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# CHECKLIST OF THE MILLIPEDS OF NORTH AMERICA

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Publications of the United States  
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The present work forms No. 212 of the *Bulletin* series.

REMINGTON KELLOGG,  
*Director, United States National Museum.*

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## Introduction

So many additions to our knowledge of the millipeds of North America and so many changes in their classification have been made since the issue of Charles H. Bollman's "Catalogue of the Known Myriopods of North America North of Mexico"<sup>1</sup> that an up-to-date checklist has long been a desideratum. The present annotated list has been prepared to meet this need. Bollman's catalogue recognized 114 species under 29 genera (subsequently adding 5 more species). The present list accounts for approximately six times as many, recording some 749 species and subspecies, and 200 genera from the same area.

The work thus far on our milliped fauna has been mainly descriptive, but the time now seems ripe for synthesis and evaluation of the information at hand. It is hoped that this compilation will stimulate and facilitate the work of other students, for much remains to be done, both to fill in the gaps in our knowledge and to clarify the taxonomy, distributions, and ecological relationships of this relatively neglected group of arthropods.

It is not the purpose of a checklist such as this to revise groups or to initiate changes. In general, we record genera, species, and other groups as they have been published, indicating however, those names that we judge to be synonyms and giving in all cases pertinent bibliographic references. For each species we have sought to give the type locality as accurately as possible, the location of the type specimen, and the distribution as far as is presently known. The latter usually can be stated in general terms only, because of the dearth of records (a shortcoming that must be remedied by future workers). Particularly is this true of the western forms, the majority of which are "known from the type locality only." Our statements of distribution are based primarily upon localities for specimens examined by us, and by literature references which we consider reliable.

We cite in our references not only the original description, but also literature giving an illustration or other such information regarded as important, and also the place in which the binomial here adopted was first used. Where synonyms are indicated, the type locality for each form placed in synonymy is given, where possible, following the literature reference.

The several instances of departure from established arrangement are based upon unpublished studies by one or both of the authors and are indicated by footnote commentary.

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<sup>1</sup> Published posthumously in his "Myriapoda of North America," U. S. Nat. Mus. Bull. 46, pp. 117-130, 1893.

The area covered by this checklist takes in all of North America north of México, and we include, in addition to native American forms, most of the introduced European and subtropical millipeds, the majority of which have become well established in our region.

In the following essay we have discussed reasons for the adoption of the present system of ordinal names. It might be added at this point that little uniformity between family and order has obtained with respect to group-name endings. In accord with what seems to be general practice in a great many animal groups, we have adopted the ending "-idea" for suborder and "-oidea" for superfamily.

Studies of the phylogeny of diplopods have not yet been made which would permit a "natural" arrangement of the groups. Although our sequence of orders is that used by several workers, it cannot be said to show progressive specialization or any other form of evolutionary pattern. We have adopted the expedient of listing families, genera, and species alphabetically, and this method certainly has its advantages in terms of convenience to the user. We venture the optimistic hope that the next listing of this sort will be able to boast at least a preliminary arrangement of families according to their natural relationships!

### Ordinal nomenclature

In the matter of nomenclature of the diplopods, there persists considerable confusion, particularly with reference to the groups above the rank of family, largely because the International Rules of Zoological Nomenclature provide no standard for fixing the validity of names at that level. In this respect few branches of systematic zoology have suffered more vicissitudes. It seems desirable, therefore, to summarize here something of the history of the changes in classification as they have arisen, and of several systems in use by different authors and students of the Diplopoda or to be encountered in the literature.

Linnaeus in 1758 ("Systema Naturae," ed. 10) under his "Insecta Aptera," placed the only two genera of myriapods recognized by him, namely *Julus* and *Scolopendra* (and, curiously enough, referred the forms now called *Polyxenus* to the latter). From the time when, in 1802-1805, Latreille ("Histoire Naturelle . . . des Crustacés et des Insectes") set up his "legion" Myriapoda with its two orders Chilognatha and Syngnatha, and Leach in 1814 elevated the Myriapoda to the rank of a separate class coordinate with Crustacea, Arachnida, and Insecta, there has continued the expansion and development of a system more and more adequately representing the Chilopoda and Diplopoda and their relationships.

With Brandt (1833-1841), Gervais (1837-1847), Newport (1844), Wood (1864-67), and Saussure (1872), the classification was much elaborated. Brandt in 1833 proposed for the Chilognatha three subdivisions based on the degree of coalescence of the visible elements of a segment, naming them Pentazonia, Trizonia, and Monozonia. The first of these has maintained

its position as correct down to the present, although the name has not been in general use.

In 1840 Brandt divided his order Myriapoda into two subdivisions: the Gnathogena—for the Chilopoda and most of the Diplopoda, and the Sugentia—corresponding precisely to the diplopod group now commonly termed the Colobognatha. Gervais in 1837 made but two divisions of the Chilognatha, the Oniscoidea and the Juloidea. In 1847 he replaced the term Chilognatha with the name Diplopoda of Blainville, and dropped his original primary subdivisions, recognizing the following families: Polyxenidae, Glomeridae, Julidae, and Polyzoniidae. The English zoologist Newport (1844, "List of the . . . Myriapoda in . . . British Museum") followed Brandt as to the divisions Pentazonia and Monozonion, but introduced a division Bizonia to embrace the Brandtian Trizonia and Sugentia. C. L. Koch (1847) ignored the primary divisions above the level of family, describing under the Chilognatha numerous new species and genera in the families Polyxenidae, Glomeridae, Sphaeriotheridae, Julidae, Blaniulidae, Chordeumidae, Polydesmidae, and Polyzoniidae.

C. S. Rafinesque, the first American worker to describe our native millipeds, in 1820 named four new genera and species in his "Annals of Nature;" in 1821 Thomas Say noted ten species as occurring in the United States, and scattered accounts of others were added by Brandt, Koch, Gervais, and Saussure; but the real foundation for the study of North American diplopods was laid by Horatio C. Wood in a series of papers appearing from 1861 to 1867, the most important of these being the "Myriopoda of North America" (1865), in which he described the forms known at that time to occur in this country. The total recognized by Wood comprised 18 genera and 92 species, of which 10 genera (including subgenera) and 41 species are diplopods, the remaining are chilopods. In his general arrangement of diplopods, Wood adopted as suborders the Pentazonia and Sugentia set up by Brandt, but introduced as a third suborder the Strongylia, under which he placed the millipeds arranged by Brandt under Trizonia and Monozonion. His classification was as follows:

- Order Chilognatha*
- Suborder Pentazonia*
- Families:*
- Glomeridae
- Sphaeriotheridae
- Suborder Strongylia*
- Families:*
- Polyxenidae
- Polydesmidae
- Julidae
- Lysiopetalidae
- Suborder Sugentia*
- Families:*
- Polyzoniidae
- Siphonophoridae

In 1872 Saussure and Humbert in their "Études sur les Myriapodes" (in "Mission Scientifique au Mexique") while dealing primarily with the Mexican fauna, gave a complete list of the species known at that time from the entire North American continent. In this work they recognized, without naming, three suborders of Chilognatha of which their "I" corresponds to the Pentazonia, "II" to the Polyxenidae, and "III" to the remaining families.

Very influential and important to all subsequent work upon the diplopods was that of Latzel in 1884, "Die Myriapoden der Österreichisch-Ungarischen Monarchie." His diagnoses and descriptions set a high standard for accuracy and clarity. These he founded more extensively than had previously been done on important anatomical characters, emphasizing especially the value of the copulatory appendages in diagnosis. In this classic work Latzel used the term Diplopoda, as has been done subsequently by all others, to designate the entire group of millipeds, which he divided into three suborders: the Pselaphognatha for the Polyxenidae, the Colobognatha for Brandt's Suentia, and the Chilognatha for the remainder.

Pocock in 1887 first elevated the Chilopoda and Diplopoda to the rank of separate classes. He divided the Diplopoda into the two subclasses Pselaphognatha and Chilognatha, and the latter into two orders, the Oniscomorpha and Helminthomorpha (including the two suborders Polydesmoidea and Julioidea). In America, Bollman, in his paper "Classification of the Myriapoda" (U. S. Nat. Mus. Bull. 46, pp. 153-162, 1893), accepted Pocock's classification down to the suborders, but reduced the Diplopoda to the rank of a subclass and the Chilognatha to a superorder, and erected a separate superorder, Podochila, for the Pselaphognatha. His complete system may be summarized as follows:

- Subclass* Diplopoda
  - Superorder* Podochila
    - Order* Pselaphognatha
      - Family* Polyxenidae
  - Superorder* Chilognatha
    - Order* Colobognatha
      - Family* Polyzoniinae
        - Subfamilies:*
          - Siphonophorinae
          - Polyzoniinae
          - Andrognathinae
          - Platydesminae
    - Order* Helminthomorpha
      - Suborder* Iulioidea
        - Superfamily* Julioidea
          - Family* Julidae
            - Subfamilies:*
              - Spirobolinae
              - Spirostreptinae
              - Cambalinae
              - Parajulinae

- Nemasominae
- Julinae
- Family Craspedosomidae
  - Subfamilies:
    - Craspedosominae
    - Campodinae
    - Chordeuminae
    - Striariinae
  - Superfamily Callipodoidea
    - Family Callipodidae
  - Suborder Polydesmoidea
    - Family Polydesmidae
      - Subfamilies:
        - Polydesminae
        - Sphaeriodesminae
- Order Oniscomorpha
  - Family Glomeridae
    - Subfamilies:
      - Sphaerotherinae
      - Glomerinae
      - Oligaspinae

In 1894 Pocock ("Diplopoda," in Weber, "Zoologische Ergebnisse einer Reise in Niederländisch Ost-Indien," vol. 3) modified his earlier system by adding an order Limacomorpha and by recognizing five suborders under the Helminthomorpha in place of his former two, these being the Callipodoidea, Colobognatha, Chordeumoidea, Juloidea, and Polydesmoidea.

O. F. Cook, in 1895, dropping the Helminthomorpha of Pocock, gave the Colobognatha a rank on a level with that of the Oniscomorpha and Limacomorpha. He placed the Stemmiulidae in a distinct order Monocheta and likewise gave the Spirobolidae subordinal rank under a new order Anocheta. To the Spirostreptidae he likewise gave subordinal rank under a new order Diplocheta, under which he also at first placed the Juloidea and Cambaloidea. Under still another new order, Merocheta, he originally placed the Lysio-petaloidea, Craspedosomoidea, and Polydesmoidea. Later in the same year, however, he contracted the Diplocheta by removing from it the Juloidea as a new order Zygocheta, and also restricted the Merocheta by the transfer of the Lysio-petaloidea and Craspedosomoidea to another new order, the Coelocheta. His revised system of the Chilognatha, as far as the suborders he thus recognized, was as follows:

- Subclass Chilognatha
  - Order Oniscomorpha
    - Suborder Glomeroidea
    - Suborder Zephronoidea
  - Order Limacomorpha
    - Suborder Glomeridesmoidea
  - Order Colobognatha
    - Suborder Polyzoidea
    - Suborder Platydesmoidea
    - Suborder Siphonocryptoidea

- Order Monocheta
  - Suborder Stemmiuloidea
- Order Coelocheta
  - Suborder Lysiopetaloidea
  - Suborder Striarioidea
  - Suborder Chordeumatoidea
- Order Merocheta
  - Suborder Polydesmoidea
- Order Zygocheta
  - Suborder Juloidea
- Order Diplocheta
  - Suborder Cambaloidea
  - Suborder Spirostreptoidea
- Order Anocheta
  - Suborder Spiroboloidea

In 1897 Silvestri, in a paper entitled "Systema Diplopodum," gave an outline of a system in which he recognized, under the Chilognatha, the superorders Opisthandria and Proterandria proposed by Verhoeff in 1894. Under the Proterandria he set up as new an order Olognatha, under which he recognized Cook's orders as suborders, thus:

- Order Olognatha
  - Suborder Monocheta
    - Tribe Stemmatiuloidea
    - Tribe Xyloiuloidea
  - Suborder Coelocheta
    - Tribe Lysiopetaloidea
    - Tribe Striarioidea
    - Tribe Chordeumoidea
  - Suborder Merocheta
    - Tribe Polydesmoidea
    - Tribe Spirostreptoidea
  - Suborder Anocheta
    - Tribe Spiroboloidea

Among European workers on the Diplopoda since the beginning of the present century, Attems, Brölemann, Silvestri, and Verhoeff have been most active in extending the knowledge of the group. Of these investigators, Verhoeff has been particularly active in proposing new divisions and names too numerous to be discussed here in detail; the major divisions and terms of the system at which he lately arrived (1926, *in* Bronn, "Die Klassen und Ordnungen des Tier-Reichs . . .," Band 5) are as follows:

- Subclass Pselaphognatha
  - Order Schizocephala
- Subclass Chilognatha
  - Superorder Opisthandria
    - Order Limacomorpha
    - Order Armadillomorpha<sup>2</sup>

<sup>2</sup> Armadillomorpha was proposed as a substitute for Oniscomorpha, which Verhoeff felt was unsuitable in its implication of a resemblance of the diplopods to oniscoid isopods. Apparently he felt no misgivings in preferring to compare them to the mammalian armadillo!

- Superorder* Proterandria
  - Order* Proterospermophora
    - Suborder* Polydesmoidea
  - Order* Nematophora
    - Suborder* Striaroidea
    - Suborder* Ascospermophora
    - Suborder* Lysiopetaloidea
    - Suborder* Stemmatoiuoidea
  - Order* Opisthospermophora
    - Suborder* Symphyognatha
    - Suborder* Chorizognatha

The preceding review of nomenclatorial changes and diversity should help to emphasize how unfortunate it has been that the International Rules make no provision for regulating names above the level of family. It has long seemed to some workers that confusion would be avoided and simplicity and stability secured by extending the "type genus" concept above the rank of family to affect the names of orders and intermediate groups. Such an extension of the idea, and a proper regard for priority in all cases, would have prevented such unnecessary duplications as the following: in Verhoeff's scheme, his order Schizocephala is antedated by Podochila of Bollman (1893), by Ancyrotricha Cook (1895), and Penicillata Latreille (1829); his superorder Opisthandria corresponds precisely to Pentazonia of Brandt (1833); his order Proterospermophora, as amended, to the revised Merocheta of Cook, and this, in turn, to the earlier Polydesmoidea of Pocock; and his Symphyognatha (1911-14) is identical with the Zygocheta of Cook and also with the Juloidea and with the Julidae as used by Meinert and others.

The senior author, having long been convinced of the desirability of having some regular method for establishing ordinal names and of eliminating duplications due to personal points of view or idiosyncracies, made use of the type concept, mentioned above, in which the ordinal name is based upon the oldest or best known of the included families. Since most of the orders were originally treated as families by early workers, application of this principle has been much easier for diplopods than it would be for insects or mammals.

The arrangement and terminology which we have adopted, and which we hope will meet with general approval, are given below. Of the twelve orders recognized, all but the Glomeridesmida are represented in our fauna by native species. It will be seen that for the second superorder under the Chilognatha we retain the name Helminthomorpha, of which the Olognatha of Silvestri (1897) and Eugnatha of Attems (1899) are exact synonyms.

- Class* Diplopoda
  - Subclass* Pselaphognatha
    - Order* Polyxenida
  - Subclass* Chilognatha
    - Superorder* Pentazonia
      - Order* Glomerida
      - Order* Glomeridesmida

- Superorder* Helminthomorpha
  - Order* Polydesmida
    - Suborder* Polydesmidea
    - Suborder* Strongylosomidea
  - Order* Chordeumida
    - Suborder* Chordeumidea
    - Suborder* Lysiopetalidea
    - Suborder* Striariidea
  - Order* Stemmiulida
  - Order* Julida
    - Suborder* Julidea
    - Suborder* Paraiulidea
  - Order* Spirobolida
  - Order* Spirostreptida
  - Order* Cambalida
- Superorder* Colobognatha
  - Order* Polyzoniida
  - Order* Platydesmida



# Checklist of the Millipeds of North America

## Class DIPLOPODA

Diplopoda Gervais, 1844, *Ann. Sci. Nat.*, ser. 3, vol. 2, p. 51.—Latzel, 1884, *Myr. Öst.-Ung. Monarch.*, vol. 2, p. 40.—Verhoeff, 1926, *in* Bronn, *Klass. und Ordn. des Tier-Reichs*, Band 5, Abt. 2, Lief. 1, p. 4.

### KEY TO THE SUBCLASSES OF DIPLOPODA

1. Body soft, the exoskeleton not calcified, bearing clusters of peculiar setae, some of which are branched or laterally armed; head with trichobothria; males without gonopods . . . . . PSELAPHOGNATHA (p. 9)
- Body hard, the exoskeleton more or less calcified, setae, when present, simple and not clustered; head without trichobothria; males with characteristic gonopods.  
CHILOGNATHA (p. 11)

## Subclass PSELAPHOGNATHA

Pselaphognatha Latzel, 1884, *Myr. Öst.-Ung. Monarch.*, vol. 2, p. 64.  
Podochila Bollman, 1893, *U. S. Nat. Mus. Bull.* 46, p. 153.

## Order POLYXENIDA

Penicillata Latreille, 1829, *in* Cuvier, *Le règne animal*, vol. 4, p. 326.  
Polyxenidae Gray, 1842, *in* Todd, *Cyclop. Anat. and Physiol.*, vol. 3, p. 546.  
Ancyrotricha Cook, 1895, *Ann. New York Acad. Sci.*, vol. 9, p. 1.  
Schizocephala Verhoeff, 1926, *in* Bronn, *Klass. und Ordn. des Tier-Reichs*, Band 5, Abt. 2, Lief. 1, p. 26.

## Family POLYXENIDAE Gray

Polyxenidae Gray, 1842, *in* Todd, *Cyclop. Anat. and Physiol.*, vol. 3, p. 546.

### Genus POLYXENUS Latreille

*Polyxenus* Latreille, 1802, *Histoire naturelle . . . des crustacés et des insectes*, vol. 3, p. 45.  
*Polyxenus* Goldfuss, 1820, *Handbuch der Zoologie*, vol. 1, p. 199.—Latzel, 1884, *Myr. Öst.-Ung. Monarch.*, vol. 2, p. 71.

GENEROTYPE: *Scolopendra lagura* Linnaeus, by monotypy.

RANGE: Nearly cosmopolitan.

SPECIES: About a dozen; seven occur in our area.

**Polyxenus anacopensis** Pierce

*Polyxenus anacopensis* Pierce, 1940, Bull. Southern California Acad. Sci., vol. 39, p. 164, figs. 3, 6, 9, 15-18.

TYPE: Los Angeles Museum.

TYPE LOCALITY: Middle Anacapa Island, Santa Barbara County, California.

RANGE: Known only from type locality.

**Polyxenus bartschi** Chamberlin

*Polyxenus bartschi* Chamberlin, 1922, Ent. News, vol. 33, p. 165.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Tortugas Key, Monroe County, Florida.

RANGE: Known only from type locality.

**Polyxenus fasciculatus fasciculatus** Say

*Polyxenus fasciculatus* Say, 1821, Journ. Acad. Nat. Sci. Philadelphia, vol. 2, p. 108.—Wood, 1865, Trans. Amer. Philos. Soc., vol. 13, p. 228.—Pierce, 1940, Bull. Southern California Acad. Sci., vol. 39, No. 2, p. 163.

TYPE: None known to exist.

TYPE LOCALITY: "Southern States."

RANGE: Eastern, southeastern, and midwestern United States, from Long Island to Texas. Absent or very scarce in the Appalachian region.

**Polyxenus fasciculatus victoriensis** Pierce

*Polyxenus fasciculatus victoriensis* Pierce, 1940, Bull. Southern California Acad. Sci., vol. 39, No. 2, p. 163.

TYPE: Los Angeles Museum.

TYPE LOCALITY: Victoria, Victoria County, Texas.

RANGE: Known only from type locality.

**Polyxenus lagurus** (Linnaeus)

*Scolopendra lagura* Linnaeus, 1758, Systema naturae, ed. 10, p. 637.

*Pollyxenus lagurus* Latreille, 1804, Histoire naturelle . . . des crustacés et des insectes, vol. 7, p. 82.

*Polyxenus lagurus* Latzel, 1884, Myr. Öst.-Ung. Monarch., vol. 2, p. 74, figs. 22-39.—Schubart, 1934, in Dahl, Die Tierwelt Deutschlands, Teil 28, p. 20, figs. 4-6.

TYPE: Not known to exist.

TYPE LOCALITY: Probably vicinity of Uppsala, Sweden.

RANGE: Throughout Europe, from Scandinavia to the Balkans, Italy, North Africa, Spain, and the Azores. In America known definitely only from Nova Scotia, but it is quite likely that at least part of the records for *P. fasciculatus* pertain to the present species, which is not infrequently intercepted at quarantine in cargoes from Europe.

**Polyxenus pugetensis Kincaid**

*Polyxenus pugetensis* Kincaid, 1898, Ent. News, vol. 9, p. 192.

TYPE: Location unknown.

TYPE LOCALITY: Western Washington.

RANGE: Washington and British Columbia.

**Polyxenus tuberculatus Pierce**

*Polyxenus tuberculatus* Pierce, 1940, Bull. Southern California Acad. Sci., vol. 39, No. 2, p. 166.

TYPE: Los Angeles Museum.

TYPE LOCALITY: Sabinal, Uvalde County, Texas.

RANGE: Known only from type locality.

**Subclass CHILOGNATHA**

Chilognatha Latreille, 1802, Histoire naturelle . . . des crustacés et des insectes, vol. 3, p. 44 (in part).

Chilognatha Latzel, 1884, Myr. Öst.-Ung. Monarch., vol. 2, p. 354 (as suborder).

**KEY TO SUPERORDERS OF CHILOGNATHA**

1. Gonopods of male at caudal end of body, modified from last two pairs of legs; legs of 7th segment not modified; tracheae dichotomously branched.
 

PENTAZONIA (p. 11)

 Gonopods of male modified from legs of the 7th segment; tracheae not branched as above . . . . . 2
2. First legs of 7th segment of male not modified; eight pairs of legs in front of the gonopods; head small, mandibles usually much reduced; labrum without teeth.
 

COLOBOGNATHA (p. 181)

 First legs of 7th segment of male always modified into gonopods; seven pairs of legs in front of gonopods; head not reduced, mouthparts of normal size; labrum usually with three teeth . . . . . HELMINTHOMORPHA (p. 13)

**Superorder PENTAZONIA**

Pentazonia Brandt, 1833, Bull. Soc. Nat. Moscou, vol. 6, p. 194.—Attems, 1914, Arch. Naturg., Abt. A., vol. 80, p. 135.—Brölemann, 1935, Myr. Diplop., Chilognathes I, in Faune de France, No. 29, p. 88.

Oniscomorpha Pocock, 1887, Ann. Mag. Nat. Hist., ser. 5, vol. 20, p. 291.—Bollman, 1893, U. S. Nat. Mus. Bull. 46, p. 161.—Cook, 1895, Ann. New York Acad. Sci., vol. 9, p. 2.—Attems, 1899, Denkschr. Akad. Wiss., Wien, vol. 67, p. 226.

Opisthandria Verhoeff, 1894, Verh. Zool.-Bot. Ges. Wien, vol. 44, p. 17.—Attems, 1926, in Kükenthal-Krumbach, Handbuch der Zoologie, vol. 4, p. 114.

## KEY TO ORDERS OF PENTAZONIA

1. Body composed of 14 to 16 segments, covered with 11 to 13 tergites; body contractile into a ball . . . . . GLOMERIDA (p. 12)  
 Body composed of 22 segments, more elongate and not contractile into a ball  
 GLOMERIDESMIDA<sup>3</sup>

*Order* GLOMERIDA

- Glomeridia Brandt, 1833, Bull. Soc. Nat. Moscou, vol. 6, p. 194.—Attems, 1914, Arch. Naturg., Abt. A., vol. 80, p. 135.  
 Glomeridae Leach, 1815, Trans. Linn. Soc. London, p. 376.—Latzel, 1884, Myr. Öst.-Ung. Monarch., vol. 2, p. 81.—Bollman, 1893, U. S. Nat. Mus. Bull. 46, p. 161.  
 Oniscomorpha Pocock, 1887, Ann. Mag. Nat. Hist., ser. 5, vol. 20, p. 291.  
 Glomeroidea Cook, 1895, Ann. New York Acad. Sci., vol. 9, p. 2.  
 Plesiocerata Verhoeff, 1910, Die Diplopoden Deutschlands, p. 21.

*Family* GLOMERIDAE Leach

- Glomeridae Leach, 1815, Trans. Linn. Soc. London, p. 376.—Latzel, 1884, Myr. Öst.-Ung. Monarch., vol. 2, p. 81.—Cook, 1895, Ann. New York Acad. Sci., vol. 9, p. 2.  
 Glomerididae Cook, 1896, Brandtia, No. 10, p. 45.

**Genus** ONOMERIS Cook

- Onomeris* Cook, 1896, Brandtia, No. 10, p. 43.—Loomis, 1943, Bull. Mus. Comp. Zool., vol. 92, No. 7, p. 373.

GENOTYPE: *Onomeris underwoodi* Cook, by original designation.

RANGE: Central Alabama and the mountains of western North Carolina and north Georgia.

SPECIES: Two.

***Onomeris australora* Hoffman**

- Onomeris australora* Hoffman, 1950, Journ. Elisha Mitchell Sci. Soc., vol. 66, p. 13, figs. 1, 2.

TYPE: U. S. Nat. Mus. (No. 1872).

TYPE LOCALITY: Reed Creek Falls on Glade Mountain, near Satolah, Rabun County, Georgia.

RANGE: Southern Blue Ridge above 3,000 feet in Rabun County, Georgia, and Macon County, North Carolina.

***Onomeris underwoodi* Cook**

- Onomeris underwoodi* Cook, 1896, Brandtia, No. 10, p. 43.

TYPE: U. S. Nat. Mus.

<sup>3</sup> Not represented in America north of Mexico; species occur in Central America and the Greater Antilles.

TYPE LOCALITY: Auburn, Lee County, Alabama.

RANGE: Known only from the type locality.

*Genus* SONOROMERIS Silvestri

*Sonoromeris* Silvestri, 1929, Boll. Lab. Zool. Portici, vol. 22, p. 199.—

Loomis, 1943, Bull. Mus. Comp. Zool., vol. 92, No. 7, p. 373.

GENEROTYPE: *Sonoromeris prima* Silvestri, by original designation.

RANGE: Central California.

SPECIES: One.

**Sonoromeris prima (Silvestri)**

*Apiomeris (Sonoromeris) prima* Silvestri, 1929, Boll. Lab. Zool. Portici, vol. 22, pp. 198–203, figs.

TYPE SPECIMEN: Probably in Silvestri's collection.

TYPE LOCALITY: Mill Valley, near San Francisco, California.

RANGE: Known only from type locality.

*Genus* TRICHOMERIS Loomis

*Trichomeris* Loomis, 1943, Bull. Mus. Comp. Zool., vol. 92, No. 7, p. 374

GENEROTYPE: *Trichomeris sinuata* Loomis, by original designation.

RANGE: Northern Alabama.

SPECIES: One.

**Trichomeris sinuata Loomis**

*Trichomeris sinuata* Loomis, 1943, Bull. Mus. Comp. Zool., vol. 92, No. 7, p. 374, figs. la–f.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Monte Sano State Park, 6 miles southeast of Huntsville, Madison County, Alabama.

RANGE: Known only from type locality.

*Superorder* HELMINTHOMORPHA

Helminthomorpha Pocock, 1887, Ann. Mag. Nat. Hist., ser. 5, vol. 20, p. 294.—Bollman, 1893, U. S. Nat. Mus. Bull. 46, p. 155.—Silvestri,

1897, Ann. Mus. Civ. Stor. Nat. Genova, ser. 2, vol. 18, p. 646.

Eugnatha Attems, 1899, Denkschr. Akad. Wiss., Wien, vol. 67, p. 227.

KEY TO THE ORDERS OF HELMINTHOMORPHA

1. Body composed of 18 to 22 segments; sternites, pleurites, and tergites completely fused without traces of sutures; tergites usually produced laterally into paranota; eyes always absent; second legs of 7th segment of male not modified as gonopods.

POLYDESMIDA (p. 14)

Body composed of 30 or more (rarely 20, 26, or 28) segments; the body rings less complete, the sternites being either free or set off by distinct sutures; eyes usually present (secondarily lost in cave forms) . . . . . 2

2. Terminal segment of body with 1 to 3 pairs of spinnerets; either one or both pairs of legs of the 7th segment of males modified into gonopods; sternites free from the pleurotergites, the latter usually with long setae . . . . . CHORDEUMIDA (p. 84)
- Terminal segment of body without spinnerets; either both pairs of legs of the 7th segment as gonopods, or one pair missing; sternites usually fused with pleurotergites . . . . . 3
3. Stipites of gnathochilarium broadly in contact behind the laminae linguales.  
JULIDA (p. 117)
- Stipites of gnathochilarium separated for their entire length by the mentum and laminae linguales . . . . . 4
4. Third segment open ventrally, the 4th and following segments closed; 5th segment with two pairs of legs . . . . . 5
- Third segment closed ventrally; 5th segment with a single pair of legs.  
SPIROBOLIDA (p. 151)
5. Both anterior and posterior gonopods present and functional, posterior pair usually with long flagella; laminae linguales completely separated by the mentum.  
CAMBALIDA (p. 172)
- Posterior pair of gonopods rudimentary or completely absent, anterior pair elaborate; laminae linguales not separated by the mentum (except in Choctellidae).  
SPIROSTREPTIDA (p. 169)

### Order POLYDESMIDA

- Polydesmidae Leach, 1815, Trans. Linn. Soc. London, vol. 11, p. 381.—Latzel, 1884, Myr. Öst.-Ung. Monarch., vol. 2, p. 124—Bollman, 1893, U. S. Nat. Mus. Bull. 46, p. 159.
- Polydesmoidea Pocock, 1887, Ann. Mag. Nat. Hist., ser. 5, vol. 20, p. 294.—Cook, 1895, Ann. New York Acad. Sci., vol. 9, p. 4.—Attems, 1899, Denkschr. Akad. Wiss., Wien, vol. 67, p. 227.—Brölemann, 1916, Ann. Soc. Ent. France, vol. 84, p. 583.—Attems, 1937, Das Tierreich, Lief. 68, p. 1.
- Merocheta Cook, 1895, Ann. New York Acad. Sci., vol. 9, p. 4.
- Proterospermophora Verhoeff, 1900, Zool. Jahrb., Syst. Abt., vol. 13, p. 54; 1913, Zool. Anz., vol. 43, p. 57.
- Polydesmida Chamberlin, 1938, Carnegie Inst. Washington, Publ. No. 491, p. 174; 1943, Bull. Univ. Utah, biol. ser., vol. 8, No. 3, p. 36.

#### KEY TO THE SUBORDERS OF POLYDESMIDA

1. Opening of sternal gonopod socket more or less constricted between the gonopods, the coxae of which are entirely free of each other . . . STRONGYLOSOMIDEA (p. 78)
- Opening of sternal gonopod socket not medially constricted; coxae of gonopods connected to each other by a ligament or a pseudosternite, or else broadly in contact along the median surfaces . . . . . POLYDESMIDEA (p. 14)

#### Suborder POLYDESMIDEA

- Polydesmidi + Leptodesmidi Brölemann, 1916, Ann. Soc. Ent. France, vol. 84, p. 527.
- Polydesmidea Attems, 1926, in Kükenthal-Krumbach, Handbuch der Zoologie, vol. 4, p. 132; 1938, Des Tierreich, Lief. 69, p. 1; 1940, Das Tierreich, Lief. 70, p. 1.

## KEY TO THE NORTH AMERICAN FAMILIES OF POLYDESMIDEA

1. Coxae of male gonopods smaller, usually concealed inside the body and never connected firmly with the margin of the sternal aperture, capable of extrusion from the body . . . . . 2  
Coxae of male gonopods larger, often conspicuously enlarged, and partially external, usually attached to the margin of the socket and immovable . . . . . 5
2. Dorsum very strongly arched, with lateral keels nearly vertical; prozonites obliterated on ventral sides; keels of 2nd, 3rd, or 4th segments enlarged, the body modified for rolling into a sphere . . . . . 3  
Without any of the preceding modifications . . . . . 4
3. Repugnatorial pores opening on upper surface of keels near the margin . . . . . CYCLODESMIDAE (p. 15)  
Repugnatorial pores not detected; a large deep pit on each side of the tergites near the anterior base of the keels . . . . . DESMONIDAE (p. 15)
4. Anal tergite broad, subquadrate . . . . . EURYURIDAE (p. 55)  
Anal tergite subtriangular . . . . . EURYDESMIDAE (p. 16)
5. Repugnatorial pores borne upon special stalks or processes, collum usually covering the head . . . . . STYLODESMIDAE (p. 76)  
Repugnatorial pores not borne upon stalks; collum not concealing the head . . . . . 6
6. Seminal canal of male gonopod widening into a distinct vesicle or ampulla near its distal extremity . . . . . POLYDESMIDAE (p. 63)  
Seminal canal not distally widened or modified as above . . . . . 7
7. Tubercles of tergites strongly developed (in our species); gonopods without prefemoral processes . . . . . VANHOEFFENIDAE (p. 77)  
Tubercles weakly developed or obliterated; prefemur of gonopods with two long slender processes . . . . . NEARCTODESMIDAE (p. 59)

*Family* CYCLODESMIDAE Silvestri

Cyclodesmidae Silvestri, 1894, Ann. Mus. Civ. Stor. Nat. Genova, ser. 2, vol. 14, p. 747.

*Genus* ETHOCYCLUS Chamberlin and Mulaik

*Ethocyclus* Chamberlin and Mulaik, 1941, Journ. New York Ent. Soc., vol. 49, p. 58.

GENEROTYPE: *Ethocyclus atophus* Chamberlin and Mulaik, by original designation.

RANGE: Texas.

SPECIES: One.

*Ethocyclus atophus* Chamberlin and Mulaik

*Ethocyclus atophus* Chamberlin and Mulaik, 1941, Journ. New York Ent. Soc., vol. 49, p. 58.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Raven Ranch, Kerr County, Texas.

RANGE: Known only from type locality.

*Family* DESMONIDAE Cook

Desmonidae Cook, 1898, Pros. U. S. Nat. Mus., vol. 21, p. 463.

**Genus DESMONIELLA Loomis**

*Desmoniella* Loomis, 1943, Bull. Mus. Comp. Zool., vol. 92, No. 7, p. 400.

GENEROTYPE: *Desmoniella curta* Loomis, by original designation.

RANGE: Oklahoma.

SPECIES: One.

***Desmoniella curta* Loomis**

*Desmoniella curta* Loomis, 1943, Bull. Mus. Comp. Zool., vol. 92, No. 7, p. 401, figs. 14a-c.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Arbuckle Mountains, 2.3 miles south of Fittstown, Pontotoc County, Oklahoma.

RANGE: Known only from type locality.

**Genus DESMONUS Cook**

*Desmonus* Cook, 1898, Proc. U. S. Nat. Mus., vol. 21, p. 463.

GENEROTYPE: *Desmonus earlei* Cook, by original designation.

RANGE: Alabama to Kentucky, west to Arkansas.

SPECIES: Two.

***Desmonus earlei* Cook**

*Desmonus earlei* Cook, 1898, Proc. U. S. Nat. Mus., vol. 21, p. 463, pl. 32, figs. 1a-n.

TYPE: U. S. Nat. Mus. (No. 681).

TYPE LOCALITY: Auburn, Lee County, Alabama.

RANGE: Known so far from the type locality, from several localities in eastern Tennessee, and from central Kentucky.

***Desmonus pudicus* (Bollman)**

*Sphaeriodesmus pudicus* Bollman, 1883, Ent. Amer., vol. 4, p. 3.

*Desmonus pudicus* Cook, 1898, Proc. U. S. Nat. Mus., vol. 21, p. 465, pl. 32, figs. 2a-b.

TYPE: U. S. Nat. Mus. (No. 154).

TYPE LOCALITY: Little Rock, Pulaski County, Arkansas.

RANGE: Known only from Little Rock and Okolona, Arkansas.

**Family EURYDESMIDAE Chamberlin**

Chelodesmidae + Xystodesmidae Cook, 1895, Ann. New York Acad. Sci., vol. 9, pp. 4, 5.

Leptodesminae Attems, 1899, Denkschr. Akad. Wiss., Wien, vol. 67, p. 369.

Leptodesmidae Attems, 1914, Arch. Naturg., Abt. A, vol. 80, p. 280; 1938, Das Tierreich, Lief. 69, p. 1.

Eurydesmidae Chamberlin, 1950, Zoologica, New York, vol. 35, p. 142.

Sigmocheiridae Causey, 1955, Proc. Biol. Soc. Washington, vol. 68, p. 93 (in part, *Sigmocheir* and *Orophe* only).



As it does not seem possible to maintain as separate families, on the basis of characters thus far proposed, the two groups designated by Cook as the Chelodesmidae and Xystodesmidae, we here unite them pending a thorough study of all the "leptodesmoid" families. The proposal of a family Sigmocheiridae we regard as premature, particularly as its primary diagnostic character is also found in numerous typical eurydesmoids of the Neotropical region.

**Genus AMPLOCHEIR Chamberlin**

*Amplocheir* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, No. 3, p. 97.

GENEROTYPE: *Xystocheir sequoia* Chamberlin.

RANGE: California.

SPECIES: Two.

**Amplocheir reducta Causey**

*Amplocheir reducta* Causey, 1955, Proc. Biol. Soc. Washington, vol. 68, p. 92, fig. 4.

TYPE: Amer. Mus. Nat. Hist.

TYPE LOCALITY: Briceburg, Mariposa County, California.

RANGE: Known only from type locality.

**Amplocheir sequoia (Chamberlin)**

*Xystocheir sequoia* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 5, p. 15, fig. 28.

*Amplocheir sequoia* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, No. 3, p. 97.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Sequoia National Park, Tulare County, California.

RANGE: Known only from type locality.

**Genus APHELORIA Chamberlin**

*Apheloria* Chamberlin, 1921, Canadian Ent., vol. 53, p. 232.

*Leptocircus* (not Swainson 1833) Attems, 1931, Zoologica, Stuttgart, vol. 30, Lief. 3-4, p. 67 (genotype, *L. inexpectatus* Attems).

GENEROTYPE: *Fontaria montana* Bollman, by original designation.

RANGE: Eastern North America, from Vermont and southern Ontario south to North Carolina, Tennessee, and Arkansas, northwest to eastern Iowa.

SPECIES: Twenty-two named forms, of which three are regarded as subspecies of *trimaculata*.

**Apheloria adela Chamberlin**

*Apheloria adela* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 10, fig. 34.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Ithaca, Tompkins County, New York.

RANGE: Known definitely only from the type locality, although possibly occurring southward in the Appalachians.

### **Apheloria ainsliei Chamberlin**

*Apheloria ainsliei* Chamberlin, 1921, Canadian Ent., vol. 53, p. 232, pl. 9, fig. 1.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Knox County, Tennessee.

RANGE: Known only from type locality.

### **Apheloria asburna Chamberlin**

*Apheloria asburna* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 101.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 20 miles north of Nashville, Davidson County, Tennessee.

RANGE: Known only from type locality.

### **Apheloria aspila Chamberlin**

*Apheloria aspila* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 10, fig. 31.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Soco Falls, northeast of Cherokee, Jackson County, North Carolina.

RANGE: Known definitely only from the type locality.

### **Apheloria butleriana (Bollman)**

*Fontaria butleriana* Bollman, 1889, Proc. U. S. Nat. Mus., vol. 11, p. 407.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Brookville, Franklin County, Indiana.

RANGE: Southern Indiana, eastern Kentucky; probably a western subspecies of *A. coriacea*.

### **Apheloria coriacea (Koch)**

*Fontaria coriacea* Koch, 1847, in Krit. Rev. Insect. Deutschlands, vol. 3, p. 141; 1863, Die Myriapoden, vol. 1, p. 72, pl. 32, fig. 63.

*Polydesmus (Fontaria) corrugatus* Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, p. 6 (Trenton Falls, New York; types, U. S. Nat. Mus. and Mus. Comp. Zool.).

*Apheloria coriacea* Hoffman, 1949, Amer. Mus. Novitates, No. 1405, p. 3, figs. 1-4 (redescription).

TYPE: Original specimen not known to exist; neotypes in Amer. Mus. Nat. Hist. and U. S. Nat. Mus.

TYPE LOCALITY: "Virginien"; restricted by Hoffman to Swann's Point, near Scotland, Surry County, Virginia.

RANGE: Southeastern Virginia north as far as Massachusetts, west to Kentucky, Ohio, and Michigan.

### **Apheloria inexpectata (Attems)**

*Leptocircus inexpectatus* Attems, 1931, Zoologica, Stuttgart, vol. 30, Lief. 3-4, p. 67, figs. 102-104.

TYPE: Probably in the Vienna Museum.

TYPE LOCALITY: North America, without further locality.

RANGE: No definite localities are known for this species, which may prove to be *A. iowa* or *A. reducta*.

### **Apheloria iowa Chamberlin**

*Apheloria iowa* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 10, fig. 28.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Mount Pleasant, Henry County, Iowa.

RANGE: Iowa and Illinois, probably continuous into Arkansas and Oklahoma.

### **Apheloria keuka Chamberlin**

*Apheloria keuka* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 10, fig. 32.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Ithaca, Tompkins County, New York.

RANGE: Finger Lakes region of central New York State.

### **Apheloria kleinpeteri Hoffman**

*Apheloria kleinpeteri* Hoffman, 1949, Proc. U. S. Nat. Mus., vol. 99, p. 375, figs. 3, 4.

TYPE: U. S. Nat. Mus. (No. 1803).

TYPE LOCALITY: Burkes Garden, Tazewell County, Virginia.

RANGE: Known from Bland, Smyth, Tazewell, and Washington counties, Virginia, and from Mercer County, West Virginia.

### **Apheloria montana (Bollman)**

*Fontaria montana* Bollman, 1887, Proc. U. S. Nat. Mus., vol. 10, p. 622.

*Apheloria montana* Chamberlin, 1921, Canadian Ent., vol. 53, p. 232, pl. 9, fig. 2.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Wolf Creek, Cocke County, Tennessee.

RANGE: Eastern Tennessee.

### **Apheloria pinicola Chamberlin**

*Apheloria pinicola* Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, vol. 99, p. 26, figs. 6, 7.

TYPE: Acad. Nat. Sci. Philadelphia (No. 9945).  
TYPE LOCALITY: Pine Mountain, Bell County, Kentucky.  
RANGE: Known only from type locality.

#### ***Apheloria reducta* Chamberlin**

*Apheloria reducta* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 11, fig. 35.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Imboden, Lawrence County, Arkansas.

RANGE: Recorded from about 14 Counties in the northwestern part of Arkansas and from southwest Missouri.

#### ***Apheloria roanea* Chamberlin**

*Apheloria roanea* Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, vol. 99, p. 26, fig. 8.

TYPE: Acad. Nat. Sci. Philadelphia (No. 9946).

TYPE LOCALITY: Harriman, Roane County, Tennessee.

RANGE: Known from type locality only.

#### ***Apheloria tigana* Chamberlin**

*Apheloria tigana* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 11, fig. 29.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Raleigh, Wake County, North Carolina.

RANGE: Known also from Ashburnham, Davidson County, Tennessee, and from Mammoth Cave, Edmondson County, Kentucky.

#### ***Apheloria trimaculata trimaculata* (Wood)**

*Polydesmus (Fontaria) trimaculatus* Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, p. 6; 1865, Trans. Amer. Philos. Soc., vol. 13, p. 223, figs. 53, 54.

*Fontaria lutzi* Jacot, 1938, Amer. Midl. Nat., vol. 20, p. 571, fig. 1 (type locality: Keene, Cheshire County, New Hampshire; types in Boston Soc. Nat. Hist. and Peabody Mus., Yale Univ.).

*Apheloria trimaculata* Attems, 1938, Das Tierreich, Lief. 69, p. 170.

*Apheloria trimaculata trimaculata* Hoffman, 1951, Chicago Acad. Sci. Nat. Hist. Misc., No. 81, p. 2.

TYPE: Not known to be extant.

TYPE LOCALITY: Susquehanna County, Pennsylvania.

RANGE: Appalachian region from New Hampshire and Massachusetts south as far as Alleghany County, Virginia.

#### ***Apheloria trimaculata antrostomicola* Hoffman**

*Apheloria antrostomicola* Hoffman, 1949, Proc. U. S. Nat. Mus., vol. 99, p. 372, figs. 1, 2.

*Apheloria trimaculata antrostomicola* Hoffman, 1951, Chicago Acad. Sci. Nat. Hist. Misc. No. 81, p. 3.

TYPE: U. S. Nat. Mus. (No. 1802).

TYPE LOCALITY: Stull's Cave, about 9 miles southwest of Lowmoor, Alleghany County, Virginia.

RANGE: Known only from the vicinity of the type locality.

### ***Apheloria trimaculata incarnata* Hoffman**

*Apheloria trimaculata incarnata* Hoffman, 1951, Chicago Acad. Sci., Nat. Hist. Misc., No. 81, p. 4, fig. 1a.

TYPE: U. S. Nat. Mus. (No. 1891).

TYPE LOCALITY: Gull Lake, Frontenac County, Ontario.

RANGE: Known from type locality only.

### ***Apheloria trimaculata tortua* Chamberlin**

*Apheloria tortua* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, No. 3, p. 101, fig. 23 (March).

*Apheloria picta* Hoffman, 1949, Proc. U. S. Nat. Mus., vol. 99, p. 376, figs. 5, 6 (type locality: Mountain Lake, Giles County, Virginia; type: U. S. Nat. Mus. No. 1804; June).

*Apheloria trimaculata tortua* Hoffman, 1951, Chicago Acad. Sci., Nat. Hist. Misc., No. 81, p. 5.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Mountain Lake, Giles County, Virginia.

RANGE: High mountains in Bedford, Craig, and Giles counties, Virginia.

### ***Apheloria unaka* Chamberlin**

*Apheloria unaka* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 11, fig. 33.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Unaka Springs, Unicoi County, Tennessee.

RANGE: Also known from Hot Springs, Madison County, North Carolina.

### ***Apheloria virginia* Chamberlin**

*Apheloria virginia* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 12, fig. 30.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Chatham, Pittsylvania County, Virginia.

RANGE: Southcentral Virginia and adjacent North Carolina.

### ***Apheloria waccamana* Chamberlin**

*Apheloria waccamana* Chamberlin, 1940, Ent. News, vol. 51, p. 284, fig. 3.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Pisgah National Forest, Buncombe County, North Carolina.

RANGE: Central and western North Carolina, north to Washington County, Virginia.

**Genus BORARIA Chamberlin**

*Boraria* Chamberlin, 1943, Proc. Biol. Soc. Washington, vol. 56, p. 143.

GENEROTYPE: *Aporiaria carolina* Chamberlin, by original designation.

RANGE: Southern Appalachians, from Virginia to Georgia.

SPECIES: Seven

***Boraria brunnior* (Chamberlin)**

*Aporiaria brunnior* Chamberlin, 1943, Proc. Biol. Soc. Washington, vol. 56, p. 37, fig. 10.

TYPE: Chicago Nat. Hist. Mus.

TYPE LOCALITY: Great Smoky Mountains National Park, Sevier County, Tennessee.

RANGE: Known only from type locality.

***Boraria carolina* (Chamberlin)**

*Aporiaria carolina* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 6, fig. 10.

*Boraria carolina* Chamberlin, 1943, Proc. Biol. Soc. Washington, vol. 56, p. 144.—Hoffman, 1950, Journ. Elisha Mitchell Sci. Soc., vol. 66, p. 23, fig. 14.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Soco Falls, northeast of Cherokee, Jackson County, North Carolina.

RANGE: From Rabun County, Georgia, north through western North Carolina to Grayson and Patrick Counties, Virginia.

***Boraria fumans* (Chamberlin)**

*Aporiaria fumans* Chamberlin, 1943, Proc. Biol. Soc. Washington, vol. 56, p. 37, fig. 9.

TYPE: Chicago Nat. Hist. Mus.

TYPE LOCALITY: Greenbrier Cove, Sevier County, Tennessee.

RANGE: Known only from type locality.

***Boraria geniculata* (Chamberlin)**

*Aporiaria geniculata* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 6, fig. 11.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Soco Falls, northeast of Cherokee, Jackson County, North Carolina.

RANGE: Known from about six localities in western North Carolina.

***Boraria media* (Chamberlin)**

*Nannaria media* Chamberlin, 1918, Psyche, vol. 25, p. 125.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Burbank, Carter County, Tennessee.

RANGE: Known only from the vicinity of Roan Mountain, North Carolina-Tennessee.

### **Boraria monticolens Chamberlin**

*Boraria monticolens* Chamberlin, 1951, Great Basin Nat., vol. 11, p. 26, fig. 16.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Great Smoky Mountains National Park, Sevier County, Tennessee.

RANGE: Known only from type locality.

### **Boraria stricta (Brölemann)**

*Fontaria tennesseensis* var. *stricta* Brölemann, 1896, Ann. Soc. Ent. France, vol. 65, p. 63, pl. 5, figs. 17, 18.

TYPE: Mus. Nat. Hist. Nat. Paris.

TYPE LOCALITY: North Carolina.

RANGE: No definite localities are known for this species.

### **Genus BRACHORIA Chamberlin**

*Brachoria* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 3.

*Anfractogon* Hoffman, 1948, Proc. Biol. Soc. Washington, vol. 61, p. 94 (generotype, *A. tenebrans* Hoffman).

GENEROTYPE: *Brachoria initialis* Chamberlin, by original designation.

RANGE: Southeastern United States, from West Virginia and Indiana south to Alabama and Mississippi.

SPECIES: Thirteen.

### **Brachoria benderi Causey**

*Brachoria benderi* Causey, 1950, Ent. News, vol. 61, p. 193, figs. 1, 2.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: Piney Woods, Rankin County, Mississippi.

RANGE: Known only from type locality.

### **Brachoria brachypus Chamberlin**

*Brachoria brachypus* Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, vol. 99, p. 26, fig. 9.

TYPE: Acad. Nat. Sci. Philadelphia (No. 9947).

TYPE LOCALITY: Harriman, Roane County, Tennessee.

RANGE: Known only from type locality.

### **Brachoria electa Causey**

*Brachoria electa* Causey, 1955, Proc. Biol. Soc. Washington, vol. 68, p. 25, fig. 3.

TYPE: Amer. Mus. Nat. Hist.

TYPE LOCALITY: Tyrone, Anderson County, Kentucky.

RANGE: Known only from type locality.

### **Brachoria ethotela Chamberlin**

*Brachoria ethotela* Chamberlin, 1942, Bull. Univ. Utah, biol. ser., vol. 6, No. 8, p. 5, fig. 13.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Marion, Smyth County, Virginia.

RANGE: Southwestern Virginia (Pulaski, Smyth, and Washington Counties) and northwestern North Carolina (Watauga County).

### **Brachoria eutypa Chamberlin**

*Brachoria eutypa* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 4, fig. 4.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Russellville, Hamblen County, Tennessee.

RANGE: Known only from type locality.

### **Brachoria glendalea (Chamberlin)**

*Fontaria glendalea* Chamberlin, 1918, Psyche, vol. 25, p. 28.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Glendale Hills, Nashville, Davidson County, Tennessee.

RANGE: Known only from type locality.

### **Brachoria hansonii Causey**

*Brachoria hansonii* Causey, 1950, Ent. News, vol. 61, p. 6, fig. 1.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: Kentucky Ridge State Park, Pineville, Bell County, Kentucky.

RANGE: Known only from type locality.

### **Brachoria indianae (Bollman)**

*Fontaria indianae* Bollman, 1889, Proc. U. S. Nat. Mus., vol. 11, p. 406.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Hagerstown and Brookville, Indiana. Here restricted to Brookville, Franklin County.

RANGE: Southern Indiana.

### **Brachoria initialis Chamberlin**

*Brachoria initialis* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 3, fig. 3.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Mapleville, Chilton County, Alabama.

RANGE: Known only from type locality.



**Brachoria ochra (Chamberlin)**

*Fontaria ochra* Chamberlin, 1918, Psyche, vol. 25, p. 123.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Agricultural College, Oktibbeha County, Mississippi.

RANGE: Known only from type locality.

**Brachoria separanda Chamberlin**

*Brachoria separanda* Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, vol. 99, p. 28, fig. 10.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: Jennings, Garrett County, Maryland.

RANGE: Known elsewhere only from Parsons, Tucker County, West Virginia.

**Brachoria sequens Chamberlin**

*Brachoria sequens* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 4, fig. 2.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Agricultural College, Oktibbeha County, Mississippi.

RANGE: Known only from type locality.

**Brachoria tenebrans (Hoffman)**

*Anfractogon tenebrans* Hoffman, 1948, Proc. Biol. Soc. Washington, vol. 61, p. 94, figs. 1-3.

TYPE: U. S. Nat. Mus. (No. 1811).

TYPE LOCALITY: Winston County, Alabama.

RANGE: Known only from type locality.

**Genus CHEIRAUXUS Chamberlin**

*Cheirauxus* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 97.

GENEROTYPE: *Cheirauxus sapiens* Chamberlin, by original designation.

RANGE: California.

SPECIES: One.

**Cheirauxus sapiens Chamberlin**

*Cheirauxus sapiens* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 97, figs. 14, 15.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Palo Alto, Santa Clara County, California.

RANGE: Known only from type locality.

**Genus CHEIROPUS Loomis**

*Cheiropus* Loomis, 1944, Psyche, vol. 51, p. 171.

GENEROTYPE: *Cheiropus plancus* Loomis, by original designation.

RANGE: Georgia and Florida.

SPECIES: One.

**Cheiropus plancus Loomis**

*Cheiropus plancus* Loomis, 1944, Psyche, vol. 51, p. 171, fig. 3.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Thomasville, Thomas County, Georgia.

RANGE: KNOWN elsewhere only from Gainesville, Florida.

**Genus CHEROKIA Chamberlin**

*Cherokia* Chamberlin, 1949, Proc. Biol. Soc. Washington, vol. 62, p. 3.

GENEROTYPE: *Fontaria georgiana* Bollman, by original designation.

RANGE: Western Florida, north as far as Asheville, North Carolina.

SPECIES: Apparently one geographically variable species. Varying chiefly in color pattern, the forms of this genus are probably worthy of subspecific rank; for the purposes of this list, however, we treat them as local variants of a single polymorphic species.

**Cherokia georgiana (Bollman)**

*Fontaria georgiana* Bollman, 1889, Proc. U. S. Nat. Mus., vol. 11, p. 344.

*Fontaria tallulah* Bollman, 1889, Proc. U. S. Nat. Mus., vol. 11, p. 344  
(type locality: Tallulah Falls, Georgia; type: U. S. Nat. Mus.).

*Fontaria ducilla* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 7, fig. 12 (type locality: Soco Falls, Jackson County, North Carolina; type: collection of R. V. Chamberlin).

*Mimuloria furcifer* Chamberlin, 1940, Ent. News, vol. 51, p. 282, fig. 1  
(type locality: Pisgah National Forest, near Asheville, North Carolina; type: collection of R. V. Chamberlin).

*Dynoria parvior* Chamberlin, 1947, Proc. Biol. Soc. Washington, vol. 60, p. 10, fig. 4 (type locality: Neel Gap, Georgia; type: collection of R. V. Chamberlin).

*Cherokia georgiana* Chamberlin, 1949, Proc. Biol. Soc. Washington, vol. 62, p. 3.—Hoffman, 1950, Journ. Elisha Mitchell Sci. Soc., vol. 66, p. 23, figs. 9–12.

TYPE: U. S. Nat. Mus. (No. 780).

TYPE LOCALITY: Macon, Bibb County, Georgia.

RANGE: From western Florida, north through Georgia and eastern Alabama into the southern Blue Ridge as far as the French Broad River.

**Genus CHIPUS Loomis**

*Chipus* Loomis, 1953, Journ. Washington Acad. Sci., vol. 43, No. 12, p. 421.

GENEROTYPE: *Chipus unicus* Loomis, by original designation.

RANGE: Idaho.

SPECIES: One.

**Chipus unicus Loomis**

*Chipus unicus* Loomis, 1953, Journ. Washington Acad. Sci., vol. 43, No. 12, p. 421, fig. 18.

TYPE: U. S. Nat. Mus. (No. 2092).

TYPE LOCALITY: Emerald Creek, St. Joe National Forest, Idaho.

RANGE: Known only from type locality.

**Genus CHONAPHE Cook**

*Chonaphe* Cook, 1904, in Harriman Alaska Exped., vol. 8, p. 56.

GENEROTYPE: *Polydesmus armatus* Harger, by original designation.

RANGE: Washington, Oregon, northern Idaho.

SPECIES: Four.

**Chonaphe armata (Harger)**

*Polydesmus armatus* Harger, 1872, Amer. Journ. Sci. Arts, vol. 4, p. 120.

*Chonaphe armata* Cook, 1904, in Harriman Alaska Exped., vol. 8, p. 56,  
pl. 4, figs. 2a-c.

TYPE: Not known to exist.

TYPE LOCALITY: John Day River Valley, Oregon.

RANGE: Oregon.

**Chonaphe cygneia Chamberlin**

*Chonaphe cygneia* Chamberlin, 1949, Proc. Biol. Soc. Washington, vol. 63  
[sic, =62], p. 125, fig. 1.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: White Swan, Yakima County, Washington.

RANGE: Known only from type locality.

**Chonaphe patriotica Chamberlin**

*Chonaphe patriotica* Chamberlin, 1949, Proc. Biol. Soc. Washington, vol.  
63 [sic, =62], p. 127, figs. 2, 3.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Fourth of July Canyon, Kootenai County, Idaho.

RANGE: Known only from type locality.

**Chonaphe remissa Chamberlin**

*Chonaphe remissa* Chamberlin, 1949, Proc. Biol. Soc. Washington, vol. 63  
[sic, =62], p. 127, figs. 4, 5.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Puyallup, Pierce County, Washington.

RANGE: Known only from type locality.

**Genus CIBULARIA Chamberlin and Hoffman**

*Cibularia* Chamberlin and Hoffman, 1950, Chicago Acad. Sci., Nat. Hist.  
Misc. No. 71, p. 4.

GENEROTYPE: *Fontaria tuobita* Chamberlin, by original designation.

RANGE: Central New Mexico; Arkansas.

SPECIES: Two.

**Cibularia profuga Causey**

*Cibularia profuga* Causey, 1955, Proc. Biol. Soc. Washington, vol. 68, p. 29, fig. 7.

TYPE: Amer. Mus. Nat. Hist.

TYPE LOCALITY: Mount Ida, Montgomery County, Arkansas.

RANGE: Known only from type locality.

**Cibularia tuobita (Chamberlin)**

*Fontaria tuobita* Chamberlin, 1910, Ann. Ent. Soc. Amer., vol. 3, No. 4, p. 243, pl. 35, figs. 7, 8.

