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NOTES ON THE BIRDS OF SOUTHEASTERN COAHUILA

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In 1938, the senior author, accompanied by George M. Sutton and John B. Semple, spent approximately six weeks studying and collecting birds in various parts of northeastern Mexico. Of this time, an aggregate of three days was devoted to two localities in southern Coahuila, namely, Diamante Pass, just south of Saltillo, and the Laguna de Mayran, some thirty miles east of Torreón. It was evident on the basis of these brief excursions that southern Coahuila contained many ornithological possibilities. As indicated by their published report,¹ the bird life of this area was found to be entirely dissimilar to that encountered just fifty miles eastward at Monterrey and on the Mesa del Chipinque. Later, in 1941, when the Museum of Zoölogy of the Louisiana State University planned a short field trip into northern Mexico, it was decided that this same area in Coahuila might be worked profitably. Mr. Merriam L. Miles, of Vicksburg, Mississippi, generously offered his support to the plan and furthermore agreed to accompany the party and to assist in the field work. Thus, on April 11, 1941, the present writers, Miles and Sam M. Ray, a student in ornithology at the Louisiana State University, departed for Mexico and the region about Saltillo. There they remained from April 12 to April 25.

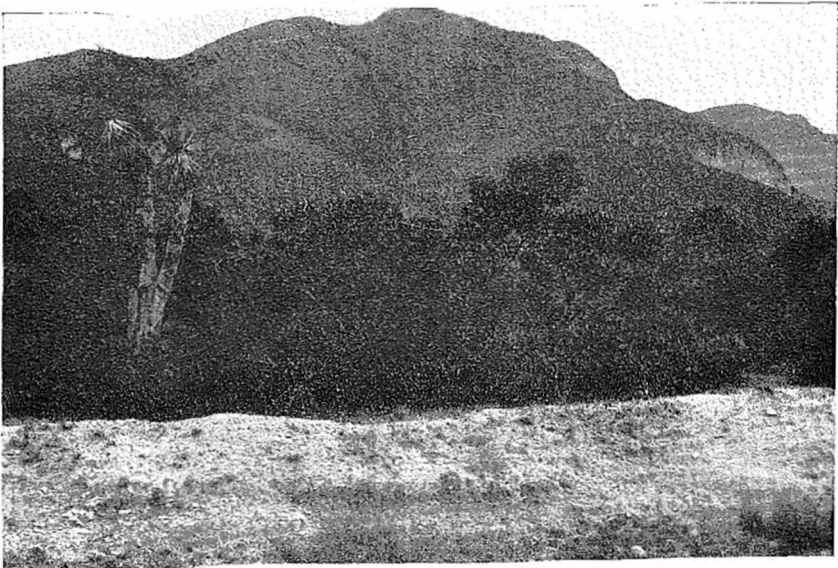
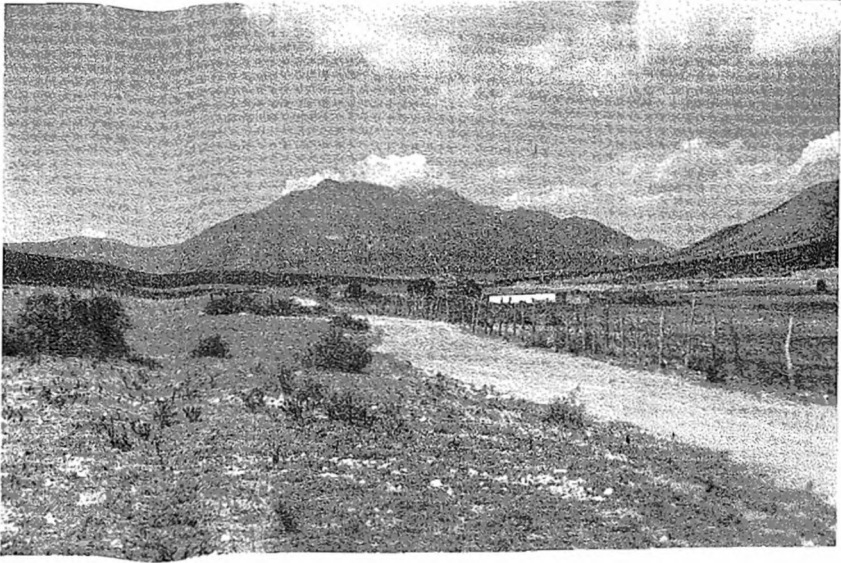
The town of Saltillo is located on an arid plateau at an elevation of 5,300 feet above the sea. Immediately to the southward a comparatively

