Gloyd and Conant, SSAR Contr. Herpetol. 6:175.

2015. *Agkistrodon laticinctus* Burbrink and Guiher, Zool. J. Linn. Soc. 17:521.

Type specimen.—Holotype, adult male, CHAS 4857, obtained 28 July 1937 by W. L. Necker on 28 July 1937.

Type locality.—Maple Canyon, 5,200 feet, Chisos Mountains, Brewster County, Texas. This locality is now within Big Bend National Park.

Topotypes.—None.

Near topotypes.—Brewster Co: Chisos Mountains, Pulliam Canyon, 1 (USNM); Chisos Mountains, Oak Spring, 1 (CAS, CHAS, TCWC); Big Bend National Park, Green Gulch, 1 (KU). The most recent near topotype was collected in 1956.

Caudisona lepida Kennicott, 1861
= Crotalus lepidus lepidus
[Mottled Rock Rattlesnake]

1861. *Caudisona lepida* Kennicott, Proc. Acad. Nat. Sci. Phila. 13:206.

1866. *A*[*ploaspis*] *lepida* Cope, Proc. Acad. Nat. Sci. Phila. (1867), 18:310.

1883. *Crotalus lepidus* Cope, Proc. Acad. Nat. Sci. Phila. 35:13.

1887. *Crotalus tigris* var. *palmeri* Garman, Bull. Essex Inst. 19:125 [p. 7 in reprint version].

1895. *Crotalus palmeri* Günther, Biol. Cent. Amer. Rept. Batr., p. 193.

1936. *Crotalus lepidus lepidus* Gloyd, Occ. Pap. Mus. Zool. Univ. Mich. 337:4.

Type specimens.—Two syntypes at ANSP, now lost, consist of only two rattlesnake heads (McDiarmid et al. 1999; Campbell and Lamar 2004). The Reptile Database (www.reptile-database.org) indicates an additional syntype, MCZ 4578, not mentioned in the original description. Collectors and collection dates are not specified for the ANSP syntypes, but their provenance suggests they may have been originally obtained in 1846 by Colonel Sylvester Churchill for the USNM and later transferred to the ANSP. Alternatively, these syntypes might have been collected by Arthur Schott during the US–Mexico Boundary Survey over 1850–54, with the same museum deposition. The VertNet database indicates the MCZ syntype (from Mexico, see below) was collected in 1812 by Edward Palmer. If this collector is the same Edward Palmer as the famous plant collector and archeologist (1829–1910), then the collection year is incorrect. Moreover, most of Palmer's fieldwork in Mexico was in the last quarter of the 19th century and well after Kennicott's description. These difficulties make the syntypic status of MCZ 4578 problematical, unless the collection date is incorrect, and the collector was actually Churchill, Schott, or some other individual.

Type localities.—For the two ANSP snake heads, Kennicott (1861) cites "Presidio del Norte and Eagle Pass [Maverick County, Texas]." Cope (1866), who designated this taxon as the type species of a new genus *Aploaspis*, broadly indicated "Rio Grande, Texas" as the origin of the type material. The type locality was restricted to Presidio del Norte, Texas, by Schmidt (1953), doubtless referring to the Texas border town of Presidio, Presidio County, where there are populations of these snakes (see Remarks). As was shown by Webb and Eckerman (1998) for the type locality of the snake *Heterodon nasicus*, and also discussed briefly in this catalog's earlier account of the lizard *Phrynosoma modestum* and extensively in a later account for the snake *Churchillia bellona*, the 19th century placename "Presidio del Norte" refers to a Rio Grande crossing southeast of Eagle Pass. Both ANSP syntypes are thus from Maverick County, Texas. The VertNet database indicates that supposed syntype MCZ 4578 is from Montclova, Coahuila, Mexico. Colonel Churchill's itinerary once in Mexico also included Monclova (Churchill 1888) but the timing (1854), as discussed above is discordant with possible span of collection years. Besides Palmer or Churchill, another possible collector of the type material was Boundary Survey artist/naturalist Arthur Schott. Schott collected other reptilian specimens at Eagle Pass (or shipped them from there), and he was familiar with the entire Texas–Mexico border. Schott also travelled extensively into northern and northeastern Mexico in the early 1850's, and thus might have visited the Monclova area of Coahuila.

Topotypes.—No further museum specimens have been found in the VertNet database from anywhere else in Maverick County.

Near topotypes.—None.

Remarks.—The presence of syntypes from Maverick County likely represent a case similar to that of the Churchill-collected syntype of *Phrynosoma modestum*, that is, waif dispersal downstream from the canyons of Val Verde County by periodic flooding of the Rio Grande. In northeastern Mexico, this rattlesnake naturally occurs in many parts of the Coahuila Folded Belt, including the vicinity of Monclova (Morafka 1977).

Crotalophorus consors Baird and Girard, 1853
= *Sistrurus tergeminus edwardsii*
[Desert Massasagua]

1818. *Crotalinus catenatus* Rafinesque, Amer. Month. Mag. Critic. Rev. (1818–1829), 4:41.

1822. *Crotalus tergeminus* Say, in James (comp.), Long's Exped. Rocky Mtns., Vol. I, p. 499.

1831. *Crot*[*alophorus*] *tergeminus* Gray, Synopsis Rept., Animal Kingdom 9:78.

1853. *Crotalophorus consors* Baird and Girard, Cat. N. A. Rept. Smithsonian Inst. I – Serpents, p. 12.

1853. *Crotalophorus tergeminus* Baird and Girard, Cat. N. A. Rept. Smithsonian Inst. I – Serpents, p. 14.

1853. *Crotalophorus edwardsii* Baird and Girard, Cat. N. A. Rept. Smithsonian Inst. I – Serpents, p. 15.

1859. *Crotalus miliarius* var. *tergeminus* (in part) Jan, Rev. Mag. Zool. 10:153.

1863. *Crotalus miliarius* var. *Edwardsii* Jan, Elenco Sistem. Deg. Ofidi Descr. Diseg. L'Iconogr. Gen., p. 124.

1875. *Caudisona tergemina* (in part) Cope, Bull. U.S. Nat. Mus. 1:34.

1875. *Caudisona edwardsii* Yarrow, Rep. Coll. Batrach. Rept., pp. 509–534 in Rep. Geogr. Geol. Gexp. Surv. West of 100th Meridian, Vol. 5, p. 531.

1875. *Crotalus consors* Coues, Synopsis Rept. Batrach. Arizona, pp. 685–633 in Rep. Geogr. Geol. Gexp. Surv. West of 100th Meridian, Vol. 5, p. 610.

1883. *Sistrurus catenatus* var. *consors* Garman, Mem. Mus. Comp. Zool. (1884), 8:176.

1883. *Sistrurus miliarius* var. *edwardsii* Garman, Mem. Mus. Comp. Zool. (1884), 8:177.

1892. *Crotalophorus catenatus edwardsii* Cope, Proc. U.S. Nat. Mus. 14:685.

1893. *Sistrurus catenatus consors* Stejneger, Rep. U.S. Nat. Mus. (1895), p. 415.

1893. *Sistrurus catenatus edwardsii* Stejneger, Rep. U.S. Nat. Mus. (1895), p. 416.

1896. *Sistrurus edwardsii* Cockerell, Amer. Nat. 30:326.

1936. *Sistrurus catenatus tergeminus* Klauber, Occ. Pap. San Diego Soc. Nat. Hist. 1:6.

2008. *Sistrurus tergeminus* (by implication) Holycross et al., Copeia 2008:423.

2011. *Sistrurus catenatus edwardsii* Kubatko et al., System. Biol. 60:402.

2013. *Sistrurus tergeminus* International Commission on Zoological Nomenclature, Opinion 2328 (Case 3571), Bull. Zool. Nomen. 70:283.

2016. *S*[*istrurus*] *t*[*ergeminus*] *edwardsii* Powell et al., Peters. Field Guide. Rept. Amphib. East. Centr. North Amer., 4th ed., p. 445.

Type specimen.—Holotype, USNM 512, collected by Col. J. D. Graham; it is now "presumed lost" (Minton 1983).

Type locality.—Indianola, Calhoun County, Texas.

Topotypes.—None.

Near topotypes.—None found. Strecker (1908) referred late 19th century specimens from Refugio and Victoria counties to *Sistrurus catenatus consors*; these specimens could not be located in a database.

Remarks.—The 20th century systematics and taxonomy of the massasauga rattlesnake has been marked by considerable turmoil (see condensed review in Lott 2021). The subspecific allocation of the type of *Crotalophorus consors* to *Sistrurus tergeminus edwardsii* is provisional. The southwestern US distribution of this subspecies is fragmented, with the populations occurring in southern Texas (Webb, Duval, Nueces counties southward) apparently allopatric to those of this subspecies from the western Edwards Plateau, Tran-Pecos, and eastern New Mexico. The nominative subspecies, *S. t. tergeminus*, is a taxon associated with the southern Great Plains of the U.S, from western Iowa southward. It occurs in north-central Texas, with disjunct populations dribbling southward towards the Gulf Coast. The handful of specimens recorded from the central Gulf Coastal Plain of Texas (see maps in Campbell and Lamar 2004; Dixon 2013), which includes the type locality of *C. consors* in Calhoun County, have been currently referred to both as *C. tergeminus tergeminus* (Gloyd 1955; Dixon 2000, 2013) and *C. t. edwardsii* (Werler and Dixon 2000; Campbell and Lamar 2004; Kubatko et al. 2011; Powell et al. 2016). Minton (1983) indicated these populations to be within an intergradation zone between the two subspecies; that explanation may be the best assessment of their status (provided they are still extant, which is yet to be demonstrated). The genetic study of Kubatko et al. (2011) indicated minimal differentiation between the two subspecies, although they had no samples from Texas of either putative subspecific taxon in their study. The subsequent follow-up study of Ryberg et al. (2015), with forty-one samples of the species from Texas, also concluded there was very little differentiation between the two subspecies (and they should not be recognized). One of their two mapped tissue samples from South Texas seems to be placed on the Gulf Coast of Kleberg County, an area even more distant from the two Strecker near topotypes alluded to above. Moreover, the two South Texas specimens in their study formed a barely detectable clade (Clade 8) nested within the others from the state. Additional genetic sampling of the apparently isolated populations northeastward along the Texas Gulf Coast would not only lay the subspecific identity question of the type of *Crotalophorus consors* to rest, it would also provide genetic information helpful in informing future conservation strategies for massasaugas in the state.

Crotalus atrox Baird and Girard, 1853
[Western Diamond-backed Rattlesnake]

1852. *Crotalus cinereous* Le Conte, in Hallowell, Proc. Acad. Nat. Sci. Phila. (1854), 6:177.

1853. *Crotalus atrox* Baird and Girard, Cat. N. A. Rept. Smithsonian Inst. I – Serpents, p. 172.

1859. *Crotalus adamanteus* var. *atrox* Jan, Rev. Mag. Zool., 2nd Ser., 10:153.

1861. *Caudisona atrox* var. *sonoraensis* Kennicott, Proc. Acad. Nat. Sci. Phila. 13:206.

1896. *Crotalus confluentus* (in part) Boulenger, Cat. Snakes Brit. Mus., Vol. III, p. 576.

1900. *Crotalus atrox atrox* Cope, Rep. U.S. Nat. Mus. 1898, p. 1164.

1953. *Crotalus atrox* Schmidt, Check List of North Amer. Amphib. Rept., 6th ed., p. 230.

Type specimen.—Holotype USNM 7761, obtained by James D. Graham.

Type locality.—Indianola, Calhoun County, Texas.

Topotypes.—Calhoun Co: Indianola, 3 (USNM), 1 (MCZ). There are no dates associated with these topotypes in the VertNet database.

Near topotypes.—Calhoun Co: 0.5 mi WNW Magnolia Beach, 1 (BUMMC); Hwy 316, 5.8 rd mi E jct with Hwy 238, 1 (TCWC). The latter was most recently collected, in 2007.

Remarks.—*Crotalus cinerous* Le Conte is a senior synonym to *C. atrox* Baird and Girard, but its use was suppressed by exercise of the plenary powers of the International Commission on Zoological Nomenclature (1955) in the interest of preserving the already widespread use of the junior synonym.

Schmidt (1953) recognized no subspecies for *Crotalus atrox*, and it continues to be a monotypic taxon today. In the most recent and extensive genetic/phylogeographic analysis to date for this species, Schield et al. (2015) concluded that *Crotalus atrox* is a single species characterized by significant past genetic divergence into eastern and western lineages. These lineages have become compromised by gene flow across a secondary contact zone that currently extends just west of the Continental Divide in New Mexico eastward through the Trans-Pecos of Texas.

Crotalus ornatus Hallowell, 1854
[Eastern Black-tailed Rattlesnake]

1853. *Crotalus molossus* (in part) Baird and Girard, Cat. North Amer. Rept. Mus. Smiths. Inst., Part 1 – Serp., p. 172.

1854. *Crotalus ornatus* Hallowell, Proc. Acad. Nat. Sci. Phila. 7:192

1860. *Caudisona molossus* Cope, Smiths. Contr. Knowl. 12:124.