*Nannaria ursula* Chamberlin, 1938, Proc. Biol. Soc. Washington, vol. 51, p. 207 (type locality: Camp Mary White, near Cloudcroft, New Mexico; type: collection of R. V. Chamberlin).

*Cibularia tuobita* Chamberlin and Hoffman, 1950, Chicago Acad. Sci. Nat. Hist. Misc. No. 71, p. 5.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Sacramento Mountains at Cloudcroft, Otero County, New Mexico.

RANGE: Otero and Lincoln Counties in central New Mexico.

**Genus CLEPTORIA Chamberlin**

*Cleptoria* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 9.

GENEROTYPE: *Cleptoria macra* Chamberlin, by original designation.

RANGE: Georgia and South Carolina, in the Piedmont.

SPECIES: Three.

**Cleptoria macra Chamberlin**

*Cleptoria macra* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 9, figs. 36, 37.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Taylors, Greenville County, South Carolina.

RANGE: Known only from type locality.

**Cleptoria rileyi (Bollman)**

*Fontaria rileyi* Bollman, 1889, Proc. U. S. Nat. Mus., vol. 11, p. 345.

*Cleptoria rileyi* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 9.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Macon, Bibb County, Georgia.

RANGE: Known only from type locality.

**Cleptoria shelfordi Loomis**

*Cleptoria shelfordi* Loomis, 1944, Psyche, vol. 51, p. 172, fig. 4.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: De La Howe Forest, Station 11, Lincoln County, Georgia.

RANGE: Known only from the type locality.

**Genus DELOCHEIR Chamberlin**

*Delocheir* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 99.

GENEROTYPE: *Xystocheir taibona* Chamberlin, by original designation.

RANGE: Central California.

SPECIES: Three.

***Delocheir conservata* Chamberlin**

*Delocheir conservata* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 99, figs. 16, 17.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Hastings Reservation, Monterey County, California.

RANGE: Known only from the type locality.

***Delocheir dalea* Chamberlin**

*Delocheir dalea* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 99, fig. 19.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Brookdale, Santa Cruz County, California.

RANGE: Known only from the type locality.

***Delocheir taibona* (Chamberlin)**

*Xystocheir taibona* Chamberlin, 1912, Ann. Ent. Soc. Amer., vol. 5, p. 170, pl. 10, figs. 1, 2.

*Delocheir taibona* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 99.

TYPE: Present location unknown.

TYPE LOCALITY: Vicinity of Monterey Bay, California.

RANGE: Monterey and adjoining Counties, California.

**Genus DELTOTARIA Causey**

*Deltotaria* Causey, 1942, Ent. News, vol. 53, p. 165.

*Phanoria* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 101 (generotype: *P. philia* Chamberlin).

GENEROTYPE: *Deltotaria brimleii* Causey, by original designation.

RANGE: Southern Appalachians in North Carolina, Tennessee, and northern Georgia.

SPECIES: Four.

***Deltotaria brimleardia* Causey**

*Deltotaria brimleardia* Causey, 1950, Ent. News, vol. 61, p. 7, figs. 2, 3.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: Great Smoky Mountains National Park, Tennessee.

RANGE: Known only from the type locality.

**Deltotaria brimleii** Causey

*Deltotaria brimleii* Causey, 1942, Ent. News, vol. 53, p. 165, figs. 1, 2.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: Swannanoa, Buncombe County, North Carolina.

RANGE: Known only from type locality.

**Deltotaria philia** (Chamberlin)

*Phanoria philia* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 101, fig. 25.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Clarkesville, Habersham County, Georgia.

RANGE: Known only from type locality.

**Deltotaria tela** Causey

*Deltotaria tela* Causey, 1950, Ent. News, vol. 61, p. 38, figs. 3-5.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: Bent Creek Forest Experiment Station, southwest of Asheville, Buncombe County, North Carolina.

RANGE: Known only from type locality.

**Genus DICELLARIUS** Chamberlin

*Dicellarius* Chamberlin, 1920, Proc. Biol. Soc. Washington, vol. 33, p. 97.

*Spathoria* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 6 (generotype: *Fontaria lamellidens* Chamberlin).

GENEROTYPE: *Leptodesmus okefenokensis* Chamberlin, by original designation.

RANGE: Gulf Coastal Plain, Florida to Mississippi.

SPECIE: Three.

**Dicellarius bimaculatus** (McNeill)

*Polydesmus bimaculatus* McNeill, 1887, Proc. U. S. Nat. Mus., vol. 10, p. 323, pl. 11, figs. 3-5.

TYPE: U. S. Nat. Mus. (No. 8).

TYPE LOCALITY: Pensacola, Escambia County, Florida.

RANGE: Known only from type locality.

**Dicellarius lamellidens** (Chamberlin)

*Fontaria lamellidens* Chamberlin, 1931, Ent. News, vol. 42, p. 78.

*Spathoria lamellidens* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 6, fig. 9.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Biloxi, Harrison County, Mississippi.

RANGE: Known only from type locality.

**Dicellarius okefenokensis (Chamberlin)**

*Leptodesmus okefenokensis* Chamberlin, 1918, Ann. Ent. Soc. Amer., vol. 11, p. 370.

*Dicellarius okefenokensis* Chamberlin, 1920, Proc. Biol. Soc. Washington, vol. 33, p. 97.

*Epeloria nannoides* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 101, fig. 4 (type locality: Gainesville, Florida; type: collection of R. V. Chamberlin).

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Billys Island, Okefenokee Swamp, Charlton County, Georgia.

RANGE: Southeastern Georgia and adjacent northern Florida.

**Genus DIXIORIA Chamberlin**

*Dixioria* Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, vol. 99, p. 28.

GENEROTYPE: *Dixioria dentifer* Chamberlin [= *Fontaria pela* Chamberlin] by original designation.

RANGE: Southern Blue Ridge in Virginia, Tennessee, and North Carolina.

SPECIE: One, with two named subspecies.

**Dixioria pela pela (Chamberlin)**

*Fontaria pela* Chamberlin, 1918, Psyche, vol. 25, p. 123.

*Dixioria dentifer* Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, vol. 99, p. 28, fig. 13 (type locality: Cranberry, Avery County, North Carolina; type: Amer. Mus. Nat. Hist.).

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Burbank, Carter County, Tennessee.

RANGE: Vicinity of Roan Mountain, in Carter and Unicoi Counties, Tennessee, and Avery and Mitchell Counties, North Carolina.

**Dixioria pela coronata (Hoffman)**

*Deltotaria coronata* Hoffman, 1949, Proc. U. S. Nat. Mus., vol. 99, p. 380, figs. 7, 8.

TYPE: U. S. Nat. Mus. (No. 1805).

TYPE LOCALITY: Mount Rogers, Grayson County, Virginia.

RANGE: The Iron Mountain in Grayson, Smyth, and Washington Counties, Virginia.

**Genus DYNORIA Chamberlin**

*Dynoria* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 7.

GENEROTYPE: *Dynoria icana* Chamberlin, by original designation.

RANGE: Northern Georgia and adjacent South Carolina.

SPECIES: Two.

**Dynoria icana Chamberlin**

*Dynoria icana* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 7, figs. 13, 14.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Tallulah Falls, Habersham County, Georgia.

RANGE: Known from the type locality, from Saluda, South Carolina, and from Clayton, Georgia.

**Dynoria medialis Chamberlin**

*Dynoria medialis* Chamberlin, 1949, Proc. Biol. Soc. Washington, vol. 62, p. 3, figs. 5, 6.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Atlanta, De Kalb County, Georgia.

RANGE: Known only from type locality.

**Genus EPELORIA Chamberlin**

*Epeloria* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 3.

GENEROTYPE: *Epeloria talapoosa* Chamberlin, by original designation.

RANGE: Georgia.

SPECIES: Six.

**Epeloria atlanta Chamberlin**

*Epeloria atlanta* Chamberlin, 1946, Ent. News, vol. 57, p. 151, fig. 6.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Atlanta, De Kalb County, Georgia.

RANGE: Known only from type locality.

**Epeloria bifida (Wood) <sup>4</sup>**

*Polydesmus (Fontaria) bifidus* Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, p. 7; 1865, Trans. Amer. Philos. Soc., vol. 13, p. 223, fig. 52.

TYPE: Not known to exist.

TYPE LOCALITY: "Georgia and Texas."

RANGE: No definite localities yet known.

**Epeloria dela Chamberlin**

*Epeloria dela* Chamberlin, 1946, Proc. Biol. Soc. Washington, vol. 59, p. 139, figs. 1, 2.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Morgan, Morgan County, Georgia.

RANGE: Known only from type locality.

**Epeloria ficta Chamberlin**

*Epeloria ficta* Chamberlin, 1943, Proc. Biol. Soc. Washington, vol. 56, p. 37, fig. 11.

<sup>4</sup>Tentatively referred to this genus. The species may prove to be a form of *Thrinaxoria*.



TYPE: Chicago Nat. Hist. Mus.

TYPE LOCALITY: Thomasville, Thomas County, Georgia.

RANGE: Known only from type locality.

### **Epeloria leiacantha Chamberlin**

*Epeloria leiacantha* Chamberlin, 1946, Proc. Biol. Soc., Washington, vol. 59, p. 139, fig. 3.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Spring Creek, Decatur County, Georgia.

RANGE: Known elsewhere from Fort Benning, Georgia.

### **Epeloria talapoosa Chamberlin**

*Epeloria talapoosa* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 3, fig. 1.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Talapoosa, Haralson County, Georgia.

RANGE: Known only from type locality.

#### **Genus FALLORIA Hoffman**

*Falloria* Hoffman, 1948, Proc. Biol. Soc. Washington, vol. 61, p. 93.

GENEROTYPE: *Apheloria bidens* Causey, by original designation.

RANGE: Great Smoky Mountains, Tennessee.

SPECIES: One.

### **Falloria bidens (Causey)**

*Apheloria bidens* Causey, 1942, Ent. News, vol. 53, p. 169, fig. 9.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: Chimneys, Great Smoky Mountains National Park, Sevier County, Tennessee.

RANGE: Known only from type locality.

#### **Genus FONTARIA Gray**

*Fontaria* Gray, 1832, Insecta, in Griffith, The animal kingdom . . . by the Baron Cuvier, vol. 15, p. 787, pl. 135, fig. 1.—Pocock, 1909, Diplopoda, in Biol. Centr.-Amer., p. 188.—Hoffman, 1952, Ent. News, vol. 63, p. 72.

*Stelgipus* Loomis, 1944, Psyche, vol. 51, p. 173 (generotype: *S. agrestis* Loomis).

GENEROTYPE: *Iulus virginianensis* Drury, by monotypy.

RANGE: South Carolina, Georgia.

SPECIES: Two.

### **Fontaria agrestis (Loomis)**

*Stelgipus agrestis* Loomis, 1944, Psyche, vol. 51, p. 173, fig. 5.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Waynesboro, Burke County, Georgia.

RANGE: Known also from Wadmalaw Island, South Carolina. May be identical with *F. virginiensis*.

### **Fontaria virginiensis (Drury)**

*Julus virginiensis* Drury, 1770, Illustrations of natural history, vol. 1, pl. 43, fig. 8.

*Fontaria virginiensis* Gray, 1832, Insecta, in Griffith, The animal kingdom, . . . by the Baron Cuvier, vol. 15, p. 787, pl. 135, fig. 1.—Hoffman, 1952, Ent. News, vol. 63, p. 72, fig. 1.

TYPE: British Mus. (Nat. Hist.).

TYPE LOCALITY: Georgia.

RANGE: Known only from type locality.

### *Genus* HARPAPHE Cook

*Harpaphe* Cook, 1904, in Harriman Alaska Exped., vol. 8, p. 59.

*Paimokia* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 5, p. 13 (generotype: *P. modestior* Chamberlin.)

GENEROTYPE: *Polydesmus haydenianus* Wood, by original designation.

RANGE: California, Oregon, Washington.

SPECIES: Nine recognized here, in a purely provisional arrangement. The genus is badly in need of study.

### **Harpaphe clara Chamberlin**

*Harpaphe clara* Chamberlin, 1949, Proc. Biol. Soc. Washington, vol. 63 [sic, =62], p. 128, figs. 6, 7.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Steven's Creek, Santa Clara County, California.

RANGE: Recorded from Santa Clara and Santa Cruz Counties, California.

### **Harpaphe haydeniana (Wood)**

*Polydesmus (Leptodesmus) haydenianus* Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, p. 10.

*Harpaphe haydeniana* Cook, 1904, in Harriman Alaska Exped., vol. 8, p. 59, pl. 4, figs. 4a-c.

*Fontaria Simoni* Brölemann, 1896, Ann. Soc. Ent. France, vol. 65, p. 65, pl. 5, figs. 19, 20 (type locality: Washington State; type: Mus. Hist. Nat., Paris).

TYPE: Not known to exist.

TYPE LOCALITY: Oregon.

RANGE: Oregon, Washington, Vancouver Island.

### **Harpaphe inlignea Chamberlin**

*Harpaphe inlignea* Chamberlin, 1949, Proc. Biol. Soc. Washington, vol. 63 [sic, =62], p. 128, fig. 8.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Inwood, Shasta County, California.

RANGE: Known only from type locality.

**Harpaphe intaminata (Karsch)**

*Polydesmus (Oxyurus) intaminatus* Karsch, 1881, Arch. Naturg., vol. 47, p. 41.

*Harpaphe intaminata* Cook, 1904, in Harriman Alaska Exped., vol. 8, p. 60.

*Paimokia scotia* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 5, p. 13, fig. 26 (type locality: Santa Cruz County, California; type: collection of R. V. Chamberlin).

*Pachydesmus cummingsiensis* Verhoeff, 1944, Bull. Southern California Acad. Sci., vol. 43, p. 64, fig. 14 (type locality: Cummings, Mendocino County, California; type: Verhoeff collection).

TYPE: Berlin Museum.

TYPE LOCALITY: "California."

RANGE: Central California.

**Harpaphe maculifer (Chamberlin)**

*Paimokia maculifer* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 5, p. 14.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 9 miles north of Woodlake, Tulare County, California.

RANGE: Known only from type locality.

**Harpaphe modestior (Chamberlin)**

*Paimokia modestior* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 5, p. 13, fig. 25.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 4.7 miles north of Badger, Fresno County, California.

RANGE: Known only from type locality.

**Harpaphe penulta Chamberlin**

*Harpaphe penulta* Chamberlin, 1949, Proc. Biol. Soc. Washington, vol. 63 [sic, = 62], p. 128, fig. 9.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 9 miles south of Belknap Springs, Lane County, Oregon.

RANGE: Reported from four localities in Lane County, Oregon.

**Harpaphe pottera Chamberlin**

*Harpaphe pottera* Chamberlin, 1949, Proc. Biol. Soc. Washington, vol. 63 [sic, = 62], p. 129, fig. 11.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Potter Creek, Mendocino County, California.

RANGE: Mendocino and Shasta Counties, California.

**Harpaphe telodonta (Chamberlin)**

*Paimokia telodonta* Chamberlin, 1943, Bull. Univ. Utah, biol. ser., vol. 8, No. 2, p. 17, fig. 33.

*Harpaphe telodonta* Chamberlin, 1949, Proc. Biol. Soc. Washington, vol. 63 [sic, =62], p. 129, fig. 11.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Arcata, Humboldt County, California.

RANGE: Known only from type locality.

**Genus HYBAPHE Cook**

*Hybaphe* Cook, 1904, in Harriman Alaska Exped., vol. 8, p. 58.

GENEROTYPE: *Hybaphe tersa* Cook, by original designation.

RANGE: Washington; northern California.

SPECIES: Two.

**Hybaphe curtipes Cook**

*Hybaphe curtipes* Cook, 1904, in Harriman Alaska Exped., vol. 8, p. 59.

TYPE: U. S. Nat. Mus. (No. 790).

TYPE LOCALITY: Pullman, Whitman County, Washington.

RANGE: Known only from type locality.

**Hybaphe tersa Cook**

*Hybaphe tersa* Cook, 1904, in Harriman Alaska Exped., vol. 8, p. 58, pl.

4, fig. 3a—Causey, 1954, Pan-Pacific Ent., vol. 30, No. 3, p. 222, fig. 1.

TYPE: U. S. Nat. Mus. (No. 789).

TYPE LOCALITY: Almota, Whitman County, Washington.

RANGE: Recorded also from Shasta County, California.

**Genus ISAPHE Cook**

*Isaphe* Cook, 1904, in Harriman Alaska Exped., vol. 8, p. 57.

GENEROTYPE: *Isaphe convexa* Cook, by original designation.

RANGE: Northern Idaho; California?

SPECIES: Two.

**Isaphe convexa Cook**

*Isaphe convexa* Cook, 1904, in Harriman Alaska Exped., vol. 8, p. 58, pl.

4, figs. 1a, b.

TYPE: U. S. Nat. Mus. (No. 788).

TYPE LOCALITY: Kootenai County, Idaho.

RANGE: Known only from type locality.

**Isaphe simplex Chamberlin**

*Isaphe simplex* Chamberlin, 1918, Pomona Coll. Journ. Ent. and Zool., vol. 10, No. 1, p. 9.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: California.

RANGE: No definite localities known.

**Genus HOWELLARIA Hoffman**

*Howellaria* Hoffman, 1950, Journ. Elisha Mitchell Sci. Soc., vol. 66, p. 26.

GENEROTYPE: *Aporiaria deturkiana* Causey, by original designation.

RANGE: Western North Carolina and eastern Tennessee.

SPECIES: One.

**Howellaria deturkiana (Causey)**

*Aporiaria deturkiana* Causey, 1942, Ent. News, vol. 53, p. 169, fig. 8.

*Howellaria deturkiana* Hoffman, 1950, Journ. Elisha Mitchell Sci. Soc., vol. 66, p. 26, figs. 7, 8, 13.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: Highlands, Macon County, North Carolina.

RANGE: Type locality and Great Smoky Mountains in Sevier County, Tennessee, and Haywood County, North Carolina; probably also in the intervening Balsam Mountains.

**Genus MIMULORIA Chamberlin**

*Mimuloria* Chamberlin, 1928, Ent. News, vol. 39, p. 155.

*Castanaria* Causey, 1950, Chicago Acad. Sci. Nat. Hist. Misc. No. 73, p. 1 (generotype: *C. depalmai* Causey).

GENEROTYPE: *Mimuloria missouriensis* Chamberlin, by original designation.

RANGE: Ozark region; Indiana, Ohio.

SPECIES: Five.

**Mimuloria castanea (McNeill)**

*Polydesmus castaneus* McNeill, 1887, Proc. U. S. Nat. Mus., vol. 10, p. 329, pl. 12, fig. 8.

*Mimuloria castanea* Causey, 1952, Chicago Acad. Sci. Nat. Hist. Misc. No. 106, p. 8, fig. 6.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Bloomington, Monroe County, Indiana.

RANGE: Southern Indiana.

**Mimuloria davidcauseyi (Causey)**

*Nannaria davidcauseyi* Causey, 1950, Ent. News, vol. 61, p. 194, figs. 3, 4.

*Mimuloria davidcauseyi* Causey, 1952, Chicago Acad. Sci. Nat. Hist. Misc. No. 106, p. 8.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: Near Jasper, Newton County, Arkansas.

RANGE: Known only from type locality.

**Mimuloria depalmai (Causey)**

*Castanaria depalmai* Causey, 1950, Chicago Acad. Sci. Nat. Hist. Misc. No. 73, p. 1, fig. 1.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: 2 miles south of Lake Leatherwood, Carroll County, Arkansas.

RANGE: Known only from type locality.

### **Mimuloria missouriensis Chamberlin**

*Mimuloria missouriensis* Chamberlin, 1928, Ent. News, vol. 39, p. 155.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: St. Charles, Missouri.

RANGE: Known only from type locality.

### **Mimuloria ohionis (Loomis and Hoffman)**

*Fontaria castanea* (Not McNeill) Williams and Hefner, 1928, Bull. Ohio Biol. Surv. No. 18, p. 106, fig. 9b.

*Nannaria ohionis* Loomis and Hoffman, 1948, Proc. Biol. Soc. Washington, vol. 61, p. 53.

*Mimuloria ohionis* Causey, 1952, Chicago Acad. Sci. Nat Hist. Misc. No. 106, p. 8, fig. 6.

TYPE: Collection of Miami Univ.

TYPE LOCALITY: "Southern Ohio."

RANGE: Known only from type locality.

#### **Genus MONTAPHE Chamberlin**

*Montaphe* Chamberlin, 1949, Proc. Biol. Soc. Washington, vol. 63 [sic, =62], p. 127.

GENEROTYPE: *Leptodesmus elrodi* Chamberlin, by original designation.

RANGE: Montana.

SPECIES: One.

### **Montaphe elrodi (Chamberlin)**

*Leptodesmus (Chonaphe) elrodi* Chamberlin, 1913, Canadian Ent., vol. 45, p. 424, fig. 17.

*Montaphe elrodi* Chamberlin, 1949, Proc. Biol. Soc. Washington, vol. 63 [sic, =62], p. 127.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Flathead Lake, Flathead County, Montana.

RANGE: Known only from type locality and from Evans, Stevens County, Washington.

#### **Genus MOTYXIA Chamberlin**

*Motyxia* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 5, p. 15.

GENEROTYPE: *Motyxia kerna* Chamberlin, by original designation.

RANGE: Southern California.

SPECIES: Six.

**Motyxia exilis Loomis**

*Motyxia exilis* Loomis, 1953, Journ. Washington Acad. Sci., vol. 43, p. 422, fig. 20.

TYPE: U. S. Nat. Mus. (No. 2094).

TYPE LOCALITY: Woodford, near Tehachapi, Kern County, California.

RANGE: Known only from type locality.

**Motyxia expansa Loomis**

*Motyxia expansa* Loomis, 1953, Journ. Washington Acad. Sci., vol. 43, p. 422, fig. 19.

TYPE: U. S. Nat. Mus. (No. 2093).

TYPE LOCALITY: Fort Tejon, Kern County, California.

RANGE: Known only from type locality.

**Motyxia kerna Chamberlin**

*Motyxia kerna* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 5, p. 15, fig. 29.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 12 miles northeast of Hammond, Tulare County, California.

RANGE: Known from type locality only.

**Motyxia monica Chamberlin**

*Motyxia monica* Chamberlin, 1944, Proc. Biol. Soc. Washington, vol. 57, p. 113, figs. 1-3.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Meadow Canyon, Santa Monica Mountains, Los Angeles County, California.

RANGE: Known only from type locality.

**Motyxia pior Chamberlin**

*Motyxia pior* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 5, p. 16.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 12 miles east of Hammond, Tulare County, California.

RANGE: Known only from type locality.

**Motyxia tejona Chamberlin**

*Motyxia tejona* Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, vol. 99, p. 25, fig. 4.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: Fort Tejon, Kern County, California.

RANGE: Known only from type locality.

**Genus NANNARIA Chamberlin**

*Nannaria* Chamberlin, 1918, Psyche, vol. 25, p. 124.

GENEROTYPE: *Nannaria minor* Chamberlin, by original designation.

RANGE: Eastern United States, chiefly in the Appalachian region from Georgia to New York.

SPECIES: Seventeen.

**Nannaria austriicola Hoffman**

*Nannaria austriicola* Hoffman, 1950, Journ. Elisha Mitchell Sci. Soc., vol. 66, p. 26, figs. 26, 27.

TYPE: U. S. Nat. Mus. (No. 1879).

TYPE LOCALITY: Highlands, Macon County, North Carolina.

RANGE: Known only from type locality and adjacent Rabun County, Georgia.

**Nannaria cayugae Chamberlin**

*Nannaria cayugae* Chamberlin, 1949, Proc. Biol. Soc. Washington, vol. 62, p. 4, fig. 3.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Ithaca, Tompkins County, New York.

RANGE: Known only from type locality.

**Nannaria conservata Chamberlin**

*Nannaria conservata* Chamberlin, 1940, Canadian Ent., vol. 72, p. 56.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Duke Forest, Orange County, North Carolina.

RANGE: Known only from type locality.

**Nannaria equalis Chamberlin**

*Nannaria equalis* Chamberlin, 1949, Proc. Biol. Soc. Washington, vol. 62, p. 4, fig. 4.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Knoxville, Knox County, Tennessee.

RANGE: Known only from type locality.

**Nannaria ericacea Hoffman**

*Nannaria ericacea* Hoffman, 1949, Proc. U. S. Nat. Mus., vol. 99, p. 381, figs. 9, 10.

TYPE: U. S. Nat. Mus. (No. 1784).

TYPE LOCALITY: Clifton Forge, Alleghany County, Virginia.

RANGE: Known from Alleghany, Botetourt, Craig, and Montgomery Counties, Virginia.

**Nannaria fowleri Chamberlin**

*Nannaria fowleri* Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, vol. 99, p. 29, fig. 14.

TYPE: Acad. Nat. Sci. Philadelphia (No. 9951).

TYPE LOCALITY: Jennings, Garrett County, Maryland.

RANGE: Known only from type locality.



**Nannaria infesta Chamberlin**

*Nannaria infesta* Chamberlin, 1918, Psyche, vol. 25, p. 126.

TYPE: Herbarium of Cryptogamic Botany, Harvard University.

TYPE LOCALITY: Cranberry, Avery County, North Carolina.

RANGE: Known only from type locality.

**Nannaria laminata Hoffman**

*Nannaria laminata* Hoffman, 1949, Proc. U. S. Nat. Mus., vol. 99, p. 383, figs. 11, 12.

TYPE: U. S. Nat. Mus. (No. 1806).

TYPE LOCALITY: 2 miles south of Glen Lyn, Mercer County, West Virginia.

RANGE: Known only from type locality.

**Nannaria minor Chamberlin**

*Nannaria minor* Chamberlin, 1918, Psyche, vol. 25, p. 124.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Burbank, Carter County, Tennessee.

RANGE: Known only from type locality.

**Nannaria morrisoni Hoffman**

*Nannaria morrisoni* Hoffman, 1948, Journ. Washington Acad. Sci., vol. 38, p. 348, figs. 3, 4.

TYPE: U. S. Nat. Mus. (No. 1834).

TYPE LOCALITY: 2 miles northwest of Crozet, Albemarle County, Virginia.

RANGE: Blue Ridge Mountains from Jefferson County, West Virginia, south as far as Rockbridge County, Virginia.

**Nannaria pulchella (Bollman)**

*Fontaria pulchella* Bollman, 1889, Proc. U. S. Nat. Mus., vol. 11, p. 316.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Strawberry Plains, Jefferson County, Tennessee.

RANGE: Known only from type locality.

**Nannaria scutellaria Causey**

*Nannaria scutellaria* Causey, 1942, Ent. News, vol. 53, p. 168, figs. 6, 7.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: Chimneys, Great Smoky Mountains National Park, Sevier County, Tennessee.

RANGE: Known only from type locality.

**Nannaria shenandoa Hoffman**

*Nannaria shenandoa* Hoffman, 1949, Proc. Biol. Soc. Washington, vol. 62, p. 82, figs. 1-4.

TYPE: U. S. Nat. Mus. (No. 1848).

TYPE LOCALITY: Shenandoah Mountain, Rockingham County, Virginia.

RANGE: Known only from type locality.

**Nannaria simplex Hoffman**

*Nannaria simplex* Hoffman, 1949, Proc. U. S. Nat. Mus., vol. 99, p. 384, figs. 13, 14.

TYPE: U. S. Nat. Mus. (No. 1807).

TYPE LOCALITY: Clifton Forge, Alleghany County, Virginia.

RANGE: Known so far only from several localities in Alleghany County, Virginia.

**Nannaria tennesseensis (Bollman)**

*Fontaria tennesseensis* Bollman, 1889, Proc. U. S. Nat. Mus. vol. 11, p. 340.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Mossy Creek, Jefferson County, Tennessee.

RANGE: Reported only from the type locality.

**Nannaria terricola (Williams and Hefner)**

*Fontaria terricola* Williams and Hefner, 1928, Bull. Ohio Biol. Surv., No. 18, p. 106, fig. 9c.

*Nannaria terricola* Loomis and Hoffman, 1948, Proc. Biol. Soc. Washington, vol. 61, p. 53.

TYPE: U. S. Nat. Mus. (No. 2269).

TYPE LOCALITY: Probably Oxford, Ohio.

RANGE: Known also from Grant County, Indiana.

**Nannaria wilsoni Hoffman**

*Nannaria wilsoni* Hoffman, 1949, Proc. U. S. Nat. Mus., vol. 99, p. 386, figs. 15, 16.

TYPE: U. S. Nat. Mus. (No. 1808).

TYPE LOCALITY: Mountain Lake, Giles County, Virginia.

RANGE: Known so far from Giles, Montgomery, Floyd, and Patrick Counties, Virginia.

**Genus OROPHE Chamberlin**

*Orophe* Chamberlin, 1951, Chicago Acad. Sci. Nat. Hist. Misc. No. 87, p. 2.

GENEROTYPE: *Orophe cabinetus* Chamberlin, by original designation.

RANGE: Western Montana.

SPECIES: One.

**Orophe cabinetus Chamberlin**

*Orophe cabinetus* Chamberlin, 1951, Chicago Acad. Sci. Nat. Hist. Misc. No. 87, p. 4, figs. 8, 9.

TYPE: California Acad. Sci.

TYPE LOCALITY: Clark's Peak, Cabinet National Forest, Montana.

RANGE: Known only from the type locality and vicinity.

**Genus PACHYDESMUS Cook**

*Pachydesmus* Cook, 1895, Ann. New York Acad. Sci., vol. 9, p. 5.

GENEROTYPE: *Polydesmus crassicutis* Wood, by original designation.

**RANGE:** Southeastern United States, from South Carolina and Tennessee west to Louisiana.

**SPECIES:** Eight listed here, but these probably are actually geographic races of but two full species.

### **Pachydesmus clarus (Chamberlin)**

*Fontaria clara* Chamberlin, 1918, Ann. Ent. Soc. Amer., vol. 11, p. 372.

*Pachydesmus kisatchinsis* Chamberlin, 1942, Bull. Univ. Utah, biol. ser., vol. 6, No. 8, p. 4, fig. 8 (type locality: Kisatchi, Louisiana; type: collection of R. V. Chamberlin).

**TYPE:** Mus. Comp. Zool.

**TYPE LOCALITY:** Creston, Natchitoches Parish, Louisiana.

**RANGE:** Northwestern Parishes of Louisiana.

### **Pachydesmus crassicutis (Wood)**

*Polydesmus crassicutis* Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, p. 7; 1865, Trans. Amer. Philos. Soc., vol. 13, p. 224, fig. 55.

*Fontaria crassicutis* Brölemann, 1900, Mém. Soc. Zool. France, vol. 13, p. 101, pl. 6, figs. 28, 29.

**TYPE:** Location unknown.

**TYPE LOCALITY:** Mississippi, without further location.

**RANGE:** Southern Mississippi and Louisiana.

### **Pachydesmus denticulatus Chamberlin**

*Pachydesmus denticulatus* Chamberlin, 1946, Ent. News, vol. 57, p. 152, figs. 8, 9.

**TYPE:** Collection of R. V. Chamberlin.

**TYPE LOCALITY:** Atlanta, Georgia.

**RANGE:** Known only from type locality.

### **Pachydesmus duplex Chamberlin**

*Pachydesmus duplex* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 5, fig. 8.

**TYPE:** Collection of R. V. Chamberlin.

**TYPE LOCALITY:** Grenada, Grenada County, Mississippi.

**RANGE:** Known only from type locality.

### **Pachydesmus incursus Chamberlin**

*Pachydesmus incursus* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 5, fig. 7.

**TYPE:** Collection of R. V. Chamberlin.

**TYPE LOCALITY:** Taylors, Greenville County, South Carolina.

**RANGE:** Known from Greenville and Pickens Counties, in western South Carolina.

**Pachydesmus laticollis (Attems)**

*Fontaria laticollis* Attems, 1900, Denkschr. Akad. Wiss., Wien, vol. 68, p. 258, pl. 13, fig. 312; 1938, Das Tierreich, Lief. 69, p. 154, fig. 176.

TYPE: Vienna Museum.

TYPE LOCALITY: Illinois (probably in error as no other forms of this genus have been found farther north than southern Tennessee).

RANGE: No definite localities known.

**Pachydesmus louisianus (Chamberlin)**

*Fontaria louisiana* Chamberlin, 1918, Canadian Ent., vol. 50, p. 363.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Covington, St. Tammany Parish, Louisiana.

RANGE: Known only from type locality.

**Pachydesmus retrorsus Chamberlin**

*Pachydesmus retrorsus* Chamberlin, 1921, Canadian Ent., vol. 53, p. 231, pl. 9, figs. 3, 4.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Knox County, Tennessee.

RANGE: Known from several localities in eastern Tennessee and extreme Northern Alabama.

**Genus PLEUROLOMA Rafinesque**

*Pleuroloma* Rafinesque, 1820, Annals of nature, . . ., p. 8.—Hoffman and Crabill, 1953, Florida Ent., vol. 36, p. 79.

*Zinaria* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 4.—Causey, 1951, Proc. Arkansas Acad. Sci., vol. 4, p. 77 (genotype: *Zinaria cala* Chamberlin).

GENOTYPE: *Pleuroloma flavipes* Rafinesque, by monotypy.

RANGE: North America east of the Great Plains.

SPECIES: Twelve, most of which will probably be shown to be only geographic races of *P. flavipes*.

**Pleuroloma brunnea (Bollman)**

*Fontaria virginensis brunnea* Bollman, 1887, Amer. Nat., vol. 21, p. 82.

*Fontaria virginensis castanea* Bollman, 1893, U. S. Nat. Mus. Bull. 46, p. 132 (error for *F. v. brunnea*).

*Zinaria brunnea* Causey, 1951, Proc. Arkansas Acad. Sci., vol. 4, p. 80, pl. 1, figs. 1b, 3d, and pl. 2, fig. 8d.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Fort Snelling, Hennipin County, Minnesota.

RANGE: Southeastern Minnesota.

**Pleuroloma busheyi (Causey)**

*Zinaria busheyi* Causey, 1951, Proc. Arkansas Acad. Sci., vol. 4, p. 84, pl. 1, figs. 1f, 4, 7, and pl. 2, fig. 8j.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: Upland, Grant County, Indiana.

RANGE: Known only from type locality.

### **Pleurolooma butleri (McNeill)**

*Polydesmus butleri* McNeill, 1888, Bull. Brookville Soc. Nat. Hist., No. 3, p. 8.

*Fontaria virginiensis* Bollman, 1889, Proc. U. S. Nat. Mus., vol. 11, p. 6.

*Zinaria butleri* Chamberlin, 1943, Bull. Univ. Utah, biol. ser., vol. 8, No. 2, p. 16.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Brookville, Franklin County, Indiana.

RANGE: Central Indiana, exact limits unknown.

### **Pleurolooma cala (Chamberlin)**

*Zinaria cala* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 4, fig. 6.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: East of Deer Park, Lake County, Florida.

RANGE: Peninsular Florida, northeast as far as Screven County, Georgia.

### **Pleurolooma flavipes Rafinesque**

*Pleurolooma flavipes* Rafinesque, 1820, Annals of nature, . . . , p. 8.

—Hoffman and Crabill, 1953, Florida Ent., vol. 36, p. 80.

TYPE: Not known to exist.

TYPE LOCALITY: Near Catskill, Greene County, New York.

RANGE: Probably general over New England.

### **Pleurolooma iowa Chamberlin**

*Pleurolooma iowa* Chamberlin, 1942, Canadian Ent., vol. 74, p. 16.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Ames, Story County, Iowa.

RANGE: Known only from Iowa.

### **Pleurolooma mima (Chamberlin)**

*Zinaria mima* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 101, fig. 26.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Greene County, Pennsylvania.

RANGE: Known only from the type locality.

### **Pleurolooma miribilia (Causey)**

*Zinaria miribilia* Causey, 1951, Proc. Arkansas Acad. Sci., vol. 4, p. 85, pl. 1, fig. 1d, and pl. 2, fig. 8f.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: 12 miles northeast of Piggott, Clay County, Arkansas.  
 RANGE: Known only from type locality.

**Pleurolooma proxima (Causey)**

*Zinaria proxima* Causey, 1951, Proc. Arkansas Acad. Sci., vol. 4, p. 86,  
 pl. 1, figs. 1g, 2a, 3c, and pl. 2, figs. 8e, 12.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: Ann Arbor, Michigan.

RANGE: Known only from type locality.

**Pleurolooma rubrilata (Hoffman)**

*Zinaria rubrilata* Hoffman, 1949, Proc. Biol. Soc. Washington, vol. 62,  
 p. 84.

TYPE: U. S. Nat. Mus. (No. 1849).

TYPE LOCALITY: 1 mile north of Kilmarnock, Lancaster County, Virginia.

RANGE: Known only from type locality and vicinity.

**Pleurolooma urbana (Chamberlin)**

*Zinaria urbana* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5,  
 No. 3, p. 5, fig. 5.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Urbana, Champaign County, Illinois.

RANGE: Champaign and adjoining Counties Illinois.

**Pleurolooma warreni (Causey)**

*Zinaria warreni* Causey, 1951, Proc. Arkansas Acad. Sci., vol. 4, p. 83, figs.  
 1c, 3b, 6, 8c, 10.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: Carroll County, Arkansas.

RANGE: Also known from Cherokee and Latimer Counties, Oklahoma.

**Genus RHYSODESMUS Cook**

*Rhysodesmus* Cook, 1895, Ann. New York Acad. Sci., vol. 9, p. 5.—Pocock,  
 1909, Diplopoda, in Biol. Centr.-Amer., p. 188.—Attems, 1938, Das  
 Tierreich, Lief. 69, p. 138.—Chamberlin, 1943, Bull. Univ. Utah,  
 biol. ser., vol. 8, No. 3, p. 36.

*Aporiaria* Chamberlin, 1938, Proc. Biol. Soc. Washington, vol. 51, p. 207  
 (generotype: *A. texicolens* Chamberlin).

GENEROTYPE: *Polydesmus limax* Saussure, by original designation.

RANGE: Southwestern Texas and New Mexico south through México to  
 Yucatán and Guatemala.

SPECIES: Sixty-one, of which two named forms (others occur) are known  
 from our limits.

**Rhysodesmus anamesus (Chamberlin and Mulaik)**

*Aporiaria anamesa* Chamberlin and Mulaik, 1941, Journ. New York Ent.  
 Soc., vol. 49, p. 57.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Camp Mary White, near Cloudcroft, Otero County, New Mexico.

RANGE: Known only from type locality.

### **Rhysodesmus texicolens (Chamberlin)**

*Aporiaria texicolens* Chamberlin, 1938, Proc. Biol. Soc. Washington, vol. 51, p. 207.

*Rhysodesmus texicolens* Chamberlin, 1943, Proc. Biol. Soc. Washington, vol. 56, p. 143.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Edinburg, Hidalgo County, Texas.

RANGE: Known only from type locality.

### **Genus RUDILORIA Causey**

*Rudiloria* Causey, 1955, Proc. Biol. Soc. Washington, vol. 68, p. 28.

GENEROTYPE: *Rudiloria mohicana* Causey, by original designation.

RANGE: Southern Ohio.

SPECIES: One.

### **Rudiloria mohicana Causey**

*Rudiloria mohicana* [sic] Causey, 1955, Proc. Biol. Soc. Washington, vol. 68, p. 28, fig. 6.

TYPE: Amer. Mus. Nat. Hist.

TYPE LOCALITY: Mohican State Park, Ashland County, Ohio.

RANGE: Known only from type locality.

### **Genus SEMIONELLUS Chamberlin**

*Semionellus* Chamberlin, 1920, Proc. Biol. Soc. Washington, vol. 33, p. 97.

GENEROTYPE: *Polydesmus placidus* Wood, by original designation.

RANGE: Eastern United States.

SPECIES: One.

### **Semionellus placidus (Wood)**

*Polydesmus (Leptodesmus) placidus* Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, p. 9.

*Polydesmus (Leptodesmus) floridus* Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, p. 9 (type locality: Michigan; type: probably lost).

*Leptodesmus borealis* Bollman, 1893, U. S. Nat. Mus. Bull. 46, p. 183 (type locality: Winona, Minnesota; type: U. S. Nat. Mus.).

*Semionellus placidus* Chamberlin, 1920, Proc. Biol. Soc. Washington, vol. 33, p. 97; 1947, Proc. Acad. Nat. Sci. Philadelphia, vol. 99, p. 24, fig. 3.

*Chonaphe michigana* Chamberlin, 1946, Proc. Biol. Soc. Washington, vol. 59, p. 31, fig. 1 (type locality: Midland County, Michigan; type: collection of R. V. Chamberlin).

*Trichomorpha placida* Attems, 1938, Das Tierreich, Lief. 69, p. 119.

TYPE: Probably lost.

TYPE LOCALITY: Michigan, without further indication.

RANGE: Minnesota and Michigan east to New York, south in the mountains through western Maryland and Virginia to Fort Benning, Georgia. Very sporadic in occurrence.

*Genus SIGIRIA* Chamberlin

*Sigiria* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 9.

GENEROTYPE: *Sigiria scorio* Chamberlin [= *rubromarginata* Bollman] by original designation.

RANGE: Western North Carolina.

SPECIES: Three; the association of these species based upon unpublished studies involving annectant and as yet unnamed species.

***Sigiria intermedia* (Hoffman)**

*Apheloria intermedia* Hoffman, 1948, Journ. Washington Acad. Sci., vol. 38, p. 346, figs. 1, 2.

TYPE: U. S. Nat. Mus. (No. 1833).

TYPE LOCALITY: Asheville, Buncombe County, North Carolina.

RANGE: Known only from type locality.

***Sigiria nigrimontis* (Chamberlin)**

*Deltotaria nigrimontis* Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, vol. 99, p. 28, figs. 11, 12.

TYPE: Amer. Mus. Nat. Hist.

TYPE LOCALITY: Black Mountain, Buncombe County, North Carolina.

RANGE: The Black Mountains, in Buncombe and Yancey Counties, North Carolina.

***Sigiria rubromarginata* (Bollman)**

*Fontaria rubromarginata* Bollman, 1888, Proc. U. S. Nat. Mus., vol. 10, p. 622.

*Sigiria scorio* Chamberlin, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 9, figs. 26, 27 (type locality: Madison County, North Carolina; type: Collection of R. V. Chamberlin).

*Sigiria rubromarginata* Hoffman, 1950, Journ. Elisha Mitchell Sci. Soc., vol. 66, p. 25.

TYPE: U. S. Nat. Mus. (No. 320).

TYPE LOCALITY: Balsam, Jackson County, North Carolina.

RANGE: Western North Carolina, south and west of the French Broad River; Madison, Jackson, Swain, Haywood Counties.

*Genus SIGMOCHEIR* Chamberlin

*Sigmocheir* Chamberlin, 1951, Chicago Acad. Sci. Nat. Hist. Misc. No. 87, p. 4.



GENEROTYPE: *Sigmocheir calaveras* Chamberlin, by original designation.

RANGE: California.

SPECIES: One.

### **Sigmocheir calaveras Chamberlin**

*Sigmocheir calaveras* Chamberlin, 1951, Chicago Acad. Sci. Nat. Hist. Misc. No. 87, p. 5, figs. 10, 11.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Crystal-Stanislaus Cave, Calaveras County, California.

RANGE: Known only from type locality.

### **Genus SIGMORIA Chamberlin**

*Sigmoria* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 7.—Hoffman, 1950, Amer. Mus. Novitates, No. 1462, p. 1.

GENEROTYPE: *Sigmoria munda* Chamberlin, by original designation.

RANGE: Southern Appalachians from West Virginia to South Carolina; central Tennessee; eastern Texas.

SPECIES: Fifteen.

### **Sigmoria aberrans Chamberlin**

*Sigmoria aberrans* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 8, figs. 24, 25.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Linville Falls, Avery County, North Carolina.

RANGE: Northwestern North Carolina (Avery, Watauga, and Ashe Counties) and adjacent southwestern Virginia (Patrick, Washington, Grayson, and Buchanan Counties), at elevations below 3,000 feet.

### **Sigmoria brachygon Chamberlin**

*Sigmoria brachygon* Chamberlin, 1940, Ent. News, vol. 51, p. 283, fig. 2.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Glen Bald, Buncombe County, North Carolina.

RANGE: Known only from type locality.

### **Sigmoria conclusa Chamberlin**

*Sigmoria conclusa* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 8, figs. 22, 23.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Altapass, Mitchell County, North Carolina.

RANGE: Known only from type locality.

### **Sigmoria divergens Chamberlin**

*Sigmoria divergens* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 8, figs. 19–21.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Landrum, Spartanburg County, South Carolina.

RANGE: Known only from type locality.

**Sigmoria evides (Bollman)**

*Fontaria evides* Bollman, 1888, Proc. U. S. Nat. Mus., vol. 10, p. 621.

*Sigmoria evides* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 7.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Mossy Creek [Jefferson City], Jefferson County Tennessee.

RANGE: Known only from type locality.

**Sigmoria furcifera Hoffman**

*Sigmoria furcifera* Hoffman, 1949, Proc. U. S. Nat. Mus., vol. 99, p. 387, figs. 17, 18.

TYPE: U. S. Nat. Mus. (No. 1809).

TYPE LOCALITY: Near Pineville, Wyoming County, West Virginia.

RANGE: Known from several localities in extreme southern West Virginia.

**Sigmoria gracilipes Chamberlin**

*Sigmoria gracilipes* Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, vol. 99, p. 29, fig. 15.

TYPE: Acad. Nat. Sci. Philadelphia (No. 9952).

TYPE LOCALITY: Pine Mountain, Bell County, Kentucky.

RANGE: Known only from type locality.

**Sigmoria houstoni Chamberlin**

*Sigmoria houstoni* Chamberlin, 1943, Proc. Biol. Soc. Washington, vol. 56, p. 144, fig. 1.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Houston, Harris County, Texas.

RANGE: Known only from type locality.

**Sigmoria latior (Brölemann)**

*Fontaria latior* Brölemann, 1900, Mém. Soc. Zool. France, vol. 13, p. 123, pl. 6, figs. 37-42.

*Sigmoria latior* Hoffman, 1950, Amer. Mus. Novitates No. 1462, p. 5.

TYPE: Mus. Hist. Nat., Paris.

TYPE LOCALITY: North Carolina, without further locality.

RANGE: Known only from a single locality, Tryon, Polk County, North Carolina.

**Sigmoria mariona Chamberlin**

*Sigmoria mariona* Chamberlin, 1939, Bull. Univ. Utah, biol. ser., vol. 5, No. 3, p. 9, figs. 17, 18.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Marion, McDowell County, North Carolina.

RANGE: Catawba River Valley, in McDowell and Burke Counties, North Carolina.

**Sigmoria mimetica (Chamberlin)**

*Fontaria mimetica* Chamberlin, 1918, *Psyche*, vol. 25, p. 29.

*Sigmoria mimetica* Hoffman, 1950, *Amer. Mus. Novitates* No. 1462, p. 6.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Hillsboro Hills, near Nashville, Davidson County, Tennessee.

RANGE: Known only from type locality.

**Sigmoria munda Chamberlin**

*Sigmoria munda* Chamberlin, 1939, *Bull. Univ. Utah, biol. ser.*, vol. 5, No. 3, p. 8, figs. 15, 16.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Hot Springs, Madison County, North Carolina.

RANGE: Madison and Buncombe Counties, North Carolina.

**Sigmoria nigrescens Hoffman**

*Sigmoria nigrescens* Hoffman, 1950, *Journ. Elisha Mitchell Sci. Soc.*, vol. 66, p. 28, figs. 28-32.

TYPE: U. S. Nat. Mus. (No. 1880).

TYPE LOCALITY: 1 mile west of intersection of South Carolina Highway 288 with U. S. Highway 178, near Rocky Bottom, Pickens County, South Carolina.

RANGE: Known only from type locality.

**Sigmoria stenogon Chamberlin**

*Sigmoria stenogon* Chamberlin, 1942, *Bull. Univ. Utah, biol. ser.*, vol. 6, No. 8, p. 5, fig. 12.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Bennett Gap Road, Pisgah National Forest, Transylvania County, North Carolina.

RANGE: Known only from type locality.

**Sigmoria zyga Chamberlin**

*Sigmoria zyga* Chamberlin, 1949, *Proc. Biol. Soc. Washington*, vol. 63 [sic, = 62], p. 3, fig. 2.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Between Hot Springs and Paint Rock, Madison County, North Carolina.

RANGE: Known only from type locality.

**Genus THRINAXORIA Chamberlin and Hoffman**

*Thrinaxoria* Chamberlin and Hoffman, 1950, *Chicago Acad. Sci. Nat. Hist. Misc. No. 71*, p. 4.

GENEROTYPE: *Fontaria lampra* Chamberlin, by original designation.

RANGE: Gulf Coast region.

SPECIES: One.

**Thrinaxoria lampra (Chamberlin)**

*Fontaria lampra* Chamberlin, 1918, Ann. Ent. Soc. Amer., vol. 11, p. 371.

*Zinaria aberrans* Chamberlin, 1942, Bull. Univ. Utah, biol. ser., vol. 6, No. 8, p. 4, fig. 7 (type locality: Shreveport, Louisiana; type: collection of R. V. Chamberlin).

*Thrinaxoria lampra* Chamberlin and Hoffman, 1950, Chicago Acad. Sci. Nat. Hist. Misc. No. 71, p. 4.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Creston, Natchitoches Parish, Louisiana.

RANGE: Known from Creston and Shreveport, Louisiana, and from Tuscaloosa, Alabama.

**Genus TUBAPHE** Causey

*Tubaphe* Causey, 1954, Pan-Pacific Ent., vol. 30, p. 222.

GENEROTYPE: *Tubaphe levii* Causey, by original designation.

RANGE: Washington.

SPECIES: One.

**Tubaphe levii** Causey

*Tubaphe levii* Causey, 1954, Pan-Pacific Ent., vol. 30, p. 223, figs. 2-4.

TYPE: Amer. Mus. Nat. Hist.

TYPE LOCALITY: Graves Creek Camp Ground, Olympic National Forest, Jefferson County, Washington.

RANGE: Known only from type locality.

**Genus TUCORIA** Chamberlin

*Tucoria* Chamberlin, 1943, Bull. Univ. Utah, biol. ser., vol. 8, No. 2, p. 17.

GENEROTYPE: *Fontaria kentuckiana* Causey, by original designation.

RANGE: Kentucky.

SPECIES: Four.

**Tucoria calceata** Causey

*Tucoria calceata* Causey, 1955, Proc. Biol. Soc. Washington, vol. 68, p. 28, figs. 4, 5.

TYPE: Amer. Mus. Nat. Hist.

TYPE LOCALITY: Tyrone, Anderson County, Kentucky.

RANGE: Known only from type locality.

**Tucoria kentuckiana** (Causey)

*Fontaria kentuckiana* Causey, 1942, Ent. News, vol. 53, p. 167, figs. 3, 4.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: Cumberland Falls State Park, Cumberland County, Kentucky.

RANGE: Known only from type locality.

**Tucoria splendida (Causey)**

*Cleptoria splendida* Causey, 1942, Ent. News, vol. 53, p. 167, fig. 5.

*Tucoria splendida* Chamberlin, 1943, Bull. Univ. Utah, biol. ser., vol. 8, No. 2, p. 17.

*Tucoria dynama* Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, vol. 99, p. 29, fig. 16 (type locality: Pine Mountain, Bell County, Kentucky; type: Acad. Nat. Sci. Philadelphia, No. 9953).

TYPE: Acad. Nat. Sci. Philadelphia (No. 11261).

TYPE LOCALITY: Pine Mountain State Park, Bell County, Kentucky.

RANGE: Known only from type locality.

**Tucoria viridicolens Hoffman**

*Tucoria viridicolens* Hoffman, 1948, Journ. Washington Acad. Sci., vol. 38, p. 349, figs. 5, 6.

TYPE: U. S. Nat. Mus. (No. 1835).

TYPE LOCALITY: Trace Creek, Greensville, Greene County, Kentucky.

RANGE: Known only from type locality.

**Genus WAIMOKIA Chamberlin**

*Waimokia* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 5, p. 14.

GENEROTYPE: *Waimokia placera* Chamberlin, by original designation.

RANGE: California.

SPECIES: One.

**Waimokia placera Chamberlin**

*Waimokia placera* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 5, p. 14, fig. 27.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 9 miles north of Placerville, Tulare County, California.

RANGE: Known only from type locality.

**Genus XYSTOCHEIR Cook**

*Xystocheir* Cook, 1904, in Harriman Alaska Exped., vol. 8, p. 53.

*Luminodesmus* Loomis and Davenport, 1951, Journ. Washington Acad. Sci., vol. 41, p. 270 (generotype: *L. sequoiae* Loomis and Davenport).

GENEROTYPE: *Polydesmus dissectus* Wood, by original designation.

RANGE: Pacific Coast States.

SPECIES: Eight.

**Xystocheir acuta Cook**

*Xystocheir acuta* Cook, 1904, in Harriman Alaska Exped., vol. 8, p. 54.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: California, probably near Palo Alto.

RANGE: Known definitely only from Berkeley, California.

**Xystocheir cooki** Causey

*Xystocheir cooki* Causey, 1955, Proc. Biol. Soc. Washington, vol. 68, p. 91, fig. 3.

TYPE: Amer. Mus. Nat. Hist.

TYPE LOCALITY: Redwood Canyon, Sequoia National Park, Tulare County, California.

RANGE: Known only from type locality.

**Xystocheir dissecta** (Wood)

*Polydesmus dissectus* Wood, 1867, Proc. Acad. Nat. Sci. Philadelphia, p. 129.

*Xystocheir dissecta* Cook, 1904, in Harriman Alaska Exped., vol. 8, p. 55.

*Xystocheir obtusa* Cook, 1904, in Harriman Alaska Exped., vol. 8, p. 53, pl. 3, figs. 1a-c (type locality: not known; type: U. S. Nat. Mus., No. 795).

TYPE: Not known to exist.

TYPE LOCALITY: Fort Tejon, Kern County, California.

RANGE: Known only from type locality.

**Xystocheir francisca** Chamberlin

*Xystocheir francisca* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 99, fig. 20.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: San Francisco, California.

RANGE: Also known from Berkeley, California.

**Xystocheir furcifer** (Karsch)

*Polydesmus (Fontaria) furcifer* Karsch, 1881, Arch. Naturg., vol. 47, p. 39, pl. 3, fig. 12.

*Xystocheir furcifer* Cook, 1904, in Harriman Alaska Exped., vol. 8, p. 54.

TYPE: Berlin Museum.

TYPE LOCALITY: California.

RANGE: No definite localities known.

**Xystocheir milpetas** Chamberlin

*Xystocheir milpetas* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 99, figs. 21, 22.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Milpetas, Santa Clara County, California.

RANGE: Known only from type locality.

**Xystocheir sequoiae** (Loomis and Davenport)

*Lumizodesmus sequoiae* Loomis and Davenport, 1951, Journ. Washington Acad. Sci., vol. 41, p. 271, fig. 1.

TYPE: U. S. Nat. Mus.

**TYPE LOCALITY:** Camp ground above Camp Nelson at junction of Belknap Creek and south fork of the middle fork of the Tulare River, Sequoia National Forest, Tulare County, California.

**RANGE:** Known only from type locality.

### **Xystocheir tularea Chamberlin**

*Xystocheir tularea* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 101, fig. 27.

**TYPE:** Collection of R. V. Chamberlin.

**TYPE LOCALITY:** Sugar Loaf Mountain, Tulare County, California.

**RANGE:** Known only from type locality.

### Eurydesmidae of uncertain generic position

#### **Fontaria luminosa Kenyon**

*Fontaria luminosa* Kenyon, 1893, Publ. Nebraska Acad. Sci., vol. 3, p. 16.

**TYPE:** Unknown.

**TYPE LOCALITY:** Omaha, Nebraska.

Most likely to prove to be a species of *Apheloria*.

#### **Fontaria oblonga Koch**

*Fontaria oblonga* Koch, 1847, in Krit. Rev. Insect. Deutschlands, vol. 3, p. 175; 1863, Die Myriapoden, vol. 1, p. 73, pl. 32, fig. 64.

**TYPE:** Unknown.

**TYPE LOCALITY:** Pennsylvania.

This species may be, as Bollman suggested, related to *Mimuloria castanea*, but as the type was probably immature, it seems impossible to identify it with certainty.

#### **Strongylosoma eruca Wood**

*Strongylosoma eruca* Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, p. 8; 1865, Trans. Amer. Philos. Soc., vol. 13, p. 227.

*Chonaphe eruca* Cook, 1904, in Harriman Alaska Exped., vol. 8, p. 57.

**TYPE:** Probably not extant.

**TYPE LOCALITY:** Oregon.

Cook's assignation of this species to *Chonaphe* was wholly tentative, and he stated ". . . the generic position of this species cannot be determined with confidence from Wood's description of his badly preserved alcoholic specimens."

### *Family* EURYURIDAE Pocock

Euryurinae Pocock, 1909, Diplopoda, in Biol. Centr.-Amer., p. 147.

Euryuridae Chamberlin, 1918, Bull. Mus. Comp. Zool., vol. 62, p. 249.

— Hoffman, 1954, Journ. Washington Acad. Sci., vol. 44, p. 49.

## KEY TO THE NORTH AMERICAN SUBFAMILIES OF EURYURIDAE

1. Tibiotarsus of male gonopod expanded into a broad sheath, which shields or partially encloses the solenomerite, and which often has one or more small processes of its own . . . . . APHELIDESMINAE (p. 56)  
 Tibiotarsus of male gonopod very slender or completely rudimentary; no separate solenomerite present . . . . . EURYURINAE (p. 56)

*Subfamily* APHELIDESMINAE Brölemann

Aphelidesminae Brölemann, 1916, Ann. Soc. Ent. France, vol. 84, p. 584.—Hoffman, 1954, Journ. Washington Acad. Sci., vol. 44, p. 57.

*Genus* APHELIDESMUS Brölemann

*Trachelorachis* Silvestri, 1898, Bull. Mus. Zool. Anat. Comp. Univ. Torino, vol. 13, No. 324, p. 5 (preoccupied by *Trachelorachis* Agassiz 1846, an emendation of *Trachelorachys* Hope 1841) (generotype, *T. rivicola* Silvestri).

*Aphelidesmus* Brölemann, 1898, Ann. Soc. Ent. France, vol. 67, p. 266.—Attems, 1937, Das Tierreich, Lief. 68, p. 128.

*Trachelacantha* Berg, 1899, Comun. Mus. Nac. Buenos Aires, vol. 1, No. 3, p. 77 (new name for *Trachelorachis* Silvestri).

GENEROTYPE: *Aphelidesmus hermaphroditus* Brölemann, by original designation.

RANGE: Northeastern Brasil and British Guiana west to Ecuador, north through Central America and Mexico to southern Texas.

SPECIES: Twenty-nine, of which but one is known within our limits.

*Aphelidesmus tertius* (Chamberlin)

*Semionellus tertius* Chamberlin, 1948, Ent. News, vol. 59, p. 269, figs. 1, 2.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Near Kerrville, Kerr County, Texas.