¹ Sutton and Burleigh, "A list of birds observed on the 1938 Semple expedition to northeastern Mexico," *Occ. Papers Mus. of Zool. La. State Univ.*, 3, 1939: 15-46.

high range of mountains rises to an elevation of about 10,000 feet. This high ridge south of Saltillo is known locally as the Zapalinamé Mountain although it is a part of the Sierra Guadalupe Range. A fairly good road crosses the mountain at an elevation of about 7,800 feet in what is called Diamante Pass. On the other side of the ridge, a broad fertile valley unfolds, and because of its elevation of some 7,000 feet, the bird life there is markedly different from that found about Saltillo. This area we have called Diamante Valley. In the pines and junipers about the summit of the pass and up the side of the slope to about 10,000 feet, in the valley beyond the ridge, as well as frequently about Saltillo, we devoted our efforts for a total of fifty-two man-days. On April 22, a brief run was made to a point some twenty miles west of Saltillo. Here at a slightly lower and definitely more arid locality, we observed many species not previously encountered.

Inasmuch as field work was limited and the fact that more comprehensive investigations in the state of Coahuila are planned, the present report is purposely brief. But, it is felt that even meagre notes are of considerable value when pertaining to the bird life of a country which is far from well-known ornithologically.

We wish to acknowledge our appreciation to Señor Fernando Romero Quintana of the Departamento Forestal y de Caza for the granting of scientific collecting permits and other courtesies. We are especially indebted to our good friend Señor Joaquin Belloc Cuellar of the Departamento de Agricultura y Fomento in Saltillo, for assistance in innumerable ways. For the privilege of spending a week working with the U. S. National Museum and Biological Survey collections identifying much of the collected material, we are grateful to the authorities of that institution and to Mr. A. J. Duvall of the Fish and Wild Life Service staff. Moreover, we have adhered to our usual policy of referring specimens of certain difficult taxonomic groups to specialists on those groups. In this connection, J. Van Tyne, Pierce Brod-korb, Robert T. Moore, H. C. Oberholser, Alden H. Miller and James L. Peters have been, as usual, most obliging. The American Museum of Natural History and Dr. Sanford kindly loaned us a series of *Spizella pusilla wortheni*. Robert T. Moore forwarded his type of *Toxostoma dorsale dumosum* to us from Pasadena, California, and both the Museum of Zoölogy of the University of Michigan and the Museum of Comparative Zoölogy at Harvard assisted by lending us other pertinent material for comparison.



UPPER.—Diamante Pass (center, right) and the slope of the Zapalinamé Mountain viewed from the floor of Diamante Valley (elevation of the valley about 7,000 feet).
LOWER.—View of the slope taken from the road crossing Diamante Pass. The vegetation in the foreground consists largely of Piñon Pine (*Pinus cembroides*) and it was there that we did most of our collecting (Photographs by M. L. Miles).

In the case of species of which no specimens were collected, and hence no subspecific determinations made, the binomial has been used.

CATHARTES AURA (LINNAEUS)

TURKEY VULTURE

This species was not uncommon, and was noted each day soaring overhead both in the valleys and over the tops of the ridges.

CORAGYPS ATRATUS MEYER

BLACK VULTURE

The Black Vulture apparently avoids to a large extent the higher altitudes, and only rarely was it observed at all, even about Saltillo. At no time was it recorded on the mountain slopes.