1883. *Crotalus durissus* var. *molossus* Garman, Mem. Mus. Comp. Zool. (1884), 8:171.

1936. *Crotalus molossus molossus* Gloyd, Occ. Pap. Mus. Zool. Univ. Mich. 325:2

2012. *Crotalus ornatus* Anderson and Greenbaum, Herpetol. Monogr. 26:44.

Type specimen.—Holotype, female, skin only, USNM 486, obtained by Dr. Adolphus L. Heerman. The date was not recorded, but it was almost certainly in the early winter or spring of 1854, when Heerman accompanied a US Army railroad survey team detachment led by Lt. Parke out of San Diego eastward to Yuma, central Arizona, southern New Mexico, El Paso, Texas, and eventually, San Antonio, Texas.

Type locality.—Originally stated by describer as "near Pecos River, N.W. Texas." A century later it was restated by Schmidt (1953) as "Pecos River between El Paso and San Antonio," which is a restriction accepted for this catalog. The 1854 collection year narrows the places on the Pecos River on the old El Paso–San Antonio Road, a wagon route used for mail carry, commercial traffic, and military transportation from 1850 well into the 1880's. Heerman and the survey party would have come from El Paso to Comanche Springs (Fort Stockton not constructed until 1855), and from there to the Pecos River just north of the present town of Iraan in Pecos County. The road followed the west bank of the river southwards out of what is now Pecos County and into Terrell County to a point just south of the river's confluence with Independence Creek. Here the route crossed the Pecos River into modern Crockett County, went southeast away from the river canyon to Howard Spring, and then on to today's Val Verde County and the "valley" of the Rio San Pedro (Devils River). From here the wagons would make their way southward downriver to the Rio Grande, and then proceeded eastward to reach San Antonio. The type specimen of *Crotalus ornatus* would have thus originated from that stretch of the Pecos River that includes frontage in Crockett, Pecos, and Terrell counties.

Topotypes.—The route of the collector is too vague to meaningfully designate any topotypes.

Near topotypes.—Crockett Co: Hwy 290, 1 (TNHC). Terrell Co: E side Martin Canyon, 1 (TCWC). The most recent near topotype was obtained in 2014.

Remarks.—Anderson and Greenbaum (2012) resurrected *Crotalus ornatus* out of synonymy with *C. molossus*. They did not recognize any subspecies of this taxon, which includes all Texas populations of Black-tailed Rattlesnakes.

Toxicophis pugnax Baird and Girard, 1853
= Agkistrodon piscivorus leucostoma
[Western Cottonmouth]

1789. *Crotalus piscivorus* Lacépède, Hist. Nat. Serp. Vol. 2, p. 130.

1790. *Crotalus aquaticus* Bonnaterre, Tabl. Encyc. Méthod. Reg. Nat. Ophiiol., p. 3.

1802. *Scytalie piscivora* Latreille, in Sonnini de Manoncourt and Latreille, Hist. Nat. Rept., Vol. III, Seconde Pt., Serpens, p. 163.

1802. *Coluber tisiphone* Shaw, Gen. Zool. 3:406.

1820. *Coluber* (*Natrix*) *piscivorus* Merrem, Versch. Syst. Amphib., Tent. Syst. Amphib., p. 131.

1836. *Ancontias leucostoma* Troost, Ann. Lyc. Nat. Hist. New York 3:176.

1836. *Toxicophis leucostoma* Troost, Ann. Lyc. Nat. Hist. New York 3:190.

1838. *Trigonocephalus leucostoma* Holbrook, North Amer. Herpetol, 1st ed., Vol. 2, p. 63.

1853. *Toxicophis pugnax* Baird and Girard, Cat. N. A. Rept. Smithsonian Inst. I – Serpents, p. 156.

1859. *Trigonocephalus piscivorus* Jan, Rev. Mag. Zool. 10:154.

1859. *Ancistrodon piscivorus* (in part) Cope, Proc. Acad. Nat. Sci. Phila. (1860), 11:336.

1859. *A*[*ncistrodon*] *pugnax* Cope, Proc. Acad. Nat. Sci. Phila. (1860), 11:336.

1863. *Trigonocephalus piscivorus* var. *pugnax* Jan, Elenco Sistem. Deg. Ofidi Descr. Diseg. l'Iconogr. Gen, p. 125

1882. *Ancistrodon piscivorus pugnax* Yarrow, Bull. U.S. Nat. Mus. (1883), 24:80.

1890. *Agkistrodon piscivorus* Garman, Bull. Illinois Nat. Hist. Surv. 3:187.

1943. *Agkistrodon piscivorus leucostoma* Gloyd and Conant, Bull Chicago Acad. Sci. 7:164.

1945. *Agkistrodon piscivorus leucostomus* Smith and Taylor, U.S. Nat. Mus. Bull. 187:177.

1953. *Ancistrodon piscovorus leucostoma* Schmidt, Check List North Amer. Amphib. Rept., 6th ed., p. 225.

2013. *Agkistrodon piscivorus leucostoma* (by implication) Dixon, Amphib. Rept. Tex., 3rd ed., p. 288.

Type specimen.—Holotype, USNM 4262, obtained by Col. J. D. Graham (Gloyd and Conant 1943). This specimen is not listed in Cochran (1961), and thus the holotype may be lost.

Type locality.—Indianola, Calhoun County, Texas.

Topotypes.—Calhoun Co: Indianola, 1 (USNM). There was no collection date for this specimen.

Near topotypes.—Calhoun Co: Powderhorn Ranch, 1 (TNHC); 13 mi S Port Lavaca, 5 (TCWC). The most recent near topotype was obtained in 2016.

Remarks.—In their gene flow study of temperate North American *Agkistrodon*, Burbrink and Guiher (2015) used a coalescence methodology to identify reduced gene flow in what appear to be two evolutionary species of cottonmouths. They did not recognize any subspecies within either lineage, including in what they termed the "Northern Cottonmouth," *Agkistrodon piscivorus*, and to which they allocated their meager

Texas samples. Unfortunately, there were no samples in this study from about two-thirds of the cottonmouth's distribution in the state, including the mid-coastal plain near the type locality of *Toxicophis pugnax*, and from the unique river-confined habitats of populations in more xeric central and north-central Texas. Until additional phylogeographic information on these Texas populations is assembled, perhaps from additional mtDNA genes, the assumption of "no subspecies" seems premature. The fallback position provisionally used in this catalog follows Dixon (2013) in the historical application of *A. piscivorus leucostoma* to Texas cottonmouths. Given that the type locality of that subspecies is in western Tennessee, it is nevertheless unlikely that future genetic research on Texas populations will find a home for the *leucostoma* epithet.

LIST 3.2. ALPHABETICAL LIST OF AMPHIBIAN AND REPTILE TYPE LOCALITIES BY STATE AND COUNTY, WITH MAP (FIG. 4), INCLUDING ORIGINAL AND CURRENT TAXONOMIC DESIGNATIONS

STATE (12 taxa)

A. No exact locality:

Phrynosoma modestum (= *Phrynosoma modestum*).
Heterodon nasicus (= *Heterodon nasicus nasicus*).

B. Between San Pedro and Comanche Springs:

Rena dulcis (= *Rena dulcis dulcis*).
Diadophis docilis (= *Diadophis punctatus regalis*).

C. Between Seymour and Austin:

Spea laticeps (= *Scaphiopus couchii*).

D. Indianola and New Braunfels:

Heterodon cognatus (= *Heterodon nasiscus nasicus*).

E. Lower Rio Grande:

Heterodon kennerlyi (= *Heterodon kennerlyi*).

F. Northwestern Texas:

Contia episcopa torquata (= *Sonora episcopa*).

G. Padre Island, north end:

Holbrookia propinqua stonei (= *Holbrookia propinqua propinqua*).

H. Pecos River between El Paso and San Antonio:

Crotalus ornatus (= *Crotalus ornatus*).

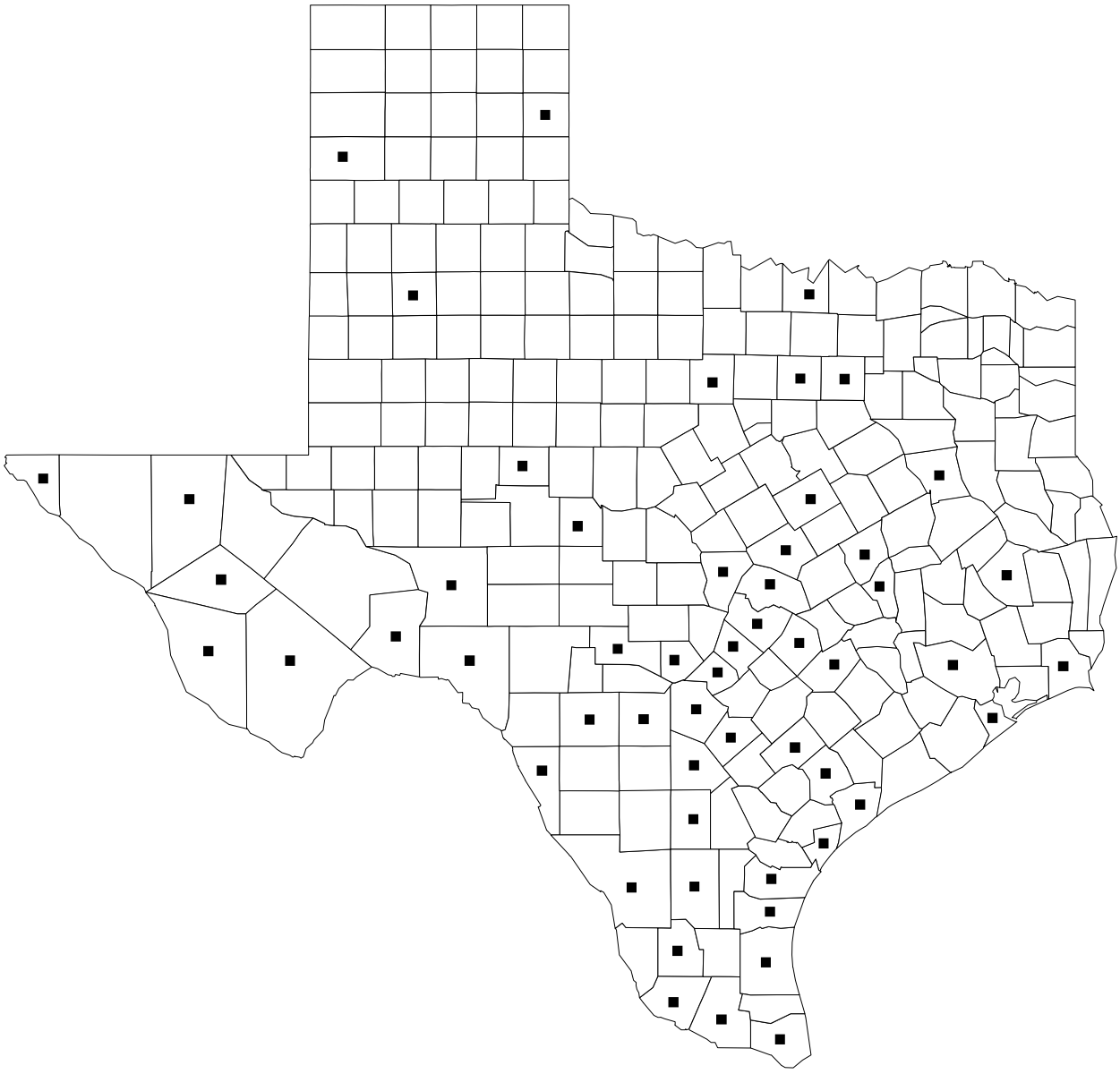

Figure 4. Distribution of Texas reptile and amphibian topotype specimens by county. Solid squares (■) indicate counties in which one or more type specimens were collected.

I. **Texas, between Laredo and Camargo**:

Hypsiglena texana (= *Hypsiglena jani*).

J. **Texas, east of Galveston**:

Diadophis texensis (= *Diadophis punctatus stictogenys*).

COUNTY

Anderson (1 taxon):

1. Elkhart:

Bufo woodhousii velatus (= *Anaxyrus velatus*).

Aransas (2 taxa):

2. Aransas National Wildlife Refuge:

Hyla flavigula (=*Dryophytes squirrellus*).

3. Rockport:

Malaclemys littoralis (= *Malaclemys terrapin littoralis*).

Atascosa (2 taxa):

4. 9 miles east of Pleasanton:

Tantilla kirnia (= *Tantilla nigriceps*).

5. 8 miles southwest of Somerset:

Hyla versicolor sandersi (= *Dryophytes chrysoscelis*).

Bastrop (1 taxon):

6. 2 miles west of the Colorado River on FM Road 969:

Hyla femoralis chrysoscelis (= *Dryophytes chrysoscelis*) [by neotype].

Bell (1 taxon):

7. Salado, side spring adjacent to Main (Salado) Springs:

Eurycea chisholmensis (= *Eurycea chisholmensis*).

Bexar (22 taxa):

8. No specific location within the county:

Hyla semifasciata (= *Dryophytes cinereus*).
Cnemidophorus guttatus (= *Aspidoscelis gularis gularis*).