RANGE: Known only from type locality.

*Subfamily* EURYURINAE Hoffman

Euryurinae Hoffman, 1954, Journ. Washington Acad. Sci., vol. 44, p. 57.

*Genus* EURYURUS Koch

*Euryurus* Koch, 1847, in Krit. Rev. Insect. Deutschlands, vol. 3, p. 591.

*Eutheatus* Attems, 1938, Das Tierreich, Lief. 69, p. 294 (new name for *Euryurus* Koch, thought by Attems to be preoccupied by the nomen nudum *Euryurus* Rafinesque, 1815).

GENEROTYPE: *Polydesmus erythropygus* Brandt, by subsequent designation of Silvestri, 1896.

RANGE: Eastern United States.

SPECIES: Three, which are probably only geographic races of a single polytypic species.



**Euryurus australis Bollman**

*Euryurus erythropygus australis* Bollman, 1839, Proc. U. S. Nat. Mus., vol. 11, p. 346.

*Euryurus falcipes* Loomis, 1943, Bull. Mus. Comp. Zool., vol. 92, No. 7, p. 403, fig. 15 (type locality: Torreya State Park, Liberty County, Florida; type: Mus. Comp. Zool.).

*Euryurus australis* Hoffman, 1951, Proc. U. S. Nat. Mus., vol. 102, p. 238.  
TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Indian Springs, Bibb County, Georgia.

RANGE: Western Florida north to extreme western South Carolina and central Kentucky.

**Euryurus erythropygus (Brandt)**

*Polydesmus erythropygus* Brandt, 1841, Recueil, p. 134.

*Euryurus maculatus* Koch, 1847, in Krit. Rev. Insect. Deutschlands, vol. 3, p. 138 (type locality and present location of type both unknown).

*Polydesmus carolinensis* Saussure, 1859, Linnaea Ent., vol. 13, p. 325 (type locality: "Carolina"; type: Geneva Museum).

*Polydesmus (Euryurus) erythropygus* Saussure and Humbert, 1872, Études sur les myriapodes, in Miss. Sci. Mexique, Zool., pt. 6, sect. 2, p. 26.

TYPE: Formerly in the Berlin Museum; present location unknown.

TYPE LOCALITY: Georgetown, Georgetown County, South Carolina.

RANGE: North and South Carolina, eastern Tennessee. Exact limits of range not known.

**Euryurus leachii (Gray)**

*Polydesmus leachii* Gray, 1832, in Griffith, The animal kingdom, . . . by the Baron Cuvier, vol. 15, plate 135, fig. 3.

*Euryurus aculeatus* Causey, 1952, Chicago Acad. Sci. Nat. Hist. Misc. No. 106, p. 9, fig. 8 (type locality: Giant City State Park, Madison County, Illinois; type: Amer. Mus. Nat. Hist.).

TYPE: British Mus. (Nat. Hist.).

TYPE LOCALITY: Unknown.

RANGE: Illinois and southern Wisconsin, east to Ohio, western Pennsylvania, and northern Kentucky.

**Genus AUTURUS Chamberlin**

*Auturus* Chamberlin, 1942, Bull. Univ. Utah, biol. ser., vol. 6, No. 8, p. 7.

GENEROTYPE: *Auturus phanus* Chamberlin, by original designation.

RANGE: Mississippi Valley from Minnesota to Louisiana, east to Georgia.

SPECIES: Ten.

**Auturus becki Chamberlin**

*Auturus becki* Chamberlin, 1951, Great Basin Nat., vol. 11, No. 1-2, p. 29, fig. 2.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Suwanee River, Florida.

RANGE: Known only from type locality.

**Auturus dixianus Chamberlin**

*Auturus dixianus* Chamberlin, 1942, Bull. Univ. Utah, biol. ser., vol. 6, No. 8, p. 8.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Covington, St. Tammany Parish, Louisiana.

RANGE: Known only from type locality.

**Auturus evides (Bollman)**

*Paradesmus evides* Bollman, 1887, Ent. Amer., vol. 2, p. 229.

*Auturus evides* Chamberlin, 1942, Bull. Univ. Utah, biol. ser., vol. 6, No. 8, p. 7.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Winona, Winona County, Minnesota.

RANGE: Minnesota, eastern Iowa, northern Illinois.

**Auturus florus Causey**

*Auturus florus* Causey, 1950, Ent. News, vol. 61, p. 37, figs. 1, 2.

TYPE: Acad. Nat. Sci. Philadelphia (No. 11264).

TYPE LOCALITY: Hemmed-in-Hollow, Compton, Newton County, Arkansas.

RANGE: Known only from type locality.

**Auturus georgianus Chamberlin**

*Auturus georgianus* Chamberlin, 1942, Bull. Univ. Utah, biol. ser., vol. 6, No. 8, p. 8, fig. 22.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 13 miles south of Savannah, Chatham County, Georgia.

RANGE: Known only from type locality.

**Auturus louisianus (Chamberlin)**

*Euryurus louisiana* Chamberlin, 1918, Ann. Ent. Soc. Amer., vol. 11, p. 371.

*Auturus louisianus* Chamberlin, 1942, Bull. Univ. Utah, biol. ser., vol. 6, No. 8, p. 7.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Creston, Natchitoches Parish, Louisiana.

RANGE: Known only from type locality.

**Auturus mcclurkini Causey**

*Auturus mcclurkini* Causey, 1955, Proc. Biol. Soc. Washington, vol. 68, p. 23, fig. 1.

TYPE: Amer. Mus. Nat. Hist.

TYPE LOCALITY: Jackson, Madison County [Stated to be Jackson County in the original description], Tennessee.

RANGE: Known only from type locality.

#### **Auturus mimetes Chamberlin**

*Auturus mimetes* Chamberlin, 1942, Bull. Univ. Utah, biol. ser., vol. 6, No. 8, p. 8, fig. 21.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Near Selma, Jefferson County, Missouri.

RANGE: Ozark region of Missouri, known from the type locality and from Chadwick, Christian County.

#### **Auturus phanus Chamberlin**

*Auturus phanus* Chamberlin, 1942, Bull. Univ. Utah, biol. ser., vol. 6, No. 8, p. 7, fig. 20.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Greensburg, St. Helena Parish, Louisiana.

RANGE: Known only from type locality.

#### **Auturus scotius Chamberlin**

*Auturus scotius* Chamberlin, 1942, Bull. Univ. Utah, biol. ser., vol. 6, No. 8, p. 9, fig. 23.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Darlington, St. Helena Parish, Louisiana.

RANGE: Known only from type locality.

#### **Genus SINGULIURUS Causey**

*Singuliurus* Causey, 1955, Proc. Biol. Soc. Washington, vol. 68, p. 23.

GENEROTYPE: *Singuliurus mississippiensis* Causey, by original designation.

RANGE: Mississippi.

SPECIES: One.

#### **Singuliurus mississippiensis Causey**

*Singuliurus mississippiensis* Causey, 1955, Proc. Biol. Soc. Washington, vol. 68, p. 23, fig. 2.

TYPE: Amer. Mus. Nat. Hist.

TYPE LOCALITY: Van Cleave, Jackson County, Mississippi.

RANGE: Known only from type locality.

#### **Family NEARCTODESMIDAE Chamberlin and Hoffman**

Nearctodesmidae Chamberlin and Hoffman, 1950, Chicago Acad. Sci. Nat. Hist. Misc. No. 71, p. 1.

**Genus ERGODESMUS Chamberlin**

*Ergodesmus* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, No. 3, p. 94.

GENEROTYPE: *Ergodesmus compactus* Chamberlin, by original designation.

RANGE: Washington.

SPECIES: One.

***Ergodesmus compactus* Chamberlin**

*Ergodesmus compactus* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, No. 3, p. 94, fig. 1.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Between Goldendale and Mayfield, Klickitat County, Washington.

RANGE: Known also from Richland and Orondo, Washington.

**Genus KEPOLYDESMUS Chamberlin**

*Kepolydesmus* Chamberlin, 1910, Ann. Ent. Soc. America, vol. 3, No. 4, p. 246; 1949, Journ. Washington Acad. Sci., vol. 39, No. 3, p. 94.

GENEROTYPE: *Kepolydesmus anderisus* Chamberlin.

RANGE: Northwestern United States.

SPECIES: Four.

***Kepolydesmus anderisus* Chamberlin**

*Kepolydesmus anderisus* Chamberlin, 1910, Ann. Ent. Soc. Amer., vol. 3, No. 4, p. 246, pl. 36, figs. 6-9, pl. 37, figs. 1-4.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Kendrick, Latah County, Idaho.

RANGE: Also recorded from Roselake, Fourth of July Canyon, Kootenai County, Idaho.

***Kepolydesmus hesperus* Chamberlin**

*Kepolydesmus hesperus* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, No. 3, p. 94, fig. 3.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Ashland, Jackson County, Oregon.

RANGE: Known from Jackson and Douglas Counties, Oregon.

***Kepolydesmus mimus* Chamberlin**

*Kepolydesmus mimus* Chamberlin, 1947, Proc. Biol. Soc. Washington, vol. 60, p. 10, fig. 3.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Martha Creek, Carson, Skamania County, Washington.

RANGE: Known only from type locality.

**Kepolydesmus pungo Chamberlin**

*Kepolydesmus pungo* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 95, fig. 4.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Horsetail Falls, Oregon.

RANGE: Known also from Latourell Falls, Oregon.

**Genus NEARCTODESMUS Silvestri**

*Nearctodesmus* Silvestri, 1910, Zool. Anz., vol. 35, p. 364.—Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 96.

GENEROTYPE: *Polydesmus cerasinus* Wood, by original designation.

RANGE: Northwestern North America.

SPECIES: Thirteen.

**Nearctodesmus amissus Chamberlin**

*Nearctodesmus amissus* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 96, fig. 5.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Oregon, without further locality.

RANGE: Oregon and Vancouver, British Columbia.

**Nearctodesmus boydi Chamberlin**

*Nearctodesmus boydi* Chamberlin, 1951, Chicago Acad. Sci. Nat. Hist. Misc. No. 87, p. 2, figs. 6, 7.

TYPE: Prov. Mus. British Columbia.

TYPE LOCALITY: Lake Cowichan, Vancouver Island, British Columbia.

RANGE: Known only from type locality.

**Nearctodesmus brunnior Chamberlin**

*Nearctodesmus brunnior* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 96, fig. 6.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 9 miles north of Crescent, Del Norte County, California.

RANGE: Known only from type locality.

**Nearctodesmus campicolens Chamberlin**

*Nearctodesmus campicolens* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 96, fig. 7.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Red Wood Fort, Route 101, Prairie Creek Park, Mendocino County, California.

RANGE: Known only from type locality.

**Nearctodesmus carli Chamberlin**

*Nearctodesmus carli* Chamberlin, 1951, Chicago Acad. Sci. Nat. Hist. Misc. No. 87, p. 2, figs. 4, 5.

TYPE: Prov. Mus. British Columbia.

TYPE LOCALITY: Scott Island, British Columbia.

RANGE: Known from Santine, Cox, Lanz, Triangle, and Scott Islands, British Columbia.

**Nearctodesmus cerasinus (Wood)**

*Polydesmus cerasinus* Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, p. 6.

*Nearctodesmus cerasinus* Silvestri, 1910, Zool. Anz., vol. 35, p. 364.

TYPE: Lost.

TYPE LOCALITY: Oregon.

RANGE: Northern California to British Columbia.

**Nearctodesmus cochlearius Causey**

*Nearctodesmus cochlearius* Causey, 1954, Ann. Ent. Soc. Amer., vol. 47, p. 82, figs. 4-6.

TYPE: Amer. Mus. Nat. Hist.

TYPE LOCALITY: Seattle, King County, Washington.

RANGE: Known only from type locality.

**Nearctodesmus insulanus (Chamberlin)**

*Kepolydesmus insulanus* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 4, p. 25, fig. 47.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Vancouver Island, British Columbia.

RANGE: Known only from type locality.

**Nearctodesmus malkini Chamberlin**

*Nearctodesmus malkini* Chamberlin, 1951, Chicago Acad. Sci. Nat. Hist. Misc. No. 87, p. 1, 2.

TYPE: California Acad. Sci.

TYPE LOCALITY: Brookings, Curry County, Oregon.

RANGE: Known only from type locality.

**Nearctodesmus olympus Causey**

*Nearctodesmus olympus* Causey, 1954, Ann. Ent. Soc. Amer., vol. 47, p. 84, figs. 7, 8.

TYPE: Amer. Mus. Nat. Hist.

TYPE LOCALITY: Olympic Hot Springs, Clallam County, Washington.

RANGE: Known only from type locality.

**Nearctodesmus pseustes Chamberlin**

*Nearctodesmus pseustes* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 96, fig. 8.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Boyer (location unknown), Oregon.

RANGE: Known also from Comstock, Oregon.

**Nearctodesmus renigens Chamberlin**

*Nearctodesmus renigens* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 97, fig. 9.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Oregon; probably near Corvallis.

RANGE: Known only from type locality.

**Nearctodesmus salix Chamberlin**

*Nearctodesmus salix* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 97, fig. 10.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 12 miles west of Willow Creek, Lassen County, California.

RANGE: Known only from type locality.

**Family POLYDESMIDAE Leach**

Polydesmidae (in part) Leach, 1815, Trans. Linn. Soc. London, vol. 11, p. 381.—Meinert, 1868, Naturh. Tidsskr., ser. 3, vol. 5, p. 23.—Wood, 1865, Trans. Amer. Philos. Soc., vol. 13, p. 212.

Polydesminae Bollman, 1893, U. S. Nat. Mus. Bull. 46, p. 159.

Polydesmidae Porath, 1872, Öfvers. Vet.-Akad. Förh., No. 5, p. 9.—Cook, 1895, Ann. New York Acad. Sci., vol. 9, p. 5.—Attems, 1940, Das Tierreich, Lief. 70, p. 1.

**Genus ANTRIADESMUS Loomis**

*Antriadesmus* Loomis, 1943, Bull. Mus. Comp. Zool., vol. 92, p. 408.

GENEROTYPE: *Antriadesmus fragilis* Loomis, by original designation.

RANGE: Central Kentucky.

SPECIES: One.

**Antriadesmus fragilis Loomis**

*Antriadesmus fragilis* Loomis, 1943, Bull. Mus. Comp. Zool., vol. 92, p. 409, fig. 18a-b and pl. 1, fig. 6.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: White's Cave, Edmondson County, Kentucky.

RANGE: Known only from type locality.

**Genus BRACHYDESMUS Heller**

*Brachydesmus* Heller, 1858, Sitz.-ber. Akad. Wiss., Wien, vol. 26, p. 318.—Attems, 1940, Das Tierreich, Lief. 70, p. 86.

GENEROTYPE: *Brachydesmus subterraneus* Heller, by monotypy.

RANGE: Palearctic and Nearctic areas.

SPECIES: About 105 species and subspecies have been described from the Old World, of which at least one, *B. superus* Latzel, has been introduced into this country, where it has become widely distributed in the eastern

and middle-western States. From the western States four species, as listed below, have been referred to the genus. For these species, a closer comparative study seems indicated.

**Brachydesmus californicus Chamberlin**

*Brachydesmus californicus* Chamberlin, 1918, Pomona Coll. Journ. Ent. Zool., vol. 10, No. 1, p. 9.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Stanford, Santa Clara County, California.

RANGE: Known only from the type locality.

**Brachydesmus cavicola (Packard)**

*Polydesmus cavicola* Packard, 1877, Bull. U. S. Geol. Geogr. Surv. Terr. (Hayden), vol. 3, p. 161, figs. 6, 6a-d.

TYPE: Not known to exist.

TYPE LOCALITY: Clinton's Cave, Tooele County, Utah.

RANGE: Known only from type locality.

**Brachydesmus hastingsus Chamberlin**

*Brachydesmus hastingsus* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 4, p. 27, figs. 18, 19.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Hastings Reservation, Monterey County, California.

RANGE: Known only from the type locality.

**Brachydesmus superus Latzel**

*Brachydesmus superus* Latzel, 1884, Myr. Öst.-Ung. Monarch., vol. 2, p. 130, pl. 6, figs. 68, 69.—Jawłowski, 1939, Frag. Faun. Mus. Zool. Polonici, vol. 4, p. 150.—Attems, 1940, Das Tierreich, Lief. 70, p. 120.

*Brachydesmus gladiolus* Williams and Hefner, 1928, Bull. Ohio Biol. Surv., No. 18, p. 113, fig. 12c (type locality: Allen County, Ohio: location of types unknown).

*Brachydesmus pallidus* Loomis, 1939, Bull. Mus. Comp. Zool., vol. 86, p. 191, fig. 14 (type locality: Charleston, West Virginia; type: Mus. Comp. Zool.).

*Brachydesmus dux* Chamberlin, 1940, Ent. News, vol. 51, p. 284, fig. 4 (type locality: Durham, North Carolina; type: collection of R. V. Chamberlin).

TYPE: Present location unknown.

TYPE LOCALITY: Prater, near Wien, Austria.

RANGE: General over eastern Europe, widely distributed elsewhere by commerce. In the United States it is often abundant in gardens and cultivated areas, having been collected in North Carolina, Virginia, Pennsylvania, West Virginia, Ohio, and Michigan.



**Brachydesmus yosemitensis** Causey

*Brachydesmus (Brachydesmus) yosemitensis* Causey, 1954, Pan-Pacific Ent., vol. 30, No. 3, p. 224, fig. 5.

TYPE: Amer. Mus. Nat. Hist.

TYPE LOCALITY: Vernal Falls, Yosemite National Park, California.

RANGE: Known only from the type locality.

**Genus CHAETASPIS** Bollman

*Chaetaspis* Bollman, 1887, Ent. Amer., vol. 3, p. 45.

GENEROTYPE: *Chaetaspis albus* Bollman, by monotypy.

RANGE: Central eastern United States.

SPECIES: Two.

**Chaetaspis albus** Bollman

*Chaetaspis albus* Bollman, 1887, Ent. Amer., vol. 3, p. 46.

TYPE: Collection of Indiana Univ.

TYPE LOCALITY: Bloomington, Monroe County, Indiana.

RANGE: Recorded from Kentucky and Indiana.

**Chaetaspis ohionis** Causey

*Chaetaspis albus* (not Bollman, 1887) Williams and Hefner, 1928, Bull. Ohio Biol. Surv., No. 18, p. 110, fig. 12a.

*Chaetaspis ohionis* Causey, 1950, Ent. News, vol. 61, No. 7, p. 197.

TYPE: Collection of Miami (Ohio) Univ.

TYPE LOCALITY: Washington and Athens Counties, Ohio.

RANGE: Known only from type locality.

**Genus DIXIDESMUS** Chamberlin

*Dixidesmus* Chamberlin, 1943, Bull. Univ. Utah, biol. ser., vol. 8, No. 2, p. 18.

GENEROTYPE: *Dixidesmus tallulanus* Chamberlin, by original designation.

RANGE: Eastern United States, dominantly in the Appalachian region.

SPECIES: Eleven.

**Dixidesmus branneri** (Bollman)

*Polydesmus branneri* Bollman, 1887, Proc. U. S. Nat. Mus., vol. 11, p. 620.—Loomis, 1943, Bull. Mus. Comp. Zool., vol. 92, No. 7, p. 405, fig. 16, and pl. 1, fig. 4.

*Polydesmus conlatus* Chamberlin, 1943, Proc. Biol. Soc. Washington, vol. 56, p. 36, fig. 5 (type locality: Gatlinburg, Tennessee; type: collection of R. V. Chamberlin).

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Mossy Creek [Jefferson City], Jefferson County, Tennessee.

RANGE: From the Great Smokies north to eastern Kentucky and central-western Virginia.

**Dixidesmus catskillus Chamberlin**

*Dixidesmus catskillus* Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, vol. 99, p. 24, fig. 2.

TYPE: Acad. Nat. Sci. Philadelphia (No. 9943).

TYPE LOCALITY: Catskill, Greene County, New York.

RANGE: Known only from type locality.

**Dixidesmus christianus Chamberlin**

*Dixidesmus christianus* Chamberlin, 1946, Proc. Biol. Soc. Washington, vol. 59, p. 142, fig. 4.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Pass Christian, Harrison County, Mississippi.

RANGE: Known only from type locality.

**Dixidesmus echinogon (Chamberlin)**

*Polydesmus echinogon* Chamberlin, 1942, Bull. Univ. Utah, biol. ser., vol. 6, No. 8, p. 10, fig. 33.

*Dixidesmus echinogon* Chamberlin, 1943, Bull. Univ. Utah, biol. ser., vol. 8, No. 2, p. 18.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Shawanese (Harvey's Lake), Luzerne County, Pennsylvania.

RANGE: Thus far recorded only from type locality and Elmira, Chemung County, New York.

**Dixidesmus erasus (Loomis)**

*Polydesmus erasus* Loomis, 1943, Bull. Mus. Comp. Zool., vol. 92, No. 7, p. 406, fig. 17, and pl. 5, fig. 4.

*Dixidesmus humilidens* Chamberlin, 1943, Bull. Univ. Utah, biol. ser., vol. 8, No. 2, p. 20, fig. 36 (type locality: Gainesville, Hall County, Georgia; type: collection of R. V. Chamberlin).

*Dixidesmus erasus* Causey, 1952, Chicago Acad. Sci. Nat. Hist. Misc. No. 106, p. 7.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Huntsville, Madison County, Alabama.

RANGE: Northern Georgia and Alabama, north through Tennessee and Kentucky to Pope County, Illinois.

**Dixidesmus gausodicrorhachus Johnson**

*Dixidesmus gausodicrorhachus* Johnson, 1954, Chicago Acad. Sci. Nat. Hist. Misc. No. 137, p. 1, fig. 1a-d.

TYPE: U. S. Nat. Mus. (No. 2117).

TYPE LOCALITY: West side of Garnet Lake, Mackinaw County, Michigan.

RANGE: Recorded from 19 Counties in northern Michigan.

**Dixidesmus nitidus (Bollman)**

*Polydesmus nitidus* Bollman, 1887, Ent. Amer., vol. 3, p. 45.

TYPE: Collection of Indiana Univ.

TYPE LOCALITY: Pensacola, Escambia County, Florida.

RANGE: Known only from the type locality.

**Dixidesmus penicillus Chamberlin**

*Dixidesmus penicillus* Chamberlin, 1943, Bull. Univ. Utah, biol. ser., vol. 8, No. 2, p. 19, fig. 35.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Clarksville, Habersham County, Georgia.

RANGE: Known only from Clarksville and Neel Gap, in northern Georgia.

**Dixidesmus phanus Chamberlin**

*Dixidesmus phanus* Chamberlin, 1951, Great Basin Nat., vol. 11, No. 1-2, p. 27, fig. 1.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Suwannee River, Florida.

RANGE: Known only from type locality.

**Dixidesmus sylvicolens Chamberlin**

*Dixidesmus sylvicolens* Chamberlin, 1943, Bull. Univ. Utah, biol. ser., vol. 8, No. 2, p. 20, fig. 33.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 7 miles north of Sylvania, Screven County, Georgia.

RANGE: Known only from type locality.

**Dixidesmus tallulanus Chamberlin**

*Dixidesmus tallulanus* Chamberlin, 1943, Bull. Univ. Utah, biol. ser., vol. 8, No. 2, p. 19, fig. 34.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Between Clayton and Tallulah Falls, Rabun County, Georgia.

RANGE: Known also from western North Carolina (Macon County) and the Great Smokies in Tennessee (Sevier County).

**Genus POLYDESMUS Latreille**

*Polydesmus* Latreille, 1802, Histoire naturelle . . . des crustacés et des insectes, vol. 3, p. 44.—Attems, 1940, Das Tierreich, Lief. 70, p. 3.

GENEROTYPE: *Julus complanatus* Linnaeus, by monotypy.

RANGE: Palearctic region. The American representatives were introduced and have become established in many places throughout the country.

SPECIES: About 145 species and subspecies have been described, of which five have been found in North America.

**Polydesmus angustus Latzel**

*Polydesmus complanatus angustus* Latzel, 1884, Bull. Soc. Sci. Nat. Rouen, ann. 19, ser. 2, pp. 262, 267.

*Polydesmus verhoeffi* var. *angustatus* Attems, 1940, Das Tierreich, Lief. 70, p. 12.

TYPE: Vienna Museum.

TYPE LOCALITY: Normandie, France.

RANGE: Generally distributed over western Europe. In America it has been found in Louisiana and also at Mexico City.

**Polydesmus complanatus (Linnaeus)**

*Julus complanatus* Linnaeus, 1761, Fauna Svecica, ed. 2, p. 502.

*Polydesmus complanatus* Latreille, 1802, Histoire naturelle . . . des crustacés et des insectes, vol. 3, p. 44.—Attems, 1940, Das Tierreich, Lief. 70, p. 6, fig. 2.—Chamberlin, 1951, Great Basin Nat., vol. 11, p. 27.

TYPE: Not known to exist.

TYPE LOCALITY: Europe.

RANGE: Europe and eastern North America (e. g., New Jersey), where introduced and established.

**Polydesmus denticulatus Koch**

*Polydesmus denticulatus*+*scabratus* Koch, 1847, in Krit. Rev. Insect. Deutschlands, vol. 3, pp. 135, 136.—Latzel, 1884, Myr. Öst.-Ung. Monarch., vol. 2, p. 141, pl. 5, figs. 59, 60.—Palmén, 1952, Ann. Zool. Soc. 'Vanamo', vol. 15, No. 1, p. 14.

TYPE: Location unknown.

TYPE LOCALITY: Germany.

RANGE: Europe, from France to Sweden and Norway. Known in North America from Newfoundland.

**Polydesmus inconstans Latzel**

*Polydesmus inconstans* Latzel, 1884, Bull. Soc. Sci. Nat. Rouen, ser. 2, ann. 19, p. 269, pl. 1, fig. 3.—Palmén, 1952, Ann. Zool. Soc. 'Vanamo', vol. 15, p. 13.

*Polydesmus distractus* Latzel, 1888, Bull. Soc. Hist. Nat. Toulouse, Proc. Verb., p. lxxxv.

*Polydesmus coriaceus* var. *borealis* Porat, 1889, Ent. Tidskr., vol. 10, p. 71.

*Polydesmus rhenanus* Verhoeff, 1891, Berliner Ent. Zeitschr., vol. 36, p. 121, pl. 5, fig. 1.

*Polydesmus coriaceus* (not Porat) Schubart, 1934, in Dahl, Die Tierwelt Deutschlands, Teil 28, p. 165, fig. 264.—Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, vol. 99, p. 22.

*Polydesmus testi* Bollman, 1888, Proc. U. S. Nat. Mus., vol. 10, p. 617 (type locality: Indianapolis, Indiana; type: U. S. Nat. Mus.).

*Polydesmus socarnius* Chamberlin, 1910, Ann. Ent. Soc. Amer., vol. 3, p. 252 (type locality: Salt Lake City, Utah; location of type unknown).

*Polydesmus hortus* Williams and Hefner, 1928, Bull. Ohio Biol. Surv., No. 18, p. 113, fig. 13d (type locality: Athens County, Ohio; no types designated).

*Polydesmus pronomeutes* Chamberlin, 1942, Bull. Univ. Utah, biol. ser., vol. 6, No. 8, p. 9, fig. 29 (type locality: Fort Collins, Colorado; type: collection of R. V. Chamberlin).

*Polydesmus wheeleri* Causey, 1950, Ent. News, vol. 61, p. 197, figs. 6, 7 (type locality: Grand Fork, North Dakota; type: Acad. Nat. Sci. Philadelphia).

TYPE: Vienna Museum.

TYPE LOCALITY: Europe.

RANGE: Widespread in Europe; introduced into North America, where it occurs across the continent in cultivated areas from Newfoundland and the New England States as far west as Oregon and British Columbia.

### ***Polydesmus* (*Hormobrachium*) *racovitzai* Brölemann**

*Polydesmus racovitzai* Brölemann, 1910, Arch Zool. Expér. Gén., ser. 5, vol. 5, p. 352, figs. 27-33.

*Polydesmus* (*Hormobrachium*) *racovitzai* Attems, 1940, Das Tierreich, Lief. 70, p. 48, fig. 63.—Causey, 1954, Ann. Ent. Soc. Amer., vol. 47, p. 82.

TYPE: Probably Paris Museum.

TYPE LOCALITY: Pyrenees Mountains at Banyuls-sur-Mer, France.

RANGE: Southern Europe. Introduced into North America at Seattle, Washington.

### **Genus PSEUDOPOLYDESMUS Attems**

*Pseudopolydesmus* Attems, 1899, Denkschr. Akad. Wiss., Wien, vol. 67, p. 270; 1940, Das Tierreich, Lief. 70, p. 139.—Chamberlin, 1943, Bull. Univ. Utah, biol. ser., vol. 8, No. 2, p. 17.

GENEROTYPE: *Polydesmus canadensis* Newport, by monotypy.

RANGE: North America east of the Rocky Mountains.

SPECIES: Eleven.

### ***Pseudopolydesmus caddo* Chamberlin**

*Pseudopolydesmus caddo* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 97, fig. 11.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 5 miles northwest of Shreveport, Caddo Parish, Louisiana.

RANGE: Known also from Reelfoot Lake, Obion County, Tennessee.

**Pseudopolydesmus euthetus (Chamberlin)**

*Polydesmus euthetus* Chamberlin, 1942, Bull. Univ. Utah, biol. ser., vol. 6, No. 8, p. 11, fig. 36.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Buder Park, 1 mile southwest of Valley Park, St. Louis County, Missouri.

RANGE: Known only from type locality.

**Pseudopolydesmus minor (Bollman)**

*Polydesmus minor* Bollman, 1888, Ent. Amer., vol. 4, p. 2.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Little Rock, Pulaski County, Arkansas.

RANGE: Arkansas, western Tennessee, and southern Illinois.

**Pseudopolydesmus natchitoches (Chamberlin)**

*Polydesmus natchitoches* Chamberlin, 1942, Bull. Univ. Utah, biol. ser., vol. 6, No. 8, p. 10, figs. 34, 35.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 2 miles south of Saline, Natchitoches Parish, Louisiana.

RANGE: Central Louisiana.

**Pseudopolydesmus neoterus (Chamberlin)**

*Polydesmus neoterus* Chamberlin, 1942, Bull. Univ. Utah, biol. ser., vol. 6, No. 8, p. 10, fig. 30.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: New Orleans, Louisiana.

RANGE: Known only from type locality.

**Pseudopolydesmus paludicolus Hoffman**

*Pseudopolydesmus paludicolus* Hoffman, 1950, Virginia Journ. Sci., new ser., vol. 1, p. 222, fig. 4.

TYPE: U. S. Nat. Mus. (No. 1871).

TYPE LOCALITY: Sand Bridge, 5 miles south of Virginia Beach, Princess Anne County, Virginia.

RANGE: Known only from type locality.

**Pseudopolydesmus paroicus (Chamberlin)**

*Polydesmus paroicus* Chamberlin, 1942, Bull. Univ. Utah, biol. ser., vol. 6, No. 8, p. 11, figs. 37, 38.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 1.5 miles north of Clay, Jackson Parish, Louisiana.

RANGE: Known only from type locality.

**Pseudopolydesmus pinetorum (Bollman)**

*Polydesmus pinetorum* Bollman, 1888, Ent. Amer., vol. 4, p. 3.

*Polydesmus americanus* Carl, 1902, Rev. Suisse Zool., vol. 10, p. 611, fig. 37 (type locality: Texas; type: Geneva Museum).

*Polydesmus hubrichti* Chamberlin, 1943, Ent. News, vol. 54, p. 15, figs. 1, 2 (type locality: St. Louis, Missouri; type: collection of R. V. Chamberlin).

*Polydesmus modocus* Chamberlin, 1943, Proc. Biol. Soc. Washington, vol. 56, p. 36, fig. 6 (type locality: between Modoc and Roots, Randolph County, Illinois; type: Chicago Nat. Hist. Mus.).

*Pseudopolydesmus pinetorum* Causey, 1952, Chicago Acad. Sci. Nat. Hist. Misc. No. 106, p. 6 (synonymy, distribution).

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Little Rock, Pulaski County, Arkansas.

RANGE: From eastern Texas and Louisiana north through Oklahoma and Arkansas to central Missouri and Illinois. The terminal populations are probably subspecifically distinct.

### ***Pseudopolydesmus planicolens* (Chamberlin)**

*Polydesmus planicolens* Chamberlin, 1942, Canadian Ent., vol. 74, p. 16, fig. 2.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Ames, Story County, Iowa.

RANGE: Known only from type locality.

### ***Pseudopolydesmus scopus* (Chamberlin)**

*Polydesmus scopus* Chamberlin, 1942, Canadian Ent., vol. 74, p. 16, fig. 1.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 6 miles south of Boone, Boone County, Iowa.

RANGE: Known only from type locality.

### ***Pseudopolydesmus serratus* (Say)**

*Polydesmus serratus* Say, 1821, Journ. Acad. Nat. Sci. Philadelphia, vol. 2, p. 106.

*Polydesmus canadensis* Newport, 1844, Ann. Mag. Nat. Hist., vol. 13, p. 265.—Wood, 1865, Trans. Amer. Philos. Soc., vol. 13, p. 216, fig. 43.—Attems, 1940, Das Tierreich, Lief. 70, p. 140. (type locality: Albany River, Hudson's Bay, Canada; type: British Museum).

*Polydesmus pensylvanicus* Koch, 1847, in Krit. Rev. Insect. Deutschlands, vol. 3, p. 133; 1863, Die Myriapoden, vol. 2, p. 18, pl. 69, fig. 142 (type locality: Pennsylvania; type: unknown).

*Polydesmus glaucescens* Koch, 1847, in Krit. Rev. Insect. Deutschlands, vol. 3, p. 133; 1863, Die Myriapoden, vol. 1, p. 59, pl. 26, fig. 51 (type locality: North America; type: unknown).

TYPE: Not known to exist.

TYPE LOCALITY: "Eastern shore of Virginia."

RANGE: Northeastern North America, from Maine to Minnesota, south in the mountains to North Carolina; also recorded from Louisiana.

*Genus* SCYTONOTUS Koch

*Scytonotus* Koch, 1847, in *Krit. Rev. Insect. Deutschlands*, vol. 3, p. 57.—

Cook and Cook, 1894, *Ann. New York Acad. Sci.*, vol. 8, p. 233.

*Lasiolathus* Loomis, 1943, *Journ. Washington Acad. Sci.*, vol. 33, p. 318  
(generotype: *L. virginicus* Loomis).

GENEROTYPE: *Scytonotus scabricollis* Koch [= *Polydesmus granulatus* Say, 1821].

RANGE: North America, except southeastern and southwestern United States; most species occur in the Pacific Northwest.

SPECIES: Nine.

***Scytonotus amandus* (Chamberlin)**

*Polydesmus amandus* Chamberlin, 1910, *Ann. Ent. Soc. America*, vol. 3,  
p. 249, pl. 38, figs. 4–6; pl. 39, fig. 1.

*Archipolydesmus amandus* Attems, 1940, *Das Tierreich*, Lief. 70, p. 154.

TYPE: Present location unknown.

TYPE LOCALITY: Mill Creek Canyon, Salt Lake County, Utah.

RANGE: Canyons of Wasatch Mountains in Utah and Idaho.

***Scytonotus bergrothi* Chamberlin**

*Scytonotus bergrothi* Chamberlin, 1911, *Canadian Ent.*, vol. 43, p. 262,  
fig. 16.

*Scytonotus pallidus* Attems, 1931, *Zoologica*, Stuttgart, vol. 30, Lief. 3–4,  
p. 145, figs. 234–39 (type locality: Vancouver Island, British Colum-  
bia; type: Vienna Museum).

TYPE: Present location unknown.

TYPE LOCALITY: Bremerton, Kitsap County, Washington.

RANGE: Vicinity of Puget Sound. Vancouver Island; Port Ludlow, Ta-  
coma, Bremerton, Muckilteo, and Port Blackely, Washington.

***Scytonotus columbianus* Chamberlin**

*Scytonotus columbianus* Chamberlain, 1920, *Canadian Ent.*, vol. 52, p.  
166, figs. 16, 17.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: British Columbia, without precise locality.

RANGE: Known only from the original collection.

***Scytonotus granulatus* (Say)**

*Polydesmus granulatus* Say, 1821, *Journ. Acad. Nat. Sci. Philadelphia*,  
vol. 2, p. 107.

*Scytonotus scabricollis* Koch, 1847, in *Krit. Rev. Insect. Deutschlands*, vol.  
3, p. 130; 1863, *Die Myriapoden*, vol. 2, pl. 80, fig. 163. (type lo-  
cality: North America; type: unknown).

*Scytonotus laevicollis* Koch, 1847, in *Krit. Rev. Insect. Deutschlands*, vol. 3,  
p. 131; 1863, *Die Myriapoden*, vol. 2, pl. 80, fig. 164 (type locality:  
Pennsylvania; type: unknown).



*Stenonia hispida* Sager, 1856, Proc. Acad. Nat. Sci. Philadelphia, vol. 8, p. 109 (type locality: vicinity of Detroit, Michigan; type: unknown).

*Polydesmus setiger* Wood, 1865, Trans. Amer. Philos. Soc., vol. 13, p. 213 (type locality: Pennsylvania; type: Acad. Nat. Sci. Philadelphia).

*Scytonotus granulatus* Bollman, 1893, U. S. Nat. Mus. Bull. 46, p. 108.—Cook and Cook, 1894, Ann. New York Acad. Sci., vol. 8, p. 233, pls. 6–9.—Hoffman, 1950, Virginia Journ. Sci., new ser., vol. 1, p. 219, fig. 1.

TYPE: Not known to exist.

TYPE LOCALITY: Vicinity of Philadelphia, Pennsylvania.

RANGE: New York south to North Carolina, west to Iowa and Missouri.

### **Scytonotus insulanus** Attems

*Scytonotus insulanus* Attems, 1931, Zoologica, Stuttgart, vol. 30, Lief. 3–4, p. 147, figs. 240–245; 1940, Das Tierreich, Lief. 70 p., 157, figs. 229–31.

TYPE: Vienna Museum.

TYPE LOCALITY: Nanaimo, Vancouver Island, British Columbia.

RANGE: Known also from Juneau, Alaska.

### **Scytonotus orthodox** Chamberlin

*Scytonotus orthodox* Chamberlin, 1925, Pan-Pacific Ent., vol. 2, p. 61.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Logan Canyon, Cache County, Utah.

RANGE: Known also from Cour d'Alene, Kootenai County, Idaho, and the Bear Lake region of Idaho and Utah.

### **Scytonotus piger** Chamberlin

*Scytonotus piger* Chamberlin, 1910, Ann. Ent. Soc. America, vol. 3, p. 244, pl. 36, figs. 1–5.

TYPE: Present location unknown.

TYPE LOCALITY: Mill Creek Canyon, Salt Lake County, Utah.

RANGE: Wasatch Mountains, Utah.

### **Scytonotus simplex** Chamberlin

*Scytonotus simplex* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 5, p. 16, fig. 30.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: John Day Creek, Douglas County, Oregon.

RANGE: Known only from type locality.

### **Scytonotus virginicus** (Loomis)

*Lasiolathus virginicus* Loomis, 1943, Journ. Washington Acad. Sci., vol. 33, p. 319, fig. 1.

*Scytonotus virginicus* Hoffman, 1950, Virginia Journ. Sci., new ser., vol. 1, p. 220, fig. 2.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Thornton Gap, Page and Rappahannock Counties, Virginia.

RANGE: Apparently restricted to the Blue Ridge Province, from northern Virginia south as far as Linville Falls, North Carolina.

**Genus SPEODESMUS Loomis**

*Speodesmus* Loomis, 1939, Bull. Mus. Comp. Zool., vol. 86, p. 187.

GENEROTYPE: *Speodesmus echinourus* Loomis, by original designation.

RANGE: Texas.

SPECIES: One.

***Speodesmus echinourus* Loomis**

*Speodesmus echinourus* Loomis, 1939, Bull. Mus. Comp. Zool., vol. 86, p. 188, fig. 13a-g.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Prassel Ranch Cave, Kerrville, Kerr County, Texas.

RANGE: Caves in Kerr, Kendall, and Hays Counties, Texas.

**Genus SPEORTHUS Chamberlin**

*Speorthus* Chamberlin, 1952, Ent. News, vol. 63, p. 12.

GENEROTYPE: *Speorthus tujanbius* Chamberlin, by original designation.

RANGE: New Mexico.

SPECIES: One.

***Speorthus tujanbius* Chamberlin**

*Speorthus tujanbius* Chamberlin, 1952, Ent. News, vol. 63, p. 12.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Carlsbad Caverns, New Mexico.

RANGE: Known only from type locality.

**Genus TIDESMUS Chamberlin**

*Tidesmus* Chamberlin, 1943, Proc. Biol. Soc. Washington, vol. 56, p. 35.

GENEROTYPE: *Tidesmus episcopus* Chamberlin, by original designation.

RANGE: California and Nevada.

SPECIES: Two.

***Tidesmus episcopus* Chamberlin**

*Tidesmus episcopus* Chamberlin, 1943, Proc. Biol. Soc. Washington, vol. 56, p. 35, figs. 1-3.

TYPE: Chicago Nat. Hist. Mus.

TYPE LOCALITY: Bishop's Road, Reservoir Hill, Los Angeles County, California.

RANGE: Known only from type locality.

**Tidesmus hubbsi Chamberlin**

*Tidesmus hubbsi* Chamberlin, 1943, Proc. Biol. Soc. Washington, vol. 56, p. 36, fig. 4.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Cave Valley, Lincoln County, Nevada.

RANGE: Known only from type locality.

**Genus UTADESMUS Chamberlin and Hoffman**

*Utadesmus* Chamberlin and Hoffman, 1950, Chicago Acad. Sci. Nat. Hist. Misc. No. 71, p. 3.

GENEROTYPE: *Brachydesmus henriensis* Chamberlin, by original designation.

RANGE: Southern Utah and central New Mexico.

SPECIES: Two.

**Utadesmus henriensis (Chamberlin)**

*Brachydesmus henriensis* Chamberlin, 1930, Pan-Pacific Ent., vol. 6, p. 118, 2 figs.

*Utadesmus henriensis* Chamberlin and Hoffman, 1950, Chicago Acad. Sci. Nat. Hist. Misc. No. 71, p. 3.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Mount Ellen, Henry Mountains, Utah.

RANGE: Known only from type locality.

**Utadesmus hoffi Chamberlin and Hoffman**

*Utadesmus hoffi* Chamberlin and Hoffman, 1950, Chicago Acad. Sci. Nat. Hist. Misc. No. 71, p. 3, figs. 1, 2.

TYPE: U. S. Nat. Mus. (No. 2015).

TYPE LOCALITY: Sandia Mountains, near Albuquerque, New Mexico.

RANGE: Known only from the Sandia Mountains.

**Polydesmidae of uncertain systematic position****Polydesmus moniliaris Koch**

*Polydesmus moniliaris* Koch, 1847, in Krit. Rev. Insect. Deutschlands, vol. 3, p. 135.

TYPE: Not known to exist.

TYPE LOCALITY: Pennsylvania.

The exact identity of Koch's species has never been made known, despite which fact the name has been used by several American authors in reporting specimens from northeastern United States. It seems likely that the name may have been based upon introduced specimens of *P. inconstans* or some other synanthropic species.

**Polydesmus sastianus Chamberlin**

*Polydesmus sastianus* Chamberlin, 1910, Ann. Ent. Soc. Amer., vol. 3, p. 251.

TYPE: Present location unknown.

TYPE LOCALITY: Shasta Springs, Siskiyou County, California. Based on a female.

**Polydesmus bonikus Chamberlin**

*Polydesmus bonikus* Chamberlin, 1912, Ann. Ent. Soc. Amer., vol. 5, p. 168, pl. 10, fig. 3.

TYPE: Present location unknown.

TYPE LOCALITY: Madison, Washington.

**Scytonotus cavernarum Bollman**

*Scytonotus cavernarum* Bollman, 1887, Ent. Amer., vol. 3, p. 46.

TYPE: Present location unknown.

TYPE LOCALITY: Mayfield's Cave, Monroe County, Indiana.

Described from a single female. It is not possible to determine from the description whether the species is really a scytonotid.

**Scytonotus nodulosus Koch**

*Scytonotus nodulosus* Koch, 1847, in Krit. Rev. Insect. Deutschlands, vol. 3, p. 131.—Bollman, 1893, U. S. Nat. Mus. Bull. 46, p. 151.

TYPE: Not known to exist.

TYPE LOCALITY: Pennsylvania.

We have no suggestions to offer on the status of this form. It appears from the drawings later published by Koch (*Die Myriapoden*, 1863, pl. 80, fig. 164) to be more like a polydesmid than a scytonotid.

**Family STYLODESMIDAE Cook**

*Stylodesmidae* Cook, 1895, Ann. New York Acad. Sci., vol. 9, p. 5.—

Chamberlin, 1943, Bull. Univ. Utah, biol. ser., vol. 8, No. 3, p. 62.—

Schubart, 1945, Arq. Mus. Nac. Brasil, vol. 38, p. 81.

*Stiodesmidae* Cook, 1896, Brandtia, No. 5, p. 25.—Loomis, 1944, Psyche, vol. 51, p. 175.

**Genus ILYMA Chamberlin**

*Ilyma* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 4, p. 24.

GENEROTYPE: *Ilyma orizaba* Chamberlin, by original designation.

RANGE: Southern Mexico; Gulf Coast States?

SPECIES: Five, one within our limits.

**Ilyma cajuni Loomis**

*Ilyma cajuni* Loomis, 1944, Psyche, vol. 51, p. 175, fig. 6.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Venice, Plaquemines Parish, Louisiana.

RANGE: Known only from type locality. This is possibly an introduced and now established species.

*Genus* **PSOCHODESMUS** Cook

*Psochodesmus* Cook, 1896, Brandtia, No. 5, p. 25.

GENEROTYPE: *Psochodesmus crescentis* Cook, by original designation.

RANGE: Florida and the West Indies.

SPECIES: Three, one within our limits.

**Psochodesmus crescentis** Cook

*Psochodesmus crescentis* Cook, 1896, Brandtia, No. 5, p. 25.—Loomis, 1934, Smithsonian Misc. Coll., vol. 89, No. 14, p. 54, fig. 27a,b.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Crescent City, Putnam County, Florida.

RANGE: The southern two-thirds of the Florida Peninsula.

*Family* **VANHOEFFENIIDAE** Attems

Vanhoeffeniidae Attems, 1914, Arch. Naturg., Abt. A, vol. 80, p. 158; 1940, Das Tierreich, Lief. 70, p. 162.

Jeekel (1956, Beaufortia, vol. 51, p. 77) places *Vanhoeffenia* as a junior synonym of *Gnomeskelus* Attems, a genus of the family Sphaeritrichopidae. As that family name has several years priority over the name Vanhoeffeniidae, the latter name must be placed into synonymy. The considerable number of polydesmoid genera not confamilial with *Gnomeskelus* and previously placed in the Vanhoeffeniidae, now need a new family name. Because of the very confused condition of the taxonomy of the small polydesmoids, it is felt that no ends would be served by the premature selection of some of the possibly available names, or by the proposal of a new one for the American genera.

*Genus* **OPHIODESMUS** Cook

*Ophiodesmus* Cook, 1895, Ann. New York Acad. Sci., vol. 9, p. 5.

GENEROTYPE: *Strongylosoma verhoeffi* Brölemann, by original designation.

RANGE: Europe from France and England to Sweden, and in North America known from Newfoundland, where probably introduced.

SPECIES: Two, one occurring in North America.

**Ophiodesmus albonanus** (Latzel)

*Paradesmus albonanus* Latzel, 1895, Mitt. Naturh. Mus. Hamburg, vol. 12, p. 107, fig. 1.

*Ophiodesmus albonanus* Lohmander, 1925, Göteborgs Vetensk. Handl., ser. 4, vol. 30, p. 20, fig. 6.—Palmén, 1952, Ann. Zool. Soc. 'Vanamo', vol. 15, No. 1, p. 14.

TYPE: Hamburg Museum.

TYPE LOCALITY: Hamburg, Germany.

RANGE: Northern Germany; Sweden; introduced into Newfoundland.

### *Suborder* STRONGYLOSOMIDEA Brölemann

Strongylosomidi Brölemann, 1916, Ann. Soc. Ent. France, vol. 84, p. 526.

Strongylosomidea Attems, 1937, Das Tierreich, Lief. 68, p. 23.

#### KEY TO NORTH AMERICAN FAMILIES OF STRONGYLOSOMIDEA

1. Gonopods of male very simple, the acropodite not definitely set off from a prefemur, and never sheathed; gonopod aperture large . . . EURYMERODESMIDAE (p. 78)
- Gonopods of male commonly more or less complicated, with the acropodite definitely set off from a prefemur, and with a separate solenomerite  
STRONGYLOSOMIDAE (p. 83)

### *Family* EURYMERODESMIDAE Causey

Eurymerodesmidae Causey, 1951, Proc. Arkansas Acad. Sci., vol. 4, p. 69.

#### *Genus* EURYMERODESMUS Brölemann

*Eurymerodesmus* Brölemann, 1900, Mém. Soc. Zool. France, vol. 13, p. 101.

GENEROTYPE: *Polydesmus hispidipes* Wood, by monotypy.

RANGE: Eastern United States, from Illinois and Iowa south to Texas and Oklahoma, east to Florida.

SPECIES: Twenty-one, many of which appear to be but geographic races of a polytypic species.

#### *Eurymerodesmus amplus* Causey

*Eurymerodesmus amplus* Causey, 1952, Chicago Acad. Sci. Nat. Hist. Misc. No. 106, p. 4, fig. 3.

TYPE: Amer. Mus. Nat. Hist.

TYPE LOCALITY: Ruston, Lincoln Parish, Louisiana.

RANGE: Known only from type locality.

#### *Eurymerodesmus angularis* Causey

*Eurymerodesmus angularis* Causey, 1951, Proc. Arkansas Acad. Sci., vol. 4, p. 69, figs. 1-3.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: Prairie County, Arkansas.

RANGE: Known only from type locality.

#### *Eurymerodesmus bentonus* Causey

*Eurymerodesmus bentonus* Causey, 1950, Ohio Journ. Sci., vol. 50, p. 268, fig. 5.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: Monte Ne, Benton County, Arkansas.

RANGE: Known only from type locality.

**Eurymerodesmus birdi Chamberlin**

*Eurymerodesmus birdi* Chamberlin, 1931, Ent. News, vol. 42, p. 101, pl. 2, figs. 6-8.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Murray County, Oklahoma.

RANGE: Recorded from Murray, Seminole, Pittsburg, and Hughes Counties, Oklahoma, and from Sebastin, Logan, and Miller Counties, Arkansas.

**Eurymerodesmus booneus Chamberlin**

*Eurymerodesmus booneus* Chamberlin, 1942, Canadian Ent., vol. 74, p. 16.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 3 miles west of Boone, Boone County, Iowa.

RANGE: Known only from type locality.

**Eurymerodesmus christianus Chamberlin**

*Eurymerodesmus christianus* Chamberlin, 1946, Proc. Biol. Soc. Washington, vol. 59, p. 140, fig. 5.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Pass Christian, Harrison County, Mississippi.

RANGE: Known only from type locality.

**Eurymerodesmus compressus Causey**

*Eurymerodesmus compressus* Causey, 1952, Ent. News, vol. 63, No. 7, p. 169, figs. 1-4.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: Junction City, Union County, Arkansas.

RANGE: Known only from type locality.

**Eurymerodesmus creolus Chamberlin**

*Eurymerodesmus creolus* Chamberlin, 1942, Bull. Univ. Utah, biol. ser., vol. 6, No. 8, p. 6, fig. 16.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 5 miles northwest of Shreveport, Caddo Parish, Louisiana.

RANGE: Known only from type locality.

**Eurymerodesmus dubius Chamberlin**

*Eurymerodesmus dubius* Chamberlin, 1943, Proc. Biol. Soc. Washington, vol. 56, p. 38, fig. 8.

TYPE: Chicago Nat. Hist. Mus.

TYPE LOCALITY: Delight, Pike County, Arkansas.

RANGE: Recorded from Pike, Clark, Dallas, Hot Springs, Saline, and Sevier Counties, Arkansas.

**Eurymerodesmus goodi Causey**

*Eurymerodesmus goodi* Causey, 1952, Chicago Acad. Sci. Nat. Hist. Misc. No. 106, p. 3, fig. 1.

TYPE: Amer. Mus. Nat. Hist.

TYPE LOCALITY: 16 miles southeast of Mena, Polk County, Arkansas.

RANGE: Known only from type locality.

### **Eurymerodesmus louisianae Chamberlin**

*Eurymerodesmus louisianae* Chamberlin, 1942, Bull. Univ. Utah, biol. ser., vol. 6, No. 8, p. 6, fig. 17.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 2 miles south of Saline, Natchitoches Parish, Louisiana.

RANGE: Known only from type locality.

### **Eurymerodesmus melacis Chamberlin and Mulaik**

*Eurymerodesmus melacis* Chamberlin and Mulaik, 1941, Journ. New York Ent. Soc., vol. 49, p. 59.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Raven Ranch, Kerr County, Texas.

RANGE: Recorded from Kerr, Kendall, and Concho Counties, Texas.

### **Eurymerodesmus mundus Chamberlin**

*Eurymerodesmus mundus* Chamberlin, 1931, Ent. News, vol. 42, p. 102, pl. 2, figs. 3-5.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: University, Norman, Cleveland County, Oklahoma.

RANGE: Recorded from Cleveland, Latimer, Caddo, and McLain Counties, Oklahoma, and Sevier County, Arkansas.

### **Eurymerodesmus newtonus Chamberlin**

*Eurymerodesmus newtonus* Chamberlin, 1942, Bull. Univ. Utah, biol. ser., vol. 6, No. 8, p. 6, fig. 14.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 12 miles south of Jasper, Newton County, Arkansas.

RANGE: Known only from type locality.

### **Eurymerodesmus oliphantus Chamberlin**

*Eurymerodesmus oliphantus* Chamberlin, 1942, Bull. Univ. Utah, biol. ser., vol. 6, No. 8, p. 6, fig. 15.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 15 miles south of Oliphant, Jackson County, Arkansas.

RANGE: Known only from type locality.

### **Eurymerodesmus planus Causey**

*Eurymerodesmus planus* Causey, 1950, Ent. News, vol. 61, p. 196, fig. 5.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: Piney Woods, Rankin County, Mississippi.

RANGE: Known only from type locality.



**Eurymerodesmus sanbernardiensis Causey**

*Eurymerodesmus sanbernardiensis* Causey, 1952, Ent. News, vol. 63, p. 174, figs. 6, 7.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: Banks of San Bernardo River, Fort Bend County, Texas.

RANGE: Known only from type locality.

**Eurymerodesmus schmidti Chamberlin**

*Eurymerodesmus schmidti* Chamberlin, 1943, Proc. Biol. Soc. Washington, vol. 56, p. 38, fig. 7.

*Eurymerodesmus plishneri* Causey, 1950, Ohio Journ. Sci., vol. 50, p. 271, fig. 8 (type locality: Fayetteville, Washington County, Arkansas; type: Acad. Nat. Sci. Philadelphia).

TYPE: Chicago Nat. Hist. Mus.

TYPE LOCALITY: Rich Mountain, Polk County, Arkansas.

RANGE: Recorded from Washington, Carroll, and Polk Counties, Arkansas.

**Eurymerodesmus spectabilis Causey**

*Eurymerodesmus spectabilis* Causey, 1950, Ohio Journ. Sci., vol. 50, p. 270, figs. 6, 7.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: 3 miles east of Magnolia, Columbia County, Arkansas.

RANGE: Known only from type locality, and from Union County, Arkansas, and Clairborne Parish, Louisiana.

**Eurymerodesmus varius (McNeill)**

*Polydesmus varius* McNeill, 1887, Proc. U. S. Nat. Mus., vol. 10, p. 323.

*Eurymerodesmus minimus* Loomis, 1943, Journ. Washington Acad. Sci., vol. 33, p. 320, fig. 2 (type locality: Marianna, Jackson County, Florida; type: Mus. Comp. Zool.).

*Eurymerodesmus varius* Causey, 1954, Tulane Stud. Zool., vol. 2, No. 4, p. 67.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Pensacola, Escambia County, Florida.

RANGE: Known from Escambia and Marianna Counties in the Florida Panhandle and from Mobile County, Alabama.

**Eurymerodesmus wellesleybentonius Causey**

*Eurymerodesmus wellesleybentonius* Causey, 1952, Ent. News, vol. 63, p. 171, fig. 5.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: Helena, Phillips County, Arkansas.

RANGE: Known only from type locality.

**Genus KEWANIVS Chamberlin**

*Kewanius* Chamberlin, 1938, Proc. Biol. Soc. Washington, vol. 51, p. 208.

GENEROTYPE: *Eurymerodesmus simplex* Chamberlin, by original designation.

RANGE: Louisiana:

SPECIES: One.

**Kewanius simplex (Chamberlin)**

*Eurymerodesmus simplex* Chamberlin, 1920, Proc. Biol. Soc. Washington, vol. 33, p. 98.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Louisiana, probably near New Orleans.

RANGE: No definite localities known.

**Genus PARESMUS Chamberlin**

*Paresmus* Chamberlin, 1942, Bull. Univ. Utah, biol. ser., vol. 6, No. 8, p. 7.

GENEROTYPE: *Paresmus paroicus* Chamberlin, by original designation.

RANGE: Arkansas and Louisiana.

SPECIES: Five.

**Paresmus columbus Causey**

*Paresmus columbus* Causey, 1950, Ohio Journ. Sci., vol. 50, p. 272, figs. 10, 11.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: Magnolia, Columbia County, Arkansas.

RANGE: Known only from type locality.

**Paresmus impurus (Wood)**

*Polydesmus impurus* Wood, 1867, Proc. Acad. Nat. Sci. Philadelphia, p. 43.

*Paresmus impurus* Causey, 1952, Ent. News, vol. 63, p. 174, figs. 8, 9.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: Texas.

RANGE: No definite localities known.

**Paresmus paroicus Chamberlin**

*Paresmus paroicus* Chamberlin, 1942, Bull. Univ. Utah, biol. ser., vol. 6, No. 8, p. 7, figs. 18, 19.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 1½ miles north of Clay, border of Lincoln and Jackson Parishes, Louisiana.

RANGE: Known only from type locality.

**Paresmus polkensis** Causey

*Paresmus polkensis* Causey, 1952, Chicago Acad. Sci. Nat. Hist. Misc. No. 106, p. 5, fig. 4.

TYPE: Amer. Mus. Nat. Hist.

TYPE LOCALITY: 11 miles north of Mena, Polk County, Arkansas.

RANGE: Known only from type locality.

**Paresmus pulaski** Causey

*Paresmus pulaski* Causey, 1950, Ohio Journ. Sci., vol. 50, p. 271, fig. 9.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: Sweet Home, Pulaski County, Arkansas.

RANGE: Known only from Grant and Pulaski Counties, Arkansas.