BUTEO JAMAICENSIS (GMELIN)

RED-TAILED HAWK

An occasional bird was noted on the higher ridges above an elevation of 6,000 feet. On April 17, two were seen perched on fence posts in the open valley south of Diamante Pass. An immature male taken just outside of Saltillo on April 20 is tentatively referred to *B. j. borealis*.

CIRCUS HUDSONIUS (LINNAEUS)

MARSH HAWK

This species was observed about Saltillo where an occasional bird was seen feeding over the arid plateau about the town. On April 14, a single female was noted above the summit of Diamante Pass at about 8,000 feet.

FALCO SPARVERIUS SPARVERIUS LINNAEUS

EASTERN SPARROW HAWK

Sparrow Hawks were noted almost daily about Saltillo and infrequently in the open valley south of Diamante Pass. A single female taken at Saltillo on April 22 is typical of the eastern race.

CALLIPEPLA SQUAMATA SQUAMATA (VIGORS)

MEXICAN SCALED QUAIL

This species was one of the characteristic birds of the open desert country. Scattered pairs were seen about Saltillo and in the open valley south of Diamante Pass. No large coveys were encountered, and since the males were invariably accompanied by two or more females, the breeding season must not have been very far advanced at the time. Two

males and one female were taken, and although referable to *squamata*, one of the specimens is very close to *castanogastris*, suggesting that southeastern Coahuila is in the region of intergradation between the two races.

ACTITIS MACULARIA (LINNAEUS)

SPOTTED SANDPIPER

While collecting birds in Mexico, it is always interesting to encounter a species which one finds frequently in his own familiar haunts in the eastern United States. One of these birds was encountered on April 17 and five more on April 19 at the Chorro del Agua near Arteaga. A female was taken there on April 19.

COLUMBA FASCIATA FASCIATA SAY

BAND-TAILED PIGEON

Small flocks were seen each day that we spent on the summit of Diamante Pass, but only on one occasion was a pair noted. For this reason, we presumed that nesting does not begin until late April or early May. The species was not recorded below an altitude of approximately 6,500 feet.

ZENAIIDURA MACROURA (LINNAEUS)

MOURNING DOVE

This dove was fairly plentiful in the open desert country about Saltillo, and was also noted in small numbers in Diamante Valley on April 17 and 19. It was not seen above an elevation of about 7,500 feet.

SCARDAFELLA INCA INCA (LESSON)

INCA DOVE

This little dove was a conspicuous inhabitant of the villages, being frequently observed each day feeding in the streets and about the houses with apparently little concern for the passerby. At Saltillo, it was largely limited to the outskirts of the town, but there it was not uncommon and was noted daily. A male and a female were collected on April 16 and 19, respectively, outside the city limits of Saltillo.

RHYNCHOPSITTA PACHYRHYNCHA (SWAINSON)

THICK-BILLED PARROT

A small flock of these parrots was seen on the summit of Diamante Pass on April 14 and on several occasions thereafter, but while noisy

and by no means inconspicuous, they were rather wary and invariably seen at a distance. We accordingly lacked the opportunity to become very familiar with their appearance and actions, but we were told by the natives that their food was largely pine seeds and that they "nested regularly in the sheer cliffs" well up the mountain sides.

GEOCOCCYX CALIFORNIANUS (LESSON)

ROAD-RUNNER

The Road-runner proved to be unexpectedly scarce and was noted but once, on April 22, when a single bird was observed in the open desert west of Saltillo.