9. Helotes:

Lithodytes latrans (= *Craugastor augusti latrans*).
Coleonyx brevis (= *Coleonyx brevis*).

10. Near Helotes:

Eutaenia cyrtopsis ocellata (= *Thamnophis cyrtopsis ocellatus*).

11. Within a circle with a 3 mile radius from Helotes (= 29°35'N, 98°41'W):

Holbrookia lacerata (= *Holbrookia lacerata*) [by restriction].

12. Headsprings of Helotes Creek, 5 miles north of Helotes:

Eurycea neotenes (= *Eurycea neotenes*).

13. Near Helotes Creek, 20 miles northwest of San Antonio:

Eumeces brevilineatus (= *Plestiodon tetragrammus brevilineatus*).

14. Vicinity of Marnock [Marnoch] homestead on Helotes Creek:

Syrrhophus marnockii [by restriction] (= *Syrrhophus marnockii*).

15. Salado Creek, 4 miles east of San Antonio:

Ambystoma proserpine (= *Ambystoma mavortium mavortium*).
Regina grahamii. (= *Regina grahamii*).

16. San Antonio [no specific location within city]:

Bufo granulosus (= *Incilius nebulifer*) [by restriction].
Ozotheca tristycha (= *Sternotherus odoratus*) [by restriction].
Pseudemys texana (= *Pseudemys texana*).
Phrynosoma bufonium (= *Phrynosoma cornutum*) [by restriction].
Phrynosoma harlanii (= *Phrynosoma cornutum*) [by restriction].
Sceloporus marmoratus (= *Sceloporus variabilis marmoratus*).
Sceloporus delicatissimus (= *Sceloporus variabilis marmoratus*).
Scolecophis fumiceps (= *Tantilla nigriceps*).

17. 20 miles north of San Antonio:

Plethodon glutinosus albagula (= *Plethodon albagula*).

18. 26 miles northwest of San Antonio:

Agkistrodon mokasen laticinctus (= *Agkistrodon laticinctus*).

19. Somerset:

Pseudacris streckeri (= *Pseudacris streckeri*) [by restriction].

Brazos (1 taxon):

20. College Station:

Deirochelys reticularia miaria (= *Deirochelys reticularia miaria*).

Brewster (12 taxa):

21. 6 miles south-southeast of Alpine:

Tantilla cucullata (= *Tantilla cucullata*).

22. 21 miles south of Alpine by TX Hwy 118:

Sceloporus poinsettii axtellii (= *Sceloporus poinsettii axtellii*).

23. Big Bend National Park, Chisos Mountains, The Basin:

Syrrhophus gaigeae (= *Syrrhophus guttilatus*).
Diadophis regalis blanchardi (= *Diadophis punctatus regalis*).

24. Big Bend National Park, east slope of Chisos Mountains:

Sceloporus merriami annulatus (= *Sceloporus merriami annulatus*).

25. Big Bend National Park, Government Spring, near Chisos Mountains:

Salvadora hexalepis deserticola (= *Salvadora deserticola*).

26. Big Bend National Park, Chisos Mountains, Maple Canyon:

Agkistrodon mokeson pictigaster (= *Agkistrodon laticinctus*).

27. Big Bend National Park, northeastern slopes of Chisos Mountains:

Sonora semiannulata blanchardi (= *Sonora episcopa*).

28. Black Gap [Wildlife Management Area], 50 miles south-southeast of Marathon, 2,500 feet:

Coleonyx reticulatus (= *Coleonyx reticulatus*).

29. Boquillas:

Trachemys scripta gaigeae (= *Trachemys gaigeae*).

30. Chalk Draw:

Leptotyphlops humilis segregus (= *Rena segrega*).

31. 5 miles east-southeast of Marathon, 30°11'57"N, 103°10'04"W:

Cnemidophorus inornatus heptagrammus (= *Aspidoscelis inornatus heptagrammus*).

Burnet (1 taxon):

32. 13 miles north of Bertram, F. W. Allen Ranch:

Tropidoclonion lineatum texanum (= *Tropidoclonion lineatum texanum*).

Calhoun (9 taxa):

33. Indianola:

Rana areolata (= *Lithobates areolatus areolatus*).
Leptophis majalis (= *Opheodrys aestivus*).
Regina clarkii (= *Nerodia clarkii clarkii*).
Tropidonotus medusa (= *Nerodia clarkii clarkii*) [by restriction].
Nerodia woodhousii (= *Nerodia erythrogaster transversa*) [by restriction].
Toxicophis pugnax (= *Agkistrodon piscivorus leucostoma*).
Crotalophorus consors (= *Sistrurus tergeminus edwardsii*).
Crotalus atrox (= *Crotalus atrox*).
Tantilla gracilis (= *Tantilla gracilis*).

Cameron (13 taxa):

34. Brownsville:

Syrrhophus campi (= *Syrrhophus campi*).
Hyla vanvlietii (= *Smilisca baudinii*).
Bufo speciosus (= *Anaxyrus speciosus*) [by restriction].
Rana berlandieri (= *Lithobates berlandieri*) [by lectotype].
Xerobates berlandieri (= *Gopherus berlandieri*) [by restriction].
Herpetodryas margaritiferus (= *Drymobius margaritiferus margaritiferus*) [by restriction].
Masticophis ruthveni (= *Masticophis schotti ruthveni*).

Taeniophis imperialis (= *Coniophanes imperialis imperialis*).
Dipsas septentrionalis (= *Leptodeira septentrionalis*) [by restriction].
Zamenis stejnegerianus (= *Coluber constrictor oaxaca*) [by restriction].

35. Vicinity of Brownsville:

Bufo debilis (= *Anaxyrus debilis debilis*) [by restriction].

36. Lower Rio Grande, near Brownsville:

Aspidonectes emoryi (= *Apalone spinifera emoryi*).

37. 7 miles north of Brownsville:

Siren intermedia texana (= *Siren intermedia nettingi*).

Coke (1 taxon):

38. Colorado River, south of the city limits of Robert Lee:

Natrix harteri paucimaculata (= *Nerodia paucimaculata*).

Comal (3 taxa):

39. Honey Creek Cave, 7.7 kilometers southwest of Spring Branch, 335 meters:

Eurycea tridentifera (= *Eurycea tridentifera*).

40. New Braunfels:

Cophosaurus texanus (= *Cophosaurus texanus texanus*).
Scotophis lindheimeri (= *Pantherophis obsoletus lindheimeri*).

Cooke (2 taxa):

41. No specific location within the county:

Opheosaurus ventralis attenuatus (= *Ophisaurus attenuatus attenuatus*) [by neotype].

42. Probably Gainesville:

Bufo aduncus (= *Anaxyrus woodhousii woodhousii*).

Crockett (1 taxon):

43. Howard Springs, 20 miles southwest of Ozona:

Scotophis emoryi (= *Pantherophis emoryi*).

Culberson (3 taxa):

44. Guadalupe Mountains region.

Eumeces epipleurotus (= *Plestiodon multiviratus epipleurotus*) [by restriction].

45. Near Frijole, southern part of the Guadalupe Mountains, 6,000 feet:

Eumeces taylori (= *Plestiodon multivirgatus epipleurotus*).

46. 17 miles south of Van Horn:

Terrapene ornata luteola (= *Terrapene ornata luteola*).

Dallas (4 taxa):

47. Dallas:

Eumeces obtusirostris (= *Plestiodon septentrionalis obtusirostris*).
Eumeces pachyurus (= *Plestiodon septentrionalis obtusirostris*).
Virginia inornata (= *Haldea striatula*).
Opheosaurus ventralis sulcatus (= *Ophisaurus attenuatus attenuatus*).

Deaf Smith (1 taxon):

48. Red River [headwaters]:

Pituophis mclennani (= *Pituophis catenifer sayi*).

DeWitt (1 taxon):

49. Guadalupe River, 8 kilometers northwest of Cuero:

Graptemys caglei (= *Graptemys caglei*).

Duval (4 taxa):

50. No specific location within the county:

Arizona elegans arenicola (= *Arizona elegans arenicola*).
Contia taylori (= *Sonora taylori*) [by restriction].

51. San Diego:

Hypopachus cuneus (= *Hypopachus variolosus*).
Cnemidophorus gularis sericeus (= *Aspidoscelis gularis gularis*).

El Paso (6 taxa):

52. El Paso:

Hyla copii (= *Dryophytes arenicolor*).
Phrynosoma planiceps (= *Phrynosoma cornutum*) [by restriction].
Cnemidophorus grahamii (= *Aspidoscelis tesselatus*) [by restriction].
Cnemidophorus marmoratus (= *Aspidoscelis marmoratus marmoratus*) [by lectotype].
Eutaenia ornata (= *Thamnophis sirtalis dorsalils*).

53. Hueco Tanks Road (RM Road 2775), 0.25 miles north of junction with US Hwy 62-180:

Tantilla nigriceps (= *Tantilla nigriceps*) [by neotype].

Fayette (1 taxon):

54. Colorado River bottomland forest, and Cummings Creek Bottom.

Salamandra texana (= *Ambystoma texanum*).

Galveston (2 taxa):

55. Galveston:

Helocaetes clarkii (= *Pseudacris clarkii*) [by restriction].
Phrynosoma brevicorne (= *Phrynosoma cornutum*) [by restriction].

Harris (1 taxon):

56. Northwest Houston, off Tanner Road, 1–2 miles west of junction with Campbell Road:

Bufo houstonensis (= *Anaxyrus houstonensis*).

Hays (5 taxa):

57. Beneath the Blanco River, 5 air kilometers northeast of [Hays] County courthouse in San Marcos:

Typhlomolge robusta (= *Eurycea robusta*).

58. Blanco River, near San Marcos:

Platythyra flavescens (= *Kinosternon flavescens*) [by lectotype].

59. Stream flowing from Fern Bank Spring, 6.3 miles east of Wimberley:

Eurycea pterophila (= *Eurycea pterophila*).

60. San Marcos, artesian well, 181 feet deep:

Typhlomolge rathbuni (= *Eurycea rathbuni*).

61. Lake at head[springs] of San Marcos River, San Marcos:

Eurycea nana (= *Eurycea nana*).

Hidalgo (1 taxon):

62. Lomita Ranch, 6 miles north of Hidalgo:

Sceloporus disparilis (= *Sceloporus grammicus microlepidotus*).

Jeff Davis (5 taxa):

63. Near head of Toyah Creek, 50 miles southwest of Pecos, Davis Mountains:

Ophibolus alternus (= *Lampropeltis alterna*).
Coluber subocularis (= *Bogertophis subocularis subocularis*).

64. Fort Davis:

Uta ornata schmidti (= *Urosaurus ornatus schmidti*).
Masticophis ornatus (= *Masticophis taeniatus girardi*) [by restriction].
Coluber bairdi (= *Pantherophis bairdi*).

Jefferson (2 taxa):

65. Beaumont:

Regina rigida sinicola Huheey (= *Liodytes rigida sinicola*).

66. Sabine Pass:

Acris gryllus paludicola (= *Acris blanchardi paludicola*).

Jim Hogg (1 taxon):

67. 4.8 kilometers south of Hebbronville on RM Road 1017:

Cnemidophorus sexlineatus stephensi (= *Aspidoscelis sexlineatus stephensae*).

Kendall (2 taxa):

68. Cascade Caverns, 4.6 miles by road southeast of Boerne:

Eurycea latitans (= *Eurycea latitans*).

69. Edge Falls, 4 miles south of Kendalia:

Storeria dekayi texana (= *Storeria dekayi texana*).

Kenedy (2 taxa):

70. 34.5 miles south of Riviera:

Cemophora coccinea lineri (= *Cemophora lineri*).

Kerr (1 taxon):

71. State Fish Hatchery, 8.2 miles northwest of Ingram:

Thamnophis proximus rubrilineatus (= *Thamnophis proximus rubrilineatus*).

Kleberg (1 taxon):

72. Kingsville:

Salvadora lineata (= *Salvadora grahamiae lineata*).

Lubbock (1 taxon):

73 1.6 kilometers west of New Deal:

Rana blairi (= *Lithobates blairi*).

Maverick (6 taxa):

74. Eagle Pass:

Spilotes erebennus (= *Drymarchon melanurus erebennus*).
Masticophis schotti (= *Masticophis schotti schotti*).
Lamprosoma episcopum (= *Sonora episcopa*).

75. Rio Grande west of San Antonio, Bexar County, Texas:

Elaps tristis (= *Micrurus tener tener*) [by restriction].

76. Texas side of Rio Grande, near Presidio del Norte (Coahuila):

Caudisona lepida (= *Crotalus lepidus lepidus*) [by restriction].
Churchillia bellona (= *Pituophis catenifer sayi*).

McClennan (1 taxon):

77. 3.5 miles east of Waco:

Scaphiopus hurterii (= *Scaphiopus hurterii*).

McMullen (1 taxon):

78. 15 miles northeast of Tilden:

Trionyx spiniferus guadalupensis (= *Apalone spinifera guadalupensis*).