*Family* STRONGYLOSOMIDAE Cook

Strongylosomatidae Cook, 1895, Ann. New York Acad. Sci., vol. 9, p. 5.

Strongylosomidae Pocock, 1909, Diplopoda, in Biol. Centr.-Amer., p. 158.—Attems, 1937, Das Tierreich, Lief. 68, p. 24 (monograph of family).

*Genus* ORTHOMORPHA Bollman

*Paradesmus* Saussure, 1859, Linnaea Ent., vol. 13, p. 325. (preoccupied).

*Orthomorpha* Bollman, 1893, U. S. Nat. Mus. Bull. 46, p. 159.—Attems, 1937, Das Tierreich, Lief. 68, p. 59.

*Asiomorpha* Verhoeff, 1939, Zool. Anz., vol. 127, p. 117 (generotype, *Paradesmus coarctatus* Saussure, by original designation).

*Brasilogonopus* Verhoeff, 1943, Arq. Mus. Nac. Brasil, vol. 37, p. 274 (generotype, *B. attemsi* Verhoeff [= *coarctatus* Saussure] by monotypy).

GENEROTYPE: *Polydesmus* (*Paradesmus*) *beaumonti* LeGillou, by subsequent designation of Pocock, 1909.

RANGE: Indo-Australian region; also introduced by commerce into most other warmer lands of the world.

SPECIES: About 20.

**Orthomorpha coarctata** (Saussure)

*Polydesmus coarctatus* Saussure, 1860, Mém. Soc. Phys. Hist. Nat. Genève, vol. 15, p. 297, pl. 3, fig. 18.

*Polydesmus vicarius* Karsch, 1881, Arch. Naturg., vol. 47, p. 38, pl. 3, fig. 8 (type locality: Mayotti, Africa; type: Berlin Museum).

*Strongylosoma poeyi* Bollman, 1887, Ent. Amer., vol. 3, p. 82 (type locality: Havana, Cuba; type: U. S. Nat. Mus. No. 1227).

*Orthomorpha coarctata* Bollman, 1893, U. S. Nat. Mus. Bull. 46, p. 196.

*Brasilogonopus attemsi* Verhoeff, 1943, Arq. Mus. Nac. Brasil, vol. 37, p. 275 (type locality: Minas Gerais, Brasil; type: Verhoeff collection).

TYPE: Location unknown.

TYPE LOCALITY: French Guiana (unquestionably introduced from the Malayan Archipelago).

RANGE: Throughout the Malayan and East Indian areas, Madagascar, West Africa, tropical South America, Central America, and México, and the West Indies; widely dispersed through commerce. In the United States it is occasional in greenhouses and has been taken in the open in Texas and Louisiana.

#### Genus OXIDUS Cook

*Oxidus* Cook, 1911, Proc. U. S. Nat. Mus., vol. 40, p. 628.

*Kalorthomorpha* Attems, 1914, Arch. Naturg., Abt. A, vol. 80, p. 191;  
1937, Das Tierreich, Lief. 68, p. 80.

GENEROTYPE: *Fontaria gracilis* Koch, by original designation.

RANGE: Indo-Australian region; introduced widely by commerce into other parts of the world.

SPECIES: About 20 listed by Attems.

#### *Oxidus gracilis* (Koch)

*Fontaria gracilis* Koch, 1847, in Krit. Rev. Insect. Deutschlands, vol. 3, p. 142.

*Paradesmus dasys* Bollman, 1888, Proc. U. S. Nat. Mus., vol. 10, p. 619  
(type locality: Baltimore, Maryland; type: U. S. Nat. Mus.).

*Kepolydesmus sontus* Chamberlin, 1910, Ann. Ent. Soc. Amer., vol. 3, p. 247, pl. 38, figs. 5-7 (type locality: Los Angeles, California; location of types unknown).

*Oxidus gracilis* Cook, 1911, Proc. U. S. Nat. Mus., vol. 40, p. 631.

*Orthomorpha* (*Kalorthomorpha*) *gracilis* Attems, 1914, Arch. Naturg., Abt. A, vol. 80, p. 191; 1937, Das Tierreich, Lief. 68, p. 82, fig. 101.

TYPE: Present location unknown.

TYPE LOCALITY: Originally described from a greenhouse in Austria.

RANGE: Tropicopolitan. Introduced by commerce and well established in southern and western United States, and found throughout the country in greenhouses.

#### Order CHORDEUMIDA

Chordeumidae Koch, 1847, in Krit. Rev. Insect. Deutschlands, vol. 3, pp. 49, 119.—Latzel, 1884, Myr. Öst.-Ung. Monarch., vol. 2, p. 171.

Craspedosomidae Saussure and Humbert, 1872, Études sur les myriapodes, in Miss. Sci. Mexique, Zool., pt. 6, sect. 2, p. 56.

Craspedosomatidae Cook and Collins, 1895, Ann. New York Acad. Sci., vol. 9, p. 1.

Chordeumoidea Pocock, 1894, Chilopoda, Symphyla and Diplopoda . . . , in Weber, Zool. Erg. Reise, Niederl. Ost-Ind., vol. 3, p. 341.—Silvestri, 1896, Ann. Mus. Civ. Stor. Nat. Genova, ser. 2, vol. 16, p. 158.—Pocock, 1903, Diplopoda, in Biol. Centr.-Amer., p. 51.

- Coelocheta + Merocheta Cook, 1896, Amer. Nat., vol. 30, p. 683.—Silvestri, 1897, Ann. Mus. Civ. Stor. Nat. Genova, ser. 2, vol. 18, p. 3.  
 Nematophora Verhoeff, 1913, Zool. Anz., vol. 43, p. 52.—Attems, 1926, in Kükenthal-Krumbach, Handbuch der Zoologie, vol. 4, p. 154.—Schubart, 1945, Arq. Mus. Nac. Brasil, vol. 38, p. 8.  
 Chordeumida Chamberlin, 1943, Bull. Univ. Utah, biol. ser., vol. 8, No. 3, pp. 5, 34.

The four suborders into which this order is divided may be distinguished by means of the key given below. Of them, no representative of the Stemmiulidea has yet been found within our limits.

#### KEY TO THE SUBORDERS OF CHORDEUMIDA

1. Body segments of adults 39 or more; repugnatorial pores present . . . . . 2  
 Body segments not more than 32; no repugnatorial pores . . . . . 3
2. Only 1 or 2 ocelli on each side; body dorsoventrally compressed; segments with fine striae . . . . . STEMMIULIDEA  
 Ocelli numerous, in a triangular patch; body rounded; segments with pronounced longitudinal crests and enlarged poriferous knobs . . . . . LYSIOPETALIDEA (p. 108)
3. Metazonites with high carinae over middorsal region; collum large, hoodlike, partly concealing the head; anal segment trilobed . . . . . STRIARIDEA (p. 115)  
 Metazonites without longitudinal carinae or ridges; collum smaller, never hoodlike, head usually exposed; anal segment entire . . . . . CHORDEUMIDEA (p. 85)

#### Suborder CHORDEUMIDEA

- Chordeumidae (in part) Koch, 1847, in Krit. Rev. Insect. Deutschlands, vol. 3, p. 49.  
 Chordeumoidea Cook, 1899, Proc. U. S. Nat. Mus., vol. 21, p. 669.—Attems, 1926, in Kükenthal-Krumbach, Handbuch der Zoologie, vol. 4, p. 154.  
 Ascospermophora Verhoeff, 1913, Zool. Anz., vol. 43, p. 53.

#### KEY TO NORTH AMERICAN FAMILIES OF CHORDEUMIDEA

1. Body composed of 20 or 26 segments . . . . . 2  
 Body composed of 28, 30, or 32 segments . . . . . 3
2. Segments 20; tergites not produced laterally into paranota (lateral carinae of older authors) . . . . . ERGETHIDAE (p. 105)  
 Segments 26; tergites with numerous short dorsal crests and prominent paranota. . . . . BRANNERIIDAE (p. 86)
3. Telopodite of second pair of legs of the seventh segment of males much thickened, often clavate, the second joint often forming a distinct angle with the coxa, the latter with a conspicuous inner process . . . . . 4  
 Second legpair of seventh segment in males never clavately thickened as described above, and not forming a distinct angle with the coxa, which has no inner process . . . . . 6
4. Gnathochilarium undivided, no promentum set off . . . . . CONOTYLIDAE (p. 97)  
 Gnathochilarium with a promentum . . . . . 5
5. Tergites with setigerous keels, the sides of segments at most vaguely striate. . . . . UNDERWOODIIDAE (p. 107)  
 Tergites without setigerous keels, the sides with pronounced lateral striae . . . . . CASEYIDAE (p. 87)



RANGE: Known definitely only from the type locality. The records for Arkansas by Bollman and Michigan by Chamberlin probably pertain to other, undescribed, forms.

*Family* CASEYIDAE Verhoeff

Caseyidae Verhoeff, 1909, Zool. Anz., vol. 34, p. 567.

*Genus* CASEYA Cook and Collins

*Caseya* Cook and Collins, 1895, Ann. New York Acad. Sci., vol. 9, p. 84.

GENEROTYPE: *Caseya heteropus* Cook and Collins, by original designation.

RANGE: California and Oregon.

SPECIES: Six.

*Caseya bentona* Chamberlin

*Caseya bentona* Chamberlin, 1952, Chicago Acad. Sci. Nat. Hist. Misc. No. 113, p. 2, figs. 3-6.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Mary's Peak, Benton County, Oregon.

RANGE: Known only from type locality.

*Caseya dynopta* Chamberlin

*Caseya dynopta* Chamberlin, 1947, Proc. Biol. Soc. Washington, vol. 60, p. 9.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Hastings Reservation, Monterey County, California.

RANGE: Known only from type locality.

*Caseya heteropus* Cook and Collins

*Caseya heteropus* Cook and Collins, 1895, Ann. New York Acad. Sci., vol. 9, p. 85, figs. 191-219.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: California, probably vicinity of San Francisco.

RANGE: No precise localities are known for this species.

*Caseya irritans* Chamberlin

*Caseya irritans* Chamberlin, 1910, Ann. Ent. Soc. Amer., vol. 3, p. 241, pl. 34, figs. 6-9, pl. 35, fig. 1.

TYPE: Present location unknown.

TYPE LOCALITY: Portland, Multnomah County, Oregon.

RANGE: Known only from type locality.

*Caseya sequoia* Chamberlin

*Caseya sequoia* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 8, p. 10, figs. 17, 18.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Sequoia National Park, Tulare County, California.

RANGE: Known only from type locality.

### **Caseya similis Causey**

*Caseya similis* Causey, 1952, Proc. Biol. Soc. Washington, vol. 65, p. 113, figs. 6, 7.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Telachapi Pass, Kern County, California.

RANGE: Known only from type locality.

### **Genus OPIONA Chamberlin**

*Opiona* Chamberlin, 1951, Chicago Acad. Sci. Nat. Hist. Misc. No. 87, p. 8.

GENEROTYPE: *Opiona columbiana* Chamberlin, by original designation.

RANGE: Washington and British Columbia.

SPECIES: Two.

### **Opiona columbiana Chamberlin**

*Opiona columbiana* Chamberlin, 1951, Chicago Acad. Sci. Nat. Hist. Misc. No. 87, p. 8, figs. 15-19.

TYPE: Provincial Museum, British Columbia.

TYPE LOCALITY: Victoria, British Columbia.

RANGE: Known only from type locality.

### **Opiona hatchi Causey**

*Opiona hatchi* Causey, 1954, Ann. Ent. Soc. America, vol. 47, p. 81, figs. 1-3.

TYPE: Amer. Mus. Nat. Hist.

TYPE LOCALITY: Carkeek Park, Seattle, King County, Washington.

RANGE: Known only from type locality.

### **Genus PLACERNA Chamberlin**

*Placerna* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 5, p. 10.

GENEROTYPE: *Placerna dorada* Chamberlin, by original designation.

RANGE: California.

SPECIES: One.

### **Placerna dorada Chamberlin**

*Placerna dorada* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 5, p. 10, figs. 19-21.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 9 miles north of Placerville, Eldorado County, California.

RANGE: Known only from type locality.



**Genus VASINGTONA** Chamberlin

*Vasingtona* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 5, p. 12.

GENEROTYPE: *Caseya fasciata* Chamberlin, by original designation.

RANGE: Washington.

SPECIES: One.

**Vasingtona fasciata (Chamberlin)**

*Caseya fasciata* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 4, p. 22.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Arlington, Snohomish County, Washington.

RANGE: Known only from type locality.

**Genus ZANTONA** Chamberlin

*Zantona* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 5, p. 11.

GENEROTYPE: *Zantona douglasi* Chamberlin, by original designation.

RANGE: Oregon.

SPECIES: One.

**Zantona douglasi Chamberlin**

*Zantona douglasi* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 5, p. 11, figs. 22-24.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: John Day Creek, Douglas County, Oregon.

RANGE: Known only from type locality.

**Family CLEIDOGONIDAE** Cook

Cleidogonidae Cook, 1896, Brandtia, No. 2, p. 8.—Hoffman, 1950, Journ. Washington Acad. Sci., vol. 40, p. 87.

Pseudocleididae Attems, 1926, in Kükenthal-Krumbach, Handbuch der Zoologie, vol. 4, p. 170 (in part).

Entomobielziinae Verhoeff, 1909, Zool. Anz., vol. 34, p. 570.

Mexiceumidae Verhoeff, 1926, Zool. Anz., vol. 68, p. 110.

**Genus CLEIDOGONA** Cook and Collins

*Cryptotrichus* Packard, 1833, Proc. Amer. Philos. Soc., vol. 21, p. 189 (preoccupied by *Cryptotrichus* Schaufuss 1865).

*Campodes* (not C. L. Koch) Bollman, 1893, U. S. Nat. Mus. Bull. 46, p. 120.

*Cleidogona* Cook and Collins, 1895, Ann. New York Acad. Sci., vol. 9, p. 41.

GENEROTYPE: *Cleidogona major* Cook and Collins, by subsequent designation of Hoffman, 1950.

RANGE: Eastern United States; Texas; Mexico; Guatemala?

SPECIES: About 25, of which 17 occur in the United States. Some of these should be removed to other genera.

**Cleidogona arkansana** Causey

*Cleidogona arkansana* Causey, 1954, Tulane Stud. Zool., vol. 2, No. 4, p. 66, figs. 6-9.

TYPE: Amer. Mus. Nat. Hist.

TYPE LOCALITY: 4 miles east of Princeton, Dallas County, Arkansas.

RANGE: Known only from the type locality.

**Cleidogona aspera** Causey

*Cleidogona aspera* Causey, 1951, Journ. Washington Acad. Sci., vol. 41, p. 78, figs. 1-4.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: 6 miles east of Imboden, Lawrence County, Arkansas.

RANGE: Lawrence, Randolph, and Dallas Counties, Arkansas.

**Cleidogona caesioannulata** (Wood)

*Spirostrephon caesioannulatus* Wood, 1865, Trans. Amer. Philos. Soc., vol. 13, p. 194.

TYPE: Acad. Nat. Nat. Sci. Philadelphia (No. 11202).

TYPE LOCALITY: Allegheny County, Pennsylvania.

RANGE: Western Pennsylvania (Allegheny and Westmoreland Counties), south through the Appalachian Plateaus Province to extreme southwestern Virginia (Buchanan County) and eastern Kentucky (Bell County).

This statement of range is based on unpublished studies, which include an examination of the original type specimen of Wood. None of the numerous published references to "*caesioannulata*" actually apply to this species. *C. justis* Cook and Collins was incorrectly placed in the synonymy of *caesioannulata* by Williams and Hefner (1928, Bull. Ohio Biol. Surv., No. 18, p. 116).

**Cleidogona celerita** Williams and Hefner

*Cleidogona celerita* Williams and Hefner, 1928, Bull. Ohio Biol. Surv., No. 18, p. 117, fig. 14c.

TYPE: U. S. Nat. Mus. (No. 2271).

TYPE LOCALITY: "Ohio," without further locality.

RANGE: "General throughout Ohio" (Williams and Hefner).

**Cleidogona exaspera** Williams and Hefner

*Cleidogona exaspera* Williams and Hefner, 1928, Bull. Ohio Biol. Surv., No. 18, p. 117, fig. 14b.

TYPE: U. S. Nat. Mus. (No. 2270).

TYPE LOCALITY: Delaware County, Ohio.

RANGE: Known only from type locality.

**Cleidogona forceps Cook and Collins**

*Cleidogona forceps* Cook and Collins, 1895, Ann. New York Acad. Sci., vol. 9, p. 49, figs. 159–163.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Probably somewhere in Indiana.

RANGE: No definite localities known for this species.

**Cleidogona fustis Cook and Collins**

*Cleidogona fustis* Cook and Collins, 1895, Ann. New York Acad. Sci., vol. 9, p. 50, figs. 151–153.

TYPE: U. S. Nat. Mus. (No. 446).

TYPE LOCALITY: Indiana, without precise locality.

RANGE: Recorded only from Montgomery County, Indiana.

**Cleidogona inexpectata Hoffman**

*Cleidogona inexpectata* Hoffman, 1950, Journ. Elisha Mitchell Sci. Soc., vol. 66, p. 22, figs. 23–25.

TYPE: U. S. Nat. Mus. (No. 1878).

TYPE LOCALITY: Chimneys Camp Ground, Sevier County, Tennessee.

RANGE: Known only from type locality.

**Cleidogona inflata Causey**

*Cleidogona inflata* Causey, 1951, Journ. Washington Acad. Sci., vol. 41, p. 80, figs. 14–19.

TYPE: Illinois Nat. Hist. Surv.

TYPE LOCALITY: Starved Rock State Park, Putnam County, Illinois.

RANGE: Known only from type locality.

**Cleidogona jocassee Hoffman**

*Cleidogona jocassee* Hoffman, 1950, Journ. Elisha Mitchell Sci. Soc., vol. 66, p. 19, figs. 15–18.

TYPE: U. S. Nat. Mus. (No. 1876).

TYPE LOCALITY: Jocassee, Oconee County, South Carolina.

RANGE: Western South Carolina, northern Georgia, and western North Carolina (Macon, Jackson, Transylvania, Swain Counties).

**Cleidogona laminata Cook and Collins**

*Cleidogona laminata* Cook and Collins, 1895, Ann. New York Acad. Sci., vol. 9, p. 48, figs. 164–171.

TYPE: U. S. Nat. Mus. (No. 427).

TYPE LOCALITY: Probably somewhere in Indiana.

RANGE: No definite localities known for this species.

**Cleidogona major Cook and Collins**

*Cleidogona major* Cook and Collins, 1895, Ann. New York Acad. Sci., vol. 9, p. 47, figs. 110–137.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Washington, D. C.

RANGE: Maryland, District of Columbia, and north-central Virginia.

**Cleidogona margarita Hoffman**

*Cleidogona margarita* Hoffman, 1950, Journ. Elisha Mitchell Sci. Soc., vol. 66, p. 21, figs. 19-22.

TYPE: U. S. Nat. Mus. (No. 1877).

TYPE LOCALITY: Chimneys Camp Ground, Sevier County, Tennessee.

RANGE: Known only from type locality.

**Cleidogona minima Causey**

*Cleidogona minima* Causey, 1951, Journ. Washington Acad. Sci., vol. 41, p. 80, figs. 10-13.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: Tuscaloosa, Tuscaloosa County, Alabama.

RANGE: Known only from type locality.

**Cleidogona mississippiana Chamberlin**

*Cleidogona mississippiana* Chamberlin, 1942, Bull. Univ. Utah, biol. ser., vol. 6, No. 3, p. 3, figs. 4-6.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Eight miles east of Vicksburg, Warren County, Mississippi.

RANGE: Known from three localities in central Mississippi.

**Cleidogona sublettei Causey**

*Cleidogona sublettei* Causey, 1954, Tulane Stud. Zool., vol. 2, No. 4, p. 66, figs. 4, 5.

TYPE: Amer. Mus. Nat. Hist.

TYPE LOCALITY: Grand Ecore, Natchitoches Parish, Louisiana.

RANGE: Known only from type locality.

**Cleidogona unita Causey**

*Cleidogona unita* Causey, 1951, Journ. Washington Acad. Sci., vol. 41, p. 78, figs. 5-9.

TYPE: Illinois Nat. Hist. Surv.

TYPE LOCALITY: Giant City State Park, Union County, Illinois.

RANGE: Also known from Dixon, Lee County, Illinois.

**Genus DEAROLFIA Loomis**

*Dearolfia* Loomis, 1939, Bull. Mus. Comp. Zool., vol. 86, p. 177.

GENEROTYPE: *Dearolfia lusciosa* Loomis, by original designation.

RANGE: Northeastern West Virginia.

SPECIES: One.

**Dearolfia lusciosa Loomis**

*Dearolfia lusciosa* Loomis, 1939, Bull. Mus. Comp. Zool., vol. 86, p. 178, figs. 7a-f.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Seneca Caverns, Pendleton County, West Virginia.

RANGE: Caves in Pendleton County, West Virginia.

**Genus OFCOOKOGONA Causey**

*Ofcookogona* Causey, 1951, Proc. Biol. Soc. Washington, vol. 64, p. 120.

GENEROTYPE: *Ofcookogona steuartae* Causey, by original designation.

RANGE: Arkansas.

SPECIES: Two.

**Ofcookogona alia Causey**

*Ofcookogona alia* Causey, 1951, Proc. Biol. Soc. Washington, vol. 64, p. 121, figs. 14-16.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: Junction City, Union County, Arkansas.

RANGE: Known only from type locality.

**Ofcookogona steuartae Causey**

*Ofcookogona steuartae* Causey, 1951, Proc. Biol. Soc. Washington, vol. 64, p. 121, fig. 13.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: Greenwood, Sebastian County, Arkansas.

RANGE: Known only from type locality.

**Genus OZARKOGONA Causey**

*Ozarkogona* Causey, 1951, Journ. Washington Acad. Sci., vol. 41, p. 80.

GENEROTYPE: *Ozarkogona glebosa* Causey, by original designation.

RANGE: Arkansas.

SPECIES: Two.

**Ozarkogona glebosa Causey**

*Ozarkogona glebosa* Causey, 1951, Journ. Washington Acad. Sci., vol. 41, p. 82, figs. 20, 21.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: Fayetteville, Washington County, Arkansas.

RANGE: Known only from Washington, Benton, and Johnston Counties, Arkansas.

**Ozarkogona ladymani Causey**

*Ozarkogona ladymani* Causey, 1952, Proc. Biol. Soc. Washington, vol. 65, p. 114, figs. 8, 9.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Rector, Clay County, Arkansas.

RANGE: Known only from type locality.

**Genus PSEUDOTREMIA Cope**

*Pseudotremia* Cope, 1869, Proc. Amer. Philos. Soc., vol. 11, p. 179.—

Cook and Collins, 1895, Ann. New York Acad. Sci., vol. 9, p. 34.

GENEROTYPE: *Pseudotremia cavernarum* Cope, by monotypy.

RANGE: Appalachian region from northwest Georgia to West Virginia, and west into Kentucky and Indiana.

SPECIES: Fourteen.

***Pseudotremia carterensis* Packard**

*Pseudotremia cavernarum* var. *carterensis* Packard, 1883, Proc. Amer. Philos. Soc., vol. 21, p. 186.

*Pseudotremia carterensis* Cook and Collins, 1895, Ann. New York Acad. Sci., vol. 9, p. 40, figs. 8–10.

TYPE: Not known to exist.

TYPE LOCALITY: Carter Caves, Carter County, Kentucky.

RANGE: Northeastern Kentucky, also reported from Wyandotte Cave, Indiana, and Marietta, Ohio. Confirmation of the last locality is desirable.

***Pseudotremia cavernarum* Cope**

*Pseudotremia cavernarum* Cope, 1869, Proc. Amer. Philos. Soc., vol. 11, p. 179.

*Pseudotremia sublevis* Loomis, 1944, Psyche, vol. 51, p. 167, fig. 1. (type locality: Tony's Cave, near Newport, Giles County, Virginia; type: Mus. Comp. Zool.).

TYPE: Not known to exist.

TYPE LOCALITY: Erhart's Cave, near Radford, Montgomery County, Virginia.

RANGE: Known only from Giles and Montgomery Counties, Virginia.

***Pseudotremia eburnea* Loomis**

*Pseudotremia eburnea* Loomis, 1939, Bull. Mus. Comp. Zool., vol. 86, No. 4, p. 174, figs. 5a–c.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Cricket Cave, Rising Fawn, Walker County, Georgia.

RANGE: Known only from type locality.

***Pseudotremia fracta* Chamberlin**

*Pseudotremia fracta* Chamberlin, 1951, Great Basin Nat., vol. 11, p. 25.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Gatlinburg Cove, Sevier County, Tennessee.

RANGE: Known only from type locality.

***Pseudotremia fulgida* Loomis**

*Pseudotremia fulgida* Loomis, 1943, Bull. Mus. Comp. Zool., vol. 92, p. 378, figs. 3a–d.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Higginbotham Cave, 1.5 miles northwest of Frankfort, Greenbrier County, West Virginia.

RANGE: Caves in Greenbrier County, West Virginia.

### ***Pseudotremia hansonii* Chamberlin**

*Pseudotremia hansonii* Chamberlin, 1951, Great Basin Nat., vol. 11, p. 25.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Pineville, Bell County, Kentucky.

RANGE: Known only from type locality.

### ***Pseudotremia hobbsii* Hoffman**

*Pseudotremia hobbsii* Hoffman, 1950, Journ. Washington Acad. Sci., vol. 40, p. 90, figs. 4, 5.

TYPE: U. S. Nat. Mus. (No. 1783).

TYPE LOCALITY: Chestnut Ridge Cave, 2.5 miles northwest of Clifton Forge, Alleghany County, Virginia.

RANGE: Known only from caves in the upper James River system, in Alleghany and Bath Counties, Virginia.

### ***Pseudotremia indianae*, new species**

*Pseudotremia cavernarum* (not Cope) Cook and Collins, 1895, Ann. New York Acad. Sci., vol. 9, p. 36, figs. 2-7, 11.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Wyandotte Cave, Crawford County, Indiana.

RANGE: Caves in southern Indiana.

### ***Pseudotremia nodosa* Loomis**

*Pseudotremia nodosa* Loomis, 1939, Bull. Mus. Comp. Zool., vol. 86, p. 175, figs. 6a-d.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: English Cave near Harrowgate, Clairborne County, Tennessee.

RANGE: Known only from type locality.

### ***Pseudotremia princeps* Loomis**

*Pseudotremia princeps* Loomis, 1939, Bull. Mus. Comp. Zool., vol. 86, p. 168, figs. 1a-c.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Eagle Cave, Pendleton County, West Virginia.

RANGE: Caves in Pendleton and Grant Counties, West Virginia.

### ***Pseudotremia simulans* Loomis**

*Pseudotremia simulans* Loomis, 1939, Bull. Mus. Comp. Zool., vol. 86, p. 170, figs. 2a, b.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Cave, Pendleton County, West Virginia.

RANGE: Known only from type locality.

**Pseudotremia sodalis Loomis**

*Pseudotremia sodalis* Loomis, 1939, Bull. Mus. Comp. Zool., vol. 86, No. 4, p. 173, figs. 4a-d.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Bat Cave, Carter County, Kentucky.

RANGE: Known only from type locality.

**Pseudotremia tuberculata Loomis**

*Pseudotremia tuberculata* Loomis, 1939, Bull. Mus. Comp. Zool., vol. 86, p. 171, figs. 3a, b.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Cassell's Cave, Burkes Garden, Tazewell County, Virginia.

RANGE: Caves in vicinity of type locality.

**Pseudotremia valga Loomis**

*Pseudotremia valga* Loomis, 1943, Bull. Mus. Comp. Zool., vol. 92, p. 377, figs. 2a-c.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: King Solomon's Cave (now called Cudjo's Cave), Cumberland Gap, Lee County, Virginia.

RANGE: Known only from type locality.

**Genus RHABDARONA Chamberlin and Mulaik**

*Rhabdarona* Chamberlin and Mulaik, 1941, Journ. New York Ent. Soc., vol. 49, p. 60.

GENEROTYPE: *Rhabdarona bacillipus* Chamberlin and Mulaik, by original designation.

RANGE: Southwestern Texas.

SPECIES: One.

**Rhabdarona bacillipus Chamberlin and Mulaik**

*Rhabdarona bacillipus* Chamberlin and Mulaik, 1941, Journ. New York Ent. Soc., vol. 49, p. 60.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Raven Ranch, Kerr County, Texas.

RANGE: Known only from type locality.

**Genus TIGANOGONA Chamberlin**

*Tiganogona* Chamberlin, 1928, Ent. News, vol. 39, p. 154—Causey, 1951, Journ. Washington Acad., Sci., vol. 41, p. 82.

GENEROTYPE: *Tiganogona brownae* Chamberlin, by original designation.

RANGE: Missouri, Arkansas.

SPECIES: Two.



**Tiganogona brownae Chamberlin**

*Tiganogona brownae* Chamberlin, 1928, Ent. News, vol. 39, p. 154.—

Causey, 1951, Proc. Biol. Soc. Washington, vol. 64, p. 124, figs. 17–18.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: St. Charles, St. Louis County, Missouri.

RANGE: Known only from type locality.

**Tiganogona moesta Causey**

*Tiganogona moesta* Causey, 1951, Journ. Washington Acad. Sci., vol. 41, p. 82, figs. 22, 23.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: Blue Spring, Carroll County, Arkansas.

RANGE: Known from Carroll and Washington Counties, Arkansas.

Cleidogonidae of uncertain generic position

**Pseudotremia vudii Cope**

*Pseudotremia vudii* Cope, 1869, Proc. Amer. Philos. Soc. vol. 11, p. 180.

TYPE: Not known to exist.

TYPE LOCALITY: Montgomery County, Virginia.

Probably a species of *Cleidogona*.

*Family* CONOTYLIDAE Cook

Conotylidae Cook, 1896, Brandtia, No. 2, p. 8.

*Genus* BOLLMANELLA Chamberlin

*Bollmanella* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 3, p. 12.

GENEROTYPE: *Bollmanella oregona* Chamberlin, by original designation.

RANGE: Oregon.

SPECIES: One

**Bollmanella oregona Chamberlin**

*Bollmanella oregona* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 5, p. 12.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Douglas County, Oregon.

RANGE: Known only from type locality.

*Genus* CONOTYLA Cook and Collins

*Conotyla* Cook and Collins, 1895, Ann. New York Acad. Sci., vol. 9, p. 70.—Loomis, 1943, Bull. Mus. Comp. Zool., vol. 92, p. 381.

GENEROTYPE: *Conotyla fischeri* Cook and Collins, by original designation.

RANGE: Western North America from New Mexico and California north to British Columbia; eastern United States from Ontario and New York west to Minnesota and Indiana, south to Maryland.

SPECIES: Thirteen.

***Conotyla albertana* Chamberlin**

*Conotyla albertana* Chamberlin, 1920, Canadian Ent., vol. 52, p. 167.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Bow River, Alberta.

RANGE: Known only from type locality.

***Conotyla atrolineata* (Bollman)**

*Craspedosoma atrolineatum* Bollman, 1888, Proc. U. S. Nat. Mus., vol. 10, p. 618.

*Conotyla atrolineata* Cook and Collins, 1895, Ann. New York Acad. Sci., vol. 9, p. 75, figs. 95-100.—Loomis, 1943, Bull. Mus. Comp. Zool., vol. 92, p. 382 (key).

TYPE: U. S. Nat. Mus. (No. 439).

TYPE LOCALITY: Glacier, British Columbia.

RANGE: Known only from type locality.

***Conotyla bollmani* (McNeill)**

*Trichopetalum bollmani* McNeill, 1887, Proc. U. S. Nat. Mus., vol. 10, p. 330.

*Conotyla bollmani* Cook and Collins, 1895, Ann. New York Acad. Sci., vol. 9, p. 76, figs. 79-94.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Mayfield's Cave, Bloomington, Monroe County, Indiana.

RANGE: Southern and central Indiana.

***Conotyla coloradensis* Chamberlin**

*Conotyla coloradensis* Chamberlin, 1910, Ann. Ent. Soc. Amer., vol. 3, p. 237, pl. 32, figs. 8, 9; pl. 33, figs. 1-3.

TYPE: Present location unknown.

TYPE LOCALITY: Colorado, without further locality.

RANGE: No definite localities known for this species.

***Conotyla deseretae* Chamberlin**

*Conotyla deseretae* Chamberlin, 1910, Ann. Ent. Soc. Amer., vol. 3, p. 235, pl. 31, figs. 3-8; pl. 32, figs. 1-7.

TYPE: Present location unknown.

TYPE LOCALITY: Wasatch Mountains, Utah.

RANGE: The Wasatch Range in central and northern Utah.

***Conotyla fischeri* Cook and Collins**

*Conotyla fischeri* Cook and Collins, 1895, Ann. New York Acad. Sci., vol. 9, p. 71, figs. 55-78.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Here restricted to Syracuse, Onandaga County, New York.

RANGE: Central portion of New York State.

### **Conotyla humerosa Loomis**

*Conotyla humerosa* Loomis, 1943, Bull. Mus. Comp. Zool., vol. 92, p. 384, figs. 5a-d.

TYPE: U. S. Nat. Mus. (No. 1443).

TYPE LOCALITY: Sunnyside Mine, 3 miles southwest of Seneca, Plumas County, California.

RANGE: Known only from type locality.

### **Conotyla jonesi Chamberlin**

*Conotyla jonesi* Chamberlin, 1951, Chicago Acad. Sci. Nat. Hist. Misc. No. 87, p. 6, figs. 12, 13.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Eugene, Layne County, Oregon.

RANGE: Known only from type locality.

### **Conotyla montivaga Loomis**

*Conotyla montivaga* Loomis, 1943, Bull. Mus. Comp. Zool., vol. 92, p. 383, figs. 4a-d.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Santa Rita Mountains, Arizona.

RANGE: Pima and Santa Cruz Counties, southwestern Arizona, and Otero County, New Mexico.

### **Conotyla pectinata Causey**

*Conotyla pectinata* Causey, 1952, Proc. Biol. Soc. Washington, vol. 65, p. 112, figs. 4, 5.

TYPE: Illinois Nat. Hist. Survey.

TYPE LOCALITY: Mount Carroll, Carroll County, Illinois.

RANGE: Known only from type locality.

### **Conotyla specus Loomis**

*Conotyla specus* Loomis, 1939, Bull. Mus. Comp. Zool., vol. 86, p. 184, figs. 11a-c.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Rice's Cave, 3 miles northeast of Goldman, Jefferson County, Missouri.

RANGE: Eastern Missouri and adjacent western Illinois.

### **Conotyla vaga Loomis**

*Conotyla vaga* Loomis, 1939, Bull. Mus. Comp. Zool., vol. 86, p. 182, fig. 10.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: South Temple Cave, Berks County, Pennsylvania.

RANGE: Eastern Pennsylvania south as far as western Maryland.

### **Conotyla wyandotte (Bollman)**

*Scotherpes wyandotte* Bollman, 1889, Proc. U. S. Nat. Mus., vol. 11, p. 405.

*Conotyla wyandotte* Cook and Collins, 1895, Ann. New York Acad. Sci., vol. 9, p. 78, fig. 101.

TYPE: U. S. Nat. Mus. (No. 440).

TYPE LOCALITY: "A few miles north of Wyandotte Cave, Crawford Co., Indiana" (Bollman).

RANGE: Known only from type locality.

### *Genus* COOKELLA Chamberlin

*Cookella* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 5, p. 13.

GENEROTYPE: *Conotyla leibergi* Cook and Collins, by original designation.

RANGE: Northern Idaho.

SPECIES: One.

### **Cookella leibergi (Cook and Collins)**

*Conotyla leibergi* Cook and Collins, 1895, Ann. New York Acad. Sci., vol. 9, p. 77, figs. 102-104.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Lake Pend d'Oreille, Kootenai County, Idaho.

RANGE: Known only from type locality.

### *Genus* FLAGELLOPETALUM Causey

*Flagellopetalum* Causey, 1951, Proc. Biol. Soc. Washington, vol. 64, p. 119.

GENEROTYPE: *Flagellopetalum stannardi* Causey, by original designation.

RANGE: Illinois.

SPECIES: One.

### **Flagellopetalum stannardi Causey**

*Flagellopetalum stannardi* Causey, 1951, Proc. Biol. Soc. Washington, vol. 64, p. 120, figs. 9-12.

TYPE: Illinois Nat. Hist. Surv.

TYPE LOCALITY: Rocky Branch, Clark County, Illinois.

RANGE: Known only from type locality.

### *Genus* PROCONOTYLA Verhoeff

*Proconotyla* Verhoeff, 1932, Zool. Janrb., Abt. Syst., vol. 62, p. 501.

GENEROTYPE: *Proconotyla blakei* Verhoeff, by monotypy.

RANGE: Eastern New York.

SPECIES: One.

**Proconotyla blakei Verhoeff**

*Proconotyla blakei* Verhoeff, 1932, Zool. Jahrb., Abt. Syst., vol. 62, p. 501, pl. 5, figs. 33–37, pl. 6, fig. 38.

TYPE: Verhoeff collection.

TYPE LOCALITY: Mount Adams, Essex County, New York.

RANGE: Known only from type locality.

**Genus SCOTERPES Cope**

*Scoterpes* Cope, 1872, Amer. Nat., vol. 6, p. 414.—Bollman, 1893, U. S. Nat. Mus. Bull. 46, p. 121.—Cook and Collins, 1895, Ann. New York Acad. Sci., vol. 9, p. 55.

GENEROTYPE: *Spirostrephon copei* Packard, by original designation.

RANGE: Central eastern United States, Missouri and Kentucky south into northern Georgia and Alabama.

SPECIES: Three, one with two subspecies.

**Scoterpes austrinus austrinus Loomis**

*Scoterpes austrinus* Loomis, 1943, Bull. Mus. Comp. Zool., vol. 92, p. 386, fig. 6, pl. 1, figs. 1, 2.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Manitou Cave, 1 mile south of Fort Payne, De Kalb County, Alabama.

RANGE: Known only from type locality.

**Scoterpes austrinus nudus Chamberlin**

*Scoterpes austrinus nudus* Chamberlin, 1946, Ent. News. vol. 57, p. 152.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 4 miles north of Kingston, Bartow County, Georgia (Salt peter Cave).

RANGE: Known only from type locality.

**Scoterpes copei (Packard)**

*Spirostrephon (Pseudotremia) copei* Packard, 1871, Amer. Nat., vol. 5, p. 748.

*Scoterpes copei* Cope, 1872, Amer. Nat., vol. 6, p. 414.—Cook and Collins, 1895, Ann. New York Acad. Sci., vol. 9, p. 55, figs. 12, 13.

TYPE: Present location unknown.

TYPE LOCALITY: Mammoth Cave, Edmonson County, Kentucky.

RANGE: Central Kentucky, southeast to northern Georgia and eastern Tennessee.

**Scoterpes dendropus Loomis**

*Scoterpes dendropus* Loomis, 1939, Bull. Mus. Comp. Zool., vol. 86, p. 181, figs. 9a–c.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Marvel Cave, Stone County, Missouri.

RANGE: Also known from near Galena, Stone County, Missouri.

**Genus TAIYUTYLA Chamberlin**

*Taiyutyla* Chamberlin, 1952, Chicago Acad. Sci. Nat. Hist. Misc. No. 113, p. 1.

GENEROTYPE: *Taiyutyla corvallis* Chamberlin, by original designation.

RANGE: Oregon.

SPECIES: One.

***Taiyutyla corvallis* Chamberlin**

*Taiyutyla corvallis* Chamberlin, 1952, Chicago Acad. Sci. Nat. Hist. Misc. No. 113, p. 1, figs. 1, 2.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Corvallis, Benton County, Oregon.

RANGE: Known only from type locality.

**Genus TRICHOPETALUM Harger**

*Trichopetalum* Harger, 1872, Amer. Journ. Sci. Arts, vol. 4, p. 117.—Cook and Collins, 1895, Ann. New York Acad. Sci., vol. 9, p. 62.

GENEROTYPE: *Trichopetalum lunatum* Harger, by subsequent designation of Cook and Collins, 1895.

RANGE: Northeastern United States, from New York and Connecticut south to Tennessee and west through Illinois and Indiana to Arkansas.

SPECIES: Five.

***Trichopetalum album* Cook and Collins**

*Trichopetalum album* Cook and Collins, 1895, Ann. New York Acad. Sci., vol. 9, p. 64, figs. 22–29, 36–45.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Here restricted to Syracuse, Onondaga County, New York.

RANGE: Central New York, southern Ontario.

***Trichopetalum cornutum* Cook and Collins**

*Trichopetalum cornutum* Cook and Collins, 1895, Ann. New York Acad. Sci., vol. 9, p. 66, figs. 46–49.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Bloomington, Monroe County, Indiana.

RANGE: Indiana and Illinois.

***Trichopetalum lunatum* Harger**

*Trichopetalum lunatum* Harger, 1872, Amer. Journ. Sci. Arts, vol. 4, p. 118.—Cook and Collins, 1895, Ann. New York Acad. Sci., vol. 9, p. 63, figs. 52, 53.

TYPE: Present location unknown.

TYPE LOCALITY: New Haven, Orange County, Connecticut.

RANGE: Known definitely only from type locality.

### **Trichopetalum montis Chamberlin**

*Trichopetalum montis* Chamberlin, 1951, Great Basin Nat., vol. 11, p. 24, figs. 13, 14.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Gatlinburg, Sevier County, Tennessee.

RANGE: Known only from type locality.

### **Trichopetalum unicum Cook and Collins**

*Trichopetalum unicum* Cook and Collins, 1895, Ann. New York Acad. Sci., vol. 9, p. 66, fig. 51.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Bloomington, Monroe County, Indiana.

RANGE: Indiana and Illinois, south to Arkansas.

#### *Genus* **TRIGENOTYLA** Causey

*Trigenotyla* Causey, 1951, Proc. Biol. Soc. Washington, vol. 64, p. 118.

GENEROTYPE: *Trigenotyla parca* Causey, by original designation.

RANGE: Arkansas.

SPECIES: One.

### **Trigenotyla parca Causey**

*Trigenotyla parca* Causey, 1951, Proc. Biol. Soc. Washington, vol. 64, p. 118, figs. 1-5.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: Carroll County, Arkansas.

RANGE: Known only from Carroll and Washington Counties, Arkansas.

#### *Genus* **TYNOPUS** Chamberlin

*Tynopus* Chamberlin, 1940, Canadian Ent., vol. 72, p. 57.

GENEROTYPE: *Tynopus dux* Chamberlin, by original designation.

RANGE: North Carolina.

SPECIES: One.

### **Tynopus dux Chamberlin**

*Tynopus dux* Chamberlin, 1940, Canadian Ent., vol. 72, p. 57.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Duke Forest, Orange County, North Carolina.

RANGE: Known only from type locality.

#### *Genus* **ZYGONOPUS** Ryder

*Zygonopus* Ryder, 1881, Proc. U. S. Nat. Mus., vol. 3, p. 527.—Cook and Collins, 1895, Ann. New York Acad. Sci., vol. 9, p. 59.

GENEROTYPE: *Zygonopus whitei* Ryder, by monotypy.

RANGE: Western Virginia, in caves.

SPECIES: One.

### **Zygonopus whitei** Ryder

*Zygonopus whitei* Ryder, 1881, Proc. U. S. Nat. Mus., vol. 3, p. 527.—

Cook and Collins, 1895, Ann. New York Acad. Sci., vol. 9, p. 60,  
figs. 14–21.

TYPE: Present location unknown.

TYPE LOCALITY: Luray Caverns, Page County, Virginia.

RANGE: Caves in Roanoke, Montgomery, Alleghany, Bath, and Page Counties, Virginia, and in Pendleton County, West Virginia.

### *Genus* ZYGOTELE Chamberlin

*Zygotela* Chamberlin, 1951, Chicago Acad. Sci. Nat. Hist. Misc., No. 87,  
p. 6.

GENEROTYPE: *Zygotela phana* Chamberlin, by original designation.

RANGE: British Columbia.

SPECIES: One.

### **Zygotela phana** Chamberlin

*Zygotela phana* Chamberlin, 1951, Chicago Acad. Sci. Nat. Hist. Misc.  
No. 87, p. 7, fig. 14.

TYPE: Provincial Mus., British Columbia.

TYPE LOCALITY: Blue River, British Columbia.

RANGE: Known only from type locality.

### Conotylidae of uncertain generic position

#### **Craspedosoma flavidum** Bollman

*Craspedosoma flavidum* Bollman, 1888, Ent. Amer., vol. 4, p. 2.

*Trichopetalum flavidum* Cook and Collins, 1895, Ann. New York Acad.  
Sci. vol. 9, p. 67, fig. 50.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Okolona, Clark County, Arkansas.

The male of Bollman's original pair of types was lost after his demise, and could not be found in 1894 nor during recent renovation of the collection at Washington. Until such a time as male topotypes are studied, the position of this species must remain unsettled.

#### **Polydesmus ocellatus** Packard

*Polydesmus ocellatus* Packard, 1883, Amer. Nat., vol. 17, p. 428.

*Craspedosoma packardi* Stuxberg, 1885, Amer. Nat., vol. 19, p. 400.

*Trichopetalum ocellatum* Cook and Collins, 1895, Ann. New York Acad.  
Sci., vol. 9, p. 68, figs. 30–35.



TYPE: Probably lost.

TYPE LOCALITY: "Oregon."

This poorly described form presents an extremely difficult problem, and the name may never be placed except by some empirical action.

### **Trichopetalum glomeratum** Harger

*Trichopetalum glomeratum* Harger, 1872, Amer. Journ. Sci. Arts, vol. 4, p. 118.

TYPE: Present location unknown.

TYPE LOCALITY: John Day Valley, Oregon.

Possibly a species of *Conotyla*, but, as observed by Cook and Collins, "The original description of this species is so brief that the generic position must remain in doubt."

## *Family* ERGETHIDAE Chamberlin

Ergethidae Chamberlin, 1949, Proc. Biol. Soc. Washington, vol. 62, p. 7.

### *Genus* ERGETHUS Chamberlin

*Ergethus* Chamberlin, 1949, Proc. Biol. Soc. Washington, vol. 62, p. 7.

GENEROTYPE: *Ergethus perditus* Chamberlin, by original designation.

RANGE: Texas.

SPECIES: One.

### **Ergethus perditus** Chamberlin

*Ergethus perditus* Chamberlin, 1949, Proc. Biol. Soc. Washington, vol. 62, p. 7, figs. 1, 2.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Near Kerrville, Kerr County, Texas.

RANGE: Known only from type locality.

## *Family* RHISCOSOMIDIDAE Silvestri

Rhiscosomididae Silvestri, 1909, Atti Accad. Lincei, Rendic., vol. 18, p. 232.

### *Genus* RHISCOSOMIDES Silvestri

*Rhiscosomides* Silvestri, 1909, Atti Acad. Lincei, Rendic., vol. 18, p. 232.

GENEROTYPE: *Rhiscosomides meineri* Silvestri, by monotypy.

RANGE: Oregon.

SPECIES: Two.

### **Rhiscosomides josephi** Chamberlin

*Rhiscosomides josephi* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 5, p. 16.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: John Day Creek, Douglas County, Oregon.

RANGE: Known only from type locality.

### **Rhiscosomides meineri Silvestri**

*Rhiscosomides meineri* Silvestri, 1909, Atti Acad. Lincei, Rendic., vol. 18, p. 232.

TYPE: Present location unknown.

TYPE LOCALITY: Lebanon, Linn County, Oregon.

RANGE: Known only from type locality.

### **Genus TINGUPA Chamberlin**

*Tingupa* Chamberlin, 1910, Ann. Ent. Soc. Amer., vol. 3, No. 4, p. 238.

GENEROTYPE: *Tingupa utahensis* Chamberlin, by original designation.

RANGE: California, Utah, Missouri.

SPECIES: Three, one having two subspecies.

### **Tingupa monterea Chamberlin**

*Tingupa monterea* Chamberlin, 1910, Ann. Ent. Soc. Amer., vol. 3, p. 240, pl. 34, figs. 3-5.

TYPE: Present location unknown.

TYPE LOCALITY: Pacific Grove, Monterey County, California.

RANGE: Known only from type locality.

### **Tingupa pallida Loomis**

*Tingupa pallida* Loomis, 1939, Bull. Mus. Comp. Zool., vol. 86, No. 4, p. 185, figs. 12a-c.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: River Cave at Hahatunka, Camden County, Missouri.

RANGE: Extreme eastern Missouri and adjacent western Illinois, in caves.

### **Tingupa utahensis utahensis Chamberlin**

*Tingupa utahensis* Chamberlin, 1910, Ann. Ent. Soc. Amer., vol. 3, p. 238, pl. 33, figs. 4-8; pl. 34, figs. 1, 2.

TYPE: Present location unknown.

TYPE LOCALITY: Mill Creek Canyon, Salt Lake County, Utah.

RANGE: Canyons of the northern Wasatch Mountains, in Utah.

### **Tingupa utahensis australis Chamberlin**

*Tingupa utahensis australis* Chamberlin, 1925, Pan-Pacific Ent., vol. 2, No. 2, p. 62.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Cedar City, Iron County, Utah.

RANGE: Known only from type locality.

**Family UNDERWOODIIDAE** Verhoeff

Underwoodiidae Verhoeff, 1909, Zool. Anz., vol. 34, p. 568.

**Genus UNDERWOODIA** Cook and Collins

*Underwoodia* Cook and Collins, 1895, Ann. New York Acad. Sci., vol. 9, p. 79.

GENEROTYPE: *Underwoodia polygama* Cook and Collins, by present designation.

RANGE: Northeastern North America; Utah.

SPECIES: Four.

***Underwoodia hespera* Chamberlin**

*Underwoodia hespera* Chamberlin, 1925, Pan-Pacific Ent., vol. 2, No. 2, p. 63.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Mill Creek Canyon, Salt Lake County, Utah.

RANGE: Canyons of the Wasatch Mountains, Utah.

***Underwoodia iuloides* (Harger)**

*Trichopetalum iuloides* Harger, 1872, Amer. Journ. Sci. Arts, vol. 4, p. 118.

*Underwoodia iuloides* Cook and Collins, 1895, Ann. New York Acad. Sci., vol. 9, p. 83, figs. 177-179.

TYPE: Present location unknown.

TYPE LOCALITY: Simmon's Harbor, Ontario.

RANGE: Recorded from Ontario, Michigan, and central New York.

***Underwoodia polygama* Cook and Collins**

*Underwoodia polygama* Cook and Collins, 1895, Ann. New York Acad. Sci. vol. 9, p. 80, figs. 180-190.—Palmén, 1952, Ann. Zool. Soc. 'Vanamo', vol. 15, No. 1, p. 2, figs. 1-9.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Centerport (Long Island), Suffolk County, New York.

RANGE: Recorded only from Long Island and from Newfoundland.

***Underwoodia tida* Chamberlin**

*Underwoodia tida* Chamberlin, 1925, Pan-Pacific Ent., vol. 2, No. 2, p. 62.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Logan Canyon, Cache County, Utah.

RANGE: Known only from type locality.

**Family UROCHORDEUMIDAE** Silvestri

Urochordeumidae Silvestri, 1909, Atti Accad. Lincei, Rendic., vol. 18, p. 230.

**Genus UROCHORDEUMA Silvestri**

*Urochordeuma* Silvestri, 1909, Atti Accad. Lincei, Rendic., vol. 18, p. 230.

GENEROTYPE: *Urochordeuma bumpusi* Silvestri, by monotypy.

RANGE: Washington.

SPECIES: Two.

***Urochordeuma bumpusi* Silvestri**

*Urochordeuma bumpusi* Silvestri, 1909, Atti Accad. Lincei, Rendic., vol. 18, p. 230.

TYPE: Present location unknown.

TYPE LOCALITY: Longmire Springs, near Tacoma, Pierce County, Washington.

RANGE: Known only from type locality.

***Urochordeuma porona* Chamberlin**

*Urochordeuma porona* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 4, p. 23, figs. 45, 46.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Snoqualmie Pass, King County, Washington.

RANGE: Known only from type locality.

**Suborder LYSIOPETALIDEA**

Lysiopetalidae Wood, 1865, Trans. Amer. Philos. Soc., new ser., vol. 13, p. 191.—Ryder, 1881, Proc. U. S. Nat. Mus., vol. 3, p. 524.

Monozonia (in part) Brandt, 1833, Bull. Soc. Nat. Moscou, vol. 6, p. 205.

Craspedosomidae (in part) Gray, 1842, *in* Todd, Cyclop. Anat. and Physiol., vol. 3, p. 546.—Saussure and Humbert, 1872, Études sur les myriapodes, *in* Miss. Sci. Mexique, Zool., pt. 6, sect. 2, p. 56.

Callipodoidae Bollman, 1893, U. S. Nat. Mus. Bull. 46, p. 155.

Lysiopetaloida Cook, 1895, Ann. New York Acad. Sci., vol. 9, p. 3.—Attems, 1926, *in* Kükenthal-Krumbach, Handbuch der Zoologie, vol. 4, p. 177.

**Family LYSIOPETALIDAE Wood**

Lysiopetalidae Wood, 1865, Trans. Amer. Philos. Soc., vol. 13, p. 191.—Cook, 1895, Ann. New York Acad. Sci., vol. 9, p. 3.—Loomis, 1937, Proc. U. S. Nat. Mus., vol. 84, No. 3006, p. 97 (monograph of North American species).

**Genus ABACION Rafinesque<sup>5</sup>**

*Abacion* Rafinesque, 1820, Annals of nature, p. 9.—Hoffman and Crahill, 1953, Florida Ent., vol. 36, p. 81.

<sup>5</sup> The arrangement of species in this genus is based on unpublished work by the junior author.

*Spirostrephon* Brandt, 1841 Bull. Sci. Acad. Sci. Saint-Petersbourg, vol. 8, p. 105.—Cook, 1895, Amer. Nat., vol. 29, p. 1017.—Loomis, 1937, Proc. U. S. Nat. Mus., vol. 84, p. 105 (generotype, *Julus lactarius* Say, by monotypy).

*Platops* Newport, 1844, Ann. Mag. Nat. Hist., vol. 13, p. 267 (generotype, *P. rugulosa* Newport, by present designation).

GENEROTYPE: *Abacion tessellatum* Rafinesque, by monotypy.

RANGE: Eastern United States, east of the 100th Meridian.

SPECIES: Four, of which two have one subspecies each.

### **Abacion lactarium (Say)**

*Julus lactarius* Say, 1821, Journ. Acad. Nat. Sci. Philadelphia, vol. 2, p. 104.

*Spirostrephon lactarium* Brandt, 1841, Bull. Sci. Acad. Sci. Saint-Petersbourg, vol. 8, p. 105.—Loomis, 1937, Proc. U. S. Nat. Mus., vol. 84, p. 108, fig. 16 l-m.

*Platops lineata* Newport, 1844, Ann. Mag. Nat. Hist., vol. 13, p. 267 (type locality: "North America"; type: British Museum, probably the original Say type of *lactarius*).

TYPE: Location not known with certainty (see note above in entry for *Platops lineata*).

TYPE LOCALITY: Here restricted to the vicinity of Philadelphia, Pennsylvania.

RANGE: Coastal Plain and Piedmont of the Atlantic States, from northern New Jersey south into peninsular Florida. Exact limits of range still very poorly known.

### **Abacion magnum magnum (Loomis)**

*Spirostrephon magnum* Loomis, 1943, Bull. Mus. Comp. Zool., vol. 92, p. 388, fig. 8a, b.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Monte Sano State Park, Madison County, Alabama.

RANGE: Extreme northeastern Alabama, probably also adjacent parts of Tennessee and Georgia.

### **Abacion magnum highlandense (Hoffman)**

*Spirostrephon highlandensis* Hoffman, 1950, Journ. Elisha Mitchell Sci. Soc., vol. 66, p. 17, figs. 5, 6.

TYPE: U. S. Nat. Mus. (No. 1875).

TYPE LOCALITY: Highlands, Macon County, North Carolina.

RANGE: Most of the Appalachian Mountains. Peripheral localities include St. Clair and Lee Counties, Alabama; Stephens County, Georgia; Greenville County, South Carolina; Harlan County, Kentucky; Upshur

County, West Virginia; Tompkins and Greene Counties, New York. Merges with *A. m. magnum* in northeastern Alabama.

**Abacion tessellatum tessellatum Rafinesque**

*Abacion tessellatum* Rafinesque, 1820, Annals of nature, p. 9.—Hoffman and Crabill, 1953, Florida Ent., vol. 36, p. 81.

*Platops rugulosa* Newport, 1844, Ann. Mag. Nat. Hist., vol. 13, p. 267 (type locality unknown, probably Ohio River Valley; type: British Museum).

*Reasia spinosa* Sager, 1856, Proc. Acad. Nat. Sci. Philadelphia, p. 109 (type locality here designated: vicinity of Detroit, Michigan; type: not known to exist).

*Lysipetalum eudasym* McNeill, 1887, Proc. U. S. Nat. Mus., vol. 10, p. 330 (type locality: Bloomington, Indiana; types: U. S. Nat. Mus.).

TYPE: Not known to exist.

TYPE LOCALITY: Estill County, Kentucky.

RANGE: Centered in the Interior Lowlands; peripheral localities include St. Louis, Missouri; Winnebago County, Illinois (the species surely occurs in Wisconsin); Estill County, Kentucky; Washington County, Pennsylvania; Alleghany and Montgomery Counties, Virginia. Intergradation with the following race takes place in southern Missouri and probably also through much of Tennessee.

**Abacion tessellatum creolum (Chamberlin)**

*Spirostrephon creolum* Chamberlin, 1942, Bull. Univ. Utah, biol. ser., vol. 6, No. 8, p. 9, figs. 24, 25.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Covington, St. Tammany Parish, Louisiana.

RANGE: From Lee County, Alabama (doubtless also the western Panhandle of Florida), west through Mississippi and Louisiana to the north-western corner of Arkansas.

**Abacion texense (Loomis)**

*Spirostrephon texensis* Loomis, 1937, Proc. U. S. Nat. Mus., vol. 84, p. 109, fig. 16n.

*Spirostrephon jonesi* Chamberlin, 1942, Canadian Ent., vol. 74, p. 17, fig 1 (type locality: Ames, Story County, Iowa; type: collection of R. V. Chamberlin).

TYPE: U. S. Nat. Mus. (No. 1237).

TYPE LOCALITY: Pierce, Wharton County, Texas.

RANGE: Great Plains from Ames, Iowa, and Lincoln, Nebraska, through Kansas, Oklahoma, and western Missouri, south as far as Kerr, Bandera, and Wharton Counties, Texas, east through Arkansas and Louisiana to Rankin County, Mississippi. The exact limits of distribution remain to be determined.

**Genus COLACTIS Loomis**

*Colactis* Loomis, 1937, Proc. U. S. Nat. Mus., vol. 84, p. 120.

GENEROTYPE: *Colactis saxetana* Loomis, by original designation.

RANGE: Arizona and Utah, south into the Mexican Plateau.

SPECIES: Six, of which five occur in our limits.

***Colactis baboquivari* Loomis**

*Colactis baboquivari* Loomis, 1937, Proc. U. S. Nat. Mus., vol. 84, p. 123,  
figs. 16c, d, pl. 3, fig. 4.

TYPE: U. S. Nat. Mus. (No. 1244).

TYPE LOCALITY: Baboquivari Canyon, Pima County, Arizona.

RANGE: Known only from type locality.

***Colactis quadrata* Loomis**

*Colactis quadrata* Loomis, 1937, Proc. U. S. Nat. Mus., vol. 84, p. 128,  
figs. 16e, f, pl. 3, fig. 5.

TYPE: U. S. Nat. Mus. (No. 1247).

TYPE LOCALITY: Cave Creek Canyon, Chiricahua Mountains, Cochise County, Arizona.

RANGE: Known only from type locality.

***Colactis saxetana* Loomis**

*Colactis saxetana* Loomis, 1937, Proc. U. S. Nat. Mus., vol. 84, p. 122,  
figs. 16a, b, pl. 3, fig. 2.

TYPE: U. S. Nat. Mus. (No. 1243).

TYPE LOCALITY: Piacacho Mountain, between Tucson and Casa Grande, Pinal County, Arizona.

RANGE: Also recorded with a doubt (female material) from near Sacaton, Arizona.

***Colactis sideralis* Loomis**

*Colactis sideralis* Loomis, 1937, Proc. U. S. Nat. Mus., vol. 84, p. 125,  
figs. 16j, k, pl. 4, figs. 1, 2.

TYPE: U. S. Nat. Mus. (No. 1245).

TYPE LOCALITY: Estrella Mountains, Maricopa County, Arizona.

RANGE: Reported from Maricopa, Pinal, and Yuma Counties, Arizona.

***Colactis utorum* (Chamberlin)**

*Spirostrephon utorum* Chamberlin, 1925, Pan-Pacific Ent., vol. 2, No. 2,  
p. 61.

*Colactis utorum* Loomis, 1937, Proc. U. S. Nat. Mus., vol. 84, p. 130.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Green River, Emery County, Utah.

RANGE: Known only from type locality.

**Genus DELOPHON Chamberlin<sup>o</sup>**

*Delophon* Chamberlin, 1943, Bull. Univ. Utah, biol. ser., vol. 8, No. 2, p. 13.—Causey, 1954, Tulane Stud. Zool., vol. 2, No. 4, p. 63 (key to species).

GENEROTYPE: *Delophon georgianum* Chamberlin, by original designation.

RANGE: Southern end of the Appalachian Mountains.

SPECIES: Three.

***Delophon carolinum* Hoffman**

*Delophon carolinum* Hoffman, 1950, Journ. Elisha Mitchell Sci. Soc., vol. 66, p. 18, fig. 5.

TYPE: U. S. Nat. Mus. (No. 1874).

TYPE LOCALITY: Highlands, Macon County, North Carolina.

RANGE: Known from Macon, Transylvania, and Swain Counties, North Carolina, and Rabun County, Georgia.

***Delophon georgianum* Chamberlin**

*Delophon georgianum* Chamberlin, 1943, Bull. Univ. Utah, biol. ser., vol. 8, No. 2, p. 13, figs. 28–30.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Gainesville, Hall County, Georgia.

RANGE: Known only from type locality.

***Delophon serrulatum* Causey**

*Delophon serrulatum* Causey, 1954, Tulane Stud. Zool., vol. 2, No. 4, p. 64, figs. 1–3.

TYPE: Amer. Mus. Nat. Hist.

TYPE LOCALITY: Nine miles west of Loxley, Baldwin County, Alabama (stated to be Mississippi in the original description).

RANGE: Known only from type locality.

**Genus DIACTIS Loomis**

*Diactis* Loomis, 1937, Proc. U. S. Nat. Mus., vol. 84, p. 110.

GENEROTYPE: *Diactis soleata* Loomis, by original designation.

RANGE: Southern California.

SPECIES: Three.

***Diactis frondifera* Loomis**

*Diactis frondifera* Loomis, 1937, Proc. U. S. Nat. Mus., vol. 84, p. 116, fig. 17f.

TYPE: U. S. Nat. Mus. (No. 1240).

TYPE LOCALITY: Torrey Pines, La Jolla, San Diego County, California.

RANGE: Known only from type locality.

<sup>o</sup> Assigned to the European family Dorypetalidae by Causey (1954), but without, as far as we can see, adequate justification.



**Diactis soleata Loomis**

*Diactis soleata* Loomis, 1937, Proc. U. S. Nat. Mus., vol. 84, p. 113, figs. 17b-e, pl. 3, fig. 1.

TYPE: U. S. Nat. Mus. (No. 1238).

TYPE LOCALITY: Temescal Canyon Road, near Corona, Riverside County, California.

RANGE: Known only from type locality.

**Diactis triangula Loomis**

*Diactis triangula* Loomis, 1937, Proc. U. S. Nat. Mus., vol. 84, p. 114, fig. 17a.

TYPE: U. S. Nat. Mus. (No. 1239).

TYPE LOCALITY: Cottonwood Creek, 46 miles east of San Diego, on the road to El Centro, San Diego County, California.

RANGE: Known only from type locality.

**Genus ETIRON Chamberlin**

*Etiron* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 4, p. 21.

GENEROTYPE: *Etiron paroicum* Chamberlin, by original designation.

RANGE: Southern California.

SPECIES: Two.

**Etiron paroicum Chamberlin**

*Etiron paroicum* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 4, p. 21, figs. 37-41.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Mountain Spring, Riverside County, California.

RANGE: Known only from type locality.

**Etiron pearcei Chamberlin**

*Etiron pearcei* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 4, p. 22.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Castro Valley, Alameda County, California.

RANGE: Known only from type locality.

**Genus HEPTIUM Loomis**

*Heptium* Loomis, 1937, Proc. U. S. Nat. Mus., vol. 84, p. 130.

GENEROTYPE: *Heptium carinellum* Loomis, by original designation.

RANGE: Southern California.

SPECIES: Three.

**Heptium canum Chamberlin**

*Heptium canum* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 4, p. 22, figs. 42-44.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Coyote Wells, Riverside County, California.

RANGE: Known only from type locality.

**Heptium carinellum Loomis**

*Heptium carinellum* Loomis, 1937, Proc. U. S. Nat. Mus., vol. 84, p. 132, figs. 18f-j, pl. 4, figs. 3, 4.

TYPE: U. S. Nat. Mus. (No. 1248).

TYPE LOCALITY: 2 miles east of "Indian Head" on the Indio-El Centro road, Imperial County, California.

RANGE: Imperial and Riverside Counties, California.

**Heptium scamillatum Loomis**

*Heptium scamillatum* Loomis, 1937, Proc. U. S. Nat. Mus., vol. 84, p. 134, figs. 18a-e, pl. 4, figs. 5, 6.

TYPE: U. S. Nat. Mus. (No. 1249).

TYPE LOCALITY: Between Perris and Elsinore, Riverside County, California.

RANGE: Known only from type locality.

*Genus* **TEXOPHON** Chamberlin

*Texophon* Chamberlin, 1946, Ent. News, vol. 57, p. 97.

GENEROTYPE: *Texophon nessius* Chamberlin, by original designation.

RANGE: Southern Texas.

SPECIES: One.

**Texophon nessius Chamberlin**

*Texophon nessius* Chamberlin, 1946, Ent. News, vol. 57, p. 97, figs. 1, 2.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Laguna Madre, 23 miles southeast of Harlingen, Cameron County, Texas.

RANGE: Known only from several localities in Cameron County, Texas.

*Genus* **TYNOMMA** Loomis

*Tynomma* Loomis, 1937, Proc. U. S. Nat. Mus., vol. 84, p. 117.

GENEROTYPE: *Tynomma sedecimum* Loomis, by original designation.

RANGE: Central California.

SPECIES: Three.

**Tynomma consanguineum Loomis**

*Tynomma consanguineum* Loomis, 1937, Proc. U. S. Nat. Mus., vol. 84, p. 119, figs. 17g-i.

TYPE: U. S. Nat. Mus. (No. 1242).

TYPE LOCALITY: Santa Cruz Mountains, between Santa Cruz and Holy City, Santa Cruz County, California.

RANGE: Known only from type locality.

**Tynomma mutans (Chamberlin)**

*Lysiopetalum mutans* Chamberlin, 1910, Ann. Ent. Soc. America, vol. 3, p. 233, pl. 30, figs. 1-10, pl. 31, figs. 1, 2.

*Tynomma mutans* Loomis, 1937, Proc. U. S. Nat. Mus., vol. 84, p. 120.

TYPE: Present location unknown.

TYPE LOCALITY: Stanford, Santa Clara County, California.

RANGE: Known only from type locality.

**Tynomma sedecimum Loomis**

*Tynomma sedecimum* Loomis, 1937, Proc. U. S. Nat. Mus., vol. 84, p. 118, figs. 17j-l, pl. 3, fig. 6.

TYPE: U. S. Nat. Mus. (No. 1241).

TYPE LOCALITY: Between Vallejo and Cordelia, Solano County, California.

RANGE: Known only from the vicinity of the type locality.

*Suborder* STRIARIDEA

Striaroidea Cook, 1896, Brandtia, No. 2, p. 8; 1899, Proc. U. S. Nat. Mus., vol. 21, p. 670.—Attems, 1926, in Kükenthal-Krumbach, Handbuch der Zoologie, vol. 4, p. 177.

*Family* STRIARIIDAE Bollman

Striariinae Bollman, 1893, U. S. Nat. Mus. Bull. 46, p. 158.

Striariidae Cook, 1895, Ann. New York Acad. Sci., vol. 9, p. 4; 1899, Proc. U. S. Nat. Mus., vol. 21, p. 670.—Loomis, 1936, Journ. Washington Acad. Sci., vol. 26, p. 404.

*Genus* AMPLARIA Chamberlin

*Amplaria* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 5, p. 9.

GENEROTYPE: *Amplaria eutypa* Chamberlin, by original designation.

RANGE: California and Oregon; North Carolina.

SPECIES: Three.

**Amplaria causeyae (Chamberlin)**

*Striaria causeyae* Chamberlin, 1940, Canadian Ent., vol. 72, p. 58.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Duke Forest, Orange County, North Carolina.

RANGE: Known only from type locality.

**Amplaria eutypa Chamberlin**

*Amplaria eutypa* Chamberlin, 1941, Bull. Univ. Utah., biol. ser., vol. 6, No. 5, p. 9.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 9 miles north of Placerville, Eldorado County, California.

RANGE: Known only from type locality.

**Amplaria nazinta (Chamberlin)**

*Striaria nazinta* Chamberlin, 1910, Ann. Ent. Soc. Amer., vol. 3, p. 242, pl. 35, figs. 2-6.

TYPE: Present location unknown.

TYPE LOCALITY: Portland, Multnomah County, Oregon.

RANGE: Known only from type locality.

**Genus STRIARIA Bollman**

*Striaria* Bollman, 1888, Ann. New York Acad. Sci., vol. 4, p. 108.—Cook, 1899, Proc. U. S. Nat. Mus., vol. 21, p. 671.—Loomis, 1936, Journ. Washington Acad. Sci., vol. 26, p. 409 (key to species).

GENEROTYPE: *Striaria granulosa* Bollman, by original description.

RANGE: Appalachian region; Illinois; California.

SPECIES: Nine.

**Striaria antica Causey**

*Striaria antica* Causey, 1952, Proc. Biol. Soc. Washington, vol. 65, p. 112, figs. 1-3.

TYPE: Illinois Nat. Hist. Surv.

TYPE LOCALITY: Turkey Run State Park, Montgomery County, Indiana.

RANGE: Known only from type locality.

**Striaria californica Cook**

*Striaria californica* Cook, 1899, Proc. U. S. Nat. Mus., vol. 21, p. 675, pl. 53, fig. 2a.—Loomis, 1936, Journ. Washington Acad. Sci., vol. 26, p. 409, fig. 1f.

TYPE: U. S. Nat. Mus. (No. 776).

TYPE LOCALITY: California, probably near Sausalito, Marin County.

RANGE: Reported from three localities in southern California.

**Striaria carmela Chamberlin**

*Striaria carmela* Chamberlin, 1947, Proc. Biol. Soc. Washington, vol. 60, p. 9, figs. 1, 2.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Hastings Reservation, Monterey County, California.

RANGE: Known only from type locality.

**Striaria columbiana Cook**

*Striaria columbiana* Cook, 1899, Proc. U. S. Nat. Mus., vol. 21, p. 674, pl. 53, fig. 3a, pl. 54, figs. 1a-m.

TYPE: U. S. Nat. Mus. (No. 775).

TYPE LOCALITY: Washington, D. C.

RANGE: Known from the District of Columbia, adjacent Maryland, and southwest to Front Royal and Charlottesville, Virginia.

**Striaria eldora Chamberlin**

*Striaria eldora* Chamberlin, 1953, Ent. News, vol. 64, p. 95.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Crystal Cosumnes Cave, Eldorado County, California.

RANGE: Known only from type locality.

**Striaria granulosa Bollman**

*Striaria granulosa* Bollman, 1888, Ann. New York Acad. Sci., vol. 4, p. 108.—Cook, 1899, Proc. U. S. Nat. Mus., vol. 21, p. 672, pl. 53, figs. 1a–j.

TYPE: U. S. Nat. Mus. (No. 230).

TYPE LOCALITY: Beaver Creek, Jefferson County, Tennessee.

RANGE: Eastern Tennessee, southwestern Virginia; exact limits of range not yet established.

**Striaria imberbis Loomis**

*Striaria imberbis* Loomis, 1936, Journ. Washington Acad. Sci., vol. 26, p. 408, fig. 1d.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: South of Atascadero, San Luis Obispo County, California.

RANGE: Known only from type locality.

**Striaria nana Loomis**

*Striaria nana* Loomis, 1936, Journ. Washington Acad. Sci., vol. 26, p. 407, figs. 1a–c.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Altamont Pass, above Miles, Alameda County, California.

RANGE: Also recorded from Pescadero, Santa Cruz County, California.

**Striaria zygoleuca Hoffman**

*Striaria zygoleuca* Hoffman, 1950, Journ. Elisha Mitchell Sci. Soc., vol. 66, p. 16, fig. 4.

TYPE: U. S. Nat. Mus. (No. 1873).

TYPE LOCALITY: Highlands, Macon County, North Carolina.

RANGE: Known from several localities in western North Carolina and adjacent eastern Tennessee.

**Order JULIDA**

Julidea Brandt, 1833, Bull. Soc. Nat. Moscou, vol. 6, p. 201.

Julidae Meinert, 1868, Naturh. Tidsskr., ser. 3, vol. 5, p. 6.—Latzel, 1884, Myr. Öst.-Ung. Monarch., vol. 2, p. 238.

Juloidea Cook, 1895, Ann. New York Acad. Sci., vol. 9, p. 6.—Silvestri, 1897, Ann. Mus. Civ. Stor. Nat. Genova, ser. 2, vol. 18, p. 650.

Zygocheta Cook, 1896, *Brandtia*, No. 2, p. 8.

Diplocheta (in part) Cook, 1895, *Ann. New York Acad. Sci.*, vol. 9, p. 5.—

Silvestri, 1897, *Ann. Mus. Civ. Stor. Nat. Genova*, ser. 2, vol. 18, p. 650.

Symphynognatha Verhoeff, 1909, *Zool. Anz.*, vol. 34, p. 542.

Juliformia (in part) Attems, 1926, in *Kükenthal-Krumbach, Handbuch der Zoologie*, vol. 4, p. 181.

Julida Chamberlin, 1938, *Publ. Carnegie Inst. Washington*, No. 491, p. 166; 1943, *Bull. Univ. Utah, biol. ser.*, vol. 8, No. 3, p. 29.

## KEY TO THE SUBORDERS OF JULIDA

1. Telopodite of anterior gonopods mostly absent or rudimentary, when present not moveable by muscles; gonopods sunk in a pocket and more or less concealed; grinding plate of mandibles with a pitted area and adjacent fluted band or file, or if this development is absent, the cutting teeth are also aborted or weak; labroclypeal processes absent . . . . . JULIDEA (p. 118)
- Telopodite of anterior gonopods strongly developed and always moveable by muscles; gonopods not sunk in a pocket, freely exposed; grinding plate of mandibles without pits and fluting; labroclypeal processes present . . . . . PARAJULIDEA (p. 122)

### *Suborder* JULIDEA

Julidae Attems, 1926, in *Kükenthal-Krumbach, Handbuch der Zoologie*, vol. 4, p. 186.

Oncophora Verhoeff, 1930, in *Bronn, Klass. und Ordn. des Tier-Reichs*, Band 5, Abt. 2, Lief. 10, p. 1643 (as superfamily).

### *Family* JULIDAE Meinert

Julidae (in part) Meinert, 1868, *Naturh. Tidsskr.*, ser. 3, vol. 5, p. 6.—

Latzel., 1884, *Myr. Öst.-Ung., Monarch.*, vol. 2, p. 238.—Wood, 1865,

*Trans. Amer. Philos. Soc.*, new ser., vol. 13, p. 194.

Julinae Bollman, 1893, *U. S. Nat. Mus. Bull.* 46, p. 157.

### *Genus* BRACHIYIULUS Berlese

*Brachyiulus* Berlese, 1884, *Acari, Myriopoda, et scorpiones hucusque in Italia reperta*, fasc. 12, p. 1 (as subgenus of *Julus*).

GENEROTYPE: *Julus pusillus* Leach.

RANGE: Europe, North Africa, and introduced in North America.

SPECIES: Eleven, of which one is established in North America.

### *Brachyiulus pusillus* (Leach)

*Julus pusillus* Leach, 1815, *Trans. Linnean Soc. London*, vol. 11, p. 379.

*Julus exiguus* Brandt, 1841, *Recueil*, p. 85.

*Julus virgatus* Wood, 1864, *Proc. Acad. Nat. Sci. Philadelphia*, p. 14 (type locality: Philadelphia, Pennsylvania; type unknown).

*Julus stuxbergi* Fanzago, 1875, Atti. Accad. Sci. Veneto-Trentino-Istria, vol. 4, p. 150.

*Brachyiulus littoralis* Verhoeff, 1898, Arch. Naturg., vol. 64, p. 154, pl. 6, fig. 29.

*Microbrachyiulus littoralis* Jawlowski, 1939, Frag. Faun. Mus. Zool. Polonici, vol. 4, p. 154.

TYPE: British Museum (Nat. Hist.).

TYPE LOCALITY: England.

RANGE: Throughout Europe and in the Azores; northern portion of North America in developed areas, south at least as far as Virginia. A synanthropic species doubtless introduced into this country from Europe.

#### Genus DIPLOIULUS Berlese

*Diploiulus* Berlese, 1884, Acari, Myriopoda, et scorpiones hucusque in Italia reperta, fasc. 12, p. 2 (as subgenus of *Julus*).—Chamberlin, 1922, Proc. Biol. Soc. Washington, vol. 35, p. 8.

*Cylindroiulus* Verhoeff, 1893, Zool. Anz., vol. 16, p. 480 nomen nudum; 1894, Verh. Zool.-Bot. Ges. Wien, vol. 44, Abt. 29, p. 151.

GENEROTYPE: *Julus boleti* Koch.

RANGE: Europe; introduced into North America.

SPECIES: About 70, of which 5 are known to be established in North America.

#### *Diploiulus caeruleocinctus* (Wood)

*Julus caeruleocinctus* Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, p. 14.

*Julus multistriatus* Walsh, 1866, Practical Ent., vol. 2, pp. 34, 70.

*Julus londinensis* Porat, 1866, Bidrag t. K. Sver., Myr. Diplop., p. 28.—Meinert, 1868, Naturh. Tidsskr., ser. 3, vol. 5, p. 8.

*Julus teutonicus* Pocock, 1900, Ann. Mag. Nat. Hist., ser. 7, vol. 6, p. 206.

*Cylindroiulus londinensis teutonicus* Jackson, 1915, Lancashire and Cheshire Nat., p. 433.

*Diploiulus londinensis caeruleocinctus* Chamberlin, 1922, Proc. Biol. Soc. Washington, vol. 35, p. 8.

TYPE: Present location unknown.

TYPE LOCALITY: Pennsylvania.

RANGE: Introduced from Europe and now occurring abundantly throughout the New England States and adjoining parts of Canada, southward to Pennsylvania and Maryland, westward to Indiana, Illinois, and Iowa.

#### *Diploiulus latistriatus latistriatus* (Curtis)

*Julus latistriatus* Curtis, 1845 (in part), Journ. Royal Agr. Soc. England, vol. 5, pt. 1, p. 229.

*Julus hortensis* Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, p. 14.—1865, Trans. Amer. Philos. Soc., vol. 13, p. 205.

*Julus oweni* Bollman, 1887, Ent. Amer., vol. 2, p. 228 (type locality: New Harmony, Indiana; type: U. S. Nat. Mus.).

*Iulus frisius* Verhoeff, 1891, Berliner Ent. Zeitschr., vol. 36, p. 133.

*Diploiulus luscus* Chamberlin, 1921, Proc. Biol. Soc. Washington, vol. 34, p. 82.

*Diploiulus hortensis* Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, vol. 99, p. 35.

*Cylindroiulus latistriatus* Blower, 1953, Ann. Mag. Nat. Hist., ser. 12, vol. 6, p. 306, fig. 4.

TYPE: British Museum (Nat. Hist.).

TYPE LOCALITY: England.

RANGE: A synanthropic species introduced from Europe and now abundant in cultivated areas of Canada and the United States as far west as Washington and British Columbia.

### **Diploiulus latistriatus hesperus (Chamberlin)**

*Julus hesperus* Chamberlin, 1914, Canadian Ent., vol. 46, p. 314.

*Cylindroiulus frisius oceanicus* Verhoeff, 1924, in Skottsberg, The natural history of Juan Fernandez and Easter Island, vol. 3, p. 406; 1944, Bull. Southern California Acad. Sci., vol. 43, p. 67.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Los Angeles, California.

RANGE: Occurring in California from Los Angeles northward in the central coastal area as far as San Francisco Bay, and on the Hawaiian, Easter, and Juan Fernandez Islands.

### **Diploiulus luscus (Meinert)<sup>7</sup>**

*Julus luscus* Meinert, 1868, Naturh. Tidsskr., ser. 3, vol. 5, p. 9.

*Iulus britannicus* Verhoeff, 1891, Berliner Ent. Zeitschr., vol. 36, p. 147, pl. 8, figs. 41, 42, 42b.

*Cylindroiulus britannicus* Schubart, 1934, in Dahl, Die Tierwelt Deutschlands, Teil 28, p. 228, fig. 361.—Palmén, 1952, Ann. Zool. Soc. 'Vanamo', vol. 15, No. 1, p. 20.—Blower, 1953, Ann. Mag. Nat. Hist., ser. 12, vol. 6, p. 307.

TYPE: Mus. Hauniensis (Copenhagen).

TYPE LOCALITY: Denmark.

RANGE: Europe and North America, where introduced. The only definite American locality thus far is Newfoundland, but in all probability part of the records for *latistriatus* pertain to this species, the two being easily confused.

### **Diploiulus punctatus (Leach)**

*Julus punctatus* Leach, 1817, The zoological miscellany, vol. 3, p. 34.

<sup>7</sup> Meinert's types embrace specimens of this species and of *latistriatus*. Since the latter species must bear the prior name given by Curtis, it seems entirely proper to restrict *luscus* to the second species as here done.



*Julus silvarum* Meinert, 1868, Naturh. Tidsskr., ser. 3, vol. 5, p. 13.

*Cylindroiulus punctatus* Brade-Birks, 1919, Bull. Soc. Zool. France, vol. 44, p. 65.

*Cylindroiulus silvarum* Jawlowski, 1939, Frag. Faun. Mus. Zool. Polonici, vol. 4, p. 156.

TYPE: Not known to exist.

TYPE LOCALITY: England.

RANGE: Western, central, and northern Europe. In North America known to be established in Newfoundland, where probably introduced. A typically forest species.

### **Diploiulus truncorum Silvestri**

*Diploiulus truncorum* Silvestri, 1896, Naturalista Siciliano, new ser., vol. 1, p. 160, pl. 7, figs. 11–13.

*Julus (Anoploiulus) africanus* Brölemann, 1897, Ann. Sci. Nat., ser. 8, vol. 4, p. 271, pl. 4, figs. 39–41.—Chamberlin, 1923, Proc. Biol. Soc. Washington, vol. 36, p. 191.

*Cylindroiulus truncorum* Attems, 1908, Notes sur les myriapodes, in Voyage zoologique en Khroumirie, pp. 112–113, pl. 24, figs. 10–12.—Schubart, 1946, Comun. Zool. Mus. Hist. Nat. Montevideo, vol. 2, No. 29, p. 2.

TYPE: Present location unknown.

TYPE LOCALITY: North Africa.

RANGE: From its native habitat in French North Africa, this species has been carried by commerce over much of Europe and Russia, and has been more recently recorded from hothouses in Brasil and North America.

### **Genus OPHYIULUS Berlese**

*Ophyiulus* Berlese, 1884, Acari, Myriopoda, et scorpiones hucusque in Italia reperta, fasc. 12, p. 2 (as subgenus of *Julus*).

GENEROTYPE: *Julus terrestris* Linnaeus.

RANGE: Europe; eastern North America.

SPECIES: Four, one of which occurs in North America.

### **Ophyiulus pilosus (Newport)**

*Julus pilosus* Newport, 1843, Ann. Mag. Nat. Hist., ser. 1, vol. 11, p. 316.

*Julus longabo* Koch, 1847, in Krit. Rev. Insect. Deutschlands, vol. 3, p. 113.

*Julus serpentinus* Koch, 1863, Die Myriapoden, vol. 2, p. 106, fig. 228.

*Julus ferreus* Koch, 1863, Die Myriapoden, vol. 2, p. 107, fig. 229.

*Julus canaliculatus* Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, p. 12.

*Julius laqueatus* Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, p. 13.

*Julus fallax* Meinert, 1868, Naturh. Tidsskr., ser. 3, vol. 5, p. 15.

*Ophyiulus fallax* Jawlowski, 1939, Frag. Faun. Mus. Zool. Polonici, vol. 4, p. 153.

TYPE: British Mus. (Nat. Hist.).

TYPE LOCALITY: England.

RANGE: Europe, from where introduced into North America where it is known from Nova Scotia and Quebec south to Virginia and Tennessee. In many places it is well established in cultivated areas.

### Suborder PARAIULIDEA

Paraiulidi Brölemann, 1923, Arch. Zool. Expér. Gén., vol. 61, No. 2, p. 103.

Blaniulidae Attems, 1926, in Kükenthal-Krumbach, Handbuch der Zoologie, vol. 4, p. 182.

Arthropora Verhoeff, 1930, in Bronn, Klass. und Ordn. des Tier-Reichs, Band 5, Abt. 2, Lief. 10, p. 1643.

#### KEY TO THE FAMILIES OF PARAIULIDEA

1. Coxite and basal part of telopodites of anterior gonopods broadly articulated and connected at the median line; gonopods partially sunk in pockets; tergites strongly longitudinally striate . . . . . PAEROMOPIDAE (p. 126)  
Anterior gonopods not articulated as described above . . . . . 2
2. Anterior and posterior gonopods very unequal in size, the anterior pair long and exposed, the posterior pair short and concealed within the body.  
ZOSTERACTHIDAE (p. 150)  
Anterior and posterior gonopods not especially unequal in size, both visible externally . . . . . 3
3. Mandible with 4 pectinate lamellae; gnathochilarium of similar form in both sexes; neither the second nor the seventh pair of legs of males modified; first legs of male with 1 to 6 joints . . . . . NEMASOMIDAE (p. 122)  
Mandible with 7 or 8 pectinate lamellae; gnathochilarium different in the two sexes; first legs of male with 6 joints and much thickened, the second and often the seventh legs also modified . . . . . PARAIULIDAE (p. 129)

### Family NEMASOMIDAE Bollman

Nemasominae Bollman, 1893, U. S. Nat. Mus. Bull. 46, p. 156.

Blaniulidae (in part) Sinclair, 1895, Myriopoda, in The Cambridge natural history, vol. 5, p. 44.

Nemasomidae Silvestri, 1896, Ann. Mus. Civ. Stor. Nat. Genova, ser. 2, vol. 16, p. 183.—Chamberlin, 1922, Proc. Biol. Soc. Washington, vol. 35, p. 9.

Protoiulidae Verhoeff, 1896, Verh. Naturh. Vereins Rheinlands, Westfalens, und Osnabrück, vol. 53, p. 210.

Blaniulinae Attems, 1909, Arkiv för Zoologi, vol. 5, No. 3, p. 35.

Blaniulidae Brölemann, 1921, Arch. Zool. Expér. Gén., vol. 60, Notes et Revue, No. 1, p. 1; 1923, Arch. Zool. Expér. Gén., vol. 61, p. 110.

#### Genus BLANIULUS Gervais

*Blaniulus* Gervais, 1836, L'Institut, vol. 4, p. 435; 1836; Extraits Soc. Philom. Paris, p. 72.—Attems, 1909, Arkiv för Zoologi, vol. 5, No. 3, p. 44—Brölemann, 1923, Arch. Zool. Expér. Gén., vol. 61, p. 283.

GENEROTYPE: *Julus guttulatus* Bosc.

RANGE: Western Europe; introduced into other regions.

SPECIES: Four; one is established in North America.

### **Blaniulus guttulatus (Bosc)**

*Julus guttulatus* Bosc, 1791, Bull. Soc. Philom. Paris, p. 10.

*Julus pulchellus* Leach, 1815, Trans. Linn. Soc. London, vol. 11, p. 379  
(type locality: England; location of type unknown).

*Blaniulus guttulatus* Gervais, 1836, L'Institut, vol. 4, p. 435.—Chamberlin,  
1921, Proc. Biol. Soc. Washington, vol. 34, p. 83.—Jawlowski, 1939,  
Frag. Faun. Mus. Zool. Polonici, vol. 4, p. 152.

TYPE: Not known to exist.

TYPE LOCALITY: France.

RANGE: Widespread over Europe, now established generally in cultivated areas of the United States and Canada.

### **Genus CHONEIULUS Brölemann**

*Choneiulus* Brölemann, 1921, Arch. Zool. Expér. Gén., vol. 60, Notes et  
Revue, No. 1, p. 4.

GENEROTYPE: *Blaniulus palmatus* Němec, by original designation.

RANGE: Central western Europe; introduced into other areas.

SPECIES: Five, of which one occurs in North America.

### **Choneiulus palmatus (Němec)**

*Blaniulus palmatus* Němec, 1895, Sitz.-ber. Böhmischen Ges. Wiss., art. 38,  
p. 5, figs. 7–11.

*Choneiulus palmatus* Brölemann, 1923, Arch. Zool. Expér. Gén., vol. 61,  
p. 211, figs. 132–136.

*Nopoiulus palmatus* Jawlowski, 1939, Frag. Faun. Mus. Zool. Polonici,  
vol. 4, p. 153.

TYPE: Location unknown.

TYPE LOCALITY: Bohemia.

RANGE: Eastern and central, and, as introduced, northern Europe. In North America, where also introduced, known definitely from Nova Scotia (Jawlowski) and likely to be found in the eastern States as a synanthropic species.

### **Genus NEMASOMA Koch**

*Nemasoma* Koch, 1847, in Krit. Rev. Insect. Deutschlands, vol. 3, p. 47,  
116.—Bollman, 1893, U. S. Nat. Mus. Bull. 46, p. 157.—Chamberlin,  
1922, Proc. Biol. Soc. Washington, vol. 35, p. 9.

*Isobates* Menge, 1851, Neueste Schrift. Naturf. Ges. Danzig, vol. 4, Heft  
4, p. 6; also most recent European authors.

*Utoiulus* Chamberlin, 1943, Proc. Biol. Soc. Washington, vol. 56, p. 145  
(generotype: *Nemasoma uta* Chamberlin).

GENEROTYPE: *Nemasoma varicorne* Koch.

RANGE: Europe and North America.

SPECIES: Four or five species known from North America.

### **Nemasoma leechi Chamberlin**

*Nemasoma leechi* Chamberlin, 1951, Chicago Acad. Sci. Nat. Hist. Misc. No. 87, p. 10.

TYPE: Prov. Mus., British Columbia.

TYPE LOCALITY: Trinity Valley, British Columbia.

RANGE: Known only from type locality.

### **Nemasoma nigrius Chamberlin**

*Nemasoma nigrius* Chamberlin, 1943, Bull. Univ. Utah, biol. ser., vol. 8, No. 2, p. 9, fig. 22.

TYPE: Chicago Nat. Hist. Mus.

TYPE LOCALITY: Gatlinburg, Sevier County, Tennessee.

RANGE: The Great Smoky Mountains, Tennessee and North Carolina.

### **Nemasoma pium Chamberlin**<sup>8</sup>

*Nemasoma pium* Chamberlin, 1918, Ann. Ent. Soc. Amer., vol. 11, p. 373.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Creston, Natchitoches Parish, Louisiana.

RANGE: Known only from type locality.

### **Nemasoma sayanum Bollman**

*Julus punctatus* Say, 1821, Journ. Acad. Nat. Sci. Philadelphia, vol. 2, p. 102 (preoccupied by *Julus punctatus* Leach, 1815).

*Julus stigmatosus* Brandt, 1841, Recueil, p. 88 (substitute name for *punctatus* Say, but also preoccupied by *Julus stigmatosus* Eichwald, 1830).

*Nemasoma sayanum* Bollman, 1893, U. S. Nat. Mus. Bull. 46, p. 145.

TYPE: Not known to exist.

TYPE LOCALITY: Probably vicinity of Philadelphia, Pennsylvania.

RANGE: Reported from Ohio, Indiana, Virginia, and other southeastern States, but the identity of Say's species has never been proven with certainty, and the form to which Bollman applied the name has likewise never been adequately described or figured.

### **Nemasoma uta Chamberlin**

*Nemasoma uta* Chamberlin, 1912, Ann. Ent. Soc. Amer., vol. 5, p. 162; 1951, Chicago Acad. Sci. Nat. Hist. Misc. No. 87, p. 9, g. 21.

*Utoiulus utus* Chamberlin, 1943, Proc. Biol. Soc. Washington, vol. 56, p. 145.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Mill Creek Canyon, Salt Lake County, Utah

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<sup>8</sup> The position of this poorly known species in *Nemasoma* is somewhat doubtful.

RANGE: Canyons of the Wasatch Mountains, in Salt Lake, Davis, and Utah Counties, Utah.

**Genus NOPOIULUS Menge**

*Nopoiulus* Menge, 1851, Neueste Schrift. Naturf. Ges. Danzig, vol. 4, Heft 4, p. 7.

GENEROTYPE: *Nopoiulus punctulatus* Menge (= *N. venustus* of Latzel).

RANGE: Europe; introduced and now established in eastern North America.

SPECIES: Six, of which one has been introduced in our area.

***Nopoiulus minutus* (Brandt)**

*Julus pusillus* Say, 1821, Journ. Acad. Nat. Sci. Philadelphia, vol. 2, p. 105 (preoccupied by *J. pusillus* Leach 1815).

*Julus minutus* Brandt, 1841, Recueil, p. 89 (substitute name for *pusillus* Say).

*Julus lineatus* McNeill, 1887, Proc. U. S. Nat. Mus., vol. 10, p. 324 (type locality: Pensacola, Florida; location of type unknown).

*Nopoiulus minutus* Chamberlin, 1922, Proc. Biol. Soc. Washington, vol. 35, p. 9.

TYPE: Not known to exist.

TYPE LOCALITY: "Eastern shore of Virginia" (Say).

RANGE: Europe, introduced and widespread over eastern United States and Canada, occurring as far south as Delaware and Virginia and west to Tennessee, sporadically as far west as Utah.

**Genus PROTEROIULUS Silvestri**

*Blaniulus* (in part) Am Stein, 1857, Jahresb. Naturf. Ges. Graubündens, new ser., vol. 2, p. 139.

*Proteroiulus* Silvestri, 1897, Ann. Mus. Civ. Stor. Nat. Genova, ser. 2, vol. 18, p. 650.

GENEROTYPE: *Blaniulus fuscus* Am Stein, by original designation.

RANGE: Europe. Introduced into North America.

SPECIES: Two, of which one is known from one area.

***Proteroiulus fuscus* (Am Stein)**

*Blaniulus fuscus* Am Stein, 1857, Jahresb. Naturf. Ges. Graubündens, new ser., vol. 2, p. 139.—Latzel, 1884, Myr. Öst.-Ung., Monarch., vol. 2, p. 248.

*Proteroiulus fuscus* Jawlowski, 1939, Frag. Faun. Zool. Mus. Polonici, vol. 4, p. 152.—Palmén, 1952, Ann. Zool. Soc. 'Vanamo', vol. 15, No. 1, p. 17, fig. 21.

TYPE: Unknown.

TYPE LOCALITY: Northern Europe.

RANGE: Known in North America from Newfoundland, Nova Scotia, and eastern United States.

**Genus TIVIULUS Chamberlin**

*Tiviulus* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 4, p. 17.

GENEROTYPE: *Tiviulus expressus* Chamberlin, by original designation.

RANGE: Washington.

SPECIES: One.

***Tiviulus expressus* Chamberlin**

*Tiviulus expressus* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 4, p. 17, figs. 27, 28.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Arlington, Snohomish County, Washington.

RANGE: Known only from type locality.

**Family PAEROMOPIDAE Cook**

Paeromopidae Cook, 1895, Ann. New York Acad. Sci., vol. 9, p. 6.—

Chamberlin, 1949, Chicago Acad. Sci. Nat. Hist. Misc. No. 52, p. 1.

Californiulidae Verhoeff, 1938, Zool. Anz., vol. 122, Nos. 5–6, p. 114.

**Genus AIGON Chamberlin**

*Aigon* Chamberlin, 1949, Chicago Acad. Sci. Nat. Hist. Misc. No. 52, p. 1.

GENEROTYPE: *Aigon rodocki* Chamberlin, by original designation.

RANGE: Idaho, Montana.

SPECIES: Two.

***Aigon parvior* (Chamberlin)**

*Klansolus parvior* Chamberlin, 1940, Pomona Coll. Journ. Ent. and Zool., vol. 32, No. 4, p. 83.

*Aigon parvior* Chamberlin, 1949, Chicago Acad. Sci. Nat. Hist. Misc. No. 52, p. 1.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Flathead Lake, Lake County, Montana.

RANGE: Known only from type locality.

***Aigon rodocki* Chamberlin**

*Aigon rodocki* Chamberlin, 1949, Chicago Acad. Sci. Nat. Hist. Misc. No. 52, p. 2, figs. 1, 2.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Sweetwater, Nez Perce County, Idaho.

RANGE: Known only from type locality.

**Genus ATOPOLUS Chamberlin**

*Atopolus* Chamberlin, 1949, Chicago Acad. Sci. Nat. Hist. Misc. No. 52, p. 3.

GENEROTYPE: *Paeromopus chamberlini* Brölemann, by original designation.

RANGE: California.

SPECIES: One.

***Atopolus chamberlini* (Brölemann)**

*Paeromopus chamberlini* Brölemann, 1922, Ann. Ent. Soc. Amer., vol. 15, p. 289, figs. 6-9, 53-57.

TYPE: Probably Paris Museum.

TYPE LOCALITY: Mount Shasta, Shasta County, California.

RANGE: Known only from type locality.

**Genus CALIFORNIULUS Verhoeff**

*Californiulus* Verhoeff, 1938, Zool. Anz., vol. 122, Nos. 5-6, p. 114.

GENEROTYPE: *Californiulus dorsovittatus* Verhoeff, by monotypy.

RANGE: California.

SPECIES: One.

***Californiulus dorsovittatus* Verhoeff**

*Californiulus dorsovittatus* Verhoeff, 1938, Zool. Anz., vol. 122, Nos. 5-6, p. 118, figs. 1-7.

TYPE: Verhoeff collection.

TYPE LOCALITY: Mount Harkness, near Berkeley, Alameda County, California.

RANGE: Known only from type locality.

**Genus KLANSOLUS Chamberlin**

*Klansolus* Chamberlin, 1938, Proc. Biol. Soc. Washington, vol. 51, p. 205.

GENEROTYPE: *Klansolus euphanus* Chamberlin, by original designation.

RANGE: Northern California and Oregon.

SPECIES: Five.

***Klansolus euphanus* Chamberlin**

*Klansolus euphanus* Chamberlin, 1938, Proc. Biol. Soc. Washington, vol. 51, p. 205.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Boyer (location unknown), Oregon.

RANGE: Known only from type locality.

***Klansolus socius* Chamberlin**

*Klansolus socius* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 4, p. 16, figs. 19-23.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 8 miles west of Wallowa, Wallowa County, Oregon.

RANGE: Known only from type locality.

**Klansolus vicinus (Chamberlin)**

*Californiulus vicinus* Chamberlin, 1943, Bull. Univ. Utah, biol. ser., vol. 8, No. 2, p. 12, figs. 40-42.

*Klansolus vicinus* Chamberlin, 1949, Chicago Acad. Sci. Nat. Hist. Misc. No. 52, p. 5.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Dickson Flats, Shasta County, California.

RANGE: Known only from type locality.

**Klansolus yosemitensis (Chamberlin)**

*Californiulus yosemitensis* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 4, p. 17.

*Klansolus yosemitensis* Chamberlin, 1949, Chicago Acad. Sci. Nat. Hist. Misc. No. 52, p. 5.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Yosemite National Park, California.

RANGE: Known only from type locality.

**Klansolus zantus Chamberlin**

*Klansolus zantus* Chamberlin, 1949, Chicago Acad. Sci. Nat. Hist. Misc. No. 52, p. 5.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 12 miles east of Cave Junction, Josephine County, Oregon.

RANGE: Known only from type locality.

**Genus PAEROMOPUS Karsch**

*Paeromopus* Karsch, 1881, Zeitschr. Naturw., vol. 54 (ser. 3, vol. 6), p. 12.

*Paeromopellus Verhoeff*, 1938, Zool. Anz., vol. 122, Nos. 5-6, p. 124 (generotype, *P. sphinx* Verhoeff, [= *lysiopetalinus* Karsch]).

GENEROTYPE: *Paeromopus lysiopetalinus* Karsch, by monotypy.

RANGE: California.

SPECIES: Four, plus one doubtful.

**Paeromopus angusticeps (Wood)<sup>9</sup>**

*Spirobolus angusticeps* Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, p. 16; 1865, Trans. Amer. Phil. Soc., vol. 13, p. 210, figs. 37, 37a.

TYPE: Location unknown.

TYPE LOCALITY: California: San Francisco.

RANGE: Known only from type locality.

<sup>9</sup> Assigination to this genus somewhat tentative, as Wood's type was a female.



**Paeromopus cavicolens Chamberlin**

*Paeromopus cavicolens* Chamberlin, 1953, Proc. Biol. Soc. Washington, vol. 66, p. 68, figs. 3, 4.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Windeler Cavern, Tuolumne County, California.

RANGE: Known only from type locality.

**Paeromopus eldoradus Chamberlin**

*Paeromopus eldoradus* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 5, p. 7, figs. 10, 11.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Coloma, Eldorado County, California.

RANGE: Known only from type locality.

**Paeromopus lysiopetalinus Karsch**

*Paeromopus lysiopetalinus* Karsch, 1881, Zeitschr. Naturw., vol. 54 (ser. 3, vol. 6), p. 12.

*Paeromopellus sphinx* Verhoeff, 1938, Zool. Anz., vol. 122, Nos. 5-6, p. 125, figs. 8, 9 (new name for *lysiopetalinus* Karsch).

TYPE: Zool. Mus. Univ. Berlin.

TYPE LOCALITY: California.

RANGE: Definite localities not known.

**Paeromopus pistus Chamberlin**

*Paeromopus pistus* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 5, p. 7, figs. 8, 9.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Stanford, Palo Alto County, California.

RANGE: Known only from type locality.

**Family PARAIULIDAE Bollman**

Paraiulinae Bollman, 1893, U. S. Nat. Mus. Bull. 46, p. 156.

Paraiulidae Cook, 1895, Ann. New York Acad. Sci., vol. 9, p. 6.—Pocock, 1903, Diplopoda, in Biol. Centr.-Amer., p. 53.

Uroblaniulinae Attems, 1909, Ark. Zool., vol. 5, No. 3, p. 47.

**Genus ALIULUS Causey**

*Aliulus* Causey, 1950, Proc. Arkansas Acad. Sci., vol. 3, p. 45.

GENEROTYPE: *Aliulus carrollus* Causey, by original designation.

RANGE: Western Arkansas and adjacent Oklahoma.

SPECIES: Three.

***Aliulus caddoensis* Causey**

*Aliulus caddoensis* Causey, 1950, Proc. Arkansas Acad. Sci., vol. 3, p. 46, figs. 5, 6.

TYPE: Acad. Nat. Sci., Philadelphia.

TYPE LOCALITY: Caddo County, Oklahoma.

RANGE: Known only from type locality.

**Aliulus carrollus Causey**

*Aliulus carrollus* Causey, 1950, Proc. Arkansas Acad. Sci., vol. 3, p. 45, figs. 1-4.

TYPE: Acad. Nat. Sci., Philadelphia.

TYPE LOCALITY: Blue Spring, Carroll County, Arkansas.

RANGE: Carroll and Washington Counties, Arkansas.

**Aliulus rugosus (Bollman)**

*Parajulus rugosus* Bollman, 1887, Ent. Amer., vol. 3, p. 81; 1893, U. S. Nat. Mus. Bull. 46, p. 105.

*Aliulus rugosus* Causey, 1952, Proc. Arkansas Acad. Sci., vol. 5, p. 22, fig. 5.

TYPE: U. S. Nat. Mus. (No. 129).

TYPE LOCALITY: Washington County, Pennsylvania.

RANGE: Pennsylvania, Ohio, Indiana, Illinois.

**Genus ANIULUS Chamberlin**

*Aniulus* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 3.

GENEROTYPE: *Aniulus adelphus* Chamberlin, by original designation.

RANGE: United States, from New York to Georgia west as far as Utah, Colorado, and Arizona.

SPECIES: Twelve.

**Aniulus adelphus Chamberlin**

*Aniulus adelphus* Chamberlin, 1940, Bull. Univ. Utah, biol. ser. vol. 5, No. 7, p. 3, figs. 1-3.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Southwest of Boerne, Kendall County, Texas.

RANGE: Known only from type locality.

**Aniulus austinensis Chamberlin**

*Aniulus austinensis* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 4, figs. 4, 5.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Austin, Travis County, Texas.

RANGE: Known only from the type locality.

**Aniulus bollmani Causey**

*Julus impressus* (not Say) Wood, 1865, Trans. Amer. Philos. Soc., vol. 13, p. 196.

*Julus venustus* (in part) Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, p. 10; 1865, Trans. Amer. Philos. Soc., vol. 13, p. 196.

*Parajulus impressus* (not Say) Bollman, 1887, Ann. New York Acad. Sci., vol. 4, p. 34; 1893, U. S. Nat. Mus. Bull. 46, pp. 52, 154.—Williams and Hefner, 1928, Bull. Ohio Biol. Surv., No. 18, p. 127, fig. 21.

*Parajulus impressus* Hefner, 1929, Journ. Morph. Physiol., vol. 48, p. 153, 4 pls.

*Aniulus impressus* Causey, 1950, Proc. Arkansas Acad. Sci., vol. 3, p. 46, figs. 7, 8.

*Aniulus bollmani* Causey, 1952, Proc. Arkansas Acad. Sci., vol. 5, p. 19.  
TYPE: Amer. Mus. Nat. Hist.

TYPE LOCALITY: Winslow, Stephenson County, Illinois.

RANGE: From western Pennsylvania and West Virginia westward to Wisconsin and North Dakota.

### **Aniulus brazonus Chamberlin**

*Aniulus brazonus* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 4, figs. 6, 7.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Brazos County, Texas.

RANGE: Known only from type locality.

### **Aniulus craterus Chamberlin**

*Aniulus craterus* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 5, figs. 9, 10.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Raven Ranch, Kerr County, Texas.

RANGE: Known only from type locality.

### **Aniulus dorophor Chamberlin**

*Aniulus dorophor* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 5, figs. 11–13.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: South of Three Rivers, Live Oak County, Texas.

RANGE: Known only from type locality.

### **Aniulus fluviatilis Chamberlin**

*Aniulus fluviatilis* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 6, figs. 14, 15.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Brazos County, Texas.

RANGE: Known only from type locality, and from Polk County, Texas.

### **Aniulus hopius Chamberlin**

*Aniulus hopius* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 4, p. 19, figs. 30, 31.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Greaterville, Pima County, Arizona.

RANGE: Known only from type locality.

**Aniulus oreines Chamberlin**

*Aniulus oreines* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 6, figs. 19, 20.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 2 miles west of Glenwood, Garfield County, Colorado.

RANGE: Also known from Salt Lake County, Utah.

**Aniulus orientalis Causey**

*Aniulus orientalis* Causey, 1952, Proc. Arkansas Acad. Sci., vol. 5, p. 20, figs. 1-4.

TYPE: Amer. Mus. Nat. Hist.

TYPE LOCALITY: Probably Durham, North Carolina.

RANGE: Known only from type locality.

**Aniulus orthodoxus Chamberlin**

*Aniulus orthodoxus* Chamberlin, 1946, Proc. Biol. Soc. Washington, vol. 59, p. 32, figs. 3, 4.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Reelfoot Lake, Obion County, Tennessee.

RANGE: Known only from type locality.

**Aniulus prosoicus Chamberlin**

*Aniulus prosoicus* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 7, figs. 16-18.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Edinburg, Hildalgo County, Texas.

RANGE: Known only from type locality.

**Genus BOLLMANIULUS Verhoeff**

*Bollmaniulus* Verhoeff, 1926, Zool. Anz., vol. 68, p. 65.

*Caliulus* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 15.

GENEROTYPE: *Iulus furcifer* Harger, by original designation.

RANGE: California to Washington, Montana.

SPECIES: Ten.

**Bollmaniulus catalinae (Chamberlin)**

*Caliulus catalinae* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 17, figs. 57, 58.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Catalina Island, California.

RANGE: Known only from type locality.

**Bollmaniulus concolor (Chamberlin)**

*Caliulus concolor* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 18, figs. 56a, 59.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Redlands, San Bernardino County, California.

RANGE: Known only from type locality.

**Bollmaniulus furcifer (Harger)**

*Iulus furcifer* Harger, 1872, Amer. Journ. Sci. Arts, vol. 4, p. 119.

*Bollmaniulus furcifer* Verhoeff, 1926, Zool. Anz., vol. 68, p. 65.

*Taijulus furcifer* Chamberlin, 1938, Proc. Biol. Soc. Washington, vol. 51, p. 205.

*Caliulus furcifer* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 15.

TYPE: Not known to exist.

TYPE LOCALITY: John Day Valley, Oregon.

RANGE: California to British Columbia.

**Bollmaniulus pachysomus (Chamberlin)**

*Caliulus pachysomus* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 15, fig. 56.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Yosemite National Park, California.

RANGE: Known only from type locality.

**Bollmaniulus pearcei (Chamberlin)**

*Caliulus pearcei* Chamberlin, 1943, Bull. Univ. Utah, biol. ser., vol. 8, No. 2, p. 12, fig. 39.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: South fork of Bishop Creek, Inyo County, California.

RANGE: Known only from type locality.

**Bollmaniulus pugetensis (Chamberlin)**

*Caliulus pugetensis* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 16, figs. 61, 62.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Puget Sound, Washington.

RANGE: Known only from type locality.

**Bollmaniulus rhodogeus (Chamberlin)**

*Caliulus rhodogeus* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 17, fig. 60.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Redlands, San Bernardino County, California.

RANGE: Known only from type locality.

**Bollmaniulus sinampus (Chamberlin)**

*Paraiulus furcifer* var. *sinampus* Chamberlin, 1910, Ann. Ent. Soc. Amer., vol. 3, p. 256, pl. 41, figs. 5-8, and pl. 42, figs. 1, 2.

TYPE: Probably lost.

TYPE LOCALITY: Portland, Oregon.

RANGE: Known only from type locality.

**Bollmaniulus signifer (Chamberlin)**

*Caliulus signifer* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 4, p. 19, fig. 32.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Portland, Oregon.

RANGE: Known only from type locality.

**Bollmaniulus spenceri (Chamberlin)**

*Bollmaniulus spenceri* Chamberlin, 1951, Chicago Acad. Sci. Nat. Hist., Misc. No. 87, p. 10, figs. 22, 23.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Kamloops, British Columbia.

RANGE: Known only from type locality.

**Genus CODIULUS Chamberlin**

*Codiulus* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 19.

GENEROTYPE: *Codiulus oulogon* Chamberlin, by original designation.

RANGE: Southern California.

SPECIES: Two.

**Codiulus etirus Chamberlin**

*Codiulus etirus* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 4, p. 18, fig. 29.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Cardiff, San Diego County, California.

RANGE: Known only from type locality.

**Codiulus oulogon Chamberlin**

*Codiulus oulogon* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 19, fig. 66.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Box Springs Grade, Riverside County, California.

RANGE: Known only from type locality.

**Genus ETHOIULUS Chamberlin**

*Ethoiulus* Chamberlin, 1918, Canadian Ent., vol. 50, p. 361.

*Illiulus* Causey, 1950, Proc. Arkansas Acad. Sci., vol. 3, p. 47 (genotype):

*I. illinoensis* Causey).

GENEROTYPE: *Ethoiulus amphelictus* Chamberlin, by original designation.

RANGE: Southern United States, from Florida to Texas; Illinois and Arkansas.

SPECIES: Five.

### **Ethoiulus amphelictus Chamberlin**

*Ethoiulus amphelictus* Chamberlin, 1918, Canadian Ent., vol. 50, p. 361.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Covington, St. Tammany Parish, Louisiana.

RANGE: Known only from type locality.

### **Ethoiulus bufonius Chamberlin**

*Ethoiulus bufonius* Chamberlin, 1938, Proc. Biol. Soc. Washington, vol. 51, p. 206.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Gainesville, Alachua County, Florida.

RANGE: Known only from north-central Florida.

### **Ethoiulus illinoensis (Causey)**

*Illiolulus illinoensis* Causey, 1950, Proc. Arkansas Acad. Sci., vol. 3, p. 47, figs.

TYPE: Illinois Nat. Hist. Surv.

TYPE LOCALITY: LaRue, Union County, Illinois.

RANGE: Southern Illinois, west to northwestern Arkansas.

### **Ethoiulus ligifer (Chamberlin)**

*Parajulus ligifer* Chamberlin, 1919, Proc. Biol. Soc. Washington, vol. 32, p. 119.

*Hakiulus ligifer* Causey, 1952, Texas Journ. Sci., vol. 4, p. 200.

*Ethoiulus geniculatus* Causey, 1952, Texas Journ. Sci., vol. 4, p. 201, figs. 8-10 (type locality: Fort Bend County, Texas; type: Amer. Mus. Nat. Hist.).

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Victoria, Victoria County, Texas.

RANGE: Victoria, Fort Bend, and Goliad Counties, Texas.

### **Ethoiulus robustior (Chamberlin)**

*Paraiulus robustior* Chamberlin, 1918, Ann. Ent. Soc. America, vol. 11, p. 373.

*Ethoiulus unilictus* Causey, 1953, Amer. Midl. Nat., vol. 50, p. 152, figs. 1-4 (type locality: Ruston, Lincoln Parish, Louisiana; type: Amer. Mus. Nat. Hist.).

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Creston, Natchitoches Parish, Louisiana.

RANGE: Known from Natchitoches and Lincoln Parishes, Louisiana.

**Genus HAKIULUS Chamberlin**

*Hakiulus* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 10.

GENEROTYPE: *Hakiulus amophor* Chamberlin, by original designation.

RANGE: Central and western United States, from Ohio west and south to Colorado and New Mexico. Most of the species occur in Texas.

SPECIES: Eleven.

**Hakiulus amophor Chamberlin**

*Hakiulus amophor* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 11, figs. 36-39.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Turtle Creek, Kerr County, Texas.

RANGE: Recorded from Kerr and Live Oak Counties, Texas.

**Hakiulus cyaneus (Chamberlin)**

*Ethojulus cyaneus* Chamberlin, 1920, Proc. Biol. Soc. Washington, vol. 33, p. 41.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Bay City, Matagorda County, Texas.

RANGE: KNOWN only from type locality.

**Hakiulus diversifrons (Wood)**

*Julus diversifrons* Wood, 1867, Proc. Acad. Nat. Sci. Philadelphia, vol. 19, p. 43.

*Parajulus castaneus* Bollman, 1887, Ent. Amer., vol. 2, p. 226 (type locality: Fort Snelling, Minnesota; type: U. S. Nat. Mus., No. 95).

*Iulus ellipticus* Bollman, 1887, Amer. Nat., vol. 21, p. 82 (type locality: Fort Snelling, Minnesota; type: U. S. Nat. Mus.).

*Parajulus diversifrons* Williams and Hefner, 1928, Bull. Ohio Biol. Surv., No. 18, p. 128, fig. 20.

TYPE: Not known to exist.

TYPE LOCALITY: Southern Illinois.

RANGE: Ohio and Michigan, west to Illinois and Minnesota.

**Hakiulus minori Causey**

*Hakiulus minori* Causey, 1952, Texas Journ. Sci., vol. 4, p. 200, figs. 1-3.

TYPE: Amer. Mus. Nat. Hist.

TYPE LOCALITY: Lufkin, Angelina County, Texas.

RANGE: Recorded from Angelina and Polk Counties, in eastern Texas.

**Hakiulus neomexicanus (Chamberlin)**

*Paraiulus neomexicanus* Chamberlin, 1903, Proc. Acad. Nat. Sci. Philadelphia, vol. 55, p. 38.

*Hakiulus neomexicanus* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 11.



TYPE: Present location unknown.

TYPE LOCALITY: Beulah, San Miguel County, New Mexico.

RANGE: Known only from type locality.

#### **Hakiulus orthodox Chamberlin**

*Hakiulus orthodox* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5,  
No. 7, p. 11, fig. 40.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: College Station, Brazos County, Texas.

RANGE: Known only from type locality.

#### **Hakiulus parallelus (Chamberlin)**

*Ethoiulus diversifrons* Chamberlin, 1931, Ent. News, vol. 42, p. 98.

*Hakiulus parallelus* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5,  
No. 7, p. 12, figs. 41-43.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Cleveland County, Oklahoma.

RANGE: Recorded from Oklahoma, Texas, Arkansas, Colorado, and Iowa,  
suggesting a wide range over the Great Plains.

#### **Hakiulus texanus (Chamberlin)**

*Paraiulus texanus* Chamberlin, 1916, Psyche, vol. 23, p. 35.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Victoria, Victoria County, Texas.

RANGE: Known only from type locality.

#### **Hakiulus texensis Causey**

*Hakiulus texensis* Causey, 1952, Texas Journ. Sci., vol. 4, No. 2, p. 201,  
figs. 6, 7.