Medina (2 taxa):

79. Valdina Farms Sinkhole, 16 miles north of D'Hanis, Valdina Farms:

Eurycea troglodytes (= *Eurycea troglodytes*).

80. Rio Seco [= Seco Creek]:

Engystoma texense (= *Gastrophryne olivacea*) [by restriction].

Nueces (1 taxon):

81. 4.8 miles east-northeast of Bishop, 27º36'30"N, 94º44'52"W, 48 feet:

Holbrookia lacerata subcaudalis (= *Holbrookia subcaudalis*).

Palo Pinto (2 taxa):

82. Palo Pinto:

Eumeces septentrionalis pallidus (= *Plestiodon septentrionalis obtusirostris*).

83. Brazos River north of Palo Pinto:

Natrix harteri (= *Nerodia harteri*).

Polk (1 taxon):

84. Dallardsville, 11 miles north of junction of FM Road 1276 and FM Road 943:

Coluber constrictor etheridgei (= *Coluber constrictor etheridgei*).

Presidio (4 taxa):

85. Closed Canyon, 23 kilometers southeast of Redford:

Sceloporus merriami longipunctatus (= *Sceloporus merriami longipunctatus*).

86. Jack Brown Spring on Ted and Francis Harper Ranch, ca. 30 miles south of Marfa:

Kinosternon murrayi (= *Kinosternon hirtipes murrayi*).

87. Ireneo Gonzalez Ranch, 24.5 miles northwest of Presidio:

Cnemidophorus dixoni (= *Aspidoscelis dixoni*).

88. Marfa:

Cnemidophorus septemvittatus (= *Aspidoscelis septemvittatus*) [by restriction].

Robertson (1 taxon):

89. Wheelock:

Heterodon nasicus gloydi (= *Heterodon nasicus gloydi*).

Starr (3 taxa):

90. 3 miles east of Rio Grande City:

Ficimia streckeri (= *Ficimia streckeri*).

91. Arroyo Los Olmos, near lower end, ca. 3 miles southeast of Rio Grande City:

Sceloporus olivaceus (= *Sceloporus olivaceus*).

92. Fort Ringgold Military Reservation, 26º22'N, 98º48'W:

Crotaphytus reticulatus (= *Crotaphytus reticulatus*).

Tarrant (1 taxon):

93. Fort Worth:

Contia nuchalis (= *Sonora episcopa*).

Terrell (2 taxa):

94. 8.8 miles west of Dryden on US Hwy 90:

Lampropeltis blairi (= *Lampropeltis alterna*).

95. Sanderson:

Arizona elegans (= *Arizona elegans elegans*) [by restriction].

Travis (5 taxa):

96. Austin (no specific locality within city):

Graptemys pseudogeographica versa (= *Graptemys versa*).

97. Outflow of Parthenia (Main) Springs in Barton Springs Pool, Zilker Park, Austin:

Eurycea sosorum (= *Eurycea sosorum*).

98. Primary outflows of Stillhouse Hollow Springs, 30°22'28"N, 97°45'55"W:

Eurycea tonkawae (= *Eurycea tonkawae*).

99. Sunken Gardens Spring, an outlet of Barton Springs, Zilker Park:

Eurycea waterlooensis (= *Eurycea waterlooensis*).

100. 1 mile east of Austin, at a small branch of Boggy Creek:

Thamnophis sirtalis annectans (= *Thamnophis sirtalis annectans*).

Uvalde (1 taxon):

101. Uvalde:

Stenostoma rubellum (= *Rena dulcis rubella*).

Val Verde (8 taxa):

102. Devils River [Horace Fawcett Ranch, 37 miles north of Del Rio], spring-fed tributary of Dolan Creek:

Tantilla diabola (= *Tantilla cucullata*).

103. Mouth of the Devils River:

Cnemidophorus gularis (= *Aspidoscelis gularis gularis*) [by restriction].

104. Devils River at ca. 30°03'40"N, 101°07'22"W, about 500 meters from its confluence with the Rio Grande:

Plestiodon obsoletum (= *Plestiodon obsoletus*) [by restriction].

105. Rio San Pedro [= Devils River] of the Rio Grande:

Bufo punctatus (= *Anaxyrus punctatus*).
Holbrookia affinis (= *Cophosaurus texanus texanus*).
Elaps tenere (= *Micrurus tener tener*) [by restriction].

106. Devils River Canyon, 0–13 kilometers north of Baker's Crossing:

Gerrhonotus infernalis (= *Gerrhonotus infernalis*) [by restriction].

107. East Painted Cave, near mouth of Pecos River:

Sceloporus merriami (= *Sceloporus merriami merriami*).

Victoria (1 taxon):

108. Victoria, Guadalupe River bottom[land]:

Engystoma areolata (= *Gastrophryne olivacea*).

Webb (1 taxon):

109. Laredo, Chacon Creek at US Highway 83:

Cnemidophorus laredoensis (= *Aspidoscelis laredoensis*).

Wheeler (1 taxon):

110. North Fork of Red River, near Sweetwater Creek:

Ophibolus gentilis (= *Lampropeltis triangulum gentilis*) [by restriction].

Williamson (1 taxon):

111. Headsprings of Buford Hollow, a small tributary of the South San Gabriel River below Lake Georgetown, 30°39'39"N, 97°43'36"W:

Eurycea naufragia (= *Eurycea naufragia*).

Wilson (1 taxon):

112. Within 12 kilometer circle centered on 29º16'20"N, 98º09'50"W:

Holbrookia propinqua (= *Holbrookia propinqua propinqua*) [by restriction].

LIST 3.3. SENIOR AUTHORS OF DESCRIPTIONS OF AMPHIBIANS AND REPTILES DESCRIBED FROM TEXAS AND NUMBER OF TAXA DESCRIBED

S. F. Baird (39)

E. D. Cope (19)

R. Kennicott (7)

H. M. Smith (7)

L. H. Stejneger (7)

E. Hallowell (6)

J. L. R. Agassiz (4)

P. T. Chippindale (4)

K. P. Schmidt (4)

G. A. Boulenger (3)

C. F. Girard (3)

R. W. Axtell (2)

S. C. Bishop (2)

A. E. Brown (2)

W. L. Burger (2)

S. W. Garman (2)

A. P. Glass (2)

H. K. Gloyd (2)

J. K. Strecker, Jr. (2)

H. Trapido (2)

R. G. Webb (2)

A. F. A. H. Wiegmann (2)

J. K. Baker (1)

G. Baur (1)

C. E. Blanchard (1)

M-F. Bocourt (1)

A. N. Bragg (1)

B. C. Brown (1)

W. K. Davis (1)

J. R. Dixon (1)

R. A. Edgren, Jr. (1)

M. J. Fouquette, Jr. (1)

A. G. Flury (1)

C. J. Goin (1)

A.B. Grobman (1)

A.C. L. G. Günther (1)

F. Harper (1)

N. E. Hartweg (1)

W. P. Hay (1)

D. P. Haynes (1)

D. M. Hillis (1)

J. E. Huheey (1)

L. M. Klauber (1)

B. Matthes (1)

C. O. McKinney (1)

J. S. Mecham (1)

S. A. Minton (1)

R. W. Mitchell (1)

M. B. Mittleman (1)

R. E. Olson (1)

A. I. Ortenburger (1)

F. E. Potter, Jr. (1)

L. W. Ramsey (1)

D. A. Rossman (1)

O. E. Sanders (1)

E. Schenkel (1)

H. Schlegel (1)

A. Schwartz (1)

J. F. Scudday (1)

W. H. Stickel (1)

E. H. Taylor (1)

D. W. Tinkle (1)

S. E. Trauth (1)

F. H. Troschel (1)

K. L. Williams (1)

L. D. Wilson (1)

A. A. Wright (1)

H. C. Yarrow (1)

LIST 3.4. PRINCIPAL COLLECTORS OF TYPE SPECIMENS OF AMPHIBIANS AND REPTILES DESCRIBED FROM TEXAS

J. H. Clark (14)

J. D. Graham (13)

A. C. V. Schott (8)

G. A. Marnock [Marnoch] (6)

J. Boll (4)

S. Churchill (4)

A. L. Heerman (4)

C. B. R. Kennerly (4)

S. Van Vliet (4)

T. F. Smith (3)

E. H. Taylor (3)

W. Taylor (3)

S. W. Woodhouse (3)

R. W. Axtell (2)

J. T. Carney (2)

P. T. Chippindale (2)

D. N. Couch (2)

A. G. Flury (2)

P. Harter (2)

D. A. Hillis (2)

A. J. B. Kirn (2)

W. Lloyd (2)

R. B. Marcy (2)

E. Meyenburg (2)

F. E. Potter, Jr. (2)

A. H. Price (2)

G. H. Ragsdale (2)

K. P. Schmidt (2)

J. K. Strecker, Jr. (2)

S. Wright (2)

R. A. Anderson (1)

E. B. Andrews (1)

V. O. Bailey (1)

J. K. Baker (1)

C. M. Barour (1)

S. C. Bishop (1)

W. L. Black (1)

W. F. Blair (1)

F. N. Blanchard (1)

J. F. von Brant (1)

C. C. Brimley (1)

H. H. Brimley (1)

B. C. Brown (1)

R. D. Camp (1)

D. A. Chamberlain (1)

W. Clanton (1)

S. Clayton (1)

E. D. Cope (1)

S. W. Crawford (1)

J. C. Cross (1)

L. DeWette (1)

L. A. Dries (1)

G. Drewry (1)

L. A. Edwards (1)

C. Everett (1)

M. J. Fouquette, Jr. (1)

C. C. Foster (1)

H. T. Gaige (1)

B. P. Glass (1)

W. J. Greer (1)

R. Hansen (1)

R. F. Harvey (1)

W. P. Hay (1)

F. R. Kay (1)

F. Kellogg (1)

W. P. Kerr (1)

F. J. Lindheimer (1)

E. A. Liner (1)

D. C. Lloyd (1)

W. P. Kerr (1)

M. F. von Maneufel (1)

G. B. McClennan (1)

B. Matthes (1)

D. L. McGregor (1)

R. McKown (1)

S. A. Minton (1)

J. D. Mitchell (1)

R. W. Mitchell (1)

C. E. Mohr (1)

W. Mosauer (1)

D. Mosier (1)

W. L. Necker (1)

R. E. Olson (1)

A. R. Ortenburger (1)

E. Palmer (1)

[Capt.] Page (1)

H. Phillips (1)

J. Pope (1)

J. R. Reddell (1)

B. P. Roberts (1)

W. B. Robertson (1)

F. von Roemer (1)

D. A. Rossman (1)

O. E. Sanders (1)

R. M. Sanders (1)

W. E. Smith (1)

D. Stine (1)

G. Stolley (1)

D. W. Tinkle (1)

S. E. Trauth (1)

A. J. Ward (1)

J. E. Werler (1)

S. H. Wheeler (1)

R. Whitten (1)

L. D. Wilson (1)

M. B. Wilson (1)

C. K. Winkler (1)

J. C. Wottring (1)

N. E. Worsham (1)

M. R. Wright (1)

C. K. Worthen (1)

LIST 3.5. MUSEUMS AND INSTITUTIONS HOUSING PRIMARY TYPE SPECIMENS OF AMPHIBIANS AND REPTILES COLLECTION IN TEXAS

National Museum of Natural History (USNM)	85
Academy of Natural Sciences of Philadelphia (ANSP)	17
University of Texas [at Austin] Biodiversity Collections (TNHC)	14
University of Michigan Museum of Zoology (UMMZ)	9
Museum of Comparative Zoology, Harvard University (MCZ)	6
University of Illinois Natural History Collection (UIMNH)	6
Field Museum of Natural History (FMNH)	6
Natural History Museum, United Kingdom (NHMUK, formerly BMNH)	5
Texas Cooperative Wildlife Collection (TCWC)	5
American Museum of Natural History (AMNH)	2
Baylor University Mayborn Museum Complex (BUMMC)	2
Carnegie Museum (CM)	2
University of Texas at El Paso Biodiversity Collections (UTEP)	2
Chicago Academy of Sciences (CHAS)	1
Cornell University Museum of Vertebrates (CUMV)	1
University of Kansas (KU)	1
Louisiana State University Museum of Zoology (LSUMZ)	1
Museum für Naturkund, Berlin, Germany (ZMB)	1
Muséum National d'Hisoire Naurelle, Paris (MNHN)	1

Naturhistorisches Museum Basel, Switzerland (NMB)	1
Naturhistoricsches Museum Wien, Vienna, Austria (NMW)	1
Texas Christian Univ., Biology Dept. (TCU)	1
Florida Museum of Natural History, University Florida (UF)	1

LIST 3.6. AMPHIBIAN AND REPTILE TAXA DESCRIBED FROM TEXAS THAT HAVE BEEN PLACED IN SYNONYMY (1) BECAUSE OF PRIORITY OR (2) BECAUSE THEY NO LONGER HAVE CURRENT TAXONOMIC RANK AS VALID SPECIES OR SUBSPECIES