TYPE: Amer. Mus. Nat. Hist.

TYPE LOCALITY: Kilgore, Gregg County, Texas.

RANGE: Known only from type locality.

#### **Hakiulus victorianus (Chamberlin)**

*Paraiulus victorianus* Chamberlin, 1916, Psyche, vol. 23, p. 33.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Victoria, Victoria County, Texas.

RANGE: Known only from type locality.

#### **Hakiulus zakiwanus (Chamberlin)**

*Paraiulus zakiwanus* Chamberlin, 1910, Ann. Ent. Soc. Amer., vol. 3,  
No. 4, p. 253, pl. 39, figs. 6, 7; pl. 40, figs. 1-5.

TYPE: Present location unknown.

TYPE LOCATION: Sacramento Mountains, New Mexico.

RANGE: Central New Mexico.

**Genus GOSIULUS Chamberlin**

*Gosiulus* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 10.

GENEROTYPE: *Gosiulus conformatus* Chamberlin, by original designation.

RANGE: Texas.

SPECIES: One.

***Gosiulus conformatus* Chamberlin**

*Gosiulus conformatus* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 10, figs. 32-35.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: South of Three Rivers, Live Oak County, Texas.

RANGE: Reported from Live Oak, Brooks, and McCulloch Counties, in southern Texas.

**Genus LITIULUS Chamberlin**

*Litiulus* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 19.

GENEROTYPE: *Paraiulus alaskanus* Cook, by original designation.

RANGE: Alaska, British Columbia, northern Washington.

SPECIES: One.

***Litiulus alaskanus* (Cook)**

*Paraiulus alaskanus* Cook, 1904, in Harriman Alaska Exped., vol. 8, p. 70, pl. 5, figs. 4a-k.

TYPE: U. S. Nat. Mus. (No. 792).

TYPE LOCALITY: Metlakatla, Alaska.

RANGE: Southern coast of Alaska, south as far as Chinook, Washington.

**Genus MULAIKIULUS Chamberlin**

*Mulaikiulus* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 5, p. 8.

GENEROTYPE: *Mulaikiulus stanleius* Chamberlin, by original designation.

RANGE: California.

SPECIES: One.

***Mulaikiulus stanleius* Chamberlin**

*Mulaikiulus stanleius* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 5, p. 8, figs. 12, 13.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 12 miles north of Hammond, Tulare County, California.

RANGE: Known only from type locality.

**Genus OKLIULUS Causey**

*Okliulus* Causey, 1950, Proc. Arkansas Acad. Sci., vol. 3, p. 46.

GENEROTYPE: *Okliulus carpenteri* Causey, by original designation.

RANGE: Oklahoma and Arkansas.

SPECIES: Two.

### **Okliulus beveli** Causey

*Okliulus beveli* Causey, 1953, Amer. Midl. Nat., vol. 50, p. 152, figs. 5-7.

TYPE: Amer. Mus. Nat. Hist.

TYPE LOCALITY: Junction City, Union County, Arkansas.

RANGE: Known only from type locality.

### **Okliulus carpenteri** Causey

*Okliulus carpenteri* Causey, 1950, Proc. Arkansas Acad. Sci., vol. 3, p. 46, figs. 9-12.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: Wilburton, Latimer County, Oklahoma.

RANGE: Oklahoma and Arkansas.

### *Genus* **ORIULUS** Chamberlin

*Oriulus* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 7.

GENEROTYPE: *Oriulus medianus* Chamberlin, by original designation.

RANGE: Northeastern and central United States, west as far as Montana, Utah, and New Mexico.

SPECIES: Nine.

### **Oriulus annectans** (Chamberlin)

*Parajulus annectans* Chamberlin, 1921, Canadian Ent., vol. 53, p. 233, figs. 1.1, 1.2.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Knox County, Tennessee.

RANGE: Known only from type locality.

### **Oriulus delus** Chamberlin

*Oriulus delus* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 8, figs. 28, 29.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Plattsburg, Clinton County, New York.

RANGE: Southern New York, New Jersey, south as far as Albemarle County, Virginia.

### **Oriulus eutypus** Chamberlin

*Oriulus eutypus* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 8, figs. 23, 24.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Minneapolis, Minnesota.

RANGE: Known only from type locality.

**Oriulus georgicolens Chamberlin**

*Oriulus georgicolens* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 9.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Barrington, McIntosh County, Georgia.

RANGE: Known only from type locality.

**Oriulus grayi Causey**

*Oriulus grayi* Causey, 1950, Proc. Arkansas Acad. Sci., vol. 3, p. 50, figs. 37-42.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: DeValls Bluff, Prairie County, Arkansas.

RANGE: Known only from type locality.

**Oriulus medianus Chamberlin**

*Oriulus medianus* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 7, figs. 21, 22.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Yellowstone National Park, Wyoming.

RANGE: Reported from numerous localities in Iowa, Nebraska, Montana, Utah, Colorado, Wyoming, and New Mexico.

**Oriulus nigrans (Chamberlin)**

*Parajulus nigrans* Chamberlin, 1918, Psyche, vol. 25, p. 27.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Near Nashville, Davidson County, Tennessee.

RANGE: Known only from type locality.

**Oriulus notus Chamberlin**

*Oriulus notus* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 8, figs. 25-27.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Gallatin River, near Taylor's Fork, Greenville County, South Carolina.

RANGE: Known only from type locality.

**Oriulus venustus (Wood)**

*Julus venustus* Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, p. 10.

*Paraiulus venustus* Bollman, 1889, Proc. U. S. Nat. Mus., vol. 11, p. 344—  
Williams and Hefner, 1928, Bull. Ohio Biol. Surv., No. 18, p. 128, fig. 22.

TYPE: Not known to exist.

TYPE LOCALITY: Illinois (restricted by Causey (in litt.) to West Frankfort, Franklin County).

RANGE: New York westward to Colorado and Utah. The southern limits of the range not known.

**Genus PSEUDOJULUS Bollman**

*Pseudojulus* Bollman, 1887, Ann. New York Acad. Sci., vol. 4, p. 37 (as subgenus of *Parajulus*).

*Pseudoiulus* Silvestri, 1896, Ann. Mus. Civ. Stor. Nat. Genova, ser. 2, vol. 16, pp. 138, 177.

GENEROTYPE: *Parajulus (Pseudojulus) obtectus* Bollman, by original designation.

RANGE: Western Florida.

SPECIES: One.

***Pseudojulus obtectus*<sup>10</sup> Bollman**

*Parajulus (Pseudojulus) obtectus* Bollman, 1887, Ann. New York Acad. Sci., vol. 4, p. 37.

TYPE: If extant, probably at U. S. Nat. Mus.

TYPE LOCALITY: Restricted to Pensacola, Escambia County, Florida.

RANGE: Known only from type locality.

**Genus PTYOIULUS Cook**

*Ptyoiulus* Cook, 1895, Ann. New York Acad. Sci., vol. 9, p. 6.

GENEROTYPE: *Julus pennsylvanicus* Brandt [= *Julus impressus* Say], by original designation.

RANGE: Appalachian region from New York southward to Georgia, west to Illinois.

SPECIES: Four.

***Ptyoiulus impressus* (Say)<sup>11</sup>**

*Julus impressus* Say, 1821, Journ. Acad. Nat. Sci. Philadelphia, vol. 2, p. 102.

*Julus pennsylvanicus* Brandt, 1841, Recueil, p. 85.

*Julus piloscutis* Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, p. 11; 1865, Trans. Amer. Philos. Soc., vol. 13, p. 198 (type locality: Susquehanna County, Pennsylvania; type: Acad. Nat. Sci. Philadelphia).

*Julus montanus* Cope, 1869, Proc. Amer. Philos. Soc., vol. 11, p. 181 (type locality: Montgomery County, Virginia; location of type unknown).

<sup>10</sup> This name was based upon immature specimens, probably of two different species, from Pensacola, Florida, and Bloomington, Indiana. Dr. Nell Causey (in litt.) has proposed restricting Bollman's name to a species occurring at Pensacola, the male of which presents distinctive generic characters and which justifies retention of Bollman's generic and specific name for its designation.

<sup>11</sup> The present allocation of Say's *J. impressus* has been arrived at after a careful re-consideration of details of Say's description in connection with his remarks on habitat and abundance. To these conditions no other form is thought to conform as well as the species that has long been commonly known under Brandt's name *pennsylvanicus*.

*Ptyoiulus pennsylvanicus* Cook, 1895, Ann. New York Acad. Sci., vol. 9, p. 5.—Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 15, figs. 71–73.

*Paraiulus pennsylvanicus* Brölemann, 1922, Ann. Ent. Soc. Amer., vol. 15, p. 291, figs. 22–27.

TYPE: Probably no longer in existence.

TYPE LOCALITY: Vicinity of Philadelphia, Pennsylvania.

RANGE: Northeastern United States, west to Indiana, and south to western North Carolina and Kentucky.

### ***Ptyoiulus coveanus* Chamberlin**

*Ptyoiulus coveanus* Chamberlin, 1943, Bull. Univ. Utah, biol. serv., vol. 8, No. 2, p. 10, figs. 24, 25.

*Ptyoiulus ectenes* Causey, 1952, Proc. Arkansas Acad. Sci., vol. 5, p. 23.

TYPE: Chicago Nat. Hist. Mus.

TYPE LOCALITY: Greenbriar Cove, Sevier County, Tennessee.

RANGE: Tennessee, Illinois. Some of the earlier Tennessee records for *P. pennsylvanicus* may apply to this species.

### ***Ptyoiulus ectenes* (Bollman)**

*Paraiulus ectenes* Bollman, 1888, Proc. U. S. Nat. Mus., vol. 10, p. 617; 1893, U. S. Nat. Mus. Bull. 46, p. 34.

TYPE: U. S. Nat. Mus. (No. 659).

TYPE LOCALITY: Chapel Hill, Orange County, North Carolina.

RANGE: Known definitely only from type locality. Identification of this species with the preceding, without comparison of types, is regarded as premature.

### ***Ptyoiulus georgiensis* Chamberlin**

*Ptyoiulus georgiensis* Chamberlin, 1943, Bull. Univ. Utah, biol. ser., vol. 8, No. 2, p. 12, figs. 26, 27.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Northwest of Clayton, Rabun County, Georgia.

RANGE: Definitely known only from type locality. Immature specimens from Macon County, North Carolina, are probably this species.

### **Genus SAIULUS Chamberlin**

*Saiulus* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 12.

GENEROTYPE: *Saiulus setifer* Chamberlin, by original designation.

RANGE: Washington.

SPECIES: One.

### ***Saiulus setifer* Chamberlin**

*Saiulus setifer* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 12, figs. 44–47.

TYPE: Collection of R. V. Chamberlin.  
TYPE LOCALITY: Region of Puget Sound, Washington.  
RANGE: Known only from type locality.

*Genus* SHOSHONIULUS Chamberlin

*Shoshoniulus* Chamberlin, 1951, Great Basin Nat., vol. 11, p. 23.  
GENEROTYPE: *Saiulus atlantus* Chamberlin, by original designation.  
RANGE: North Georgia; Idaho.  
SPECIES: Two.

***Shoshoniulus atlantus* (Chamberlin)**

*Saiulus atlantus* Chamberlin, 1946, Ent. News, vol. 57, p. 149, figs. 1-5.  
*Shoshoniulus atlantus* Chamberlin, 1951, Great Basin Nat., vol. 11, p. 23.  
TYPE: Collection of R. V. Chamberlin.  
TYPE LOCALITY: Atlanta, Fulton County, Georgia.  
RANGE: Known only from type locality.

***Shoshoniulus idahoanus* (Chamberlin)**

*Uroblaniulus idahoanus* Chamberlin, 1950, Chicago, Acad. Sci. Nat. Hist. Misc. No. 68, p. 5, fig. 2.  
*Shoshoniulus idahoanus* Chamberlin, 1951, Great Basin Nat., vol. 11, p. 23.  
TYPE: Collection of R. V. Chamberlin.  
TYPE LOCALITY: Pierce, Clearwater County, Idaho.  
RANGE: Known only from type locality.

*Genus* SIMIULUS Chamberlin

*Simiulus* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 20.  
GENEROTYPE: *Parajulus arius* Chamberlin, by original designation.  
RANGE: Southern California.  
SPECIES: One.

***Simiulus arius* (Chamberlin)**

*Parajulus arius* Chamberlin, 1918, Pomona Coll. Journ. Ent. and Zool., vol. 10, No. 1, p. 10.  
TYPE: Mus. Comp. Zool.  
TYPE LOCALITY: Stanford, Santa Clara County, California.  
RANGE: Known only from type locality.

*Genus* SOPHIULUS Chamberlin

*Sophiulus* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 18.  
GENEROTYPE: *Paraiulus tivius* Chamberlin, by original designation.  
RANGE: Central California.  
SPECIES: Two.

**Sophiulus lomondus Chamberlin**

*Sophiulus lomondus* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 4, p. 20, figs. 33, 34.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Ben Lomond, Santa Cruz County, California.

RANGE: Known only from type locality.

**Sophiulus tivius (Chamberlin)**

*Paraiulus tivius* Chamberlin, 1912, Ann. Ent. Soc. America, vol. 5, p. 163, pl. 11, figs. 1-7.

*Sophiulus tivius* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 18, fig. 64.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Mill Valley, Marin County, California.

RANGE: Vicinity of San Francisco Bay (Stanford, Mill Valley, San Francisco).

**Genus SPATHIULUS Chamberlin**

*Spathiulus* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 14.

GENEROTYPE: *Spathiulus leptus* Chamberlin, by original designation.

RANGE: Eastern central California.

SPECIES: Four.

**Spathiulus elegantulus Causey**

*Spathiulus elegantulus* Causey, 1950, Proc. Arkansas Acad. Sci., vol. 3, p. 47, figs. 18-21.

TYPE: Illinois Nat. Hist. Survey.

TYPE LOCALITY: Happy Isle, Yosemite National Park, Maricopa County, California.

RANGE: Known only from type locality.

**Spathiulus leptus Chamberlin**

*Spathiulus leptus* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 14, figs. 53-55.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Yosemite National Park, Maricopa County, California.

RANGE: Known only from type locality.

**Spathiulus tribolus Chamberlin**

*Spathiulus tribolus* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 5, p. 8, figs. 14, 16.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Sequoia National Park, 12 miles north of Hammond, Tulare County, California.

RANGE: Known only from type locality.



**Spathiulus tuolumnus Chamberlin**

*Spathiulus tuolumnus* Chamberlin, 1950, Chicago Acad. Sci. Nat. Hist. Misc. No. 68, p. 4, fig. 1.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Pinecrest, Tuolumne County, California.

RANGE: Known only from type locality.

**Genus TAIJULUS Chamberlin**

*Taijulus* Chamberlin, 1938, Proc. Biol. Soc. Washington, vol. 51, p. 205.  
*Taiulus* authors (emendation of *Taijulus*).

GENEROTYPE: *Paraiulus tiganus* Chamberlin, by original designation.

RANGE: Utah, Wyoming, Idaho, and Washington.

SPECIES: Two.

**Taijulus olympus (Causey)**

*Taiulus olympus* Causey 1953, Amer. Midl. Nat., vol. 50, p. 154, figs. 8-10.

TYPE: Amer. Mus. Nat. Hist.

TYPE LOCALITY: Olympic Hot Springs, Washington.

RANGE: Known only from type locality.

**Taijulus tiganus Chamberlin**

*Paraiulus tiganus* Chamberlin, 1910, Ann. Ent. Soc. Amer., vol. 3, No. 4, p. 254, pl. 40, figs. 6-8, and pl. 41, figs. 1-4; Brölemann, 1922, Ann. Ent. Soc. Amer., vol. 15, p. 290.

*Taijulus tiganus* Chamberlin, 1938, Proc. Biol. Soc. Washington, vol. 51, p. 205.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Wahsatch Mountains, Salt Lake County, Utah.

RANGE: Northern Utah, Idaho, and Wyoming.

**Genus TENIULUS Chamberlin**

*Teniulus* Chamberlin, 1951, Great Basin Nat., vol. 11, Nos. 1-2, p. 21.

GENEROTYPE: *Teniulus parvior* Chamberlin, by original designation.

RANGE: Eastern Tennessee.

SPECIES: Two known.

**Teniulus parvior Chamberlin**

*Teniulus parvior* Chamberlin, 1951, Great Basin Nat., vol. 11, Nos. 1-2, p. 23, figs. 10-12.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Gatlinburg, Sevier County, Tennessee.

RANGE: Known only from type locality.

**Teniulus setosior Chamberlin**

*Teniulus setosior* Chamberlin, 1951, Great Basin Nat., vol. 11, Nos. 1-2, p. 21, figs. 6-9.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Gatlinburg, Sevier County, Tennessee.

RANGE: Known only from type locality.

**Genus TUNIULUS Chamberlin**

*Tuniulus* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 4, p. 18.

GENEROTYPE: *Codiulus milpetanus* Chamberlin, by original designation.

RANGE: California, Oregon, British Columbia.

SPECIES: Three.

**Tuniulus hewitti (Chamberlin)**

*Paraiulus hewitti* Chamberlin, 1919, Canadian Ent., vol. 51, p. 119, fig. 21.

*Codiulus hewitti* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 20, pl. 7, fig. 67, and pl. 8 [sic], figs. 67-69.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Agassiz, British Columbia.

RANGE: Reported also from Rainier National Park, Washington.

**Tuniulus milpetanus (Chamberlin)**

*Codiulus milpetanus* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 20, fig. 70.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Milpetas., Santa Clara County, California.

RANGE: Known only from type locality.

**Tuniulus oregonensis (Wood)**

*Julus oregonensis* Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, vol. 16, p. 11; 1865, Trans. Amer. Philos. Soc., vol. 13, p. 199, fig. 31.

*Codiulus oregonensis* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 19.

TYPE: Unknown.

TYPE LOCALITY: "Oregon."

RANGE: No definite localities known.

**Genus UROBLANIULUS Attems**

*Uroblaniulus* Attems, 1902, Mitt. Naturh. Mus. Hamburg, vol. 18, p. 113.—

Chamberlin and Hoffman, 1950, Chicago Acad. Sci. Nat. Hist. Misc. No. 71, p. 6.

GENEROTYPE: *Uroblaniulus megalodus* Attems [= *Julus canadensis* Newport] by monotypy.

RANGE: Boreal North America, Ontario and Vermont south to Georgia, west to Illinois and Michigan.

SPECIES: Nine.

**Uroblaniulus canadensis (Newport)**

*Iulus canadensis* Newport, 1844, Ann. Mag. Nat. Hist., vol. 13, p. 268.—

Wood, 1865, Trans. Amer. Philos. Soc., vol. 13, p. 200.

*Spirostreptus nutans* Koch, 1847, in Krit. Rev. Insect. Deutschlands, vol. 3, p. 104 (type locality: North America; type unknown).

*Spirostreptus clavipes* Koch, 1847, in Krit. Rev. Insect. Deutschlands, vol. 3, p. 105 (type locality: Pennsylvania; type unknown).

*Paraiulus canadensis* Bollman, 1893, U. S. Nat. Mus. Bull. 46, p. 150.

*Uroblaniulus megalodus* Attems, 1902, Mitt. Naturh. Mus. Hamburg, vol. 18, p. 114, pl. 1, figs. 1–5 (type locality: Vermont; type: Hamburg Museum).

*Uroblaniulus canadensis* Chamberlin and Hoffman, 1950, Chicago Acad. Sci. Nat. Hist. Misc. No. 71, p. 6.

*Saiulus jerseyi* Causey, 1950, Proc. Arkansas Acad. Sci., vol. 3, p. 48, figs. 27–30 (type locality: Rockaway, New Jersey; type: Acad. Nat. Sci. Philadelphia).

TYPE: British Mus. (Nat. Hist.).

TYPE LOCALITY: Albany River, Hudson's Bay, Ontario, Canada.

RANGE: Northeastern United States and eastern Canada, south in the Appalachians at least as far as northern Virginia.

**Uroblaniulus carolinensis Causey**

*Uroblaniulus carolinensis* Causey, 1953, Amer. Midl. Nat., vol. 50, p. 154, figs. 11–12.

TYPE: Amer. Mus. Nat. Hist.

TYPE LOCALITY: Raleigh, North Carolina.

RANGE: Known only from type locality.

**Uroblaniulus dixinus Chamberlin**

*Uroblaniulus dixinus* Chamberlin, 1951, Great Basin Nat., vol. 11, Nos. 1–2, p. 21, figs. 4, 5.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Gatlinburg, Tennessee.

RANGE: Known only from type locality.

**Uroblaniulus dux (Chamberlin)**

*Paraiulus dux* Chamberlin, 1914, Canadian Ent., vol. 46, p. 304.—Williams and Hefner, 1928, Bull. Ohio Biol. Surv., No. 18, p. 126, fig. 18.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Douglas Lake, Cheboygan County, Michigan.

RANGE: Cheboygan, Allen, and Logan Counties, Michigan.

**Uroblaniulus exul Chamberlin**

*Uroblaniulus exul* Chamberlin, 1951, Great Basin Nat., vol. 11, Nos. 1–2, p. 19, figs. 1–3.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Gatlinburg, Tennessee.

RANGE: Known only from type locality.

### **Uroblaniulus fumans (Chamberlin)**

*Saiulus fumans* Chamberlin, 1943, Bull. Univ. Utah, biol. ser., vol. 8, No. 3, p. 10, fig. 23.

*Uroblaniulus fumans* Chamberlin, 1951, Great Basin Nat., vol. 11, Nos. 1-2, p. 19.

TYPE: Chicago Nat. Hist. Mus.

TYPE LOCALITY: Gatlinburg, Sevier County, Tennessee.

RANGE: Great Smoky Mountains, Tennessee.

### **Uroblaniulus immaculatus (Wood)**

*Julus immaculatus* Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, p. 12; 1865, Trans. Amer. Philos. Soc., vol. 13, p. 200.

*Parajulus immaculatus* Bollman, 1887, Ann. New York Acad. Sci., vol. 4, p. 44.—Brölemann, 1922, Ann. Ent. Soc. Amer., vol. 15, No. 4, p. 292, figs. 28-34.

*Saiulus immaculatus* Causey, 1950, Proc. Arkansas Acad. Sci., vol. 3, p. 49, figs. 31-36.

TYPE: Acad. Nat. Sci., Philadelphia.

TYPE LOCALITY: Catskill Mountains, New York.

RANGE: Known definitely from Vermont (Grafton County), New York (Catskill Mountains), Pennsylvania (Charteroak).

### **Uroblaniulus montanus (Hoffman)**

*Saiulus montanus* Hoffman, 1949, Proc. Biol. Soc. Washington, vol. 62, p. 81, figs. 5, 6.

TYPE: U. S. Nat. Mus. (No. 1847).

TYPE LOCALITY: Mount Rogers, Grayson County, Virginia.

RANGE: High mountains in southwestern Virginia, in Grayson, Bland, Tazewell, Giles, and Alleghany Counties. This form is probably a southern subspecies of *U. immaculatus* (Wood).

### **Uroblaniulus sandersoni (Causey)**

*Saiulus sandersoni* Causey, 1950, Proc. Arkansas Acad. Sci., vol. 3, p. 48, figs. 22-26.

TYPE: Illinois Nat. Hist. Survey.

TYPE LOCALITY: LaRue, Illinois.

RANGE: Southern Illinois (Thebes and LaRue).

### **Uroblaniulus stolidus Causey**

*Uroblaniulus stolidus* Causey, 1952, Proc. Arkansas Acad. Sci., vol. 5, p. 22, figs. 6-9.

TYPE: Amer. Mus. Nat. Hist.

TYPE LOCALITY: Peninsular State Park, Door County, Wisconsin.

RANGE: Known only from type locality.

**Genus ZINIULUS Chamberlin**

*Ziniulus* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 13.

GENEROTYPE: *Ziniulus aethes* Chamberlin, by original designation.

RANGE: Texas, New Mexico.

SPECIES: Three.

***Ziniulus aethes* Chamberlin**

*Ziniulus aethes* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 13, figs. 48-50.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Austin, Travis County, Texas.

RANGE: Known only from type locality.

***Ziniulus medicolens* Chamberlin**

*Ziniulus medicolens* Chamberlin, 1940, Bull. Univ. Utah, biol. ser., vol. 5, No. 7, p. 13, figs. 51-51.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Raven Ranch, Kerr County, Texas.

RANGE: Known only from type locality.

***Ziniulus navajo* Chamberlin**

*Ziniulus navajo* Chamberlin, 1943, Proc. Biol. Soc. Washington, vol. 56, p. 146, fig. 6.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 6 miles south of Mountainair, Tarrant County, New Mexico.

RANGE: Lincoln and Tarrant Counties, New Mexico.

**Paraiulidae of uncertain systematic position*****Julus caesius* Wood**

*Julus caesius* Wood, 1867, Proc. Acad. Nat. Sci. Philadelphia, p. 43.

*Parajulus caesius* Bollman, 1893, U. S. Nat. Mus. Bull. 46, p. 119.

TYPE: Present location unknown.

TYPE LOCALITY: Texas.

Bollman was correct in referring this form to the Paraiulidae, but the generic position and specific characters of *caesius* remain obscure.

***Paraiulus garius* Chamberlin**

*Paraiulus garius* Chamberlin, 1912, Ann. Ent. Soc. Amer., vol. 5, p. 167.

TYPE: Present location unknown.

TYPE LOCALITY: Tolland, Gilpin County, Colorado.

Based upon a female. Collection of topotypes will be necessary to make a generic placement certain.

**Parajulus perditus Chamberlin**

*Parajulus perditus* Chamberlin, 1920, Canadian Ent., vol. 52, p. 167.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Waterton Lake, British Columbia.

Known only from females, and not at present to be placed with certainty.

**Parajulus varius Bollman**

*Parajulus varius* Bollman, 1887, Ann. New York Acad. Sci., vol. 4, p. 38.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: San Diego, California.

RANGE: Reported by Bollman from Ukiah and Rosario Mission, California, but probably more than one species were involved.

The type most probably is a *Bollmaniulus* or a *Codiulus*.

**Parajulus zonatus Bollman**

*Parajulus zonatus* Bollman, 1887, Proc. U. S. Nat. Mus., vol. 10, p. 618.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Chehalis, Lewis County, Washington.

This species is probably referable to *Bollmaniulus*.

*Family* ZOSTERACTIIDAE Loomis

*Zosteractiidae* Loomis, 1943, Bull. Mus. Comp. Zool., vol. 92, No. 7, p. 393.

*Genus* ZOSTERACTIS Loomis

*Zosteractis* Loomis, 1943, Bull. Mus. Comp. Zool., vol. 92, No. 7, p. 394.

GENEROTYPE: *Zosteractis interminata* Loomis, by original designation.

RANGE: Missouri.

SPECIES: One.

**Zosteractis interminata Loomis**

*Zosteractis interminata* Loomis, 1943, Bull. Mus. Comp. Zool., vol. 92, No. 7, p. 395, figs. 11a-i.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: South Rankin Cave, 4 miles east of Eureka, St. Louis County, Missouri.

RANGE: Caves in St. Louis and St. Genevieve Counties, Missouri.

**ORDER 11** Julida of uncertain systematic position**Julus cinerefrons Wood**

*Julus cinerefrons* Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, p. 13.

TYPE: Present location unknown.

TYPE LOCATION: Oregon.

Wood based this species on a single badly mutilated female, now apparently lost. It seems impossible to identify the form again, even to family, with any degree of certainty.

**Julus milesi Wood**

*Julus milesi* Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, p. 13.

TYPE: Present location unknown.

TYPE LOCALITY: Michigan.

A form not identifiable with certainty. It was probably based on immature specimens.

**Order SPIROBOLIDA**

Spirobolinae Bollman, 1893, U. S. Nat. Mus. Bull. 46, p. 156.

Spirobolidae (in part) Verhoeff, 1893, Zool. Anz., vol. 16, p. 481.—

Pocock, 1894, Chilopoda, Symphyla and Diplopoda . . . , in Weber, Zool. Erg. Reise Niederl. Ost-Ind., vol. 3, p. 388.

Anocheta Cook, 1895, Ann. New York Acad. Sci., vol. 9, p. 7.

Spiroboloidea Attems, 1926, in Kükenthal-Krumbach, Handbuch der Zoologie, vol. 4, p. 192.

**KEY TO THE NORTH AMERICAN FAMILIES OF SPIROBOLIDA**

1. Prozonites of some of the segments usually with a pair of dorsal pits (scobinae); sternite of anterior gonopods produced distally; telopodite of posterior gonopods distally biramous (tibiotarsus with a separate solenomerite), usually very slender.
 

RHINOCRICIDAE (p. 151)

Scobinae never present; sternite of anterior gonopods not conspicuously produced distad; telopodite of posterior gonopods not very slender and usually without a free and conspicuous solenomerite . . . . . 2
2. Second tergite extending well below level of the collum, latter with ends generally rounded; coxite and telopodite of posterior gonopods attached to each other in the same axis . . . . . SPIROBOLIDAE (p. 159)
- Second tergite not extending below level of ends of collum, latter typically more acute; posterior gonopods with coxite and telopodite attached to form a right angle . . . . . ATOPETHOLIDAE (p. 152)

**Family RHINOCRICIDAE Brölemann**

Rhinocricidae Brölemann, 1914, Ann. Soc. Ent. France, vol. 83, p. 476.—  
Schubart, 1951, Anais Acad. Brasileira Ciénc., vol. 23, p. 221.

**Genus EURHINOCRICUS Brölemann**

*Eurhinocricus* Brölemann, 1903, Ann. Soc. Ent. France, vol. 72, p. 131.—

Pocock, 1907, Diplopoda, in Biol. Centr.-Amer., pp. 68, 73.—Hoffman, 1953, Proc. Biol. Soc. Washington, vol. 66, p. 179.

GENEROTYPE: *Eurhinocricus biolleyi* Brölemann, by original designation.

RANGE: Middle America, from southern California south to Panama; Jamaica.

SPECIES: Twenty, of which one occurs, in our area.

**Eurhinocricus tidus (Chamberlin)**

*Rhinocricus tidus* Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, vol. 99, p. 37, figs. 25, 26.

*Eurhinocricus tidus* Hoffman, 1953, Proc. Biol. Soc. Washington, vol. 66, p. 183.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: Fort Tejon, Kern County, California.

RANGE: Known only from type locality.

**Genus RHINOCRICUS Karsch**

*Rhinocricus* Karsch, 1881, Zeitschr. Naturw., vol. 54 (ser. 3, vol. 6), p. 68 (as subgenus of *Spirobolus*).

*Rhinocricus* Pocock, 1894, Journ. Linn. Soc. London, vol. 24 (Zool.), p. 485.

GENEROTYPE: *Spirobolus (Rhinocricus) parvus* Karsch, by subsequent designation of Pocock, 1894.

RANGE: Neotropical and Austral regions.

SPECIES: Two are known from our limits; more than a hundred have been described from the tropics.

**Rhinocricus vagans Chamberlin**

*Rhinocricus vagans* Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, vol. 99, p. 37, figs. 23, 24.

TYPE: Acad. Nat. Sci. Philadelphia (No. 9959).

TYPE LOCALITY: Fort Tejon, Kern County, California.

RANGE: Known only from type locality.

**Rhinocricus vancouveri Chamberlin**

*Rhinocricus vancouveri* Chamberlin, 1951, Chicago Acad. Sci. Nat. Hist. Misc. No. 87, p. 11, figs. 24-26.

TYPE: Prov. Mus. British Columbia.

TYPE LOCALITY: Clayoquot Sound, Vancouver Island, British Columbia.

RANGE: Known only from type locality.

**Family ATOPETHOLIDAE Chamberlin**

Atopetholidae Chamberlin, 1918, Proc. Biol. Soc. Washington, vol. 31, p. 167; 1949, Journ. Washington Acad. Sci., vol. 39, p. 168.

Onychelidae Verhoeff, 1938, Zool. Anz., vol. 122, p. 273.

**Genus ANELUS Cook**

*Anelus* Cook, 1911, Proc. U. S. Nat. Mus., vol. 40, p. 160.

GENEROTYPE: *Anelus reduncus* Cook, by original designation.

RANGE: Texas.

SPECIES: One in our area, another in Mexico.



**Anelus reduncus Cook**

*Anelus reduncus* Cook, 1911, Proc. U. S. Nat. Mus., vol. 40, p. 162.

TYPE: U. S. Nat. Mus. (No. 798).

TYPE LOCALITY: Brownsville, Cameron County, Texas.

RANGE: Known only from type locality.

**Genus ARINOLUS Chamberlin**

*Arinolus* Chamberlin, 1940, Pomona Coll. Journ. Ent. and Zool., vol. 32, p. 81.

GENEROTYPE: *Arinolus torynophor* Chamberlin, by original designation.

RANGE: Arizona, southern California, and Mexico.

SPECIES: Ten, nine in our area.

**Arinolus apachellus Chamberlin**

*Arinolus apachellus* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 4, p. 10, figs. 12-14.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Covered Wells, Pima County, Arizona.

RANGE: Known only from type locality.

**Arinolus chiricahuanus Chamberlin**

*Arinolus chiricahuanus* Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, vol. 99, p. 50, figs. 56-58.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: White Tail Canyon, Chiricahua Mountains, Arizona.

RANGE: Known only from type locality.

**Arinolus dentatus (Cook)**

*Onychelus dentatus* Cook, 1911, Proc. U. S. Nat. Mus., vol. 40, p. 158.

*Onychelus suturatus* Cook, 1911, Proc. U. S. Nat. Mus., vol. 40, p. 159 (type locality: Fort Huachuca, Arizona; type: U. S. Nat. Mus., No. 805).

*Arinolus dentatus* Loomis, 1950, Journ. Washington Acad. Sci., vol. 40, p. 164.

TYPE: U. S. Nat. Mus. (No. 804).

TYPE LOCALITY: Fort Huachuca, Cochise County, Arizona.

RANGE: Known only from type locality.

**Arinolus hopinus Chamberlin**

*Arinolus hopinus* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 4, p. 12, fig. 16.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 15 miles east of Tucson, Pima County, Arizona.

RANGE: Known only from type locality.

**Arinolus hospes (Cook)**

*Onychelus hospes* Cook, 1911, Proc. U. S. Nat. Mus., vol. 40, p. 157.

*Arinolus hospes* Loomis, 1950, Journ. Washington Acad. Sci., vol. 40, p. 164.

TYPE: U. S. Nat Mus. (No. 803).

TYPE LOCALITY: Tucson, Pima County, Arizona.

RANGE: Known only from the type locality.

**Arinolus latus Loomis**

*Arinolus latus* Loomis, 1953, Journ. Washington Acad. Sci., vol. 43, p. 418, figs. 10-12.

TYPE: U.S. Nat. Mus. (No. 2090).

TYPE LOCALITY: Antelope Valley, between Lancaster and Palmdale, Los Angeles County, California.

RANGE: Known only from type locality.

**Arinolus nogalanus Chamberlin**

*Arinolus nogalanus* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 4, p. 11, fig. 15.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Nogales, Santa Cruz County, Arizona.

RANGE: Known only from type locality.

**Arinolus pimus Chamberlin**

*Arinolus pimus* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 4, p. 12.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Litchfield Park, Maricopa County, Arizona.

RANGE: Known only from type locality.

**Arinolus torynophor Chamberlin**

*Arinolus torynophor* Chamberlin, 1940, Pomona Coll. Journ. Ent. and Zool., vol. 32, p. 81, figs. A, B.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Fish Creek, Maricopa County, Arizona.

RANGE: Known only from type locality.

**Genus ATOPETHOLUS Chamberlin**

*Atopetholus* Chamberlin, 1918, Proc. Biol. Soc. Washington, vol. 31, p. 167.

GENEROTYPE: *Atopetholus californicus* Chamberlin, by original designation.

RANGE: California.

SPECIES: Seven.

**Atopetholus angelus Chamberlin**

*Atopetholus aneglus* Chamberlin, 1920, Proc. Biol. Soc. Washington, vol. 33, p. 101.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Edendale, Los Angeles County, California.

RANGE: Known only from type locality.

**Atopetholus barbaranus Chamberlin**

*Atopetholus barbaranus* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 168.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Santa Barbara County, California.

RANGE: Known only from type locality.

**Atopetholus californicus Chamberlin**

*Atopetholus californicus* Chamberlin, 1918, Proc. Biol. Soc. Washington, vol. 31, p. 168.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Claremont, Los Angeles County, California.

RANGE: Known only from type locality.

**Atopetholus carmelitus Chamberlin**

*Atopetholus carmelitus* Chamberlin, 1940, Pomona Coll. Journ. Ent. and Zool., vol. 32, p. 81, figs. C-E.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Hastings Reservation, Monterey County, California.

RANGE: Known only from type locality.

**Atopetholus fraternus Chamberlin**

*Atopetholus fraternus* Chamberlin, 1918, Proc. Biol. Soc. Washington, vol. 31, p. 168.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Friant, Fresno County, California.

RANGE: Known only from type locality.

**Atopetholus paroicus Chamberlin**

*Atopetholus paroicus* Chamberlin, 1941, Bull. Univ. Utah. biol. ser., vol. 6, No. 4, p. 7, fig. 5.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Mountain Spring, San Diego County, California.

RANGE: Known only from type locality.

**Atopetholus pearcei Chamberlin**

*Atopetholus pearcei* Chamberlin, 1950, Chicago Acad. Sci. Nat. Hist. Misc. No. 68, p. 6, fig. 3.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Oildale, Kern County, California.

RANGE: Known only from type locality.

**Genus EURELUS Cook**

*Eurelus* Cook, 1911, Proc. U. S. Nat. Mus., vol. 40, p. 151.

GENEROTYPE: *Eurelus soleatus* Cook, by original designation.

RANGE: Western Texas; New Mexico.

SPECIES: Four.

***Eurelus kerrensis* Chamberlin and Mulaik**

*Eurelus kerrensis* Chamberlin and Mulaik, 1941, Journ. New York Ent. Soc., vol. 49, p. 61.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Kerr County, Texas.

RANGE: Known only from type locality.

***Eurelus mulaiki* Chamberlin**

*Eurelus mulaiki* Chamberlin, 1943, Proc. Biol. Soc. Washington, vol. 56, p. 147, figs. 7-11.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: North of Glencoe, Lincoln County, New Mexico.

RANGE: Known from Lincoln and Tarrant Counties, New Mexico.

***Eurelus proximus* Chamberlin and Mulaik**

*Eurelus proximus* Chamberlin and Mulaik, 1941, Journ. New York Ent. Soc., vol. 49, p. 62.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Edinburg, Hidalgo County, Texas.

RANGE: Known only from type locality.

***Eurelus soleatus* Cook**

*Eurelus soleatus* Cook, 1911, Proc. U. S. Nat. Mus., vol. 40, p. 153.

TYPE: U. S. Nat. Mus. (No. 801).

TYPE LOCALITY: Falfurrias, Brooks County, Texas.

RANGE: Known only from type locality.

**Genus HESPEROLUS Chamberlin**

*Hesperolus* Chamberlin, 1918, Proc. Biol. Soc. Washington, vol. 31, p. 169.

GENEROTYPE: *Hesperolus wheeleri* Chamberlin, by original designation.

RANGE: California.

SPECIES: One.

***Hesperolus wheeleri* Chamberlin**

*Hesperolus wheeleri* Chamberlin, 1918, Proc. Biol. Soc. Washington, vol. 31, p. 169.

TYPE: Mus. Comp. Zool.

**TYPE LOCALITY:** Cold Spring Canyon, Santa Inez Mountains, California.

**RANGE:** Known only from type locality.

**Genus ONYCHELUS Cook**

*Onychelus* Cook, 1904, in Harriman Alaska Exped., vol. 8, p. 67.

*Gosichelus* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 168 (generotype, *Onychelus jaegeri* Chamberlin).

**GENEROTYPE:** *Onychelus obustus* Cook, by original designation.

**RANGE:** California and Arizona.

**SPECIES:** Three.

***Onychelus jaegeri* Chamberlin**

*Onychelus jaegeri* Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, vol. 99, p. 50, figs. 53, 54.

*Gosichelus jaegeri* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 168.

**TYPE:** Acad. Nat. Sci. Philadelphia (No. 9972).

**TYPE LOCALITY:** Indio Mudhills, about ten miles northeast of Palm Springs, Riverside County, California.

**RANGE:** Known only from type locality.

***Onychelus medolus* Chamberlin**

*Onychelus medolus* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 4, p. 13, figs. 17, 18.

**TYPE:** Collection of R. V. Chamberlin.

**TYPE LOCALITY:** Olberg, Pinal County, Arizona.

**RANGE:** Known only from type locality.

***Onychelus obustus* Cook**

*Onychelus obustus* Cook, 1904, in Harriman Alaska Exped., vol. 4, p. 68.

**TYPE:** U. S. Nat. Mus. (No. 797).

**TYPE LOCALITY:** Colorado Desert, Imperial County, California.

**RANGE:** Known only from type locality.

**Genus ORTHICHELUS Chamberlin and Hoffman**

*Orthichelus* Chamberlin and Hoffman, 1950, Chicago Acad. Sci. Nat. Hist. Misc. No. 71, p. 7.

**GENEROTYPE:** *Onychelus phanus* Chamberlin, by original designation.

**RANGE:** California.

**SPECIES:** One.

***Orthichelus michelbacheri* (Verhoeff)**

*Onychelus michelbacheri* Verhoeff, 1938, Zool. Anz., vol. 122, Nos. 11-12, p. 276, figs. 1-3.

*Onychelus phanus* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 5, p. 6, figs. 6, 7. (type locality: 6 miles west of Freeman, Kern County, California; type: collection of R. V. Chamberlin).

TYPE: Verhoeff collection.

TYPE LOCALITY: Walker's Pass, west of Freeman, Kern County, California.

RANGE: Known only from Kern County, California.

**Genus PIEDOLUS Chamberlin**

*Piedolus* Chamberlin, 1930, Pan-Pacific Ent., vol. 6, p. 117.

GENEROTYPE: *Piedolus utus* Chamberlin, by original designation.

RANGE: Southern Utah.

SPECIES: One.

***Piedolus utus* Chamberlin**

*Piedolus utus* Chamberlin, 1930, Pan-Pacific Ent., vol. 6, p. 118, fig.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: St. George, Washington County, Utah.

RANGE: Known only from type locality.

**Genus TIDOLUS Chamberlin**

*Tidolus* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, No. 5, p. 169.

GENEROTYPE: *Atopetholus parvus* Chamberlin, by original designation.

RANGE: Southern California.

SPECIES: One.

***Tidolus parvus* (Chamberlin)**

*Atopetholus parvus* Chamberlin, 1918, Proc. Biol. Soc. Washington, vol. 31, p. 168.

*Tidolus parvus* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 169.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Claremont, Los Angeles County, California.

RANGE: Known only from type locality.

**Genus TOLTECOLUS Chamberlin**

*Toltecolus* Chamberlin, 1943, Bull. Univ. Utah, biol. ser., vol. 8, No. 3, p. 27.

GENEROTYPE: *Toltecolus garcianus* Chamberlin, by original designation.

RANGE: Texas, Chihuahua, Nuevo León.

SPECIES: Three, one of which occurs in our area.

***Toltecolus parvunguis* Hoffman**

*Toltecolus parvunguis* Hoffman, 1949, Chicago Acad. Sci. Nat. Hist. Misc. No. 46, p. 1, figs. A, B.

TYPE: U. S. Nat. Mus. (No. 1853).

TYPE LOCALITY: Frio State Park, Frio County, Texas.

RANGE: Known only from type locality.

**Genus WATICHELUS Chamberlin**

*Watichelus* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 169.

GENEROTYPE: *Onychelus smithi* Chamberlin, by original designation.

RANGE: Southern California, and adjacent Baja California.

SPECIES: Four in our area, two extralimital.

***Watichelus edentatus* Loomis**

*Watichelus edentatus* Loomis, 1949, Journ. Washington Acad. Sci., vol. 39, p. 241, figs. 3, 4.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Between El Centro and San Diego, California.

RANGE: Known only from type locality.

***Watichelus parallelus* Loomis**

*Watichelus parallelus* Loomis, 1949, Journ. Washington Acad. Sci., vol. 39, p. 244, figs. 9, 10.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Chula Vista, San Diego County, California.

RANGE: Known only from type locality.

***Watichelus robustus* Loomis**

*Watichelus robustus* Loomis, 1949, Journ. Washington Acad. Sci., vol. 39, p. 241, figs. 1, 2.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Chula Vista, San Diego County, California.

RANGE: Known only from type locality.

***Watichelus smithi* (Chamberlin)**

*Onychelus smithi* Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, vol. 99, p. 49, figs. 52, 53.

*Watichelus smithi* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 169.

TYPES Acad. Nat. Sci., Philadelphia.

TYPE LOCALITY: Murray Canyon, Riverside County, California.

RANGE: Known only from type locality.

**Family SPIROBOLIDAE Bollman**

Spirobolinae (in part) Bollman, 1893, U. S. Nat. Mus. Bull. 46, p. 156.

Spirobolidae (in part) Verhoeff, 1893, Zool. Anz., vol. 16, p. 481.—Pocock, 1894, Chilopoda, Symphyla and Diplopoda, . . . , in Weber, Zool. Erg. Reise Niederl. Ost-Ind., vol. 3, p. 388.—Cook, 1895, Ann. New York Acad. Sci., vol. 9, p. 7.

Spirobolidae Brölemann, 1914, Ann. Soc. Ent. France, vol. 83, p. 1.

**Genus AUXOBOLUS Chamberlin**

*Auxobolus* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 163.

GENEROTYPE: *Auxobolus ergus* Chamberlin, by original designation.

RANGE: Southern California.

SPECIES: Eight.

***Auxobolus castaneus* (Chamberlin)**

*Tylobolus castaneus* Chamberlin, 1918, Proc. Biol. Soc. Washington, vol. 31, p. 166.

*Auxobolus castaneus* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 163.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Brookdale, Santa Cruz County, California.

RANGE: Known only from the type locality.

***Auxobolus claremontus* (Chamberlin)**

*Tylobolus claremontus* Chamberlin, 1918, Proc. Biol. Soc. Washington, vol. 31, p. 165.

*Auxobolus claremontus* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 163, figs. 1, 2.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Claremont, Los Angeles County, California.

RANGE: Known only from type locality.

***Auxobolus discipulus* Chamberlin**

*Auxobolus discipulus* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 165, figs. 3, 4.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Ione, Amador County, California.

RANGE: Also known from vicinity of Stanford University, in central California.

***Auxobolus ergus* Chamberlin**

*Auxobolus ergus* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 163, figs. 5-7.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Tollhouse, Fresno County, California.

RANGE: Central-eastern California, from Kern County north to Madera County.

***Auxobolus friantus* Chamberlin**

*Auxobolus friantus* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 165, figs. 8, 9.

TYPE: Collection of R. V. Chamberlin.



TYPE LOCALITY: Friant, Fresno County, California.

RANGE: Known only from type locality.

#### **Auxobolus monachus Chamberlin**

*Auxobolus monachus* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 165, figs. 10, 11.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Hastings Reservation, Monterey County, California.

RANGE: Known only from Monterey County, California.

#### **Auxobolus simulatus Chamberlin**

*Auxobolus simulatus* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 165, figs. 12, 13.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Riverside, Riverside County, California.

RANGE: Known only from type locality.

#### **Auxobolus stebbinsi (Chamberlin)**

*Tylobolus stebbinsi* Chamberlin, 1944, Proc. Biol. Soc. Washington, vol. 57, p. 113, figs. 4, 5.

*Auxobolus stebbinsi* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 165.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Meadow Canyon, Santa Monica Mountains, Los Angeles County, California.

RANGE: Known only from Los Angeles County, California.

#### **Genus CALIFORNIBOLUS Verhoeff**

*Californibolus* Verhoeff, 1944, Bull. Southern California Acad. Sci., vol. 43, p. 53.—Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 165.

GENEROTYPE: *Californibolus michelbacheri* Verhoeff, by original designation.

RANGE: Oregon, California, southwestern Utah.

SPECIES: Seven.

#### **Californibolus fredricksoni Causey**

*Californibolus fredricksoni* Causey, 1955, Journ. Kansas Ent. Soc., vol. 28, p. 78, figs. 1c, 4, 5.

TYPE: Snow Ent. Mus., Univ. Kansas.

TYPE LOCALITY: Douglas County, Kansas.

RANGE: Eastern Kansas, probably also Nebraska and Iowa.

#### **Californibolus michelbacheri Verhoeff**

*Californibolus michelbacheri* Verhoeff, 1944, Bull. Southern California Acad. Sci., vol. 43, p. 56, pl. 12, figs. 1-3.

TYPE: Verhoeff collection.

TYPE LOCALITY: Vicinity of Fort Seward, Humboldt County, California.

RANGE: Known only from type locality.

### **Californibolus oregonus Chamberlin**

*Californibolus oregonus* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 166, figs. 14, 15.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Springfield, Lane County, California.

RANGE: Known only from type locality.

### **Californibolus pontis Chamberlin**

*Californibolus pontis* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 166, figs. 18, 19.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Bridgeville, Humboldt County, California.

RANGE: Known only from type locality.

### **Californibolus rectus Chamberlin**

*Californibolus rectus* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 166, figs. 16, 17.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Solano County, California.

RANGE: Known only from type locality.

### **Californibolus uncigerus (Wood)**

*Spirobolus uncigerus* Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, p. 15; 1865, Trans. Amer. Philos. Soc., vol. 13, p. 209, fig. 36.

*Californibolus uncigerus* Chamberlin, 1949, Journ. Washington Acad. Sci., vol. 39, p. 166.

TYPE: Not known to exist.

TYPE LOCALITY: California, without further locality.

RANGE: Recorded from Shasta County, California, by Causey (1955).

### **Californibolus utahensis (Chamberlin)**

*Tylobolus utahensis* Chamberlin, 1925, Pan-Pacific Ent., vol. 2, No. 2, p. 60.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Zion National Park, Washington County, Utah.

RANGE: Known only from type locality.

### **Genus CHICOBOLUS Chamberlin**

*Chicobolus* Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, vol. 99, p. 46.—Causey, 1955, Journ. Kansas Ent. Soc., vol. 28, p. 75.

GENEROTYPE: *Chicobolus pilsbryi* Chamberlin, by original designation.

RANGE: Florida.

SPECIES: Three.

**Chicobolus jucundus Causey**

*Chicobolus jucundus* Causey, 1955, Journ. Kansas Ent. Soc., vol. 28, p. 77.

TYPE: Amer. Mus. Nat. Hist.

TYPE LOCALITY: Pensacola, Escambia County, Florida.

RANGE: Known only from type locality.

**Chicobolus pilsbryi Chamberlin**

*Chicobolus pilsbryi* Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, vol. 99, p. 46, figs. 46, 47.

TYPE: Acad. Nat. Sci. Philadelphia (No. 9968).

TYPE LOCALITY: Boca Chica Key, Dade County, Florida.

RANGE: Known only from type locality.

**Chicobolus spinigerus (Wood)**

*Spirobolus spinigerus* Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, p. 15.

*Spirobolus paludis* Chamberlin, 1918, Ann. Ent. Soc. Amer., vol. 11, p. 374 (type locality: Okefenokee Swamp, Georgia; type: Mus. Comp. Zool.).

*Chicobolus spinigerus* Causey, 1955, Journ. Kansas Ent. Soc., vol. 28, p. 76, fig. 1b.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: "Florida and South Carolina" (Wood), restricted by Causey to Everglades National Park, Florida.

RANGE: Peninsular Florida, south to Charleston, South Carolina, north-west as far as Leon County, Florida.

**Genus HILTONIUS Chamberlin**

*Hiltonius* Chamberlin, 1918, Proc. Biol. Soc. Washington, vol. 31, p. 166; 1949, Journ. Washington Acad. Sci., vol. 39, p. 166.

GENEROTYPE: *Hiltonius pulchrus* Chamberlin, by original designation.

RANGE: Southern California and Arizona, south on the Mexican Plateau as far as the State of Guerrero.

SPECIES: Fifteen, of which eight are found within our limits.

**Hiltonius congregans Chamberlin**

*Hiltonius congregans* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 4, p. 9, fig. 10.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Mountain Spring, San Diego County, California.

RANGE: Known only from type locality.

**Hiltonius conservatus Chamberlin**

*Hiltonius conservatus* Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, vol. 99, p. 53, figs. 61-63.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: Fort Tejon, Kern County, California.

RANGE: Known only from the type locality.

**Hiltonius hebes (Bollman)**

*Spiroboles hebes* Bollman, 1887, Ann. New York Acad. Sci., vol. 4, p. 31.

*Hiltonius balboanus* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 4, p. 10, fig. 11 (type locality: San Diego, California; types in Chamberlin Collection).

*Hiltonius hebes* Loomis and Hoffman, 1948, Proc. Biol. Soc. Washington, vol. 61, p. 51.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: San Diego, California.

RANGE: Known only from type locality.

**Hiltonius mimus Chamberlin**

*Hiltonius mimus* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 4, p. 9, figs. 8, 9.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Mountain Spring, San Diego County, California.

RANGE: Known only from type locality.

**Hiltonius palmaris Loomis**

*Hiltonius palmaris* Loomis, 1953, Journ. Washington Acad. Sci., vol. 43, p. 418, figs. 8, 9.

TYPE: U. S. Nat. Mus. (No. 2089).

TYPE LOCALITY: Palm Canyon, Palm Springs, Riverside County, California.

RANGE: Known only from type locality.

**Hiltonius pius Chamberlin**

*Hiltonius pius* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 4, p. 7, fig. 6.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Mountain Spring, San Diego County, California.

RANGE: Known only from type locality.

**Hiltonius pulchrus Chamberlin**

*Hiltonius pulchrus* Chamberlin, 1918, Proc. Biol. Soc. Washington, vol. 31, p. 167.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Claremont, Los Angeles County, California.

RANGE: Known only from type locality.

### **Hiltonius thebanus Chamberlin**

*Hiltonius thebanus* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 4, p. 8, fig. 7.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Theba, Maricopa County, Arizona.

RANGE: Known only from type locality.

### **Genus NARCEUS Rafinesque**

*Narceus* Rafinesque, 1820, Annals of nature, p. 9.—Hoffman and Crabill, 1953, Florida, Ent., vol. 36, p. 80.

*Rhexenor* Rafinesque, 1820, Annals of nature, p. 9 (generotype: *R. annularis* Rafinesque, by monotypy).

*Spiroboldus* (not Brandt) Wood, 1865, Trans. Amer. Philos. Soc., new ser., vol. 13, p. 207.—Bollman, 1893, U. S. Nat. Mus. Bull. 46, p. 118.—Brölemann, 1914, Ann. Soc. Ent. France, vol. 83, p. 31.—Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, vol. 99, p. 44.

*Arctobolus* Cook, 1904, in Harriman Alaska Exped., vol. 8, p. 64 (generotype: *A. onandaga* Cook).

GENEROTYPE: *Narceus tinctorius* Rafinesque, by monotypy.

RANGE: North America east of the Great Plains. The entirely provisional statement of ranges in this genus must be emphasized. Many of the names admitted to this list will doubtless fall as synonyms when adequate studies have been made.

SPECIES: Fourteen.

### **Narceus americanus (Beauvois)**

*Julus americanus* Beauvois, 1805, Insectes recueillis en Afrique et Amérique, . . . , Aptères, pl. 4, figs. 3a-c (the name "americanae borealis" appears on page 155 of the text).

*Spiroboldus marginatus* (not Say) Wood, 1865, Trans. Amer. Philos. Soc., new ser., vol. 13, p. 207 (this citation follows Bollman, whose identification of Say's *marginatus* with the Floridian species does not seem to be beyond challenge and which is here only provisionally accepted).

*Spiroboldus agilis* Cope, 1869, Proc. Amer. Philos. Soc., vol. 11, p. 181 (type locality: Montgomery County, Virginia; types probably not extant).

*Spiroboldus americanae-borealis* Bollman, 1893, U. S. Nat. Mus. Bull. 46, p. 145.

*Spiroboldus americanus* Hoffman, 1951, Florida Ent., vol. 34, p. 15.

TYPE: Location unknown.

TYPE LOCALITY: North America, without further indication.

RANGE: Atlantic Coast States, at least from Maryland to Georgia and Alabama, exact limits unknown.

### **Narceus annularis (Rafinesque)**

*Rhexenor annularis* Rafinesque, 1820, *Annals of nature*, p. 9.

*Arctobolus onandaga* Cook, 1904, in *Harriman Alaska Exped.*, vol. 8, p. 64 (type locality: Kirkville, Onandaga County, New York; type: U. S. Nat. Mus., No. 1881).

*Narceus annularis* Hoffman and Crabill, 1953, *Florida Ent.*, vol. 36, p. 81.

TYPE: Probably none extant.

TYPE LOCALITY: "Highland Hills of New York," here restricted to vicinity of Catskill, Greene County, New York.

RANGE: Exact limits unknown, but specimens have been seen from several localities in central New York State.

### **Narceus atratus (Girard)**

*Julus atratus* Girard, 1853, in *Marcy, Exploration of the Red River of Louisiana . . . in 1852*, Appendix F, p. 244.

TYPE: Originally belonging to the Smithsonian Institution, present location unknown.

TYPE LOCALITY: Prairie Mer Rouge, Louisiana.

RANGE: Known only from type locality.

### **Narceus dolleyi (Loomis)**

*Arctobolus dolleyi* Loomis, 1943, *Bull. Mus. Zool.*, vol. 92, No. 7, p. 398, figs. 13a-f.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Feemster's Lake near Tupelo, Lee County, Mississippi.

RANGE: Central Mississippi to northern Alabama, western North Carolina, Tennessee, and southwest Virginia.

### **Narceus gordanus (Chamberlin)**

*Spirobolus gordanus* Chamberlin, 1943, *Bull. Univ. Utah, biol. ser.*, vol. 8, No. 2, p. 5, figs. 6-11.

TYPE: Chicago Nat. Hist. Mus.

TYPE LOCALITY: Punta Gorda, Charlotte County, Florida.

RANGE: Known only from type locality.

### **Narceus keysi (Loomis)**

*Arctobolus keysi* Loomis, 1944, *Psyche*, vol. 50, p. 169, fig. 2.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Lantana, Palm Beach County, Florida.

RANGE: Known only from type locality.

### **Narceus melanior (Chamberlin)**

*Spirobolus melanior* Chamberlin, 1943, *Bull. Univ. Utah, biol. ser.*, vol. 8, No. 2, p. 9.

TYPE: Chicago Nat. Hist. Mus.

TYPE LOCALITY: Stephen E. Austin State Park, 5 miles east of Scaley, Austin County, Texas.

RANGE: Known only from type locality.

### **Narceus oklahomae (Chamberlin)**

*Spirobolus oklahomae* Chamberlin, 1931, Ent. News, vol. 42, p. 98, pl. 2, fig. 1.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Murray County, Oklahoma.

RANGE: Murray, Comanche, and Pushmataha Counties, Oklahoma.

### **Narceus orophilus (Chamberlin)**

*Spirobolus orophilus* Chamberlin, 1943, Bull. Univ. Utah, biol. ser., vol. 8, No. 2, p. 8, figs. 17-21.

TYPE: Chicago Nat. Hist. Mus.

TYPE LOCALITY: Gatlinburg, Sevier County, Tennessee.

RANGE: Eastern Tennessee and southeastern Kentucky.

### **Narceus pensacolae (Bollman)**

*Spirobolus pensacolae* Bollman, 1887, Ent. Amer., vol. 1, p. 228.

TYPE: U. S. Nat. Mus. (No. 110).

TYPE LOCALITY: Pensacola, Escambia County, Florida.

RANGE: Known only from type locality.

### **Narceus ramstadi (Chamberlin)**

*Spirobolus ramstadi* Chamberlin, 1943, Bull. Univ. Utah, biol. ser., vol. 8, No. 2, p. 7, figs. 12-16.

TYPE: Chicago Nat. Hist. Mus.

TYPE LOCALITY: Punta Gorda, Charlotte County, Florida.

RANGE: Known only from type locality.

### **Narceus scotti (Chamberlin)**

*Spirobolus scotti* Chamberlin, 1943, Proc. Biol. Soc. Washington, vol. 56, p. 148, figs. 12-14.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Houston, Harris County, Texas.

RANGE: Known only from type locality.

### **Narceus tinctorius Rafinesque**

*Narceus tinctorius* Rafinesque, 1820, Annals of nature, p. 9.

TYPE: Probably none in existence.

TYPE LOCALITY: Here restricted to the "Knobs" in Estill County, Kentucky.

RANGE: Known definitely only from the type locality, but doubtless ranging over much of the Cumberland Plateau and adjacent regions.

**Narceus woodi (Humbert and Saussure)**

*Spirostreptus woodi* Humbert and Saussure, 1870, Rev. Mag. Zool., ser. 2, vol. 22, p. 177.

TYPE: Geneva Museum.

TYPE LOCALITY: St. Louis, Missouri.

RANGE: No definite localities known. Placement of this name in *Narceus* is tentative.

**Genus TYLOBOLUS Cook**

*Tylobolus* Cook, 1904 in Harriman Alaska Exped., vol. 8, p. 65.

GENEROTYPE: *Tylobolus deses* Cook, by original designation.

RANGE: California.

SPECIES: One.

**Tylobolus deses Cook**

*Tylobolus deses* Cook, 1904, in Harriman Alaska Exped., vol. 8, p. 65, pl. 4, figs. 3a-3b.

TYPE: U. S. Nat. Mus. (No. 796).

TYPE LOCALITY: California; exact locality not known but probably either the vicinity of Stanford or of Claremont.

RANGE: No definite localities known.

**Spirobolida of uncertain systematic position****Spirostreptus californicus Humbert and Saussure**

*Spirostreptus californicus* Humbert and Saussure, 1870, Rev. Mag. Zool., ser. 2, vol. 22, p. 177.

TYPE: ?Geneva Museum.

TYPE LOCALITY: California.

**Spirostreptus ignobilis Humbert and Saussure**

*Spirostreptus ignobilis* Humbert and Saussure, 1870, Rev. Mag. Zool., ser. 2, vol. 22, p. 177.

TYPE: ?Geneva Museum.

TYPE LOCALITY: "North America."

**Tylobolus viduus Chamberlin**

*Tylobolus viduus* Chamberlin, 1940. Pomona Coll. Journ. Ent. and Zool., vol. 32, p. 81.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: KNOWN only from the female type specimen, probably not a true *Tylobolus* in its restricted sense.

**Order SPIROSTREPTIDA**

Spirostreptidea Brandt, 1833, Bull. Soc. Nat. Moscou, vol. 6, p. 200.



Spirostreptidae Pocock, 1894, Chilopoda, Symphyla and Diplopoda . . . ,  
in Weber, Zool. Erg. Reise Niederl. Ost-Ind., vol. 3, p. 378.

Spirostreptoidea Cook, 1895, Ann. New York Acad. Sci., vol. 9, p. 5.—  
Attems, 1914, Zoologica, vol. 25, Heft 65–66, p. 52.—Verhoeff, 1931,  
in Bronn, Klass. und Ordn. des Tier-Reichs, Band. 5, Abt. 2, Lief. 11,  
pp. 1675, 1704.

Spirostreptomorpha Attems, 1926, in Kükenthal-Krumbach, Handbuch der  
Zoologie, vol. 4, p. 197.

#### KEY TO NORTH AMERICAN FAMILIES OF SPIROSTREPTIDA

1. Lingual laminae of gnathochilarium separated by the mentum; telopodite of anterior gonopod fused with the basiopodite, without apparent seminal groove.

CHOCTELLIDAE (p. 169)

Lingual laminae of gnathochilarium not separated by the mentum; telopodite of anterior gonopod long, slender, partly embraced by the folded coxite but always freely moveable and with a distinct seminal groove . . . SPIROSTREPTIDAE (p. 169)

#### *Family* CHOCTELLIDAE Chamberlin and Hoffman

Choctellidae Chamberlin and Hoffman, 1950, Chicago Acad. Sci., Nat.  
Hist. Misc. No. 71, p. 7.

#### *Genus* CHOCTELLA Chamberlin

*Choctella* Chamberlin, 1918, Psyche, vol. 25, p. 25.

GENEROTYPE: *Choctella cumminsi* Chamberlin, by original designation.

RANGE: Alabama and Tennessee.

SPECIES: One.

#### *Choctella cumminsi* Chamberlin

*Choctella cumminsi* Chamberlin, 1918, Psyche, vol. 25, p. 25.—Loomis,  
1943, Bull. Mus. Comp. Zool., vol. 92, No. 7, p. 391, fig. 9.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Glendale Hills, Davidson County, Tennessee.

RANGE: Cumberland Plateau and adjacent region, from the vicinity of Nashville, Tennessee, south to the vicinity of Guntersville, Marshall County, Alabama.

#### *Family* SPIROSTREPTIDAE Attems

Spirostreptidae Attems, 1914, Zoologica, Vol. 25, Heft. 65–66, p. 52 (The first usage of the name Spirostreptidae in its current restricted sense, i. e., exclusive of the Harpagophoridae and Odontopygidae).

#### *Genus* ORTHOPORUS Silvestri

*Orthoporus* Silvestri, 1897, Boll. Mus. Zool. Anat. Comp. Univ. Torino, vol. 12, No. 283, p. 7.

GENEROTYPE: *Orthoporus diaporooides* Silvestri, by monotypy.

RANGE: Tropical America, ?Africa.

SPECIES: About 50, of which 10 occur in our area. In addition to the forms recorded below, Bollman listed *Spirostreptus montezumae* Saussure (now referable to *Orthoporus*) as occurring in Texas at El Paso. As the evidence makes it reasonably certain that the El Paso species is not the same as Saussure's, *O. montezumae* is not cataloged herein.

### **Orthoporus arizonicus Loomis**

*Orthoporus arizonicus* Loomis, 1953, Journ. Washington Acad. Sci., vol. 43, No. 12, p. 418, figs. 4, 5.

TYPE: U. S. Nat. Mus (No. 2088).

TYPE LOCALITY: Patagonia, Santa Cruz County, Arizona.

RANGE: Known only from type locality.

### **Orthoporus boreus Chamberlin**

*Orthoporus boreus* Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, vol. 99, p. 55, fig. 69.

TYPE: Acad. Nat. Sci. Philadelphia (No. 9979).

TYPE LOCALITY: Snake River Desert at Taber, Bingham County, Idaho.

RANGE: Known only from type locality.

### **Orthoporus crotonus Chamberlin**

*Orthoporus crotonus* Chamberlin, 1952, Great Basin Nat., vol. 12, Nos. 1-4, p. 24.

TYPE: Chicago Nat. Hist. Mus.

TYPE LOCALITY: Croton Springs, north of Chisos Mountains, Brewster County, Texas.

RANGE: Known only from type locality.

### **Orthoporus entomacis Chamberlin and Mulaik**

*Orthoporus entomacis* Chamberlin and Mulaik, 1941, Journ. New York Ent. Soc., vol. 49, p. 63.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Duncan, Greenlee County, Arizona.

RANGE: Known only from type locality.

### **Orthoporus flavior Chamberlin and Mulaik**

*Orthoporus flavior* Chamberlin and Mulaik, 1941, Journ. New York Ent. Soc., vol. 49, p. 63.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 4 miles east of Dryden, Terrel County, Texas.

RANGE: Known only from type locality.

### **Orthoporus ornatus (Girard)**

*Julus ornatus* Girard, 1853, in Marcy, Exploration of the Red River of Louisiana . . . in 1852, Appendix F, p. 274.

*Spirobolus ornatus* Wood, 1865, Trans. Amer. Philos. Soc., vol. 13, p. 208.

*Orthoporus ornatus* Causey, 1954, Tulane Stud. Zool., vol. 2, No. 4, p. 67, fig. 10.

TYPE: Not known to exist.

TYPE LOCALITY: Headwaters of the Prairiedog Town River, in the northern Panhandle of Texas. Considered by Causey (op. cit.) to be "either within or near the present Palo Duro Canyon State Park, Randall County, Texas."

RANGE: Known only from Randall County, Texas.

### **Orthoporus pontis Chamberlin**

*Orthoporus pontis* Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, vol. 99, p. 53, fig. 66.

TYPE: Acad. Nat. Sci. Philadelphia (No. 9977).

TYPE LOCALITY: "High Bridge", on the Pecos River, Texas.

RANGE: Known only from type locality.

### **Orthoporus producens Chamberlin**

*Orthoporus producens* Chamberlin, 1947, Proc. Biol. Soc. Washington, vol. 60, p. 11, fig. 8.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Benson, Cochise County, Arizona.

RANGE: Known only from type locality.

### **Orthoporus sanctus Chamberlin**

*Orthoporus sanctus* Chamberlin, 1947, Proc. Acad. Nat. Sci. Philadelphia, vol. 99, p. 55, fig. 68.

TYPE: Acad. Nat. Sci. Philadelphia (No. 9978).

TYPE LOCALITY: St. Augustine, St. Johns County, Florida.

RANGE: Known only from the type locality. In view of the considerable separation of this location from the rest of the range occupied by *Orthoporus* in the United States, confirmation is very desirable.

### **Orthoporus vallicolens Chamberlin**

*Orthoporus vallicolens* Chamberlin, 1943, Proc. Biol. Soc. Washington, vol. 56, p. 149, fig. 15.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Fort Hancock, Hudspeth County, Texas.

RANGE: Known only from type locality.

### **Orthoporus wichitanus Chamberlin**

*Orthoporus wichitanus* Chamberlin, 1931, Ent. News, vol. 42, p. 99, pl. 2, fig. 2.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Elk Mountain, Wichita Reserve, Comanche County, Oklahoma.

RANGE: Known only from type locality.

**Genus SCAPHIOSTREPTUS Brölemann**

*Scaphiostreptus* Brölemann, 1902, Rev. Mus. Paulista, vol. 5, p. 152 (as subgenus of *Spirostreptus*).

*Scaphiostreptus* Attems, 1914, Zoologica, vol. 25, Heft 65-66, p. 75; 1950, Ann. Naturh. Mus. Wien, vol. 57, p. 225.

GENEROTYPE: *Spirostreptus fuscipes* Porat, by present designation.

RANGE: Tropical America, from southern Brasil north to Texas.

SPECIES: About 40, only one of which is known with certainty to occur in the United States. One or more other species, among the several based upon females and here placed under *Orthoporus*, may belong to *Scaphiostreptus*.

**Scaphiostreptus texicolens (Chamberlin)**

*Orthoporus texicolens* Chamberlin, 1938, Proc. Biol. Soc. Washington, vol. 51, p. 207.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Edinburg, Hidalgo County, Texas.

RANGE: Southern Texas.

**Spirostreptidae of uncertain systematic position****Spirobolus miles Chamberlin**

*Spirobolus miles* Chamberlin, 1918, Pomona Coll. Journ. Ent. and Zool., vol. 10, p. 11.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Fort Boutelle, Arizona.

RANGE: Known only from type locality. This species is clearly a spirostreptoid, but its correct generic position cannot be determined in the absence of males.

**Julus multiannulatus McNeill**

*Inlus* (sic) *multiannulatus* McNeill, 1887, Proc. U. S. Nat. Mus., vol. 10, p. 331.

TYPE: Location unknown.

TYPE LOCALITY: Fort Madison, Lee County, Iowa.

RANGE: Known only from the type locality. This is rather considerably out of the known range of spirostreptids in this country, and since none have subsequently been found near Iowa, there is some doubt about the provenance of the type specimen.

**Order CAMBALIDA**

Cambalinae Bollman, 1893, U. S. Nat. Mus., Bull. 46, p. 156.

Cambaloidea Cook, 1895, Ann. New York Acad. Sci., vol. 9, p. 6.—Silvestri, 1897, Ann. Mus. Civ. Stor. Nat. Genova, ser. 2, vol. 18, p. 650.

Cambalida Chamberlin, 1943, Bull. Univ. Utah, biol. ser. vol. 8, No. 3, p. 4.

## KEY TO NORTH AMERICAN FAMILIES OF CAMBALIDA

1. Mentum divided, the promentum clearly set off . . . . . CAMBALIDAE (p. 173)  
 Mentum entire, no separate promentum . . . . . LEIODERIDAE (p. 179)

*Family* CAMBALIDAE Bollman

Cambalinae Bollman, 1893, U. S. Nat. Mus. Bull. 46, p. 157.

Cambalidae Cook, 1895, Ann. New York Acad. Sci., vol 9, p. 6.—Loomis, 1938, Proc. U. S. Nat. Mus., vol. 86, p. 31.

*Genus* ALAKENE Chamberlin

*Alakene* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 5, p. 3.

GENEROTYPE: *Akalene simplex* Chamberlin, by original designation.

RANGE: California.

SPECIES: One.

**Alakene simplex** Chamberlin

*Alakene simplex* Chamberlin, 1941, Bull. Univ. Utah, biol. serv., vol. 6, No. 5, p. 3, fig. 2.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 5 miles northeast of Lemoncove, Tulare County, California.

RANGE: Known only from type locality.

*Genus* BUWATIA Chamberlin

*Buwatia* Chamberlin, 1912, Ann. Ent. Soc. America, vol. 5, p. 159.

GENEROTYPE: *Buwatia monterea* Chamberlin, by original designation.

RANGE: Southern California.

SPECIES: One.

**Buwatia monterea** Chamberlin

*Buwatia monterea* Chamberlin, 1912, Ann. Ent. Soc. America, vol. 5, p. 159, pl. 10, fig. 7.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Pacific Grove, Monterey County, California.

RANGE: Known only from type locality.

*Genus* CAMBALA Gray

*Cambala* Gray, 1832, Insecta, in Griffith, The animal kingdom . . . by the Baron Cuvier, vol. 15, pl. 135.—Loomis, 1938, Proc. U. S. Nat. Mus., vol. 86, p. 37.

GENEROTYPE: *Julus annulatus* Say, by monotypy.

RANGE: Eastern United States.

SPECIES: Ten.

**Cambala annulata (Say)**

*Julus annulatus* Say, 1821, Journ. Acad. Nat. Sci. Philadelphia, vol. 2, p. 103.

*Cambala annulata* Gray, 1832, Insecta, in Griffith, The animal kingdom . . . by the Baron Cuvier, vol. 15, pl. 135.—Loomis, 1938, Proc. U. S. Nat. Mus., vol. 86, p. 37, fig. 11.

TYPE: Present location unknown, possibly in British Mus. (Nat. Hist.).

TYPE LOCALITY: Southeastern United States.

RANGE: Virginia and Kentucky, south to Florida and Louisiana. Exact limits of range unknown, owing to past confusion with *C. cristula*.

**Cambala arkansana Chamberlin**

*Cambala arkansana* Chamberlin, 1942, Bull. Univ. Utah, biol. ser., vol. 6, No. 8, p. 3, figs. 2, 3.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 1 mile north of Pocahontas, Randolph County, Arkansas.

RANGE: Known only from type locality.

**Cambala cara Causey**

*Cambala cara* Causey, 1953, Amer. Midl. Nat., vol. 50, p. 156, figs. 13, 14.

TYPE: Amer. Mus. Nat. Hist.

TYPE LOCALITY: Cave Springs, Benton County, Arkansas.

RANGE: Arkansas and northern Louisiana.

**Cambala caeca Loomis**

*Cambala caeca* Loomis, 1953, Journ. Washington Acad. Sci., vol. 43, No. 12, p. 417, figs. 1-3.

TYPE: U. S. Nat. Mus. (No. 2087).

TYPE LOCALITY: Sonora, Sutton County, Texas.

RANGE: Caves in Sutton County, Texas.

**Cambala cristula Loomis**

*Cambala cristula* Loomis, 1938, Proc. U. S. Nat. Mus., vol. 86, p. 39, fig. 12.

TYPE: U. S. Nat. Mus. (No. 1305).

TYPE LOCALITY: Etowah, Monroe County, Tennessee.

RANGE: Southwestern Virginia, eastern Tennessee, North and South Carolina, western Panhandle of Florida.

**Cambala minor Bollman**

*Cambala annulata minor* Bollman, 1888, Proc. U. S. Nat. Mus., vol. 11, p. 404.

*Cambala annulata* Williams and Hefner, 1928, Bull. Ohio Biol. Surv., No. 18, p. 123, fig. 17b.

*Cambala minor* Loomis, 1938, Proc. U. S. Nat. Mus., vol. 86, p. 40.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Here restricted to Bloomington, Monroe County, Indiana.  
RANGE: Ohio and Indiana, southwest to Arkansas.

### **Cambala ochra Chamberlin**

*Cambala ochra* Chamberlin, 1942, Bull. Univ. Utah, biol. ser., vol. 6, No. 8, p. 3, fig. 1.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Darlington, Ste. Helena Parish, Louisiana.

RANGE: Known only from type locality.

### **Cambala saltillona Chamberlin**

*Cambala saltillona* Chamberlin, 1943, Bull. Univ. Utah, biol. ser., vol. 8, No. 2, p. 3, figs. 1, 2.

TYPE: Chicago Nat. Hist. Mus.

TYPE LOCALITY: Saltillo, Stephens County, Texas.

RANGE: Known only from type locality.

### **Cambala texana Loomis**

*Cambala texana* Loomis, 1938, Proc. U. S. Nat. Mus., vol. 86, p. 40, fig. 13.

TYPE: U. S. Nat. Mus. (No. 1306).

TYPE LOCALITY: Nacogdoches County, Texas.

RANGE: Known only from type locality.

### **Cambala washingtonensis Causey<sup>12</sup>**

*Cambala washingtonensis* Causey, 1954, Ann. Ent. Soc. Amer., vol. 47, p. 85, fig. 9.

TYPE: Amer. Mus. Nat. Hist.

TYPE LOCALITY: Wilma, Garfield County, Washington.

RANGE: Known only from type locality.

### **Genus ECLOMUS Chamberlin**

*Eclytus* (not Holmgren 1855) Chamberlin, 1952, Ent. News, vol. 63, p. 10.

*Eclomus* Chamberlin, 1952, Ent. News, vol. 63, p. 71.

GENEROTYPE: *Eclomus speobius* Chamberlin, by original designation.

RANGE: Texas.

SPECIES: One.

### **Eclomus speobius (Chamberlin)**

*Eclytus speobius* Chamberlin, 1952, Ent. News, vol. 63, p. 11.

*Eclomus speobius* Chamberlin, 1952, Ent. News, vol. 63, p. 71.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Wyatt Cave, Sonora, Sutton County, Texas.

RANGE: Known only from type locality.

<sup>12</sup> Known only from a female and not impossibly will be found to be generically distinct from the eastern species of *Cambala*.

**Genus MIMOLENE Chamberlin**

*Mimolene* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 5, p. 3.

GENEROTYPE: *Mimolene oregona* Chamberlin, by original designation.

RANGE: Oregon.

SPECIES: One.

**Mimolene oregona Chamberlin**

*Mimolene oregona* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 5, p. 3.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Washington County, Oregon.

RANGE: Known only from type locality.

**Genus NANNOLENE Bollman**

*Nannolene* Bollman, 1887, Ann. New York Acad. Sci., vol. 4, p. 37.—

Chamberlin, 1922, Proc. U. S. Nat. Mus., vol. 61, art. 10, p. 2.—

Loomis, 1938, Proc. U. S. Nat. Mus., vol. 86, p. 42.

GENEROTYPE: *Julus burkei* Bollman, by original designation.

RANGE: Pacific Coast States.

SPECIES: Nine.

**Nannolene burkei (Bollman)**

*Julus burkei* Bollman, 1887, Amer. Nat., vol. 21, p. 82.

*Nannolene burkei* Bollman, 1887, Ann. New York Acad. Sci., vol. 4, p. 40.—

Chamberlin, 1922, Proc. U. S. Nat. Mus., vol. 61, art. 10, p. 2, pl. 1, figs. 4–10.

TYPE: U. S. Nat. Mus. (No. 80).

TYPE LOCALITY: Ukiah, Mendocino County, California.

RANGE: Known only from type locality.

**Nannolene catalina Chamberlin**

*Nannolene catalina* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 5, p. 5.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Santa Catalina Island, Los Angeles County, California.

RANGE: Known only from type locality.

**Nannolene cincta Chamberlin**

*Nannolene cincta* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 5, p. 4, fig. 1.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Arlington, Snohomish County, Washington.

RANGE: Known only from type locality.



**Nannolene corticolens Chamberlin**

*Nannolene corticolens* Chamberlin, 1951, Great Basin Nat., vol. 11, Nos. 1-2, p. 31, fig. 3.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Marsch Creek Springs, at base of Mount Diablo, near Concord, Contra Costa County, California.

RANGE: Known only from type locality.

**Nannolene dorothea Chamberlin**

*Nannolene dorothea* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 5, p. 4, fig. 3.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Kernville, Kern County, California.

RANGE: Known only from type locality.

**Nannolene keiferi Chamberlin**

*Nannolene keiferi* Chamberlin, 1943, Ent. News, vol. 54, p. 88.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Sacramento, Sacramento County, California.

RANGE: Known only from type locality.

**Nannolene minor Loomis**

*Nannolene minor* Loomis, 1938, Proc. U. S. Nat. Mus., vol. 86, p. 44, fig. 14.

TYPE: U. S. Nat. Mus. (No. 1307).

TYPE LOCALITY: Bakersfield, Kern County, California.

RANGE: Known only from type locality.

**Nannolene personifer Chamberlin**

*Nannolene personifer* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 5, p. 5, figs. 4, 5.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 9 miles north of Placerville, Eldorado County, California.

RANGE: Known only from type locality.

**Nannolene violacea Loomis**

*Nannolene violacea* Loomis, 1938, Proc. U. S. Nat. Mus., vol. 86, p. 46, fig. 15; pl. 2, fig. 3.

TYPE: U. S. Nat. Mus. (No. 1308).

TYPE LOCALITY: Atascadero, San Luis Obispo County, California.

RANGE: Known only from type locality.

**Genus ODACHURUS Loomis**

*Odachurus* Loomis, 1938, Proc. U. S. Nat. Mus., vol. 86, p. 54.

GENEROTYPE: *Odachurus petasatus* Loomis, by original designation.

RANGE: Southern California.

SPECIES: One.

**Odachurus petasatus Loomis**

*Odachurus petasatus* Loomis, 1938, Proc. U. S. Nat. Mus., vol. 86, p. 55, fig. 17.

TYPE: U. S. Nat. Mus. (No. 1311).

TYPE LOCALITY: Torrey Pines, La Jolla, San Diego County, California.

RANGE: Known only from type locality.

**Genus PAITEYA Chamberlin**

*Paiteya* Chamberlin, 1910, Ann. Ent. Soc. Amer., vol. 3, p. 258.

GENEROTYPE: *Paiteya errans* Chamberlin, by original designation.

RANGE: Southern California.

SPECIES: One.

**Paiteya errans Chamberlin**

*Paiteya errans* Chamberlin, 1910, Ann. Ent. Soc. Amer., vol. 3, p. 258, pl. 43, figs. 4-7.

TYPE: Location unknown.

TYPE LOCALITY: "Southern California."

RANGE: No definite localities known.

**Genus PHARODERE Loomis**

*Pharodere* Loomis, 1938, Proc. U. S. Nat. Mus., vol. 86, p. 51.

GENEROTYPE: *Pharodere radiata* Loomis, by original designation.

RANGE: Southern California.

SPECIES: One.

**Pharodere radiata Loomis**

*Pharodere radiata* Loomis, 1938, Proc. U. S. Nat. Mus., vol. 86, p. 53, fig. 16; pl. 2, fig. 1.

TYPE: U. S. Nat. Mus. (No. 1310).

TYPE LOCALITY: Torrey Pines, La Jolla, San Diego County, California.

RANGE: Known only from type locality.

**Genus PLATYDERE Loomis**

*Platydere* Loomis, 1938, Proc. U. S. Nat. Mus., vol. 86, p. 48.

GENEROTYPE: *Platydere caeca* Loomis, by original designation.

RANGE: California.

SPECIES: One.

**Platydere caeca Loomis**

*Platydere caeca* Loomis, 1938, Proc. U. S. Nat. Mus., vol. 86, p. 50.

TYPE: U. S. Nat. Mus. (No. 1309).

TYPE LOCALITY: Tajiguas, Santa Barbara County, California.

RANGE: Known only from type locality.

**Genus TRIDERE Cook and Loomis**

*Tridere* Cook and Loomis, 1938, Proc. U. S. Nat. Mus., vol. 86, p. 33.

GENEROTYPE: *Tridere chelopa* Cook and Loomis, by original designation.

RANGE: Southern California.

SPECIES: One.

***Tridere chelopa* Cook and Loomis**

*Tridere chelopa* Cook and Loomis, 1938, Proc. U. S. Nat. Mus., vol. 86, p. 36, fig. 10; pl. 2, figs. 6, 7.

TYPE: U. S. Nat. Mus. (No. 1304.)

TYPE LOCALITY: 2 miles above Mountain Springs, between San Diego and El Centro, San Diego County, California.

RANGE: Known only from type locality.

**Family LEIODERIDAE Schubart**

Leioderidae Schubart, 1946, Rev. Brasileira, Biol., vol. 6, No. 3, p. 404.

Cambalopsidae Cook (in part), 1895, Ann. New York Acad. Sci., vol. 9, p. 6—Loomis, 1938, Proc. U. S. Nat. Mus., vol. 86, p. 32.—Chamberlin, 1943, Bull. Univ. Utah, biol. ser., vol. 8, No. 2, p. 4.

Trachyiulidae Silvestri (in part), 1896, Ann. Mus. Civ. Stor. Nat. Genova, ser. 2, vol. 16, p. 168, fig. 15.

**Genus DOILENE Chamberlin**

*Doilene* Chamberlin, 1941, Bull. Univ. Utah, biol. serv., vol. 6, No. 4, p. 6.

GENEROTYPE: *Doilene carmela* Chamberlin, by original designation.

RANGE: California.

SPECIES: One.

***Doilene carmela* Chamberlin**

*Doilene carmela* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 4, p. 6.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Hastings Reservation, Monterey County, California.

RANGE: Known only from type locality.

**Genus ENDERE Loomis**

*Endere* Loomis, 1938, Proc. U. S. Nat. Mus., vol. 86, p. 57.

GENEROTYPE: *Endere disora* Loomis, by original designation.

RANGE: California.

SPECIES: One.

***Endere disora* Loomis**

*Endere disora* Loomis, 1938, Proc. U. S. Nat. Mus., vol. 86, p. 59, fig. 18.

TYPE: U. S. Nat. Mus. (No. 1312).

TYPE LOCALITY: Sunnyside Mine, Seneca, Plumas County, California.

RANGE: Known only from type locality.

**Genus LEIODERE Loomis**

*Leiodere* Loomis, 1938, Proc. U. S. Nat. Mus., vol. 86, p. 60.

GENEROTYPE: *Leiodere torreyana* Loomis, by original designation.

RANGE: Southern California.

SPECIES: Four.

***Leiodere angelorum* Chamberlin**

*Leiodere angelorum* Chamberlin, 1943, Bull. Univ. Utah, biol. ser., vol. 8, No. 2, p. 5, fig. 5.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Los Angeles, California.

RANGE: Known only from type locality.

***Leiodere dasyura* Loomis**

*Leiodere dasyura* Loomis, 1938, Proc. U. S. Nat. Mus., vol. 86, p. 64.

TYPE: U. S. Nat. Mus. (No. 1315).

TYPE LOCALITY: Tajiguas, Santa Barbara County, California.

RANGE: Known only from type locality.

***Leiodere nana* Loomis**

*Leiodere nana* Loomis, 1938, Proc. U. S. Nat. Mus., vol. 86, p. 62, fig. 20.

TYPE: U. S. Nat. Mus. (No. 1314).

TYPE LOCALITY: Between Vallejo and Cordelia, Solano County, California.

RANGE: Known only from type locality.

***Leiodere torreyana* Loomis**

*Leiodere torreyana* Loomis, 1938, Proc. U. S. Nat. Mus., vol. 86, p. 61, fig. 18; pl. 2, figs. 4, 5.

TYPE: U. S. Nat. Mus. (No. 1313).

TYPE LOCALITY: Torrey Pines, La Jolla, San Diego County, California.

RANGE: Southern California and northern Baja California.

**Genus TIGOLENE Chamberlin**

*Tigolene* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 4, p. 5.

GENEROTYPE: *Tigolene clementinus* Chamberlin, by original designation.

RANGE: San Clemente Island, California.

SPECIES: One.

***Tigolene clementinus* Chamberlin**

*Tigolene clementinus* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 4, p. 5, fig. 2.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: San Clemente Island, Los Angeles County, California.

RANGE: Known only from type locality.

*Genus* TITSONA Chamberlin

*Titsona* Chamberlin, 1912, Ann. Ent. Soc. Amer., vol. 5, p. 160.

GENEROTYPE: *Titsona sima* Chamberlin, by original designation.

RANGE: California.

SPECIES: One.

**Titsona sima** Chamberlin

*Titsona sima* Chamberlin, 1912, Ann. Ent. Soc. Amer., vol. 5, p. 161,

pl. 10, figs. 4-6.—Loomis, 1943, Bull. Mus. Comp. Zool., vol. 92, No.

7, p. 393, figs. 10a, b.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Oroville, Butte County, California.

RANGE: Yolo and Butte Counties, California.

*Superorder* COLOBOGNATHA

Colobognatha Brandt, 1834, Oken's Isis, p. 704.—Latzel, 1884, Myr. Öst.-

Ung. Monarch, vol. 2, p. 56.—Bollman, 1893, U. S. Nat. Mus. Bull. 46,

p. 154—Cook and Loomis, 1928, Proc. U. S. Nat. Mus., vol. 72,

art. 18, p. 4.

Siphonizantia Brandt, 1837, Bull. Sci. Acad. Sci. Saint-Pétersbourg, vol. 1

(1836, No. 23), p. 178.

Sugentia Wood, 1869, Trans. Amer. Philos. Soc., vol. 13, p. 248.

KEY TO ORDERS OF COLOBOGNATHA

1. Gnathochilarium having the usual parts represented in millipeds; tergites with a distinctly impressed median sulcus . . . . . PLATYDESMIDA (p. 181)
2. Gnathochilarium represented by a single triangular plate, or the divisions at most indistinctly indicated; tergites without an impressed median sulcus.

POLYZONIDA (p. 185)

*Order* PLATYDESMIDA

Platydesmiens Saussure, 1860, Mém. Soc. Phys. Hist. Nat. Genève, vol. 15, p. 83.

Platydesmia (in part) + Dolistenia Latzel, 1884, Myr. Öst.-Ung. Monarch., vol. 2, p. 356.

Platydesmini Pocock, 1887, Ann. Mag. Nat. Hist., ser. 5, vol. 20, p. 225.

Platydesminae + Andrognathinae Bollman, 1893, U. S. Nat. Mus. Bull. 46, p. 154.

*Family* ANDROGNATHIDAE Cope

Andrognathidae Cope, 1869, Proc. Amer. Philos. Soc., vol. 11, p. 182.—

Cook and Loomis, 1928, Proc. U. S. Nat. Mus., vol. 72, art. 18, p. 18.

**Genus ANDROGNATHUS Cope**

*Andrognathus* Cope, 1869, Proc. Amer. Philos. Soc., vol. 11, p. 182.

GENEROTYPE: *Andrognathus corticarius* Cope, by monotypy.

RANGE: Eastern United States.

SPECIES: One.

***Andrognathus corticarius* Cope**

*Andrognathus corticarius* Cope, 1869, Proc. Amer. Philos. Soc., vol. 11, p. 182—Cook and Loomis, 1928, Proc. U. S. Nat. Mus., vol. 72, art. 18, p. 19.

TYPE: Unknown.

TYPE LOCALITY: Montgomery County, Virginia.

RANGE: Campbell, Roanoke, and Montgomery Counties, Virginia, west to Crittenden, Kentucky, and south to Georgia and Tennessee. Also reported from northern Florida.

**Genus BRACHYCYBE Wood**

*Brachycybe* Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, p. 187.—

Cook and Loomis, 1928, Proc. U. S. Nat. Mus., vol. 72, art. 18, p. 22.

GENEROTYPE: *Brachycybe lecontei* Wood, by monotypy.

RANGE: Southeastern United States, and California.

SPECIES: Six.

***Brachycybe lecontei* Wood**

*Brachycybe lecontei* Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, p. 187.—Loomis, 1936, Proc. U. S. Nat. Mus., vol. 83, p. 366, fig. 322.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Mountains of northern Georgia.

RANGE: Eastern Kentucky, West Virginia, and southwest Virginia, south to western South Carolina and central Alabama. Also reported from Arkansas.

***Brachycybe petasata* Loomis**

*Brachycybe petasata* Loomis, 1936, Proc. U. S. Nat. Mus., vol. 83, p. 365, fig. 32.

TYPE: U. S. Nat. Mus. (No. 1160).

TYPE LOCALITY: Cherokee National Forest, Tennessee.

RANGE: The Great Smoky Mountains in North Carolina and Tennessee.

***Brachycybe potterinus* Chamberlin**

*Brachycybe potterinus* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 4, p. 4.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Potter Creek, Mendocino County, California.

RANGE: Known only from type locality.

**Brachycybe producta Loomis**

*Brachycybe producta* Loomis, 1936, Proc. U. S. Nat. Mus., vol. 83, p. 367, figs. 32 h, i.

TYPE: U. S. Nat. Mus. (No. 1161).

TYPE LOCALITY: Baja California.

RANGE: Reported from Marin County, California, by Causey (1954).

**Brachycybe rosea Murray**

*Brachycybe rosea* Murray, 1877, Economic entomology . . . Aptera, pt. 1, p. 21.—Loomis, 1936, Proc. U. S. Nat. Mus., vol. 83, p. 367, figs. 32f, g.

*Platydesmus californicus* Karsch, 1881, Mitth. Münchner Ent. Ver., vol. 4, p. 144 (type locality: "California"; type: Berlin Museum).

TYPE: Not known.

TYPE LOCALITY: California, without more specific locality.

RANGE: Central and southern California.

**Brachycybe tuolumne Chamberlin**

*Brachycybe tuolumne* Chamberlin, 1953, Proc. Biol. Soc. Washington, vol. 66, p. 70.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Windeler Cavern, Tuolumne County, California.

RANGE: Known only from type locality.

**Genus EUCYBE Chamberlin**

*Eucybe* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 4, p. 3.

GENEROTYPE: *Eucybe clarus* Chamberlin, by original designation.

RANGE: Central California.

SPECIES: Two.

**Eucybe clarus Chamberlin**

*Eucybe clarus* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 4, p. 3.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Hastings Reservation, Monterey County, California.

RANGE: Known only from type locality.

**Eucybe longior Chamberlin**

*Eucybe longior* Chamberlin, 1950, Chicago Acad. Sci. Nat. Hist. Misc., No. 68, p. 4.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 12 miles east of Hammond, Tulare County, California.

RANGE: Known only from type locality.

**Genus GOSODESMUS Chamberlin**

*Gosodesmus* Chamberlin, 1922, Pomona College Journ. Ent. and Zool., vol. 14, No. 1, p. 9.

GENEROTYPE: *Gosodesmus claremontanus* Chamberlin, by original designation.

RANGE: Southern California.

SPECIES: One.

***Gosodesmus claremontanus* Chamberlin**

*Gosodesmus claremontanus* Chamberlin, 1922, Pomona Coll. Journ. Ent. and Zool., vol. 14, No. 1, p. 9.—Loomis, 1936, Proc. U. S. Nat. Mus., vol. 83, p. 364, fig. 32c.

TYPE: Mus. Comp. Zool.

TYPE LOCALITY: Claremont, Los Angeles County, California.

RANGE: Type locality, also the Santa Cruz Mts. and south of Pescadero, California.

**Genus ISCHNOCYBE Cook and Loomis**

*Ischnocybe* Cook and Loomis, 1928, Proc. U. S. Nat. Mus., vol. 72, art. 18, p. 21.

GENEROTYPE: *Ischnocybe plicata* Cook and Loomis, by original designation.

RANGE: California.

SPECIES: One.

***Ischnocybe plicata* Cook and Loomis**

*Ischnocybe plicata* Cook and Loomis, 1928, Proc. U. S. Nat. Mus., vol. 72, art. 18, p. 22, fig. 6, pl. 1.

TYPE: U. S. Nat. Mus. (No. 980).

TYPE LOCALITY: 14 miles up North Fork of the Feather River from Belden, Plumas County, California.

RANGE: Known only from type locality and from Idaho County, Idaho.

**Genus MITOCYBE Cook and Loomis**

*Mitocybe* Cook and Loomis, 1928, Proc. U. S. Nat. Mus., vol. 72, art. 18, p. 19.

GENEROTYPE: *Mitocybe auriportae* Cook and Loomis, by original designation.

RANGE: California.

SPECIES: One.

***Mitocybe auriportae* Cook and Loomis**

*Mitocybe auriportae* Cook and Loomis, 1928, Proc. U. S. Nat. Mus., vol. 72, art. 18, p. 19, fig. 5.

TYPE: U. S. Nat. Mus. (No. 979).



TYPE LOCALITY: Mount Tamalpais, Marin County, California.

RANGE: Known only from type locality.

*Genus* STENO CYBE Chamberlin

*Stenocybe* Chamberlin, 1950, Chicago Acad. Sci. Nat. Hist. Misc. No. 68, p. 3.

GENEROTYPE: *Stenocybe waipea* Chamberlin, by original designation.

RANGE: California.

SPECIES: One.

*Stenocybe waipea* Chamberlin

*Stenocybe waipea* Chamberlin, 1950, Chicago Acad. Sci. Nat. Hist. Misc. No. 68, p. 3.

TYPE: Collection of R. V. Chamberlain.

TYPE LOCALITY: Squaw Creek, Placer County, California.

RANGE: Known only from type locality.

*Order* POLYZONIIDA

Ommatophora Brandt, 1841, Recueil, p. 49.

Polyzoniidae Gervais, 1844, Ann. Sci. Nat., ser. 3, vol. 2, p. 78.

Polyzoniidae Bollman, 1893, U. S. Nat. Mus. Bull. 46, p. 186.

Polyzonoidea Cook and Loomis, 1928, Proc. U. S. Nat. Mus., vol. 72, art. 18, p. 4.

KEY TO NORTH AMERICAN FAMILIES OF POLYZONIIDA

1. Eyes absent; head narrowed forward or prolonged into a beak; prozonites decidedly smaller than the metazonites producing constrictions between the latter; dorsum pilose and tuberculate . . . . . SIPHONOPHORIDAE (p. 189)
- One or several ocelli on each side; head not strongly narrowed forward or produced into a beak; the prozonites not forming a constriction between the metazonites; dorsum without hairs or tubercles . . . . . POLYZONIIDAE (p. 185)

*Family* POLYZONIIDAE Gervais

Polyzoniidae (in part) Gervais, 1844, Ann. Sci. Nat., ser. 3, vol. 2, p. 78.

Polyzoniidae (in part) Wood, 1865, Trans. Amer. Philos. Soc., vol. 13, p. 248.

Polyzoniinae Bollman, 1893, U. S. Nat. Mus. Bull. 46, p. 186.

*Genus* BDELLOZONIUM Cook and Loomis

*Bdellozonium* Cook and Loomis, 1928, Proc. U. S. Nat. Mus., vol. 72, art. 18, p. 15.

GENEROTYPE: *Bdellozonium cerviculatum* Cook and Loomis, by original designation.

RANGE: Central California north to Oregon.

SPECIES: Three.

***Bdellozonium cerviculatum* Cook and Loomis**

*Bdellozonium cerviculatum* Cook and Loomis, 1928, Proc. U. S. Nat. Mus., vol. 72, art. 18, p. 16, fig. 3.

TYPE: U. S. Nat. Mus. (No. 978).

TYPE LOCALITY: Belden, Plumas County, California.

RANGE: Known also from Emigrant Gap, California.

***Bdellozonium rothi* Chamberlin**

*Bdellozonium rothi* Chamberlin, 1950, Chicago, Acad. Sci. Nat. Hist. Misc. No. 68, p. 2.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 14 miles west of Grant's Pass, Oregon.

RANGE: Known only from type locality.

***Bdellozonium sequoium* Chamberlin**

*Bdellozonium sequoium* Chamberlin, 1941, Bull. Univ. Utah, biol. ser., vol. 6, No. 5, p. 5.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 12 miles northeast of Hammond, Tulare County, California.

RANGE: Known only from type locality.

***Genus* BUOTUS Chamberlin**

*Buotus* Chamberlin, 1940, Canadian Ent., vol. 72, p. 59.

GENEROTYPE: *Buotus carolinus* Chamberlin, by original designation.

RANGE: Central North Carolina.

SPECIES: One.

***Buotus carolinus* Chamberlin**

*Buotus carolinus* Chamberlin, 1940, Canadian Ent., vol. 72, p. 59.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Duke Forest, Durham County, North Carolina.

RANGE: Known only from type locality.

***Genus* BUZONIUM Cook and Loomis**

*Buzonium* Cook and Loomis, 1928, Proc. U. S. Nat. Mus., vol. 72, art. 18, p. 13.

GENEROTYPE: *Buzonium crassipes* Cook and Loomis, by original designation.

RANGE: California.

SPECIES: One.

***Buzonium crassipes* Cook and Loomis**

*Buzonium crassipes* Cook and Loomis, 1928, Proc. U. S. Nat. Mus., vol. 72, art. 18, p. 14, fig. 2.

TYPE: U. S. Nat. Mus. (No. 977).

TYPE LOCALITY: Seneca, Plumas County, California.

RANGE: Known only from type locality.

**Genus EUZONIUM Chamberlin**

*Euzonium* Chamberlin, 1950, Chicago Acad. Sci. Nat. Hist. Misc. No. 68,  
p. 1.

GENEROTYPE: *Euzonium crucis* Chamberlin, by original designation.

RANGE: California.

SPECIES: One.

**Euzonium crucis Chamberlin**

*Euzonium crucis* Chamberlin, 1950, Chicago Acad. Sci. Nat. Hist. Misc.  
No. 68, p. 1.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Felbon, Santa Cruz County, California.

RANGE: Known only from type locality.

**Genus HYPOZONIUM Cook**

*Hypozoneum* Cook, 1904, in Harriman Alaska Exped., vol. 8, p. 62.

GENEROTYPE: *Hypozoneum anurum* Cook, by original designation.

RANGE: Washington.

SPECIES: One.

**Hypozoneum anurum Cook**

*Hypozoneum anurum* Cook, 1904, in Harriman Alaska Exped., vol. 8, p. 63,  
pl. 5, figs. 1a-d.—Cook and Loomis, 1928, Proc. U. S. Nat. Mus.,  
vol. 72, art. 18, p. 17.

TYPE: U. S. Nat. Mus. (No. 791).

TYPE LOCALITY: Seattle, Washington.

RANGE: Known only from Seattle and Bremerton, Washington.

**Genus PIZONIUM Chamberlin**

*Pizonium* Chamberlin, 1950, Chicago Acad. Sci. Nat. Hist. Misc. No. 68,  
p. 2.

GENEROTYPE: *Pizonium crescentis* Chamberlin, by original designation.

RANGE: California.

SPECIES: One.

**Pizonium crescentis Chamberlin**

*Pizonium crescentis* Chamberlin, 1950, Chicago Acad. Sci. Nat. Hist. Misc.  
No. 68, p. 2.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: 15 miles east of Crescent, Los Angeles County, California.

RANGE: Known from type locality only.

**Genus POLYZONIUM Brandt**

*Polyzonium* Brandt, 1834, Oken's Isis, p. 704; 1837, Bull. Sci. Acad. Sci. Saint Pétersbourg, vol. 1 (1836, No. 23), p. 178.

*Octoglena* Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, p. 186 (genotype: *O. bivirgata* Wood, by monotypy).

*Petaserpes* Cope, 1870, Trans. Amer. Ent. Soc., vol. 3, p. 65 (genotype: *P. rosalbus* Cope, by monotypy).

*Hexaglena* McNeill, 1887, Proc. U. S. Nat. Mus., vol. 10, p. 328 (genotype: *H. cryptocephala* McNeill).

GENEROTYPE: *Polyzonium germanicum* Brandt, by monotypy.

RANGE: Northern Europe; eastern United States.

SPECIES: About seven; three occur in our area.

***Polyzonium bikermani* Causey**

*Polyzonium bikermani* Causey, 1951, Proc. Biol. Soc. Washington, vol. 64, p. 138, fig. 1.

TYPE: Acad. Nat. Sci. Philadelphia.

TYPE LOCALITY: Devil's Den State Park, Washington County, Arkansas.

RANGE: Known only from type locality.

***Polyzonium bivirgatum* (Wood)**

*Octoglena bivirgata* Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, p. 186.

*Petaserpes rosalbus* Cope, 1870, Trans. Amer. Ent. Soc., vol. 3, p. 65 (type locality: ". . . western slope of the Cumberlands, in the northern part of East Tennessee." Location of type unknown).

*Polyzonium bivirgatum* Cook and Loomis, 1928, Proc. U. S. Nat. Mus., vol. 72, art. 18, p. 18.

TYPE: Location unknown, probably not in existence.

TYPE LOCALITY: Georgia.

RANGE: Eastern United States from Connecticut west as far as Ohio, south to Georgia in the mountains. Exact limits of range still poorly known.

***Polyzonium cryptocephalum* (McNeill)<sup>13</sup>**

*Hexaglena cryptocephala* McNeill, 1887, Proc. U. S. Nat. Mus., vol. 10, p. 328.

*Polyzonium mutabile* Causey, 1951, Proc. Biol. Soc. Washington, vol. 64, p. 139, fig. 2.

TYPE: U. S. Nat. Mus.

TYPE LOCALITY: Bloomington, Monroe County, Indiana.

RANGE: Indiana, Illinois, Michigan, southern Ontario.

<sup>13</sup> Synonymy based on unpublished studies, including examination of the holotype of *cryptocephala*.

*Genus* SIPHONOTUS Brandt

*Siphonotus* Brandt, 1837, Bull. Sci. Acad. Sci. Saint-Petersbourg, vol. 1, p. 179.

GENEROTYPE: *Siphonotus brasiliensis* Brandt, by monotypy.

RANGE: South America, West Indies.

SPECIES: About six.

*Siphonotus purpureus* Pocock

*Siphonotus purpureus* Pocock, 1894, Journ. Linn. Soc. London, vol. 24, p. 479, pl. 37, fig. 5.—Loomis, 1934, Smithsonian Misc. Coll., vol. 89, p. 9.

*Siphonotus miamiensis* Causey, 1953, Florida Ent., vol. 36, p. 71, figs. 1, 2 (type locality: Miami, Florida; type: Illinois Nat. Hist. Surv.).

TYPE: British Museum (Nat. Hist.).

TYPE LOCALITY: Brasil.

RANGE: Most of the Lesser Antilles; Hispaniola; northern coast of South America; southern Florida. Probably dispersed by commerce.

*Family* SIPHONOPHORIDAE Newport

Siphonophoridae Newport, 1845, Trans. Linn. Soc. London, vol. 19, p. 278.—Verhoeff, 1941, Zool. Anz., vol. 134, p. 212.—Attems, 1951, Mém. Mus. Nat. Hist. Nat., Paris, ser. A, Zoologie, vol. 3, fasc. 3, p. 221.

*Genus* ILLACME Cook and Loomis

*Illacme* Cook and Loomis, 1928, Proc. U. S. Nat. Mus., vol. 72, art. 18, p. 10.

GENEROTYPE: *Illacme plenipes* Cook and Loomis, by original designation.

RANGE: California.

SPECIES: One.

*Illacme plenipes* Cook and Loomis

*Illacme plenipes* Cook and Loomis, 1928, Proc. U. S. Nat. Mus., vol. 72, art. 18, p. 12.

TYPE: U. S. Nat. Mus. (No. 976).

TYPE LOCALITY: between Salinas and San Juan Bautista, in San Benito County, California.

RANGE: Known only from type locality.

*Genus* SIPHONACME Cook and Loomis

*Siphonacme* Cook and Loomis, 1928, Proc. U. S. Nat. Mus., vol. 72, art. 18, p. 7.

GENEROTYPE: *Siphonacme lytoni* Cook and Loomis, by original designation.

RANGE: Southern Arizona; northwestern Mexico.

SPECIES: Two, one of which occurs in the United States.

**Siphonacme lyttoni Cook and Loomis**

*Siphonacme lyttoni* Cook and Loomis, 1928, Proc. U. S. Nat. Mus., vol. 72, art. 18, p. 8, fig. 1 a-c.

TYPE: U. S. Nat. Mus. (No. 975).

TYPE LOCALITY: Crest of Pinal mountains, between Miami and Superior, in Gila County, Arizona.

RANGE: Known also from single localities in Yavapa and Cochise Counties, Arizona.

**Genus SIPHONOPHORA Brandt**

*Siphonophora* Brandt, 1837, Bull. Sci. Acad. Saint-Pétersbourg, vol. 1, p. 179.

GENEROTYPE: *Siphonophora portoricensis* Brandt, by subsequent designation of Silvestri, 1896.

RANGE: Tropical America and possibly also the Oriental region, but the extent of the genus in its strict sense has yet to be determined by study of the type species.

SPECIES: About 18 species are listed by Attems, in a sort of semi-restricted sense. Two species have been described in *Siphonophora* in the United States, but these may not be congeneric with *S. portoricensis*.

**Siphonophora limitare Loomis**

*Siphonophora limitare* Loomis, 1936, Proc. U. S. Nat. Mus., vol. 83, No. 2989, p. 362, 363, fig. 32 a, b.

TYPE: U. S. Nat. Mus. (No. 1159).

TYPE LOCALITY: Brownsville, Cameron County, Texas.

RANGE: Known only from the type locality.

**Siphonophora texascolens Chamberlin and Mulaik**

*Siphonophora texascolens* Chamberlin and Mulaik, 1941, Journ. New York Ent. Soc., vol. 49, p. 64.

TYPE: Collection of R. V. Chamberlin.

TYPE LOCALITY: Raven Ranch, Kerr County, Texas.

RANGE: Reported from Kerr, Kendall, and Bandera counties, in central Texas.

## Addendum

The following species should appear on page 80, immediately preceding *Eurymerodesmus louisianae*.

### **Eurymerodesmus hispidipes (Wood)**

*Polydesmus hispidipes* Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia, p. 7; 1865, Trans. Amer. Philos. Soc., new ser., vol. 13, p. 220, fig. 48.

*Eurymerodesmus hispidipes* Brölemann, 1900, Mém. Soc. Zool. France, vol. 13, p. 101, pl. 6, fig. 32.—Causey, 1950, Ohio Journ. Sci., vol. 50, No. 6, p. 267, figs. 1-4.

**TYPE:** If extant, present location unknown.

**TYPE LOCALITY:** "Illinois."

**RANGE:** Dixon Springs, Lee County, Illinois, is the only definitely known locality for this rare species. The Louisiana record for *hispidipes* by Brölemann (op. cit.) doubtless applies to a different member of the genus.





# Bibliography

AM STEIN, J. G.

1857. Aufzählung und Beschreibung der Myriapoden und Crustaceen Graubündens. Jahresb. Naturf. Ges. Graubündens, new ser., vol. 2 (1855-1856), pp. 112-148.

ATTEMS, CARL

1899. System der Polydesmiden. I Theil. Denkschr. Akad. Wiss., Wien (Math.-naturwiss. Classe), vol. 67, pp. 221-482, pls. 1-11, figs. 1-276.
1900. System der Polydesmiden. II Theil. Denkschr. Akad. Wiss., Wien (Math.-naturwiss. Classe), vol. 68, pp. 251-435, pls. 12-17, figs. 277-400.
1902. Neue durch den Schiffsverkehr in Hamburg eingeschleppte Myriapoden. Mitt. Naturh. Mus. Hamburg, vol. 18, pp. 109-116, pl. 1.
1903. Beiträge zur Myriopodenkunde. Zool. Jahrb., Abt. Syst., vol. 18, pp. 63-154, pls. 5, 6, figs. 1-37, pl. 7, figs 1-20, pls. 8-11, figs. 1-88.
1908. Note sur lse myriapodes, in Gadeau de Kerville, Voyage zoologique en Khroumirie (Tunisie) . . . 1906, . . ., pp. 112-113, pl. 24, figs. 10-12.
1909. Die Myriopoden der Vega-Expedition. Arkiv för Zoologi, vol. 5, No. 3, pp. 1-84, text figs. 1-27, pls. 1-5, figs. 1-86.
1914. Afrikanische Spirostreptiden nebst Überblick über die Spirostreptiden orbis terrarum. Zoologica, Stuttgart, vol. 25, Heft 65-66, pp. 1-233, figs. 1-36, pls. 1-15.
1914. Die indo-australischen Myriopoden. Arch. Naturg., Abt. A, vol. 80, No. 4, pp. 1-398, pls. 1-7, figs. 1-125.
1926. Myriopoda, in Kükenthal und Krumbach, Handbuch der Zoologie, vol. 4, pp. 1-402, figs. 1-477.
1931. Die Familie Leptodesmidae und andere Polydesmiden. Zoologica, Stuttgart, vol. 30, Lief. 3-4, pp. 1-149, figs. 1-245.
1937. Fam. Strongylosomidae, in Das Tierreich, Lief. 68 (Polydesmoidea I), pp. 1-300, figs. 1-343.
1938. Fam. Leptodesmidae, Platyrahidae, Oxydesmidae, Gomphodesmidae, in Das Tierreich, Lief. 69 (Polydesmoidea II), pp. 1-487, figs. 1-509.
1940. Fam. Polydesmidae, Vanhoeffeniidae, Cryptodesmidae, Oniscodesmidae, Sphaerotrachopidae, Peridotodesmidae, Rhachidesmidae, Macellolophidae, Pandirodesmidae, in Das Tierreich, Lief. 70 (Polydesmoidea III), pp. 1-577, figs. 1-719.
1950. Über Spirostreptiden (Diplpoda). Ann. Naturh. Mus. Wien, vol. 57 (1949-50), pp. 179-257, figs. 1-96.
1951. Revision systématique des Colobognatha (Myriapodes Diplopodes) et description d'espèces nouvelles. Mém. Mus. Nat. Hist. Nat., ser. A, Zoologie, vol. 3, fasc. 3, pp. 193-231, figs. 1-72.

BARBER, HERBERT S.

1915. Migrating armies of myriopods. Proc. Ent. Soc. Washington, vol. 17, pp. 121-123.
1915. Fragmentary notes on the life-history of the myriopod *Spirobolus marginatus*. Proc. Ent. Soc. Washington, vol. 17, pp. 123-126.

BERG, CARLOS

1899. Substitución de nombres genéricos. III. Comun. Mus. Nac. Buenos Aires, vol. 1, No. 3, pp. 77-80.

## BERLESE, ANTONIO

1884. Studi critici sulla sistematica dei Chilognati conservati nella Raccolti del Museo zoologico della R. Università di Padova. Parte I, Julidae. Atti Rend. Inst. Veneto, ser. 6, vol. 2, pp. 247-280, pls. 1, 2.
- 1882-1895. Acari, Myriopoda et Scorpiones hucusque in Italia reperta, Fasc. 1-77. Padua.

## BLOWER, GORDON

1953. On three species of *Cylindroiulus* Verhoeff (Diplopoda, Julidae) in Britain. Ann. Mag. Nat. Hist., ser. 12, vol. 6, pp. 305-316, figs. 1-4.

## BOLLMAN, CHARLES HARVEY

1887. Preliminary descriptions of ten new North American myriapods. Amer. Nat., vol. 21, pp. 81-82.
1887. Descriptions of new genera and species of North American Myriapoda (Julidae). Ent. Amer., vol. 2, pp. 225-229.
1887. Notes on North American Julidae, with descriptions of new species. Ann. New York Acad. Sci., vol. 4, Nos. 1 and 2, pp. 25-44.
1887. New genus and species of Polydesmidae. Ent. Amer., vol. 3, No. 1, pp. 45, 46.
1887. New North American myriapods. Ent. Amer., vol. 3, No. 5, pp. 81-83.
1888. A preliminary list of the Myriapoda of Arkansas, with descriptions of new species. Ent. Amer., vol. 4, pp. 1-8.
1888. Notes upon a collection of Myriapoda from East Tennessee, with a description of a new genus and six new species. Ann. New York Acad. Sci., vol. 4, Nos. 3 and 4, pp. 106-112.
1888. Descriptions of fourteen new species of North American myriapods. Proc. U. S. Nat. Mus., vol. 10, pp. 617-627.
1889. Description of a new species of insect, *Fontaria pulchella*, from Strawberry Plains, Jefferson County, Tennessee. Proc. U. S. Nat. Mus., vol. 11, p. 316.
1889. Notes on a collection of Myriapoda from Mossy Creek, Tenn., with a description of a new species. Proc. U. S. Nat. Mus., vol. 11, pp. 339-342.
1889. Notes upon some myriapods belonging to the U. S. National Museum. Proc. U. S. Nat. Mus., vol. 11, pp. 343-350.
1889. Catalogue of the myriapods of Indiana. Proc. U. S. Nat. Mus., vol. 11, pp. 403-410.
1893. The Myriapoda of North America. U. S. Nat. Mus. Bull. 46, pp. 1-210 (edited by L. M. Underwood, containing the preceding papers and 14 posthumously published articles, with introduction and literature review by Underwood).

## BORRE, ALFRED PREUDHOMME DE

1884. Tentamen catalogi lysiopetalidarum, julidarum, archijulidarum, polyzonidarum, atque siphonophoridarum hucusque descriptarum. Ann. Soc. Ent. Belgique, vol. 28, pp. 46-82.

## BOSC, LOUIS AUGUSTIN GUILLAUME

1791. Description d'une nouvelle espèce d'iule. Bull. Soc. Philom. Paris, vol. 1, p. 10.

## BRADE-BIRKS, HILDA K., AND S. GRAHAM

1919. Notes on Myriapoda. XVII. (1): Pour réhabiliter quelques anciens noms spécifiques. [With notes by H. W. Brolemann.] Bull. Soc. Zool. France, vol. 44, pp. 63-68.