Original Name	Current Taxonomic Designation
Siren intermedia texana	*Siren intermedia nettingi*
Ambystoma proserpine	*Ambystoma mavortium mavortium*
Spea laticeps	*Scaphiopus couchii*
Syrrhophus gaigeae	*Syrrhophus guttilatus*
Hyla copii	*Dryophytes arenicolor*
Hyla versicolor sandersi	*Dryophytes chrysoscelis*
Hyla semifasciata	*Dryophytes cinereus*
Hyla flavigula	*Dryophytes squirellus*
Hyla vanvlietii	*Smilisca baudinii*
Bufo aduncus	*Anaxyrus woodhousii woodhousii*
Bufo granulosus	*Incilius nebulifer*
Engystoma areolata	*Gastrophryne olivacea*
Engystoma texense	*Gastrophryne olivacea*
Hypopachus cuneus	*Hypopachus variolosus*
Ozotheca tristycha	*Sternotherus odoratus*
Eumeces taylori	*Plestiodon multivirgatus epipleurotus*

Eumeces pachyurus	*Plestiodon septentrionalis obtusirostris*
Eumeces septentrionalis pallidus	*Plestiodon septentrionalis obtusirostris*
Cnemidophorus gularis sericeus	*Aspidoscelis gularis gularis*
Cnemidophorus guttatus	*Aspidoscelis gularis gularis*
Cnemidophorus grahamii	*Aspidoscelis tesselatus*
Opheosaurus ventralis sulcatus	*Ophisaurus attenuatus attenuatus*
Holbrookia affinis	*Cophosaurus texanus texanus*
Holbrookia propinqua stonei	*Holbrookia propinqua propinqua*
Phrynosoma brevicorne	*Phrynosoma cornutum*
Phrynosoma bufonium	*Phrynosoma cornutum*
Phrynosoma harlanii	*Phrynosoma cornutum*
Phrynosoma planiceps	*Phrynonoma cornutum*
Sceloporus delicatissimus	*Sceloporus variabilis marmoratus*
Sceloporus disparilis	*Sceloporus grammicus microlepidotus*
Agkistrodon mokeson pictigaster	*Agkistrodon laticinctus*
Toxicophis pugnax	*Agkistrodon piscivorus leucostoma*
Crotalophorus consors	*Sistrurus tergeminus edwardsii*
Elaps tristis	*Micrurus tener tener*
Zamenis stejnegerianus	*Coluber constrictor oaxaca*
Lampropeltis blairi	*Lampropeltis alterna*
Masticophis ornatus	*Masticophis taeniatus girardi*
Leptophis majalis	*Opheodrys aestivus*
Churchillia bellona	*Pituophis catenifer sayi*
Pituophis mclennani	*Pituophis catenifer sayi*

Contia episcopa torquata	*Sonora episcopa*
Contia nuchalis	*Sonora episcopa*
Sonora semiannulata blanchardi	*Sonora episcopa*
Tantilla diabola	*Tantilla cucullata*
Scolecophis fumiceps	*Tantilla nigriceps*
Tantilla kirnia	*Tantilla nigriceps*
Virginia inornata	*Haldea striatula*
Tropidonotus medusa	*Nerodia clarkii clarkii*
Nerodia woodhousii	*Nerodia erythrogaster transversa*
Eutaenia ornata	*Thamnophis sirtalis dorsalis*
Diadophis docilis	*Diadophis punctatus regalis*
Diadophis regalis blanchardi	*Diadophis punctatus regalis*
Diadophis texensis	*Diadophis punctatus stictogenys*
Heterodon cognatus	*Heterodon nasicus nasicus*
Hypsiglena texana	*Hypsiglena jani*

ENDEMIC TAXA AND CONSERVATION CONCERNS

Of the 45 taxa of amphibians and 126 taxa of reptiles described from Texas, 31 (68.8%) of the amphibians and 86 (68.2%) of the reptiles are recognized in the catalog as valid. Of these, 14 of the amphibians are endemic (45.2%) to the state (Table 8), the major proportion of which (13 taxa, 92.8%) are obligatory paedomorphic salamander species in the genus *Eurycea* (Family Plethodontidae) that have highly restricted distributions in central Texas. The fourteenth endemic is the Endangered Houston Toad (*Anaxyrus houstonensis*), which has declined to a few extant populations in eastern and central Texas. The US Fish and Wildlife Service currently lists four of these salamander species as Endangered, and one as Threatened; the USFWS has been petitioned to consider four others for listing. Texas Parks and Wildlife must list taxa as the USFWS does, and thus designates all the federally listed taxa as state Threatened. They also list as Threatened those four species under federal petition, plus another three species that are not potential federal candidates. Only two endemic Texas salamanders thus are not under state (or federal) protection at this time, *Eurycea pterophila* and *E. troglodytes*. These nominal species likely are composed of two or more endemic species that are yet to be described. The Global versus State Conservation rankings for the endemic amphibians are generally in accord with each other, and correspond well with their state and federal listing status.

Table 8. Conservation status of amphibians described from Texas that (A) are endemic to the state or (B) were described from the state and occur nowhere else in the United States, although they may range by varying degrees into Mexico. Threatened/Endangered listings at state and federal level were taken from TPWD and USFWS, respectively; state and global evaluations of conservation status are from NatureServe (https://explorer.natureserve.org). Conservation status marked with an asterisk (*) denotes the level of threat indicated by the NatureServe classification needs adjustment to reflect current data.

Current Name of Taxon	Original Name of Taxon	State Threatened or Endangered	Federal Threatened or Endangered	State Conservation Status	Global Conservation Status
A. Amphibians described from Texas that are endemic to the state					
Eurycea chisholmensis	*Eurycea chisholmensis*	Threatened	Threatened	Critically imperiled	Critically imperiled
Eurycea latitans	*Eurycea latitans*	Threatened	Petitioned	Imperiled	Vulnerable
Eurycea nana	*Eurycea nana*	Threatened	Threatened	Critically imperiled	Critically imperiled
Eurycea naufragia	*Eurycea naufragia*	Threatened	Threatened	Critically imperiled	Critically imperiled
Eurycea neotenes	*Eurycea neotenes*	Threatened	Petitioned	Critically imperiled	Critically imperiled
Eurycea pterophila	*Eurycea pterophila*	Not listed	Not listed	Vulnerable	Vulnerable
Eurycea rathbuni	*Typhlomolge rathbuni*	Endangered	Endangered	Critically imperiled	Critically imperiled
Eurycea robusta	*Typhlomolge robusta*	Threatened	Petitioned	Critically imperiled	Critically imperiled
Eurycea sosorum	*Eurycea sosorum*	Endangered	Endangered	Critically imperiled	Critically imperiled
Eurycea tonkawae	*Eurycea tonkawae*	Threatened	Threatened	Imperiled	Imperiled
Eurycea tridentifera	*Eurycea tridentifera*	Threatened	Petitioned	Unranked	Unranked
Eurycea troglodytes	*Eurycea troglodytes*	Not listed	Not listed	Vulnerable	Vulnerable
Eurycea waterlooensis	*Eurycea waterlooensis*	Endangered	Endangered	Critically imperiled	Critically imperiled
Anaxyrus houstonensis	*Bufo houstonensis*	Endangered	Endangered	Critically imperiled	Critically imperiled
B. Amphibians described from Texas that occur nowhere else in the United States although they range into Mexico					
Syrrhophus campi[1]	*Syrrhophus campi*	Not listed	Not listed	Vulnerable*	Apparently secure
Syrrhophus marnockii	*Syrrhophus marnockii*	Not listed	Not listed	Secure	Secure
Craugastor augusti latrans	*Lithodytes latrans*	Not listed	Not listed	Secure at species level	Apparently secure subspecies

[1] *Syrrhophus campi* was once an endemic species to extreme south Texas and adjacent Mexico until about the 1970's when it began to colonize suburban central and eastern Texas locations; it has now spread into Louisiana. It is apparently a human commensal in these areas of introduction, their direct-development eggs likely being spread by transportation of ornamental potted plants. It is not clear if any of these introduced populations will persist long term outside of their original semitropical environment, and thus has been considered here still to be a species that naturally occurs only in Texas and Mexico.

Of the 86 valid reptile taxa, only 15 are endemic (17.4%). These endemics (Table 9) are diverse, however, comprising 7 snakes (4 of which are subspecific taxa), 5 turtles (2 are subspecies), and 2 lizards (one a subspecies). The taxonomic validities of two of the three snake endemic subspecies (*Tropiclonion lineatum texanum* and *Heterodon nasicus gloydi*) and one of the lizards (*Aspidoscelis sexlineatus stephensae*) are somewhat controversial, and may not be recognized following further study of within-species variation. The taxonomic status of the remaining endemics are for the most part non-controversial. Of the 15 reptile endemics, only four are currently protected as state Threatened and none are listed federally at this time. The formerly Threatened snake *Nerodia paucimaculata* has been declared Recovered by the USFWS, and is thus no longer on the TPWD protected list. The concordance between the Global versus State Conservation rankings seen for endemic amphibians is not completely realized for the endemic reptiles. The reasons are threefold: 1) a taxon, particularly a subspecies, is not recognized at one or both of the two levels (state versus global); 2) the ranking has not kept pace with new information on state populations being actively generated on vulnerable taxa; and 3) near total ignorance of the population status and of any emerging threats to widespread but understudied species (e.g., *Tantilla cucullata*).

A second group of valid amphibian and reptile species and subspecies described from Texas are those that occur in the United States only in Texas, but are also shared with adjacent Mexico. Only three amphibian species can be placed into this group, two Chirping Frogs of the genus *Syrrhophus* and a subspecies of the Barking Frog, *Craugastor augusti latrans*. One of these, *S. campi*, historically known only from the near-tropical areas of extreme South Texas and the adjacent coastal plain of northeastern Mexico, began to appear in suburban areas in central and eastern Texas in the 1970s. However, in this century it has now invaded Louisiana in similar habitats. These colonies are not likely to survive severe winter weather in the long term, and thus the occurrence of the species outside of the historical Lower Rio Grande area is likely transitory. Fundamentally, the continuing presence of these three frog species on a global basis is likely secure at this time.

There are 28 reptile species and subspecies described from Texas that are indigenous to no other US state but also occur in Mexico. These comprise two turtles, twelve lizards, and fourteen snakes. Half of these taxa (14) occur in Texas primarily south and southeast of the Edwards Plateau in the South Texas Plains and peripheral coastal areas; their distributions all extend into Mexico into the Gulf Coastal Plain areas of Tamaulilpas, Coahuila, and Nuevo Leon. Some of these species also have extensive distributions further south into tropical Mexico and Central America. Three of these are the snakes *Drymobius margaritiferus*, *Coniophanes imperalis*, and *Leptodeira septentrionalis*, all of which occur in Texas only in the near-tropical southernmost part of the state. All of these are designated Threatened by the TPWD, but appear to be persisting in reserves and greenbelt set-asides within their small historical distributions. They are not at present considered to be vulnerable on a global basis, although little is known of their present population status directly south of the Rio Grande in northern Tamaulipas. Of greater global concern are two species with larger historical distributions in South Texas, the tortoise *Gopherus berlandeiri* and the lizard *Holbrookia subcaudalis*. The tortoise is protected largely because of vulnerability to habitat changes and illicit take for captivity purposes. The lizard has been recently found to be likely extirpated over extensive parts of its former Texas distribution. The only other state Threatened reptile is the aquatic turtle *Kinosternon hirtipes murrayi*, a Chihuahuan Desert subspecies of a widespread Mexican Plateau form known from a handful of populations in Presidio County. It is likely a distinct species, and may be critically endangered on a global basis. Three other Chihuahuan Desert endemics with limited Texas distributions, the lizards *Coleonyx reticulatus*, *Aspidoscelis septemvittatus*, and *Sceloporus merriami* (with three subspecies) are not protected at this time. The remaining 10 Texas-described taxa shared with Mexico have large distributions in Texas, and although adversely affected by expansion of human populations and activities, do not seem to be imperiled to the point of requiring protection.

Table 9. Conservation status of reptiles described from Texas that (A) are endemic to the state or (B) were described from the state and occur nowhere else in the United States, although they may range by varying degrees into Mexico. Threatened/Endangered listings at state and federal level were taken from TPWD and USFWS, respectively; state and global evaluations of conservation status are from NatureServe (https://explorer.natureserve.org). Conservation status marked with an asterisk (*) denotes the level of threat indicated by the NatureServe classification needs adjustment (upwards or downwards) to reflect current data. Additionally, some subspecies are not ranked globally or at the state level; in these cases the ranking for the entire species is provided and indicated as such.

Current Name of Taxon	Original Name of Taxon	State Threatened or Endangered	Federal Threatened or Endangered	State Conservation Status	Global Conservation Status
A. Reptiles described from Texas that are endemic to the state					
Apalone spinifera guadalupensis	*Apalone spinifera guadalupensis*	Not listed	Not listed	Unranked	Apparently secure subspecies
Malaclemys terrapin littoralis	*Malaclemys littoralis*	Not listed	Not listed	Vulnerable [species]	Vulnerable subspecies
Graptemys caglei	*Graptemys caglei*	Threatened	Not listed	Critically imperiled	Vulnerable
Graptemys versa	*Graptemys pseudogeographica versa*	Not lited	Not listed	Status unknown	Apparently secure
Pseudemys texana	*Pseudemys texana*	Not listed	Not listed	Secure	Secure
Holbrookia lacerata	*Holbrookia lacerata*	Not listed	Not listed	Imperiled	Unranked
Aspidoscelis sexlineatus stephensae	*Cnemidophorus sexlineatus stephensi*	Not listed	Not listed	Secure [species]	Secure [species]
Arizona elegans arenicola	*Arizona elegans arenicola*	Not listed	Not listed	Secure [species]	Secure [species]
Cemophora lineri	*Cemphora coccinea lineri*	Threatened	Not listed	Imperiled	Imperiled
Tantilla cucullata	*Tantilla cucullata*	Threatened	Not listed	Imperiled	Vulnerable
Nerodia harteri	*Natrix harteri*	Threatened	Not listed	Critically imperiled	Critically imperiled
Nerodia paucimaculata	*Natrix harteri paucimaculata*	Not listed	Recovered	Critically imperiled*	Critically imperiled*
Thamnophis proximus rubrilineatus	*Thamnophis proximus rubrilineatus*	Not listed	Not listed	Secure [species]	Secure [species]
Tropidoclonion lineatum texanum[1]	*Tropidoclonion lineatum texanum*	Not listed	Not listed	Imperiled [species]	Secure [species]
Heterodon nasicus gloydi[2]	*Heterodon nasicus gloydi*	Not listed	Not listed	Unranked	Apparently secure [species]

Table 9. (cont.)

Current Name of Taxon	Original Name of Taxon	State Threatened or Endangered	Federal Threatened or Endangered	State Conservation Status	Global Conservation Status
B. Reptiles described from Texas that occur nowhere else in the United States although they range into Mexico					
Kinosternon hirtipes murrayi	*Kinosternon murrayi*	Threatened	Not listed	Secure*	Secure*
Gopherus berlandieri	*Xerobates berlandieri*	Threatened	Not listed	Imperiled	Apparently secure
Coleonyx reticulatus	*Coleonyx reticulatus*	Not listed	Not listed	Apparently secure	Vulnerable
Plestiodon tetragrammus brevilineatus	*Eumeces brevilineatus*	Not listed	Not listed	Unranked	Apparently secure subspecies
Aspidoscelis laredoensis	*Cnemdiophorus laredoensis*	Not listed	Not listed	Apparently secure	Apparently secure
Aspidoscelis septemvittatus[3]	*Cnemdiophorus septemvittatus*	Not listed	Not listed	Vulnerable	Secure
Gerrhonotus infernalis	*Gerrhonotus infernalis*	Not listed	Not listed	Apparently secure	Apparently secure
Holbrookia subcaudalis	*Holbrookia lacerata subcaudalis*	Not listed	Not listed	Status unknown	Imperiled
Holbrookia propinqua propinqua	*Holbrookia propinqua*	Not listed	Not listed	Vulnerable [species]	Apparently secure [species]
Sceloporus merriami annulatus	*Sceloporus merriami annulatus*	Not listed	Not listed	Vulnerable	Apparently secure subspecies
Sceloporus merriami longipunctatus	*Sceloporus merriami longipunctatus*	Not listed	Not listed	Vulnerable	Apparently secure subspecies
Sceloporus merriami merriami	*Sceloporus merriami*	Not listed	Not listed	Vulnerable	Apparently secure subspecies
Sceloporus poinsettii axtelli	*Sceloporus poinsettii axtelli*	Not listed	Not listed	Secure [species]	Secure [species]
Sceloporus variabilis marmoratus	*Sceloporus marmoratus*	Not listed	Not listed	Unranked	Secure subspecies
Rena dulcis rubella	*Stenostoma rubellum*	Not listed	Not listed	Secure [species]	Secure [species]
Crotalus ornatus	*Crotalus ornatus*	Not listed	Not listed	Unranked	unranked
Drymarchon melanurus erebennus	*Spilotes erebennus*	Not listed	Not listed	Apparently secure subspecies	Apparently secure subspecies
Drymobius margaritiferus margaritiferus	*Herpetodryas margaritiferus*	Threatened	Not listed	Critically imperiled	Secure [species]
Ficimia streckeri	*Ficimia streckeri*	Not listed	Not listed	Vulnerable	Apparently secure
Masticophis schotti schotti	*Masticophis schotti*	Not listed	Not listed	Secure [species]	Secure [species]

Table 9. (cont.)

Current Name of Taxon	Original Name of Taxon	State Threatened or Endangered	Federal Threatened or Endangered	State Conservation Status	Global Conservation Status
Masticophis schotti ruthveni	*Masticophis ruthveni*	Not listed	Not listed	Unranked	unranked
Masticophis taeniatus girardi	*Masticophis ornatus*	Not listed	Not listed	Secure [species]	Secure [species]
Pantherophis bairdi	*Coluber bairdi*	Not listed	Not listed	Apparently secure	Apparently secure
Salvadora grahamiae lineata	*Salvadora lineata*	Not listed	Not listed	Secure [species]	Secure [species]
Sonora taylori	*Contia taylori*	Not listed	Not listed	Unranked	Unranked
Thamnophis cyrtopsis ocellatus	*Eutaenia cyrtopsis ocellata*	Not listed	Not listed	Unranked	Apparently secure subspecies
Coniophanes imperialis imperalis	*Taeniophis imperialis*	Threatened	Not listed	Imperiled	Apparently secure subspecies
Leptodeira septentrionalis	*Dipsas septentrionalis*	Threatened	Not listed	Imperiled	Secure

[1] The status of this poorly diagnosed subspecies in Oklahoma is undetermined. It is considered here an endemic taxon to Texas pending a full taxonomic review of the species.

[2] The NatureServe rankings have this taxon as a full species, *Heterodon gloydi*, with a global rank of Vulnerable. Their distributional concept, however, is considerably outdated, and the current view of this entity is that of a problematical (but possibly valid) Texas endemic subspecies of *Heterodon nasicus* (see the Catalog entry). The Global conservation rank indicated here is for the entire *H. nasicus* species, as status of the *gloydi* form is Unranked in Texas.

[3] This species appears in the NatureServe global and state rankings as *Aspidoscelis scalaris*.

AUTHORS OF TYPE DESCRIPTIONS AND COLLECTORS OF TYPE SPECIMENS

As mentioned above, the two individuals whose names are associated with the most field acquisitions of Texas type material are **James Duncan Graham** (12 taxa) and **John Henry Clark** (14 taxa), both participants in the early 1850–1855 Boundary Survey field work between the US and Mexico after the 1848 Treaty of Guadalupe Hidalgo. Brevet Lt. Colonel Graham (1799–1865) was the career US Army officer appointed to be the head of the Scientific Corps for this effort. After his Boundary Survey assignment was completed, he was reassigned back to the northeastern US. He served in the newly created US Army Corps of Engineers and was eventually promoted to full Colonel during the Civil War. Although the Boundary Survey assignment occupied only a relatively brief period of his long, diverse career as an astronomer/surveyor, his herpetological legacy was to have three reptilian taxa named after him: *Cnemidophorus grahami* (now a synonym of *Aspidoscelis tesselatus*), *Salvadora grahamiae*, and *Regina grahamii*. Also named in his honor are Mount Graham, the highest peak in the Pinaleño Mountains of Arizona, and the county in which that range resides. Ironically, the confusing verbatim type locality of "province of Sonora," associated with some Graham-collected specimens from the Survey, is now thought to refer to areas in Graham County (Webb 1988).

John Henry Clark (ca. 1830–1885?) was a college-educated naturalist and a former student protégé of Spencer Baird when the latter was a teacher at Dickinson College. Clark already was on site in the Southwest and working as a vertebrate zoologist (sponsored by Baird after he joined the Smithsonian) for Boundary Commissioner John Bartlett. Clark was at that time already responsible for collecting fishes, birds, mammals, and reptiles. Soon after his arrival in Texas in 1850, Graham hired him for his own boundary survey travels. Col. Graham's name was attached to several more than the eleven taxa once cited as his acquisitions; some of these specimens have been since found to have actually been obtained by Clark. During his civilian experience with the Army, Clark also became interested in astronomy and surveying, and under Graham's successor (Major William H. Emory), became credibly trained in these fields as well. His vertebrate zoology legacy is commemorated in one frog and two reptile species named after him, *Pseudacris clarkii*, *Sceloporus clarkii*, and *Nerodia clarkii*, the grebe *Aechmophorus clarkii*, and the pocket gopher subspecies, *Cratogeomys castanops clarkii* (now in synonymy, see mammal catalog). His surveyor's legacy is not so benign, as his name is associated with the notorious "Clark Survey" of 1859–1860 that botched the placement of the 103rd degree longitudinal division between the future state of New Mexico and the Texas Panhandle (Baker 1902).

The third important figure of biological type material (11 taxa) obtained during the Boundary Survey was the Prussian-American polymath **Arthur Carl Victor Schott** (1814–1875), an individual noted for being a botanist, topographical engineer, botanical and topographical artist, ethnographer, geologist, and poet. Educated in Germany and trained in classical botany, Schott immigrated to the United States in 1850. In New York he met and briefly worked for the well-connected and influential Dr. John Torrey, then a professor of chemistry and botany at Columbia University's medical school. Torrey was impressed with Scott's botanical and scientific illustration skills, and shortly recommended him to the Boundary Survey as a civilian employee. By 1851 Schott was hired to function as a surveyor and topographical artist to work under Major William Emory, primarily charged with making drawings of landscapes along the total extent of the new border with Mexico. During these travels he made extensive botanical collections on both sides of the border between Arizona/Sonora and Texas/Coahuila that were sent back to John Torrey in New York (the cacti went to George Engelmann of St. Louis) for their taxonomic evaluation for the Survey's final reports. The botanical collections, which include many species that have their names associated with Schott, overshadow his zoological collections; the snake *Masticophis schotti* was named in his honor. Moreover, Schott's assigned drawings of specific border locations, which featured indigenous plant species in the foreground, were only some of the sketches drafted during his travels; numerous ethnographic images of Native Americans who inhabited the region were compiled as well. Schott worked for the Boundary Survey in the Southwest until 1855, and then continued in that US

Army organization headquarters in Washington, DC. There he worked up the various documents associated with the Boundary Survey report, including his own numerous (and unique) observations on the natural history of the Southwest and its indigenous peoples. The sketches of the landscapes at the boundary survey markers were converted, without Schott's permission, into engravings for publication by Colonel Graham; that act became a bone of contention between the two of them during the preparation of the Survey's final report in Washington (Kelsey 2007). Schott continued to live in the Washington area after leaving the Boundary Survey office in 1857, and, except for two excursions to Panama and tropical Mexico, lived there for the rest of his life. With regard to the present account of Texas type-localities, the caption of the engraving based on Schott's original sketch of the boundary survey marker entitled "Los Isletas, Falls of Presidio de Rio Grande" (reproduced in works by Gardner 1933 and Kelsey 2007), provided confirmation that Webb and Eckerman (1998) were on the right track in locating the Presidio del Norte Texas type locality for *Heterodon nasicus* in Maverick County instead of Presidio County. This confirmation led to understanding of similar type material origins for *Phrynosoma modestum*, *Churchillia bellona*, *Elaps tristis*, and *Caudisona lepida*.

The most prolific of all describers of amphibians and reptiles from Texas was **Spencer Fullerton Baird** (1823–1887), a largely-self trained vertebrate zoologist from Pennsylvania whose interactions with notable naturalists of the 1840s led to his eventual appointment as a professor of natural history at Dickinson College. Impressed with his publications and scholarly reputation, the fledging Smithsonian Institution hired him in 1850 as their Assistant Secretary, a post second only to the institutional director, and tasked him to create a research center. By a combination of administrative skills and force of personality, he was highly successful in assembling the core collections that would become the National Museum of Natural History (Adler 1989). Over his lifetime, he published almost eleven hundred publications, mostly on birds and mammals, but also his 42 sole or co-authored (with Girard) descriptions of Texas amphibians or reptiles are prominent in this catalog.

Charles Frédéric Girard (1822–1895), of French Alsace, was a physician and zoologist assistant to Louis Agassiz in Switzerland who came to the United States to work for Agassiz at Harvard College in Massachusetts in the 1840s. Baird hired him away from Agassiz (to the latter's annoyance) and provided him with some independence in research involving descriptions of fishes, reptiles, amphibians, and invertebrates. Of his approximately 80 publications, about half are in ichthyology (Adler 1989). Together, Baird and Girard described 33 taxa from Texas type material, and on their own described 6 (Baird) and 3 (Girard) in single authorship. Girard, a Southern sympathizer, was in Europe when the American Civil War started (Adler 1989). His subsequent actions as a physician aiding the Confederacy coincided with the end of his direct herpetological collaboration with Baird and the Smithsonian. He did visit Washington briefly after the war, but by 1865 he had returned to his native France to resume medical practice (Adler 1989).