## BRANDT, JOHANN FRIEDRICH

1833. De nove insectorum multipedum seu myriapodum familia Pentazoniorum (*glomeriderum*) nomine designanda. Bull. Mém. Acad. Sci. St.-Pétersbourg, ser. 6 (Sci. Math. Phys.), vol. 2.

## BRANDT, JOHANN FRIEDRICH—Continued

1833. *Tentaminum quorundam monographicorum Insecta Myriapoda Chilognatha Latreillii spectantium*. Bull. Soc. Nat. Moscou, vol. 6, pp. 194–209, pl. 5, figs. 22–47.
1834. (Note on *Colobognatha*). Oken's *Isis* (vol. 27), p. 704.
1834. (Note on the genus *Polyzonium Brandti*). Oken's *Isis* (vol. 27), p. 704.
1837. Note sur un ordre nouveau de la classe des Myriapodes et sur l'établissement des sections de cette classe d'animaux en général. Bull. Sci. Acad. Sci. Saint-Petersbourg, vol. 1 (1836, No. 23), pp. 178, 179.
1841. Recueil de mémoires relatif à l'ordre des Insectes Myriapodes. Bull. Sci. Acad. Sci. Saint-Petersbourg, vols. 5–9, 189 pp. [Individual titles are listed in Latzel, 1884, Myr. Öst.-Ung. Monarch., vol. 2, pp. 375–76.]

## BRÖLEMANN, HENRY W.

1896. Liste de myriapodes des États-Unis, et principalement de la Caroline du Nord, faisant partie des collections de M. Eugène Simon. Ann. Soc. Ent. France, vol. 65, pp. 43–70, pls. 5–7.
1897. Julides d'Algérie. Ann. Sci. Nat., ser. 8, vol. 4 (1896), pp. 253–276, pls. 3, 4.
1898. Voyage de M. E. Simon au Venezuela. Myriapodes. Ann. Soc. Ent. France, vol. 67, pp. 241–313, pls. 20–27.
1900. Myriapodes d'Amérique. Mém. Soc. Zool. France, vol. 13, pp. 89–131, pls. 6–8., figs. 1–122.
1902. Le genre *Paraiulus* (Myriapodes-diplopodes). Ann. Soc. Ent. France, vol. 71, Nos. 1, 2, pp. 440–447, pls. 1, 2, figs. 1–18.
1902. Myriapodes du Musée de Sao Paulo. Rev. Mus. Paulista, vol. 5, pp. 35–237, pls. 1–9, figs. 1–271.
1903. Myriapodes recueillis à l'isla de Cocos par M. le Professeur P. Biolley. Ann. Soc. Ent. France, vol. 72, pp. 128–143, figs. 10, pls. 1.
1910. Biospeologica. XVII. Symphyles, psélaphognathes, polydesmoides et lysiopétaloïdes (myriapodes) (1<sup>re</sup> série). Arch. Zool. Expér. Gén., Paris, ser. 5, vol. 5, pp. 339–378, pls. 4–7, figs. 1–50.
1913. Un nouveau système de spirobolides. Bull. Soc. Ent. France, No. 19, pp. 476–478.
1914. Étude sur les spirobolides. Ann. Soc. Ent. France, vol. 83, No. 1, pp. 1–38, figs. 1–9.
1916. Essai de classification des polydesmiens (myriapodes). Ann. Soc. Ent. France, vol. 84, No. 4 (1915), pp. 523–608, figs. 1–18.
1921. Clef dichotomique des divisions et des espèces de la famille des Blaniulidae (myriapodes). Arch. Zool. Expér. Gén., Paris, vol. 60, Notes et Revue, No. 1, pp. 1–10.
1922. Notes on female paraiulids, with description of a new species. Ann. Ent. Soc. Amer., vol. 15, No. 4, pp. 281–309, pls. 19–24, figs. 1–57.
1923. Biospeologica 48. Blaniulidae (myriapodes). Arch. Zool. Expér. Gén., Paris, vol. 61, fasc. 2, pp. 99–453, figs. 1–411, pls. 1–16.
1935. Myriapodes diplopodes (chilognathes I), in Faune de France, No. 29, pp. 1–369, figs. 1–750.

## CARL, JOHANN

1902. Exotische Polydesmiden. Rev. Suisse Zool., vol. 10, pp. 563–679, pls. 10–12, figs. 1–109.
1903. Revision amerikanischer Polydesmiden. Rev. Suisse Zool., vol. 11, pp. 543–562, pls. 16–17, figs. 1–23.

## CAUSEY, NELL BEVEL

1942. Six new diplopods of the family Xystodesmidae. Ent. News, vol. 53, pp. 165–170, figs. 1–9.

## CAUSEY, NELL BEVEL—Continued

1943. Studies on the life-history and the ecology of the hot-house millipede, *Orthomorpha gracilis* (C. L. Koch). Amer. Midl. Nat., vol. 29, No. 3, pp. 670-682, 3 figs.
1950. A collection of xystodesmid millipeds from Kentucky and Tennessee. Ent. News, vol. 61, pp. 5-7, figs. 1-3.
1950. Two new polydesmoid diplopods. Ent. News, vol. 61, pp. 37-39, figs. 1-5.
1950. Five new Arkansas millipeds of the genera *Eurymerodesmus* and *Paresmus* (Xystodesmidae). Ohio Journ. Sci., vol. 50, No. 6, pp. 267-272, figs. 1-11.
1950. A new genus and species of diplopod (Family Xystodesmidae). Chicago Acad. Sci. Nat. Hist. Misc., No. 73, pp. 1-3, figs. 1.
1950. New genera and species of millipeds—Paraiulidae (Juloidea). Proc. Arkansas Acad. Sci., vol. 3, pp. 45-58, pls. 1-5, figs. 1-42.
1950. Variations in the gonopods of a xystodesmid diplopod. Amer. Midl. Nat., vol. 44, No. 1, pp. 198-202, figs. 1-6.
1950. On four new polydesmoid millipeds. Ent. News, vol. 61, No. 7, pp. 193-198, figs. 1-7.
1951. On *Eurymerodesmidae*, a new family of Diplopoda (Strongylosomidea), and a new Arkansas species of *Eurymerodesmus*. Proc. Arkansas Acad. Sci., vol. 4, pp. 69-71, figs. 1-3.
1951. The milliped assembly *Zinaria butlerii* isogen. (Xystodesmidae). Proc. Arkansas Acad. Sci., vol. 4, pp. 73-88, pls. 1, 2, figs. 1-12.
1951. New genera and species of chordeumoid millipeds in the United States, and notes on some established species. Proc. Biol. Soc. Washington, vol. 64, pp. 117-124, figs. 1-18.
1951. On two new colobognath millipeds and records of some established species from east of the Rocky Mountains. Proc. Biol. Soc. Washington, vol. 64, pp. 137-140, figs. 1-3.
1951. New cleidogonid millipeds (Chordeumoidea). Journ. Washington Acad. Sci., vol. 41, No. 2, pp. 78-83, figs. 1-23.
1952. On two new species and new distribution records of paraiulid millipeds from the eastern United States. Proc. Arkansas Acad. Sci., vol. 5, pp. 19-23, figs. 1-9.
1952. Some records and descriptions of polydesmoid millipeds from the United States. Chicago Acad. Sci. Nat. Hist. Misc., No. 106, pp. 1-11, figs. 1-8.
1952. New species and records of paraiulid millipeds from Texas. Texas Journ. Sci., vol. 4, No. 2, pp. 200-203, figs. 1-10.
1952. On three new eurymerodesmoid millipeds and notes on *Paresmus impurus* (Wood). Ent. News, vol. 63, No. 7, pp. 169-176, figs. 1-9.
1952. Four chordeumoid millipeds from the United States. Proc. Biol. Soc. Washington, vol. 65, pp. 111-118, figs. 1-18.
1952. New records of millipeds from southern Ontario. Canadian Field Nat., vol. 66, p. 145.
1953. On a Florida milliped, *Siphonotus miamiensis*, n. sp. Florida Ent., vol. 36, No. 2, pp. 71-72, figs. 1, 2.
1953. On five new North American millipeds and records of some established species. Amer. Midl. Nat., vol. 50, pp. 152-158, figs. 1-14.
1954. The millipeds collected in the Pacific Northwest by Dr. M. H. Hatch. Ann. Ent. Soc. America, vol. 47, pp. 81-86, figs. 1-12.
1954. New records and species of millipeds from the western United States and Canada. Pan-Pacific Ent., vol. 30, No. 3, pp. 221-227, figs. 1-5.
1954. Three new species and new records of southern millipeds. Tulane Stud. Zool., vol. 2, No. 4, pp. 63-68, figs. 1-10.

## CAUSEY, NELL BEVEL—Continued

1955. Spirobolidae (Spirobolida: Diplopoda) east of the Rocky Mountains. *Journ. Kansas Ent. Soc.*, vol. 28, pp. 69-80, figs. 1-5.
1955. New records and descriptions of polydesmoid millipeds (Order Polydesmida) from the eastern United States. *Proc. Biol. Soc. Washington*, vol. 68, pp. 21-30, figs. 1-7.
1955. New records and descriptions of Californian Diplopoda. *Proc. Biol. Soc. Washington*, vol. 68, pp. 87-94, figs. 1-5.

## CHAMBERLIN, RALPH VARY

1903. Myriapods from Beulah, New Mexico. *Proc. Acad. Nat. Sci. Philadelphia*, vol. 55, pp. 35-40.
1910. Diplopoda from the western states. *Ann. Ent. Soc. Amer.*, vol. 3, No. 4, pp. 233-262, pls. 30-43.
1911. Notes on myriapods from Alaska and Washington. *Canadian Ent.*, vol. 43, pp. 260-264, fig. 16.
1912. New North American chilopods and diplopods. *Ann. Ent. Soc. America*, vol. 5, No. 2, pp. 141-172, pls. 10-13.
1913. A new leptodesmid from Montana. *Canadian Ent.*, vol. 45, pp. 424-426, fig. 17.
1914. A new diplopod from the Galapagos Is., with notes on the chilopods. *Psyche*, vol. 21, pp. 85-89.
1914. Notes on myriapods from Douglas Lake, Michigan. *Canadian Ent.*, vol. 46, pp. 301-306.
1914. A new *Julus* from California. *Canadian Ent.*, vol. 46, pp. 314-315, figs. 26, 27.
1916. Two new Texan *Parajuli*. *Psyche*, vol. 23, pp. 33-36.
1918. Four new western diplopods. *Pomona Coll. Journ. Ent. and Zool.*, vol. 10, No. 1, pp. 9-11.
1918. Myriapods from Nashville, Tennessee. *Psyche*, vol. 25, pp. 23-30.
1918. The Chilopoda and Diplopoda of the West Indies. *Bull. Mus. Comp. Zool.*, vol. 62, No. 5, pp. 149-262.
1918. Two new diplopods from Louisiana. *Canadian Ent.*, vol. 50, pp. 361-363.
1918. New polydesmoid diplopods from Tennessee and Mississippi. *Psyche*, vol. 25, No. 6, pp. 122-127.
1918. Myriopods from Okefenokee swamp, Ga., and from Natchitoches Parish, Louisiana. *Ann. Ent. Soc. Amer.*, vol. 11, No. 4, pp. 369-380.
1918. New spiroboloid diplopods. *Proc. Biol. Soc. Washington*, vol. 31, pp. 165-170.
1919. A new *Parajulus* from British Columbia. *Canadian Ent.*, vol. 51, pp. 119-120, fig. 21.
1919. A new Texas *Parajulus*. *Proc. Biol. Soc. Washington*, vol. 32, pp. 119-120.
1920. (Note on the writings of H. C. Wood). *Ent. News*, vol. 31, pp. 117-118.
1920. Some records of Canadian myriopods. *Canadian Ent.*, vol. 52, No. 4, pp. 94-95.
1920. Canadian myriapods collected in 1882-83 by J. B. Tyrrell, with additional records. *Canadian Ent.*, vol. 52, No. 6, pp. 166-168, figs. 16, 17.
1920. A new diplopod from Texas and a new chilopod from Alaska. *Proc. Biol. Soc. Washington*, vol. 33, pp. 41-44.
1920. Corrections to Mr. Gunthorp's summary of Wood's Myriopoda papers. *Canadian Ent.*, vol. 52, No. 7, pp. 202-203.
1920. A new leptodesmoid diplopod from Louisiana. *Proc. Biol. Soc. Washington*, vol. 33, pp. 97-100.
1920. A new diplopod of the genus *Atopetholus*. *Proc. Biol. Soc. Washington*, vol. 33, pp. 101-102.
1921. The Julidae and Isobatidae in North America. *Proc. Biol. Soc. Washington*, vol. 34, pp. 81-84.

## CHAMBERLIN, RALPH VARY—Continued

1921. On some chilopods and diplopods from Knox Co., Tennessee. *Canadian Ent.*, vol. 53, No. 10, pp. 230-233, fig. 1, pl. 9, figs. 1-4.
1922. A new platydesmoid diplopod from California. *Pomona Coll. Journ. Ent. and Zool.*, vol. 14, No. 1, pp. 9-10, 1 fig.
1922. Further notes on the nomenclature of North American Julidae and Nemasomidae. *Proc. Biol. Soc. Washington*, vol. 35, pp. 7-10.
1922. A new milliped of the genus *Polyxenus* from the Florida Keys. *Ent. News*, vol. 33, No. 6, p. 165.
1922. Notes on West Indian millipeds. *Proc. U. S. Nat. Mus.*, vol. 61, art. 10, pp. 1-19, pls. 1-6.
1923. An Algerian julid in America. *Proc. Biol. Soc. Washington*, vol. 36, pp. 191-192.
1925. Notes on some centipeds and millipeds from Utah. *Pan-Pacific Ent.*, vol. 2, No. 2, pp. 55-63.
1928. Some chilopods and diplopods from Missouri. *Ent. News*, vol. 39, No. 5, pp. 153-155.
1928. Notes on chilopods and diplopods from southeastern Utah. *Ent. News*, vol. 39, No. 10, pp. 307-311.
1930. On some centipeds and millipeds from Utah and Arizona. *Pan-Pacific Ent.*, vol. 6, No. 3, pp. 111-121, 11 figs.
1931. A new milliped of the genus *Fontaria* from Mississippi. (Chilognatha: Xystodesmidae). *Ent. News*, vol. 42, No. 3, pp. 78-79.
1931. On a collection of chilopods and diplopods from Oklahoma. *Ent. News*, vol. 42, No. 4, pp. 97-104, pl. 2, figs. 1-8.
1938. Diplopoda from Yucatan, in *Pearse, Fauna of the caves of Yucatan*. *Carnegie Inst. Washington Publ.*, No. 491, pp. 165-182, figs. 1-55.
1938. New diplopods. *Proc. Biol. Soc. Washington*, vol. 51, pp. 205-208.
1939. On some diplopods of the family Fontariidae. *Bull. Univ. Utah, biol. ser.*, vol. 5, No. 3, pp. 1-19, pls. 1-4, figs. 1-37.
1940. On some chilopods and diplopods from North Carolina. *Canadian Ent.*, vol. 72, pp. 56-59.
1940. New genera and species of North American Parajulidae. *Bull. Univ. Utah, biol. ser.*, vol. 5, No. 7, pp. 1-39, pls. 1-8, figs. 1-73.
1940. Four new western millipeds. *Pomona Coll. Journ. Ent. and Zool.*, vol. 32, No. 4, pp. 81-83, figs. a-f.
1940. Four new polydesmoid millipeds from North Carolina (Myriapoda). *Ent. News*, vol. 51, No. 10, pp. 282-284, figs. 1-4.
1941. New polydesmoid diplopods intercepted at quarantine. *Proc. Ent. Soc. Washington*, vol. 43, No. 2, pp. 32-35, 4 text figs.
1941. New American millipeds. *Bull. Univ. Utah, biol. ser.*, vol. 6, No. 4, pp. 1-39, pls. 1-5, figs. 1-49.
1941. New western millipeds. *Bull. Univ. Utah, biol. ser.*, vol. 6, No. 5, pp. 1-23, pls. 1-3, figs. 1-30.
1942. On a collection of myriopods from Iowa. *Canadian Ent.*, vol. 74, No. 1, pp. 15-17, 4 figs.
1942. New southern millipeds. *Bull. Univ. Utah, biol. ser.*, vol. 6, No. 8, pp. 1-19, pls. 1-4, figs. 1-40.
1943. On nine North American polydesmoid millipeds. *Proc. Biol. Soc. Washington*, vol. 56, pp. 35-40, pls. 1, 2, figs. 1-11.
1943. A new *Polydesmus* from Missouri and Oklahoma (Diplopoda). *Ent. News*, vol. 54, pp. 15-16, figs. 1, 2.
1943. A new cambalid diplopod. *Ent. News*, vol. 54, pp. 88-89.

## CHAMBERLIN, RALPH VARY—Continued

1943. On some genera and species of American millipeds. *Bull. Univ. Utah, biol. ser.*, vol. 8, No. 2, pp. 1-20, figs. 1-42.
1943. Some records and descriptions of American diplopods. *Proc. Biol. Soc. Washington*, vol. 56, pp. 143-152, pls. 7-8, figs. 1-15.
1943. On Mexican millipeds. *Bull. Univ. Utah, biol. ser.*, vol. 8, No. 3, pp. 1-103, pls. 1-16, figs. 1-172.
1944. Some records of myriopods collected by W. M. Pearce in California. *Pan-Pacific Ent.*, vol. 20, pp. 79-80.
1944. Two millipeds from southern California. *Proc. Biol. Soc. Washington*, vol. 57, pp. 113-116, pl. 4, figs. 1-5.
1946. Two new species of the milliped genera *Chonaphe* and *Aniulus*. *Proc. Biol. Soc. Washington*, vol. 59, pp. 31-34, figs. 1-4.
1946. *Texophon*, a new genus in the diplopod family Lysiopetalidae. *Ent. News*, vol. 57, pp. 97-99, figs. 1-2.
1946. On some millipeds of Georgia. *Ent. News*, vol. 57, pp. 149-152, figs. 1-9.
1946. On four millipeds from Georgia and Mississippi. *Proc. Biol. Soc. Washington*, vol. 59, pp. 139-142, figs. 1-5.
1947. Seven new American millipeds. *Proc. Biol. Soc. Washington*, vol. 60, pp. 9-16, figs. 1-8.
1947. Some records and descriptions of diplopods chiefly in the collection of the Academy. *Proc. Acad. Nat. Sci. Philadelphia*, vol. 99, pp. 21-58, figs. 1-73.
1948. A third species in the chelodesmid genus *Semionellus*. *Ent. News*, vol. 59, p. 259, figs. 1-2.
1949. Some millipeds of the families Polydesmidae and Xystodesmidae. *Journ. Washington Acad. Sci.*, vol. 39, No. 3, pp. 94-102, figs. 1-27.
1949. A new genus and four new species in the diplopod family Xystodesmidae. *Proc. Biol. Soc. Washington*, vol. 62, pp. 3-6, figs. 1-6.
1949. A new family in the diplopod order Chordeumida. *Proc. Biol. Soc. Washington*, vol. 62, pp. 7, 8, figs. 1, 2.
1949. On some western millipeds of the order Spirobolida. *Journ. Washington Acad. Sci.*, vol. 39, No. 5, pp. 163-169, figs. 1-19.
1949. American millipeds of the family Paeromopidae. *Chicago Acad. Sci. Nat. Hist. Misc.*, No. 52, pp. 1-6, figs. 1, 2.
1949. Some western millipeds of the family Chelodesmidae. *Proc. Biol. Soc. Washington*, vol. 63 [sic=62], pp. 125-132, figs. 1-11.
1950. Three new genera and eight new species of western millipeds. *Chicago Acad. Sci. Nat. Hist. Misc.*, No. 63, pp. 1-6, figs. 1-3.
1950. Neotropical chilopods and diplopods in the collections of the Department of Tropical Research, New York Zoological Society. *Zoologica*, New York, vol. 35, No. 2, pp. 133-144, figs. 1-23.
1951. Eleven new western millipeds. *Chicago Acad. Sci. Nat. Hist. Misc.*, No. 87, pp. 1-12, figs. 1-26.
1951. On eight new southern millipeds. *Great Basin Nat.*, vol. 11, Nos. 1-2, pp. 19-27, figs. 1-16.
1951. Records of American millipeds and centipeds collected by Dr. D. Eldon Beck in 1950. *Great Basin Nat.*, vol. 11, Nos. 1-2, pp. 27-35, figs. 1-3.
1952. Three cave-dwelling millipeds. *Ent. News*, vol. 63, pp. 10-12.
1952. *Eclomus*, nom. nov. *Ent. News*, vol. 63, p. 71.
1952. Two Oregon millipeds of the order Chordeumida. *Chicago Acad. Sci. Nat. Hist. Misc.*, No. 113, pp. 1-4, figs. 1-6.
1952. American polydesmoid millipeds in the collection of the Chicago Museum of Natural History. *Ann. Ent. Soc. Amer.*, vol. 45, pp. 553-584, figs. 1-47.

## CHAMBERLIN, RALPH VARY—Continued

1952. Further records and descriptions of American millipeds. *Great Basin Nat.*, vol. 12, Nos. 1-4, pp. 13-34, figs. 1-21.
1953. Six new American millipeds, with notes on several cave-dwelling species. *Proc. Biol. Soc. Washington*, vol. 66, pp. 67-72, figs. 1-4.
1953. Two new millipeds taken in California caves. *Ent. News*, vol. 64, pp. 93-95.
1953. Some American millipeds of the order Spirobolida. *Amer. Midl. Nat.*, vol. 50, pp. 138-151, figs. 1-31.
- CHAMBERLIN, RALPH V., AND HOFFMAN, RICHARD L.
1950. On some genera and families of North American diplopods. *Chicago Acad. Sci. Nat. Hist. Misc.*, No. 71, pp. 1-7, figs. 1, 2.
- CHAMBERLIN, RALPH V., AND MULAİK, STANLEY
1941. On a collection of millipeds from Texas and New Mexico. *Journ. New York Ent. Soc.*, vol. 49, No. 1, pp. 57-64.
- COOK, ORATOR FULLER
1895. Chordeumidae or Craspedosomatidae? *Amer. Nat.*, vol. 29, pp. 862-864.
1895. The genera of Lysiopetalidae. *Amer. Nat.*, vol. 29, pp. 1017-1019.
1895. Introductory note on the families of Diplopoda, in Cook and Collins, *The Craspedosomatidae of North America*. *Ann. New York Acad. Sci.*, vol. 9, pp. 1-9.
1896. On recent diplopod names. *Brandtia*, No. 2, pp. 5-8.
1896. *Cryptodesmus* and its allies. *Brandtia*, No. 5, p. 25.
1896. A spinning diplopod. *Brandtia*, No. 9, pp. 41-42.
1896. An American glomeroid. *Brandtia*, No. 10, pp. 43-45.
1896. Note on the classification of Diplopoda. *Amer. Nat.*, vol. 30, pp. 681-684.
1898. Myriapoda, in *The fur seals and fur-seal islands of the North Pacific Ocean*, edited by D. S. Jordan, vol. 4, pp. 350-351.
1898. American oniscoid Diplopoda of the order Merocheta. *Proc. U. S. Nat. Mus.*, vol. 21, pp. 451-468, pls. 29-32.
1899. The diplopod family Striariidae. *Proc. U. S. Nat. Mus.*, vol. 21, pp. 667-676, pls. 53-54.
1904. Myriapoda of northwestern North America, in *Harriman Alaska Expedition*, vol. 8 (Insects, pt. 1), pp. 47-82, pls. 3, 4, 5.
1911. Notes on the distribution of millipeds in southern Texas, with descriptions of new genera and species from Texas, Arizona, Mexico, and Costa Rica. *Proc. U. S. Nat. Mus.*, vol. 40, pp. 147-167.
1911. The hothouse milliped as a new genus. *Proc. U. S. Nat. Mus.*, vol. 40, pp. 625-631.
- COOK, ORATOR F., AND COLLINS, GEORGE N.
1895. *The Craspedosomatidae of North America*. *Ann. New York Acad. Sci.*, vol. 9, pp. 1-100, pls. 1-12, figs. 1-219. (Pp. 1-9 by O. F. Cook.)
- COOK, ORATOR F., AND COOK, A. C.
1894. A monograph of *Scytonotus*. *Ann. New York Acad. Sci.*, vol. 8, pp. 233-248, pls. 6-9, figs. 1-71.
- COOK, ORATOR F., AND LOOMIS, HAROLD F.
1928. Millipeds of the order Colobognatha, with descriptions of six new genera and type species, from Arizona and California. *Proc. U. S. Nat. Mus.*, vol. 72, art. 18, pp. 1-26, figs. 1-6, pls. 1, 2.
- COPE, EDWARD DRINKER
1869. Synopsis of the extinct Mammalia of the cave formations in the United States, with observations on some Myriapoda found in and near the same, and on some extinct mammals of the caves of Anguilla, W. I., and other localities. *Proc. Amer. Philos. Soc.*, vol. 11, pp. 171-192, pls. 3-5.



## COPE, EDWARD DRINKER—Continued

1870. On some new and little known Myriapoda from the Southern Alleghanies. *Trans. Amer. Ent. Soc.*, vol. 3, pp. 65-67.
1872. On the Wyandotte Cave and its fauna. *Amer. Nat.*, vol. 6, pp. 406-422.

## CURTIS, JOHN

1845. Observations on the natural history and economy of the insects called wire-worms, affecting the turnips, corn-crops, &c.; also of their parents the elaters or beetles, called skip-jacks, click-beetles, &c. *Journ. Roy. Agr. Soc. England*, vol. 5, art. 11, pp. 180-237, pls. I, J, figs. 1-55.

## DADAY, EUGENIO

1890. *Myriopoda extranea Musaei nationalis Hungarici*. *Term. Füz.*, vol. 12 (1889), pp. 115-156, pls. 4, 5.
1891. *Myriopoda extranea collectionis zoologicae Universitatis Heidelbergensis*. *Term. Füz.*, vol. 14, pp. 135-154, pl. 7.

## DRURY, DRU

- 1770-82. Illustrations of natural history; wherein are exhibited . . . figures of exotic insects, according to their different genera . . . , vols. 1-3, pls. 151. London.

## FABRICIUS, JOHANN CHRISTIAN

1781. *Species insectorum exhibentes eorum differentias specificas . . . etc.*, 2 vols. Hamburg and Cologne.

## FANZAGO, F.

1875. Alcune nuove specie di miriapodi. *Atti Acad. Sci. Veneto-Trentino-Istria*, vol. 4, pp. 149-152.

## GERVAIS, PAUL

1836. Nouvelles espèces de myriapodes. *L'Institut*, sect. 1, vol. 4, No. 190, pp. 435-436.
1836. Nouvelles espèces de myriapodes. *Bull. Soc. Philom. Paris*, ser. 5, vol. 1 (Extraits des Procès-verbaux des Séances), pp. 71-72.
1844. Études pour servir à l'histoire naturelle des myriapodes. *Am. Sci. Nat.* ser. 3, vol. 2, pp. 51-80.
1847. Myriapodes, *in* Walckenaer and Gervais, *Histoire naturelle des insectes*. Aptères, vol. 4, pp. 1-333, 577-595, with atlas, pls. 37-45. Paris.

## GIRARD, CHARLES

1853. Myriapods, *in* Marcy, Report on exploration of the Red River of Louisiana . . . in 1852, Appendix F, pp. 243-246, pls. 1.

## GOLDFUSS, GEORG AUGUST

1820. *Handbuch der zoologie*, vol. 1.

## GRAY, JOHN EDWARD

1832. Myriapods, *in* Griffith, *The animal kingdom arranged in conformity with its organization by the Baron Cuvier*, vol. 15 (Class Insecta, vol. 2), p. 787, pl. 135, fig. 1.
1842. *In* T. Rymer Jones, *Myriapoda*, *in* R. B. Todd, *Cyclopedia of anatomy and physiology*, vol. 3, pp. 544-560, figs. 304-326.
1844. List of the specimens of Myriapoda in the collection of the British Museum. London.

## GUNTROP, HORACE

1913. Annotated list of the Diplopoda and Chilopoda, with a key to the Myriapoda of Kansas. *Kansas Univ. Sci. Bull.*, vol. 7, No. 6, pp. 161-183, figs. 1-6.

## HARGER, OSCAR

1872. Descriptions of new North American myriapods. *Amer. Journ. Sci. Arts*, ser. 3, vol. 4, pp. 117-121, pls. 2.

## HEFNER, R. A.

1929. Studies of parajulid diplopods. I. The development of the external sexual structures of *Parajulus impressus* Say (8). Journ. Morph. Physiol., vol. 48, pp. 153-172, pls. 1-4, figs. 1-25.

## HELLER, CAMIL

1858. Beiträge zur österreichischen Grotten-Fauna. Sitz-ber. Akad. Wiss., Wien, vol. 26 (1857), pp. 313-326, figs. 1-14.

## HOFFMAN, RICHARD LAWRENCE

1947. The status of the milliped *Lasiolathus virginicus*, with notes on *Scytonotus granulatus*. Proc. Biol. Soc. Washington, vol. 60, pp. 139-140.
1948. Two new genera of xystodesmid millipeds from eastern United States. Proc. Biol. Soc. Washington, vol. 61, pp. 93-96, figs. 1-3.
1948. Three new eastern millipeds of the family Xystodesmidae. Journ. Washington Acad. Sci., vol. 38, No. 10, pp. 346-350, figs. 1-6.
1949. The identity of *Apheloria coriacea* (Diplopoda: Xystodesmidae). Amer. Mus. Novitates, No. 1405, pp. 1-6, figs. 1-4.
1949. Three new species of Diplopoda from Virginia. Proc. Biol. Soc. Washington, vol. 62, pp. 81-83, figs. 1-6.
1949. A new milliped of the genus *Toltecolus* from the United States (Anocheta: Atopetholidae). Chicago Acad. Sci. Nat. Hist. Misc., No. 46, pp. 1-3, fig. 1.
1949. Nine new xystodesmid millipeds from Virginia and West Virginia, with records of established species. Proc. U. S. Nat. Mus., vol. 99, No. 3244, pp. 371-389, pls. 26, 27, figs. 1-18.
1950. A preliminary list of the cleidogonid millipeds, with descriptions of a new genus from Guatemala and a new species from Virginia. Journ. Washington Acad. Sci., vol. 40, No. 3, pp. 87-92, figs. 1-6.
1950. Records and descriptions of diplopods from the southern Appalachians. Journ. Elisha Mitchell Sci. Soc., vol. 66, No. 1, pp. 11-33, figs. 1-32.
1950. Notes on some Virginia millipeds of the family Polydesmidae. Virginia Journ. Sci., new ser., vol. 1, No. 3, pp. 219-225, figs. 1-4.
1950. American polydesmoid millipeds of the genus *Sigmoria*. Amer. Mus. Novitates, No. 1462, pp. 1-7.
1950. The status of the milliped *Chelodesmus marxi* Cook and of the family name Chelodesmidae. Proc. Biol. Soc. Washington, vol. 63, pp. 185-188, pl. 13.
1951. The name of the common eastern spiroboloid milliped. Florida Ent., vol. 34, No. 1, pp. 15-16.
1951. Subspecies of the milliped *Apheloria trimaculata* (Wood). (Polydesmida: Xystodesmidae). Chicago Acad. Sci. Nat. Hist. Misc., No. 81, pp. 1-6, fig. 1.
1951. A new genus of Central American milliped (family Euryuridae), with notes on the American genera. Proc. U. S. Nat. Mus., vol. 102, pp. 235-243, fig. 84.
1952. The identity of the milliped genus *Fontaria* Gray (Polydesmida: Xystodesmidae). Ent. News, vol. 63, No. 3, pp. 72-74, fig. 1.
1953. Studies on spiroboloid millipeds. I. The genus *Eurhinocricus* Brolemann. Proc. Biol. Soc. Washington, vol. 66, pp. 179-183, pl. 10, figs. 1-8.
1954. Further studies on American millipeds of the family Euryuridae (Polydesmida). Journ. Washington Acad. Sci., vol. 44, pp. 49-58, figs. 1-4.

## HOFFMAN, RICHARD L., AND CRABILL, RALPH E.

1953. C. S. Rafinesque as the real father of American myriapodology. Florida Ent., vol. 36, No. 2, pp. 73-82.

- HUMBERT, ALOIS, AND SAUSSURE, HENRI  
 1869. Description de divers myriapodes du Musée de Vienna. Verh. Zool.-Bot. Ges. Wien, vol. 19, pp. 669-692.  
 1870. Myriapoda Nova Americana: Description de divers Myriapodes nouveaux du musée de Vienne. Rev. Mag. Zool., ser. 2, vol. 22, pp. 172-177.
- JACKSON, A. R.  
 1915. On some arachnids and myriapods observed in 1914. Lancashire and Cheshire Nat., vol. 7, pp. 433-437.
- JACOT, ARTHUR PAUL  
 1938. Four new arthropods from New England. Amer. Midl. Nat., vol. 20, pp. 571-574, figs. 1-3.
- JAWLOWSKI, HIERONIM  
 1939. Contribution to the knowledge of the Diplopoda of Nova Scotia and Newfoundland. Fragmenta Faunistica Mus. Zool. Polonici, vol. 4, No. 8, pp. 149-158, figs. 1.
- JOHNSON, BERT M.  
 1954. A new species of milliped, genus *Dixidesmus*, from Michigan. Chicago Acad. Sci. Nat. Hist. Misc., No. 137, pp. 1-5, fig. 1.
- KARSCH, FERDINAND  
 1881. Zum studium der Myriapoda Polydesmia. Arch. Naturg., vol. 47, pp. 36-49, pl. 3.  
 1881. Einige neue diplopode Myriopoden des Berliner Museums. Mitth. Münchener Ent. Ver., vol. 4, pp. 140-144.  
 1881. Neue Juliden des Berliner-Museums, als Prodrömus einer Juliden Monographie. Zeitschr. Naturw., vol. 54 (ser. 3, vol. 6), pp. 1-79.
- KENYON, FREDERICK C.  
 1893. A preliminary list of the Myriapoda of Nebraska, with descriptions of new species. Publ. Nebraska Sci., vol. 3, pp. 14-18.
- KINCAID, TREVOR  
 1898. A new species of *Polyxenus*. Ent. News, vol. 9, pp. 192-193.
- KINGSLEY, JOHN STERLING  
 1888. The classification of the Myriapoda. Amer. Nat., vol. 22, pp. 1118-1121.
- KOCH, CARL LUDWIG  
 1835-1844. Deutschlands Crustaceen, Myriapoden und Arachniden. Ein Beitrag zur Deutschen Fauna von C. L. Koch . . . , in Herrich-Schäffer, Deutschlands Insecten, Hefte 136, 137, 142, 162, 190.  
 1847. System der Myriapoden, in Herrich-Schäffer, Kritische Revision der Insectenfauna Deutschlands, vol. 3.  
 1863. Die Myriapoden. Getreu nach der Natur abgebildet und beschrieben, . . . , vol. 1, pp. 1-134, pls. 1-60, figs. 1-123; vol. 2, pp. 1-112, pls. 61-119, figs. 124-234. Halle.
- LATREILLE, PIERRE ANDRÉ  
 1802. Histoire naturelle . . . des crustacés et des insectes, . . . , vol. 3, pp. 1-467.  
 1804. Histoire naturelle . . . des crustacés et des insectes, . . . , vol. 7, p. 82.  
 1817. Myriapodes, in Georges Cuvier, Le règne animal distribué d'après son organisation, . . . , vol. 3.  
 1829. Myriapodes, in Georges Cuvier, Le règne animal distribué d'après son organisation, . . . , vol. 4, nouvelle édition.
- LATZEL, ROBERT  
 1884. Die Myriopoden der Osterreichisch-Ungarischen Monarchie . . . , vol. 2, Die Symphylen, Pauropoden und Diplopoden, pp. i-xi+1-414, pls. 1-16, figs. 1-210. Wien.

## LATZEL, ROBERT—Continued

1884. Suite de diagnoses d'espèces et de variétés nouvelles. Bull. Soc. Sci. Nat. Rouen, ser. 2, Ann. 19 (1883), pp. 251-266.
1884. Diagnoses d'espèces et de variétés nouvelles. Bull. Soc. Sci. Nat. Rouen, ser. 2, Ann. 19 (1883), pp. 267-272, pl. 1, figs. 1-7.
1888. Diagnoses d'espèces nouvelles. Bull. Soc. Hist. Nat. Toulousc, Proc. Verb., pp. LXXXV-LXXXVI.
1895. Myriopoden aus der Umgebung Hamburgs. Mitt. Naturh. Mus. Hamburg, vol. 12 (1894), pp. 99-109, figs. 1, 2.

## LEACH, WILLIAM ELFORD

1815. A tabular view of the external characters of four classes of animals, which Linné arranged under Insecta . . . Trans. Linn. Soc. London, vol. 11, pp. 306-400.
1817. The characters of the genera of the class Myriapoda, with descriptions of some species. Zoological Miscellany, London, vol. 3, pp. 31-45, pls. 132-140.

## LINNAEUS, CARL

1758. Systema naturae . . . , ed. 10, vol. 1, pp. 1-824.
1761. Fauna svecica, sistens animalia sveciae regni . . . , ed. 2, pp. 1-578, pls. 2.

## LOHMANDER, HANS

1925. Sveriges diploper. Göteborgs Vetensk. Samh. Handl., ser. 4, vol. 30, No. 2, pp. 1-115, figs.

## LOOMIS, HAROLD FREDERICK

1933. Egg-laying habits and larval stages of a milliped, *Arctobolus marginatus* (Say) Cook, native at Washington, D. C. Journ. Washington Acad. Sci., vol. 23, No. 2, pp. 100-109, fig. 1.
1934. Millipeds of the West Indies and Guiana collected by the Allison V. Armour Expedition in 1932. Smithsonian Misc. Coll., vol. 89, No. 14, pp. 1-69, figs. 1-33, pls. 1-4.
1936. New millipeds of the American family Striariidae. Journ. Washington Acad. Sci., vol. 26, pp. 404-409, fig. 1.
1936. Three new millipeds of the order Colobognatha from Tennessee, Texas, and Lower California, with records of previously known species. Proc. U. S. Nat. Mus., vol. 83, No. 2989, pp. 361-368, fig. 32.
1937. Crested millipeds of the family Lysiopetalidae in North America, with descriptions of new genera and species. Proc. U. S. Nat. Mus., vol. 84, No. 3006, pp. 97-135, figs. 16-18, pls. 3, 4.
1938. The cambaloid millipeds of the United States, including a family new to the fauna and new genera and species. Proc. U. S. Nat. Mus., vol. 86, No. 3043, pp. 27-66, figs. 10-21, pl. 2.
1939. The millipeds collected in Appalachian caves by Mr. Kenneth Dearolf. Bull. Mus. Comp. Zool., vol. 86, No. 4, pp. 165-193, figs. 1-14.
1943. New cave and epigean millipeds of the United States, with notes on some established species. Bull. Mus. Comp. Zool., vol. 92, No. 7, pp. 371-410, text figs. 1-13, pl. 1.
1943. A new genus of Virginia millipeds related to *Scytonotus* and a new species from Florida. Journ. Washington Acad. Sci., vol. 33, No. 10, pp. 318-320, figs. 1, 2.
1944. Millipeds principally collected by Professor V. E. Shelford in the eastern and southeastern United States. Psyche, vol. 51, Nos. 3-4, pp. 166-177, figs. 1-6.
1949. New millipeds of the spiroboloid genus *Watichelus* from the Pacific Coast. Journ. Washington Acad. Sci., vol. 39, No. 7, pp. 241-244, figs. 1-10.

## LOOMIS, HAROLD FREDERICK—Continued

1950. Synonymy of some native American and introduced millipeds. Journ. Washington Acad. Sci., vol. 40, No. 5, pp. 164–166, fig. 1.  
 1953. New millipeds of the western States and Lower California. Journ. Washington Acad. Sci., vol. 43, No. 12, pp. 417–422, figs. 1–20.

## LOOMIS, HAROLD F. AND HOFFMAN, RICHARD L.

1948. Synonymy of various diplopods. Proc. Biol. Soc. Washington, vol. 61, pp. 51–54.

## LOOMIS, HAROLD F., AND DAVENPORT, DEMOREST

1951. A luminescent new xystodesmid milliped from California. Journ. Washington Acad. Sci., vol. 41, pp. 270–272, fig. 1.

## MCNEILL, JEROME

1887. List of the myriapods found in Escambia County, Florida, with descriptions of six new species. Proc. U. S. Nat. Mus., vol. 10, pp. 323–327, pl. 11, figs. 1–7.  
 1887. Descriptions of twelve new species of Myriapoda, chiefly from Indiana. Proc. U. S. Nat. Mus., vol. 10, pp. 328–334, pl. 12, figs. 1–9.  
 1888. A list, with brief descriptions, of all the species, including one new to science, of Myriapoda of Franklin County, Indiana. Bull. Brookville (Indiana) Soc. Nat. Hist., No. 3, pp. 1–20.

## MAUCK, A. V.

1901. On the swarming and variation in a myriapod (*Fontaria virginiensis*). Amer. Nat., vol. 35, pp. 477–478.

## MEINERT, FRANZ

1868. Danmarks Chilognather. Naturh. Tidsskr., ser. 3, vol. 5, pp. 1–32.

## MENCE, FRANZ ANTON

1851. Myriapoden der Umgebend von Danzig. Neueste Schrift. Naturf. Ges. Danzig, vol. 4, Heft 4, pp. 1–22, pls. 2.

## MILEY, HUGH H.

1927. Development of the male gonopods and life history of a polydesmid millipede. Ohio Journ. Sci., vol. 27, pp. 25–41, pls. 1, 2, figs. 1–9.

## MORSE, MAX

1902. Myriapods from Vinton, Ohio. Ohio Nat., vol. 2, p. 187.  
 1903. Unusual abundance of a myriapod, *Parajulus pennsylvanicus* (Brandt). Science, new ser., vol. 18, pp. 59–60.

## MURRAY, ANDREW

1877. Economic entomology. Science handbook of the South Kensington Museum, 433 pp. London.

## NĚMEC, BOHUMIL

1895. O nových českých Diplopodech. Sitz-ber. Böhmischen Ges. Wiss., pt. 2, No. 38, pp. 1–8, figs. 1–13.

## NEWPORT, GEORGE

1842. On some new genera of the Class Myriapoda. Proc. Zool. Soc. London, vol. 10, pp. 177–181.  
 1843. Description of a new British *Julus*. Ann. Mag. Nat. Hist., vol. 11, p. 316.  
 1844. A list of the species of Myriapoda in the collection of the British Museum. Ann. Mag. Nat. Hist. (ser. 1), vol. 13, pp. 263–270.  
 1845. Monograph of the class Myriapoda, order Chilopoda; with observations on the general arrangement of the Articulata. Trans. Linn. Soc. London, vol. 19, pp. 265–302, pl. 33, figs. 1–38.

## PACKARD, ALPHEUS SPRING, JR.

1870. New or rare Neuroptera, Thysanura, and Myriapoda. Proc. Boston Soc. Nat. Hist., vol. 13, pp. 405–413.  
 1871. The Mammoth Cave and its inhabitants. Amer. Nat., vol. 5, pp. 739–761.

## PACKARD, ALPHEUS SPRING, JR.—Continued

1874. Report on the myriopods collected by Lieut. W. L. Carpenter, in 1873, in Colorado. *Ann. Rep. U. S. Geol. Geogr. Surv. Terr.* (Hayden), for 1873, p. 607.
1877. On a new cave fauna in Utah. *Bull. U. S. Geol. Geogr. Surv. Terr.* (Hayden), vol. 3, No. 1, art. 10, pp. 157-169, figs. 5-10.
1881. Fauna of the Luray and Newmarket caves, Virginia. *Amer. Nat.*, vol. 15, pp. 231-232.
1883. A new *Polydesmus* with eyes. *Amer. Nat.*, vol. 17, p. 428.
1883. A revision of the *Lysiopetalidae*, a family of Chilognath Myriopoda, with a notice of the genus *Cambala*. *Proc. Amer. Philos. Soc.*, vol. 21, pp. 177-197.
1883. Repugnatorial pores in the *Lysiopetalidae*. *Amer. Nat.*, vol. 17, p. 555.
1883. On the morphology of the Myriopoda. *Proc. Amer. Philos. Soc.*, vol. 21, pp. 197-209.

## PALISOT DE BEAUVOIS, AMBROSE MARIE FRANÇOIS JOSEPH

1805. Insectes recueillis en Afrique et en Amérique, dans les royaumes d'Oware et de Benin, à Saint-Dominique et dans les États-Unis, pendant . . . 1786-1797. *Aptères*, pp. i-xvi+1-276, pls. 1-90.

## PALMÉN, ERNST

1952. Survey of the diplopoda of Newfoundland. *Ann. Zool. Soc.* 'Vanamo,' vol. 15, No. 1, pp. 1-31, figs. 1-22.

## PETERS, WILHELM CARL HARTWIG

1864. Übersicht der im Königl. zoologischen Museum befindlich Myriapoden aus der Familie der polydesmi, so wie Beschreibungen einer neuen Gattung, *Trachyiulus*, der Juli, und neuer Arten der Gattung *Siphonophora*. *Monatsb. Preuss. Akad. Wiss. Berlin*, 1864, pp. 529-551, 617-627.

## PIERCE, W. DWIGHT

1940. A rare myriapod from Anacapa Island, compared with two Texas species. *Bull. Southern California Acad. Sci.*, vol. 39, part 2, pp. 158-171, figs. 1-19.

## POCOCK, REGINALD INNES

1887. On the classification of the Diplopoda. *Ann. Mag. Nat. Hist.*, ser. 5, vol. 20, art. 35, pp. 283-295.
1894. Contributions to our knowledge of the arthropod fauna of the West Indies. Part III. Diplopoda and Malacopoda, with a supplement on the Arachnida of the class Pedipalpi. *Journ. Linn. Soc. London, Zool.*, vol. 24 (No. 157), pp. 473-544, pls. 37-40.
1894. Chilopoda, Symphyla, and Diplopoda from the Malay Archipelago, in Weber, *Zoologische Ergebnisse einer Reise in Niederländisch Ost-Indien*, vol. 3, pp. 307-404, pls. 19-22.
1900. On two English millipedes (*Iulus londinensis* Leach and *Iulus teutonicus*, sp. n.). *Ann. Mag. Nat. Hist.*, ser. 7, vol. 6, pp. 206-207.
- 1903-1910 Diplopoda, in *Biologia Centrali-Americana, Zoologia, Chilopoda and Diplopoda*, pp. 41-217, pls. 4-15.

## VON PORAT [ALSO AS PORATH], CARL OSCAR

1866. Bidrag till Kännedom om Sveriges Myriapoder, Ordning Diplopoda. (Inaug. Dissert.). Stockholm.
1872. Myriopoda Africae australis, in *Museo Regio Holmiensi asservata, recensuit*. Pars. 2. Diplopoda. *Öfvers Vet.-Akad. Förh.*, Stockholm, vol. 29, No. 5, pp. 3-45, pl. 4, figs. 1-8.
1889. Nya bidrag till Skandinaviska halföns myriopodologi. *Ent. Tidskr.*, vol. 10, pp. 65-80.

## PROVANCHER, LEON

1873. Myriapodes. *Nat. Canadien*, vol. 5, pp. 410-419.

## RAFINESQUE, CONSTANTINE SAMUEL

1820. Annals of nature, or annual synopsis of new genera and species of animals and plants discovered in North America. First Annual Number for 1820, pp. 1-20.

## RYDER, JOHN ADAM

1881. List of the North American species of myriapods belonging to the family of the Lysiopetalidae, with a description of a blind form from Luray Cave, Virginia. Proc. U. S. Nat. Mus., vol. 3, No. 181, pp. 524-529, figs. 1-3.

## SAGER, ABRAM

1856. Description of three Myriapoda. Proc. Acad. Nat. Sci. Philadelphia, vol. 8, p. 109.

## SAUSSURE, HENRI DE

1859. Note sur la famille des polydesmides, principalement au point de vue des espèces américaines. Linnea Ent., vol. 13, pp. 318-327.
1859. Diagnoses de divers Myriapodes nouveaux. Linnea Ent., vol. 13, pp. 328-332.
1860. Essai d'une faune des Myriapodes du Mexique, avec la description de quelques espèces des autres parties de l'Amérique. Mém. Soc. Phys. Hist. Nat. Genève, vol. 15, pt. 2, pp. 259-393, pls. 1-7, figs. 1-52.

## SAUSSURE, HENRI DE, AND HUMBERT, ALOIS

1872. Études sur les myriapodes, in Mission scientifique au Mexique et dans l'Amérique Centrale, recherches zoologiques, pt. 6, sect. 2, pp. 1-211, pls. 1-6. Paris.

## SAY, THOMAS

1821. Description of the myriapodae of the United States. Journ. Acad. Nat. Sci. Philadelphia, vol. 2, pp. 102-114.

## SCHUBART, OTTO

1934. Tausendfüßler oder Myriapoda I: Diplopoda, in Dahl, Die Tierwelt Deutschlands und der angrenzenden Meeresteile nach ihren Merkmalen und nach ihrer Lebensweise, Teil 28, pp. i-vii+1-318, figs. 1-480. Jena.
1945. Os proterospermophora do Distrito Federal (Myriapoda Diplopoda). Arq. Mus. Nac. Brasil, vol. 38, pp. 1-156, figs. 1-138.
1946. Uma segunda especie do genero *Cylindroiulus* [Diplopoda] encontrada no Brasil. Comun. Zool. Mus. Hist. Nat. Montevideo, vol. 2, No. 29, pp. 1-5, figs. 1-3.
1946. *Cambalopsis nordquisti* Attems da Asia oriental, habitante do Distrito Federal do Brasil (Diplopoda, Cambalopsidae). Rev. Brasileira Biol., vol. 6, No. 3, pp. 395-406.
1951. Contribuição para a fauna do estado de São Paulo II. Os Rhinocricidae (Ophisthospermophora, Diplopoda). Anais Acad. Brasileira Ciênc., vol. 23, No. 2, pp. 221-275, figs. 1-40.

## SILVESTRI, FILIPPO

1894. Chilipodi e diplopodi della Papuasias, per Filippo Silvestri. Ann. Mus. Civ. Stor. Nat. Genova vol., 34 (ser. 2, vol. 14), pp. 619-659.
1894. I chilipodi ed i diplopodi di Sumatra e della isole Nias, Engano e Mentavei. Ann. Mus. Civ. Stor. Nat. Genova, vol. 34 (ser. 2, vol. 14), pp. 707-760, figs. 1-14.
1896. I Diplopodi. Parte I, Sistematica. Ann. Mus. Civ. Stor. Nat. Genova, vol. 36 (ser. 2, vol. 16), pp. 121-254, figs. 1-26.
1896. Una escursione in Tunisia (Symphyla, Chilopoda, Diplopoda). Nat. Siciliano, vol. 1, new ser., pp. 143-161, pl. 7.
1897. Viaggio del Dott. Alfredo Borelli nel Chaco Boliviano e nella Repubblica Argentina. IV. Chilopodi e Diplopodi. Bull. Mus. Zool. Anat. Comp. Univ. Torino, vol. 12, No. 283, pp. 1-11.

## SILVESTRI, FILIPPO—Continued

1897. *Systema Diplopodum*. Ann. Mus. Civ. Stor. Nat. Genova, vol. 38 (ser. 2, vol. 18), pp. 644-651.
1898. Viaggio del Dott. E. Festa nella Repubblica dell' Ecuador. XI. Diplopodi. Boll. Mus. Zool. Anat. Comp. Univ. Torino, vol. 13, No. 324, pp. 1-11, figs. 1-29.
1909. Descrizioni preliminari di vari Artropodi, specialmente d'America. Atti Accad. Lincei Rendic., Classe Sci. Fis. Mat. Nat., ser. 5, vol. 18, pp. 229-233.
1910. Descrizioni preliminari di novi generi di Diplopodi. I. Polydesmoidea. Zool. Anz., vol. 35, pp. 357-364.
1929. Descrizione di un nuovo Diplopodo della famiglia Glomeridae della California. Boll. Lab Zool. Portici, vol. 22, pp. 198-203, figs. 2.

## SINCLAIR, FREDERICK GRANVILLE

1895. Myriopoda, in Harmer and Shipley, *The Cambridge natural history*, vol. 5, pp. 27-80.

## STUXBERG, A.

1885. Generic position of *Polydesmus ocellatus* (Craspedosoma). Amer. Nat., vol. 19, pp. 400, 401.

## UNDERWOOD, LUCIEN MARCUS

1885. The North American Myriapoda. Ent. Amer., vol. 1, pp. 141-151.
1893. A review of the literature of the North American Myriapoda, in Bollman, *The Myriapoda of North America*. U. S. Nat. Mus. Bull. 46, pp. 9-17.

## VERHOEFF, KARL WILHELM

1891. Ein Beitrag zur mitteleuropäischen Diplopoden-Fauna. Berliner Ent. Zeitschr., vol. 36, Heft 1, pp. 115-166, pls. 5-8, figs. 1-49.
1893. Vorläufige Mittheilung über neue Schaltstadium-Beobachtungen bei Juliden, eine neue Gruppierung der alten Gattung Julus und einige neue und seltene Diplopoden aus Tirol. Zool. Anz., vol. 16, pp. 479-482.
1894. Beiträge zur Anatomie und Systematik der Juliden. Verh. Zool.-Bot. Ges. Wien, vol. 44, pp. 137-162.
1894. Beiträge zur Diplopoden-Fauna Tirols. Verh. Zool.-Bot. Ges. Wien, vol. 44, pp. 9-34.
1896. Diplopoden Rheinpreussens und Beiträge zur Biologie und vergleichenden Faunistik europäischer Diplopoden, Vorläufer zu einer rheinischen Diplopodenfauna. Verh. Naturh. Vereins Rheinlands, Westfalens, und Osnabrück, vol. 53, 1896, pp. 186-280, 336.
1898. Ueber Diplopoden aus Bosnien, Herzogowina und Dalmatien. Arch. Naturg., vol. 64, Teil 4, Julidae, pp. 119-160, figs. 1-7, pls. 5, 6, figs. 1-34; Teil 5, Glomeridae and Polyzoniidae (Schluss), pp. 161-176, figs. 1, 2, pl. 7, figs. 1-22.
1900. Beiträge zur Kenntniss paläarktischer Myriopoden. X. Aufsatz. Zur vergleichenden Morphologie, Phylogenie, Gruppen- and Artsystematik der Lysiopetaliden. Zool. Jahrb., Abt. Syst., vol. 13, pp. 36-70, figs. 1-3, pls. 5-9.
1909. Superfamilien der Diplopoda-Opisthospermomorpha. Zool. Anz., vol. 34, pp. 542-543.
1909. Neues System der Diplopoda-Ascospormorphora. Zool. Anz., vol. 34, pp. 566-572.
1909. Zur Kenntnis der Glomeriden. Zool. Anz., vol. 35, pp. 101-124, figs. 1-22.
- 1911-1914. Die Diplopoden Deutschlands . . . , pp. xiii+640, text figs. 1-460, pls. 1-25.
1913. Die Ordnungen der Proterandria und zur Kenntnis der Cambaliden. Zool. Anz., vol. 43, pp. 49-65, figs. 1-3.



## VERHOEFF, KARL WILHELM—Continued

1924. Über Myriapoden von Juan Fernandez und der Osterinsel, in Skottsberg, The natural history of Juan Fernandez and Easter Island, vol. 3, pp. 405-418, figs. 1-18.
1926. Chilognathen-Beiträge. Zool. Anz., vol. 68, Heft 1/2, pp. 57-71, figs. 1-11, Heft 3/4, pp. 109-127, figs. 12-22.
- 1926-1932. Diplopoda, in H. G. Bronn, Klassen und Ordnungen des Tier-Reichs, wissenschaftlich dargestellt in Wort und Bild, Band 5, Abt. 2, Buch 2, Lief. 1-13, pp. 1-2084, figs. 1-1048.
1932. Diplopeden-Beiträge. Zool. Jahrb., Abt. Syst., vol. 62, pp. 469-524, pls. 4-6, figs. 1-50.
1938. *Californiulus* n. g. und *Paeromopellus* n. g. Vertreter einer neuen Familie der Symphyognatha-Arthropoda. Zool. Anz., vol. 122, Nos. 5-6, pp. 113-127, figs. 1-9.
1938. Über einige amerikanische Myriapoden. Zool. Anz., vol. 122, Nos. 11-12, pp. 273-284, figs. 1-5.
1939. Zur Kenntnis ostasiatischer Diplopoden. III., Zool. Anz., vol. 127, pp. 113-125, figs. 1-9.
1941. Versuch eines Siphonophoriden-Systems und geographisch-phylogenetische Beurteilung der Gonopoden. Zool. Anz., vol. 134, pp. 212-224, figs. 1-8.
1943. Ueber einige Diplopoden aus Minas Gerais (Brasilien). Arq. Mus. Nac. Brasil, vol. 37, pp. 247-288, figs. 1-37.
1944. Some Californian Chilognatha. Bull. Southern California Acad. Sci., vol. 43, part 2, pp. 53-70, pls. 12-13, figs. 1-14.

## WALSH, BENJAMIN DANN

1866. *Iulus multistriatus*, n. sp. Practical Entomologist, vol. 2, pp. 34, 35, 70.
1869. Thousand-legged worms. Amer. Ent., vol. 2, p. 59.

## WILLIAMS, ELIOT C., JR., AND WARD, DANIEL B.

1950. An unusual aggregation of the millipede *Zinaria butleri* (McNeill). Proc. Indiana Acad. Sci., vol. 60, pp. 329-331.

## WILLIAMS, STEPHEN R., AND HEFNER, ROBERT A.

1928. The millipedes and centipedes of Ohio. Bull. Ohio Biol. Surv., No. 18, vol. 4, No. 3 (Ohio State Univ. Bull., vol. 33, No. 7), pp. 93-146, figs. 1-26.

## WOOD, HORATIO C.

1864. Descriptions of new species of North American Polydesmidae. Proc. Acad. Nat. Sci. Philadelphia (vol. 16), pp. 6-10.
1864. Descriptions of new species of North American Julidae. Proc. Acad. Nat. Sci. Philadelphia (vol. 16), pp. 10-16.
1864. Descriptions of new genera and species of North American Myriapoda. Proc. Acad. Nat. Sci. Philadelphia (vol. 16), pp. 186-187.
1865. The Myriapoda of North America. Trans. Amer. Philos. Soc., new ser., vol. 13 (1869), pt. 2, art. 7, pp. 137-248, figs. 1-61, pls. 1-3.
1867. Descriptions of new species of Texan Myriapoda. Proc. Acad. Nat. Sci. Philadelphia (vol. 19), pp. 42-44.
1867. Notes on a collection of California Myriapoda, with descriptions of new eastern species. Proc. Acad. Nat. Sci. Philadelphia (vol. 19), pp. 127-130.



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