In Girard's absence, the next great pulse of descriptions of Texas species and subspecies came during and after the Civil War through the numerous publications of the prolific paleontologist/herpetologist **Edward Drinker Cope** (1840–1897) of Philadelphia (see Adler 1989 for a concise biography). Young Cope began an early association with the collections of Academy of Natural Sciences of Philadelphia as a volunteer, attended the University of Pennsylvania to study paleontology over 1860–1861, but he spent the winters in Washington DC pursuing his informal studies of herpetology. Cope became one of Baird's protégés in Washington during the early Civil War years, and towards the end of that conflict he spent a year in Europe visiting the museum collections and meeting their vertebrate zoologists. Upon his return to the United States in 1865, now highly educated but without an earned science degree, he became a Professor of Natural Sciences at Haverford College with a concurrent appointment as Curator of Herpetology at the Philadelphia Academy of Natural Sciences. From 1871 to 1893, Cope spent about eight months a year in the field—mostly in the western US on paleontological pursuits, and the remainder of the year in Philadelphia writing up the work for publication. He named 1,282 genera and species of North American fossil vertebrates, more than 500 of them reptiles or amphibians. For a 19th century museum professional, Cope was a rarity in acquiring much of his research material by his own field work. Late in his life (1889), in near poverty

from the costs of his research and poor investments, he was appointed to the faculty of the University of Pennsylvania. He died of an untreated illness at age 56, leaving a legacy of 1,395 publications, about 170 of which were on recent (non-fossil) amphibians and reptiles.

Cope described 18 taxa from Texas type material, and his decades of collaboration with Baird and Girard at the USNM explains why the majority of type material from the 19th century ended up in two museums, the USNM and ANSP (see List 3.5).

All other describers of Texas taxa number their contributions, either as sole author or as a co-author, in the single digits. The top dozen consists of Hobart M. Smith (9 descriptions); Robert Kennicott and Leonhard H. Stejneger (7 descriptions each); Edward Hallowell (6); Paul T. Chippindale and David M. Hillis (5 each); Louis R. Agassiz, Floyd E. Potter, Jr., Andrew H. Price, and Karl P. Schmidt (4 each); and George A. Boulenger, Bryce C. Brown, Roger Conant and John J. Wiens (3 each).

Unlike the collectors of mammals, relatively few of the collectors of amphibian and reptile type specimens also authored the description of new species or subspecies that they themselves collected. In fact, many of those describers in the 19th century never visited Texas in their lifetimes. Even during most of the 20th century, when researchers in herpetology at colleges and universities proliferated at a national level, only sixteen of the individual describers of taxa from specimens collected in Texas by themselves or a coauthor did so as a singular event during their careers, and only nine were able to describe two such taxa. Moreover, as the 20th century progressed, authorship of new taxa went from single individuals early in the century, increased to two individuals in the middle decades, and then frequently expanded to three authors in the latter decades. By the early 21st century, four or more authors of species descriptions became commonplace, and multiple collectors of type material were included among them. In the interest of brevity, List 3.3 summarizes these contributions by sole or senior author only.

SUMMARY

The most recent comprehensive treatment of the Texas herpetofauna was James R. Dixon's (2013) third-edition compendium of county-based distribution maps of taxa and supporting literature citations. In that work, he recognized as native to Texas 70 amphibian and 196 reptile species and subspecies, each of which he perceived to be a distinct and valid taxon. The present work focuses on a subset of this herpetofauna, namely those taxa that were described from specimens collected in Texas and with type localities in the state. This group encompasses 70% of the amphibians and 68% of the reptiles, and updates have been presented herein about their taxonomic history and the rather fluid state of their present taxonomic status.

Some summaries of interest in the various listings and connections included in this account are as follows:

- One hundred eighty described specific and subspecific taxa of amphibians and reptiles were found to have primary type material (holotypes or syntypes) from the state of Texas. Of these taxa, eighteen were salamanders, thirty-one frogs and toads, thirteen turtles, forty-eight lizards, and seventy-two snakes. Among these original 180 taxa, 171 catalog entries were prepared. Six of the 180 taxa were based upon primary type material from Texas or from another state or county, and their type locality was subsequently revealed, restricted, or designated (by lectotype) to be in another state in the US or in Mexico. Catalog entries were not prepared for these six. Entries for an additional three taxa (*Notophthalmus meridionalis*, *Sceloporus thayeri*, and *Urosaurus ornatus*) also were not included in this catalog, as they were described from syntypic series of type specimens from localities in Texas and either New Mexico or Tamaulipas. No credible type locality restriction or lectotype designation has yet assigned these to Texas. One hundred fourteen of the remaining 171 species and subspecies (66.7%) were originally described from Texas from a single county location, and another 42 taxa (24.6%), once described from several Texas

syntypes spread over several counties, have been now associated with a type locality in only one county. Finally, 15 taxa (8.8%) were described from syntypes drawn from two or more Texas counties that as yet do not have either a lectotype designation or a credible type locality restriction to one county.

- Of the original 180 specific and subspecific taxa determined to have at least some primary type material from Texas, 65% (117 taxa) were described using a traditional holotype specimen that was associated (at least at one time) with a specific museum collection. The type material of the others is in part represented by 21 lectotypes and 5 neotypes, either designated from a syntypic series or a new specimen to replace a lost holotype. Finally, there is a remainder of 33 taxa (18%) still only represented by syntypes. Fifty-nine of the 180 historical taxa (one third) are currently considered junior synonyms, and thus there are 123 taxa described from Texas type material still considered valid species or subspecies. List 3.6 lists the 56 synonymous taxa among the 171 catalog entries.

- The post-description histories of these valid taxa sort into six categories: 1) described as a species, and still a species-level taxon (though perhaps in a different genus), 54 taxa; 2) described as a new subspecies, but now a full species, 21 taxa; 3) described as a species, but now a subspecies, 14 taxa; 4) described as a species, reduced to subspecific rank under another species, but subsequently restored to full species, 16 taxa; 5) described as a species, completely synonymized with another species, then resurrected to full species rank, 6 taxa; and 6) originally described as a subspecies, and still considered such, 12 taxa.

- The total native herpetofaunal diversity in valid species and subspecific taxa recognized by Dixon (2013) for the different groups of amphibians and reptiles consisted of 111 snakes, 55 lizards, 43 frogs/toads, 35 turtles, and 27 salamanders. The number of valid taxa described from Texas type material covered in the present work comprises 59% of the salamanders and 58% of the lizards, but only 40% of the snakes, 39% of the anurans, and 34% of the turtles. The majority of the diversity of the latter three groups are associated with widespread eastern US species that were described from type material from those regions much earlier than the middle of the 19th century (when serious biodiversity inventories of the Southwest commenced).

- Excluding the 12 vague or multiple-location origins of various Texas type specimens, a total of 113 other sets of type material could be associated with at least one of 54 counties. The two counties with the most individually identifiable such localities were Bexar (12) and Brewster (11). Most of the 254 Texas counties perforce have none, and of those that do, type material originated from only one locality (32 counties) or two localities (12 counties). The last group of eight counties have 3–6 type localities each; these are Culberson, Maverick, and Starr with 3, Cameron and Presidio with 4, Hays and Travis with 5, and Val Verde with 6. The top four specific locations in Texas that have produced the most named taxa (including synonyms) are Brownsville (Cameron County) with 10 taxa, Indianola (Calhoun County) with 9 taxa, San Antonio (Bexar County) with 8 taxa, El Paso (El Paso County) with 5 taxa, and the Chisos Mountains (Brewster County) with 5 taxa.

- One hundred eleven individuals are associated with field acquisitions of Texas type material. The three whose names are most frequently listed as collectors are John H. Clark, James D. Graham, and Arthur H. Schott of the early 1850s US Mexico Boundary Survey (14, 12, and 11 taxa, respectively). The remainder of the collectors of described taxa are in single digit numbers (most commonly, only one). The following were the top ten of these lesser collectors: Gabriel A. Marnock (6); Jacob Boll, Sylvester Churchill, Adolphus L. Heerman, Caleb B. R. Kennerly, Ferdinand J. Lindheimer, Stewart Van Vliet (4 each); Tarleton F. Smith, Edward H. Taylor, William Taylor, and Samuel W. Woodhouse (3 each). All but two of these (T. F. Smith and E. H. Taylor) acquired their specimens in the 19th century. Smith was a student technician assigned to the Chisos Moun-

tains CCC camp in the summer of 1937; he was charged with assisting FMNH herpetologist Karl P. Schmidt with identifying reptiles and amphibians in need of future study. Taylor, a herpetologist and faculty member at the University of Kansas, collected his three holotypes during summer visits to southern and southwestern Texas in 1930–31.

- Ninety individuals have participated in describing the diverse taxa of amphibians and reptiles from Texas; fifty-two (58%) of these represented a one-time-only contribution by an individual zoologist. The most prolific of these authors was due to a collaboration between USNM zoologists Spencer F. Baird and his assistant, Charles F. Girard, between 1850 and 1860. Together they described 33 taxa clearly from Texas type material, and on their own described 6 (Baird) and 3 (Girard) in single authorship. The next great pulse of descriptions of Texas species and subspecies came during and after the Civil War through the numerous publications of the paleontologist/zoologist Edward D. Cope of Philadelphia. Cope described 18 such taxa, and, together with Baird and Girard at the USNM, and the decades of Cope's dual association with USNM and the ANSP, explain why the majority of type material from the 19th century ended up in these two museums (see below). All other describers and their coauthors of Texas taxa number their contributions in the single digits.

- Twenty-three museums or university biodiversity collections house specimens of primary Texas type material. Slightly more than half (51%) of this material (170 types or syntypic series) were deposited with the United States National Museum (USNM, the National Museum of Natural History). The only other collections with type specimens in double digits are the Academy of Natural Sciences of Philadelphia (ANSP, now the Academy of Natural Sciences of Drexel University) with 17 (10%), and Texas Natural History Collection (TNHC, now University of Texas [at Austin] Biodiversity Collection) with 12 (7%). More than half of the other institutions have but a single Texas type specimen of an amphibian or reptile.

- A trend that developed toward the end of the 20th century was a de-emphasis on the taxonomic practice of naming and describing subspecies. Many publication outlets (journals) for herpetological research actively discouraged authors from resorting to new subspecies descriptions for mere geography-based polymorphisms of species-level taxa. The emphasis instead became placed upon using DNA nucleotide sequence data from mitochondrial or nuclear genes to propose robust phylogenetic classifications above the species level, and to attempt to understand the current evolutionary status and geographic extent of the sets of populations in nature that could be considered "valid species." One of the ironies of the 21st century is that the new information occasionally suggests resurrection of old species names from the 19th century. The gene-sequence approach is not without its flaws, as reliance on these taxonomic methods for species-level pronouncement from individuals specimen data is today, as it has been for many decades, influenced by the assumptions and limitations of the analyses performed on that data (for a recent example, see Chambers and Hillis 2019).

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Conclusions

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Due to its size and geographic location, Texas is ecologically diverse, characterized by a varied array of habitats including temperate and subtropical regions, coastlines, forests, prairies, deserts, mountains, and riverine systems. Together, this variety of habitat types, topography, and climate zones supports an immense amount of biodiversity. In comparison to other US states, Texas ranks second, third, and fourth in terms of biodiversity, endemism, and extinctions, respectively (Stein 2002). Texas boasts the highest numbers of bird and reptile species and the second highest numbers of plant and mammal species.

Although some Texas species are thriving thanks to careful management, many others face increasing challenges and are in steep decline. Campbell (2003) lists 132 vertebrates, including 36 mammals, 30 birds, 25 reptiles, 6 amphibians, and 29 fishes in the state as either threatened or endangered. As of March 2020, Texas Parks and Wildlife Department listed 133 vertebrates as either threatened or endangered, and in many cases the number of species for each vertebrate group differed from those listed by Campbell (2003). Several cave and aquifer dwelling invertebrate species are threatened, as well.

Like most global ecosystems, threats to biodiversity in Texas include anthropogenic factors and patterns of land use, resulting in loss and fragmentation of habitats, invasive species, limited access to water, and climate change (TPWD 2023). Most of what we know about biodiversity results from biological surveys throughout the state and publications by those interested in ecology and systematics. Information from field studies and descriptions and cataloging of species provide the foundation for studies focusing on the conservation of Texas' biodiversity heritage.

Museum collections and the specimens they house provide a temporal framework for assessment of how changes in the Anthropocene have altered habitats, thus threatening vulnerable species in Texas. Proper description of species and subspecies is imperative, and this requires a taxonomic accounting of the biodiversity currently cataloged in Texas. Moreover, this information offers guidelines for on-going ecological studies related to conservation and management of species and habitats. Clearly, taxonomic and systematic research play a role in defining and conserving biodiversity in Texas.

In the catalogs presented in this publication, we have, to the best of our abilities with the data available to us, compiled all of the information about the terrestrial vertebrate taxa described in the scientific literature based on specimens, or other materials, from localities in Texas. As such, the contents of the catalogs provide essential biological reference points that lend objectivity to taxonomy and are thus of critical importance in systematic investigations. Furthermore, such compilations facilitate taxonomic research by helping to integrate traditional specimen data with those from other sources, such as DNA samples for genetic sequencing, georeferenced data for biogeographical studies, and photos derived from citizen science projects such as iNaturalist.org (see Uetz et al. 2019). We therefore expect the catalogs to facilitate future research on the taxonomy, systematics, biogeography, and ecology of Texas' terrestrial vertebrates, which is why we compiled and recorded this information for current and future investigators. This information provides a first necessary step for detailed studies of how the state's diversity is changing and the causes of those changes.

Accurate taxonomic information is a critical component for biodiversity conservation (Thomson et al. 2018). It provides basic understanding about the components of biodiversity and is necessary for effective decision-making about conservation priorities. From a conservation perspective, endemic species and subspecies generally are considered more vulnerable to extinction from anthropogenic (man-made) events than species with widespread distributions (see Ceballos et al. 1998). These taxa should be of the highest priority in terms of conservation concern and action. Their conservation has become a global priority, with habitat conservation considered an integral part of their survival. It is considered especially important to focus on those endemic taxa with restricted geographic ranges that already appear on lists of species in peril (endangered, threatened, or vulnerable).

As described in each of the three catalogs, many of the terrestrial vertebrates described from Texas are endemic to the state or they occur in the US only in Texas with the remainder of their ranges extending into Mexico. Collectively, 141 of the 278 taxa (50.1%) described from the state that are currently taxonomically valid fit into this category. Sixty-three of these taxa (22.7%) are endemic to the state (32 mammals, 2 birds, 14 amphibians, and 14 reptiles) with 37 of these (58.7%) appearing on some sort of critical conservation list. Another 78 terrestrial vertebrates described from the state occur in the US only in Texas, although their ranges do extend southward into Mexico. Of these 78, 13 (16.7%) appear on lists of species of conservation concern.

Taxonomic accuracy depends on information from type material pertaining to the original published description of species and subspecies, including all specimens used in the original description of a new taxon (both type specimens and topotypes) and information about the original type locality and synonymies. The type locality, determined as accurately as possible, is of prime importance in the fixation of a name to a subspecies or species of terrestrial vertebrate animal (Grinnell 1932). This information anchors a taxon in time and space and serves as a tangible reference point for future comparisons (Bell et al. 2020). Nomenclature and taxonomy intersect objectively at the type specimen, as designated through rules established by nomenclatural codes to anchor scientific names to the biological world (Thomson et al. 2018). Furthermore, the type specimen can often be important in determining to which of two or more forms the name was originally applied (Grinnell 1932). However, because the type specimen may not represent the population's mean from whence it came, a series of topotype specimens are even more useful for taxonomic accuracy.

Contrary to what some may think, taxonomy, like all disciplines in science, changes in response to new evidence. This is known as the taxonomic correction process, which retests and updates existing species and subspecies circumscriptions on the basis of new evidence. New information from sources other than morphology alone and more detailed studies may reveal multiple species previously associated with one designated species. In other cases, previously described species and subspecies may be synonymized and placed in association with another scientific name. Changes in taxonomy must be up to date, allowing accuracy in assignment of information to a particular taxon, and synonymies provide a means of keeping taxonomic information up to date. Furthermore, the use of synonyms improves literature searches for biological studies (Guala 2016) and helps keep checklists of biodiversity up to date (Duboise 2017). It also is important for the DNA sequence database maintained by the National Center for Biotechnology Information (NCBI), which allows for searches based on scientific names (Federhen 2012). Because taxonomy is dynamic, especially now, our taxonomic treatment of taxa in Texas includes synonymies, which will help those involved in management and research.

In the 21st century, DNA evidence has become crucial in taxonomic studies employing DNA barcodes (Hebert et al. 2003; Honeycutt 2021), and there is more work to be done on the discovery of biodiversity (Honeycutt et al. 2010). Phylogenetic analyses of DNA sequence data are regularly incorporated into taxonomic studies and are especially useful in cases where a high degree of morphological similarity obscures species boundaries and evolutionary relationships (Baird et al. 2009). Unfortunately, most existing type specimens were obtained and designated as such before the molecular revolution in systematic biology and they lack associated tissue samples specifically preserved for genetic analyses. In some cases, samples (e.g., skin clips, hair, feathers, scales) may be obtained from non-holotype voucher specimens in the type series and used in these studies, such as those based on DNA barcodes (Hebert et al. 2003). Next-generation sequencing is proving useful for systematics studies based on examination of museum specimens (Besnard et al. 2016; Wood et al. 2018; Castañeda-Rico et al. 2020; Nakahama 2020; Mason et al. 2021), and the use of museum specimens for detailed phylogenetic, population genetic, and ecological studies will increase in the future.

Most taxa of terrestrial vertebrates in Texas lack critical type material, particularly topotype or near topotype specimens, for taxonomic comparisons. In many cases, knowledge of the current existence of many taxa described from Texas is uncertain because

the type localities have not been visited in decades. This dearth of information is apparent in the catalogs for amphibians, reptiles, mammals, and, to a lesser extent, birds. Revisiting historical study sites, especially those used by other researchers, is challenging, especially if anthropogenic development has occurred at or near the type locality subsequent to the taxon's original description. Habitat loss and fragmentation in regions of Texas have influenced the distribution and occurrence of many vertebrates, including mammals (Dragoo et al. 2003; Janečka et al. 2011), birds (Fuhlendorf et al. 2002; Athrey et al. 2012), reptiles (Young et al. 2018), and amphibians (Ramesh et al. 2012). Therefore, it may no longer be possible to collect topotype specimens for many type localities.

For the reasons described above, we propose a novel project to attempt to locate and revisit the type localities, or as near as possible, of terrestrial vertebrate taxa described from Texas. We recommend collecting voucher specimens and genomic-grade tissue samples from those localities to serve as topotypic vouchers. Some terrestrial vertebrate populations originally described as species have been synonymized, whereas others described as subspecies are now recognized as full species. These changes are the result of more recent molecular evidence as well as a closer examination of morphology. Thus, these sampling units should include subspecies and synonyms because historically, these taxonomic designations often were made without genetic data. Topotypic genetic material is helpful for resolving any lingering taxonomic uncertainty. These samples can serve as proxies for cases in which obtaining genomic data from the type specimen is impossible, and they should be archived in accredited museum collections following appropriate guidelines and standards (Phillips et al. 2019; Soniat et al. 2021).

The proposed project will have a practical benefit to conservation efforts in Texas. In the 21st century, there has been a sharp increase in the number of subspecies being raised to full species and a notable increase in the number of cryptic species recognized (those that are morphologically similar but genetically different). We saw examples of this in all three of the catalogs in this volume. Specimens and genetic materials from the proposed project will improve the accuracy of the taxonomic correction process and assist with identifying those species truly in need of conservation efforts. In the future, there likely will be a larger number of distinctive species in need of conservation that previously had been hidden from these efforts because they lacked taxonomic recognition.

It is important to follow a holistic approach to obtaining and vouchering specimens (see Schindel and Cook 2018). This approach requires collecting a suitable number of specimens (perhaps at least 10) and multiple tissue samples from type localities or existing areas where the species is present. Information from these specimens must cover the full spectrum of variation within a taxon—males, females, various age classes, plumage variants, variations in reproductive conditions, seasonal variations, etc. Furthermore, future studies in adaptive physiology, comparative anatomy, biomechanics, feeding ecology, and parasitology will rely on whole-body, alcohol-preserved specimens with all organs intact (Schindel and Cook 2018). Perhaps one way to think about this effort is to assume that the specimens collected are "the last specimens of this taxon ever to be collected," thus justifying the need to collect every possible type of sample for preservation and future study. Further, given the relevance of parasites and other zoonotic agents, the importance of collecting symbiotypes should be considered (Bradley et al. 2020).

The science of taxonomy has declined for the past half-century but is relevant now more than ever. Biological collecting is an essential feature of data acquisition and validation for taxonomy, and strategic collecting must continue if biodiversity science is to inform global conservation efforts (Patterson 2002). Consequently, we envision that the education and training of both undergraduate and graduate students in specimen-based research would be one of the most beneficial aspects of our proposed project. Core-based educational activities should include multiple aspects of specimen-based research, such as field sampling techniques, collection and preparation of museum specimens, literature reviews, reviews of synonymies, and identification of specific localities for sampling. Development of student leadership and organizational skills requires their involvement with planning and executing fieldwork in cooperation with their mentors.

As mentioned above, all specimen vouchers, tissues, and associated data should be deposited in an officially accredited research collection at a museum or university program (see Bradley et al. 2013, 2014; Baker et al. 2014; Bradley et al. 2020). Students also should gain hands-on experience with curating these museum specimens, including the professional practices associated with accessing and using museum collections (e.g., preserving, storing, cataloging, use of database software, and ethical and legal mandates for using archival animal materials). Training in these areas will allow students to gain an appreciation for what is involved in managing natural history collections (McLean et al. 2016). There is a dire shortage of trained, talented museum curators capable of this type of work. Combining these curatorial skills with fieldwork experience, as mentioned above, will be the best way to prepare students for the future.

The type locality project proposed here becomes feasible by establishing networks of university undergraduate and graduate programs in field biology and wildlife sciences. These networks could involve scientific societies in Texas, such as the Texas Herpetological Society, the Texas Ornithological Society, and the Texas Society of Mammalogists. Their members include naturalists, aspiring undergraduate and graduate students, and personnel associated with state and federal agencies responsible for conservation work in the state. This approach will provide a platform to train students in specimen-based research and the practice of responsible collecting. Skills gained may provide students with the tools necessary for employment and research opportunities in several areas (natural history museums, conservation biology, wildlife management agencies and NGOs, and careers in systematic biology). Bell et al.'s (2020) project related to revisiting historical type localities of amphibians in Virginia to collect holistic samples is an excellent example of what we are proposing for Texas.

The value of the approach we are suggesting can be seen in a recent study of molecular genetic variation in pocket gophers in Texas (Bradley et al. 2023, in press). Three genera of pocket gophers occur in Texas (*Cratogeomys*, *Geomys*, and *Thomomys*) and 71 taxa (species or subspecies) have been described among them. Many of the described forms have greatly restricted ranges and their taxonomic and conservation status has been controversial for decades. In the study by Bradley et al. (2023, in press), efforts were made to obtain DNA sequences from voucher samples of museum specimens collected at type localities (topotypes) or as nearly as possible to establish a genotype that could be referenced to each taxonomic name. The study resulted in 43 of the 71 original names (60%) being synonymized, elevated to species, or otherwise reassigned, and two new taxonomic entities were identified as needing official description. New distribution maps were provided to reflect the updated taxonomy, and the conservation status of several taxa was clarified. Although the taxonomic scheme proposed is far from complete, it is the best synopsis available to date and it has provided a map forward for addressing systematic and conservation issues pertaining to the diversity of pocket gophers in Texas.

The maintenance and future growth of natural history archives for integrated biodiversity sciences may hinge on increased dedication to specimen vouchering and broader acceptance of these practices by regulatory authorities and funding agencies (Hope et al. 2018). Specimens are the most fundamental record of a species' existence and occurrence, and biological collections are the appropriate place to store those vouchers. Only with such material can researchers in the future confirm (or refute) the accurate identification of taxa used in research. In some cases, specimens that looked identical to early researchers may later represent two or more taxa, as indicated in a recent paper by Light et al. (2021). Discovery of new species is possible, especially given the combined use of morphological and genetic characters and more advanced analytical methods to identify species (e.g., Devitt et al. 2019).

Arguments against collecting specimens as vouchers in favor of alternative methods have appeared in the past few decades in response to concerns that removing individuals from wild populations might affect the integrity of natural communities. Minter et al. (2014) raised questions about specimen collecting, arguing for the use of alternative methods (e.g., photographs, audio records, and non-lethal tissue sampling for DNA analyses) for species descriptions and documentation. Moratelli (2014) and Rocha et al. (2014) promptly rejected those arguments, and other

authors (Hope et al. 2018) subsequently have provided conclusive evidence to document the continued resilience of wildlife to sustainable removal and the negligible contributions to mortality that scientific collecting imposes compared with those of other natural or anthropogenic-induced causes.

The International Commission on Zoological Nomenclature or ICZN (2017) published Declaration 45, which deals with designation of a type without a museum specimen. In this declaration, the ICZN provided recommendations for designation of unpreserved specimens as the type. This new declaration noted that when "feasible, new species-group taxa should be established on the basis of at least one preserved type specimen." The ICZN says that designation of unpreserved specimens as the type should occur only under unusual circumstances when the feasibility of collecting a specimen is difficult. In such cases, the ICZN lists a detailed protocol including information (e.g., illustrations and DNA sequences) be made available. Clearly, the ICZN supports the need for the collection and preservation of types and topotypes.

Continued assessment of the conservation status of Texas' terrestrial biodiversity is essential. The information and recommendations provided herein are essential for addressing the impacts of climate change, emergence of new pathogens and zoonoses, and pollution on animal species. Gathering this information requires continued collection and preparation of scientific museum specimens and genomic samples. We hope the information presented in this publication serves to 1) document the importance of specimen-based research and 2) stimulate continued field collecting and specimen-based research using appropriate specimen vouchering, tissue collecting, and archiving techniques.

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