CAPRIMULGUS VOCIFERUS SETOSUS VAN ROSSEM²

WAGLER WHIP-POOR-WILL

The Whip-poor-will is possibly a fairly common bird on the higher slopes south of Saltillo during the summer months; however, we recorded it only twice during our stay. A single bird was flushed from the ground on April 15, near the summit of Diamante Pass, and two were seen on April 23 well above the pass toward the top of the ridge at an elevation of about 9,000 feet. We were successful in collecting one of the latter, and it proved to be an adult male. This is, of course, the *macromystax* of authors in general. We have followed van Rossem in his contention that Wagler's type of *Caprimulgus macromystax* in the Munich Museum is nothing more than a migrant *C. vociferus vociferus* of eastern North America. This leaves the race of *Caprimulgus vociferus* resident in eastern Mexico without a name which van Rossem proposes to call *C. v. setosus*. Our single specimen is even larger than the measurements van Rossem gives for the type of *setosus*. It measures (in mm.) as follows: wing, 170, tail, 135; longest rectal bristles, 49.

CHORDEILES ACUTIPENNIS TEXENSIS LAWRENCE

TEXAS NIGHTHAWK

This species was noted on but one occasion, April 18, when two individuals were seen feeding over a field and a small pond at the edge of Saltillo. As it was too dark to discern any of the distinctive color characteristics of the bird before us, we hurriedly made an effort to collect one. But, before this was accomplished, we were certain that we

² "Critical Notes on Middle American Birds," *Bull. Mus. Comp. Zool.*, vol. 77, 1934: 407-408.

were in pursuit of the Texas Nighthawk rather than the common Nighthawk with which we are familiar in the east. The two birds swooped back and forth emitting a peculiar frog-like "hoot" entirely unlike the "pee-ank" of *Chordeiles minor*. The specimen collected proved to be a male and was exceedingly fat, suggesting that it was a migrant headed farther north.

AERONAUTES SAXATALIS SAXATALIS (WOODHOUSE)

WHITE-THROATED SWIFT

This remarkable bird was found to be very common at the summit of Diamante Pass and on the nearby ridges. As a rule small flocks were overhead at all times of the day. On April 19, several pairs were found nesting in a cliff at the Chorro del Agua, where occasional individuals were observed entering crevices in the sheer face of the cliff. A single male was collected on April 13 at the summit of the pass.

CALOTHORAX LUCIFER (SWAINSON)

LUCIFER HUMMINGBIRD

This magnificently colored hummingbird was encountered but once, at the Chorro del Agua on April 19, where a male was collected.

ARCHILOCHUS COLUBRIS (LINNAEUS)

RUBY-THROATED HUMMINGBIRD

One of our most unexpected records was that of a male of this species taken by Miles on April 22 in a small arroyo twenty miles west of Saltillo.

ARCHILOCHUS ALEXANDRI (BOURCIER AND MULSANT)

BLACK-CHINNED HUMMINGBIRD

Our only record of this species is that of a female collected in an arroyo about twenty miles west of Saltillo on April 22.

SELASPHORUS PLATYCERCUS PLATYCERCUS (SWAINSON)

BROAD-TAILED HUMMINGBIRD

This species was found to be not uncommon in the pine woods bordering the summit of Diamante Pass. There it was encountered daily, specimens being taken at an elevation of 7,800 feet on April 15 and at about 10,000 feet on April 23. A female, possibly a migrant, was collected in a dry arroyo twenty miles west of Saltillo, at 4,900 feet, on April 23.

COLAPTES CAFER NANUS GRISCOM

DWARF RED-SHAFTED FLICKER

The Red-shafted Flicker was one of the few birds which we encountered in which distribution was not affected to some extent by altitude. Apparently its one requirement is the presence of trees large enough to furnish a nesting site. Where such were found, the flicker was invariably noted. At the summit of Diamante Pass it was fairly common, while about Saltillo scattered pairs were found in the arroyos where cottonwoods grew. In some cases at least, nesting must begin in late February or early March, for a young bird of the year, fully grown, was taken on April 22 in the open desert west of Saltillo. Several adult specimens were collected.

CENTURUS AURIFRONS AURIFRONS (WAGLER)

GOLDEN-FRONTED WOODPECKER

This species apparently avoids the mountain slopes, but was found to be not uncommon on the arid plateau about Saltillo. As true of the foregoing species, its distribution was limited to local areas where the trees were large enough to furnish nesting sites, and for this reason it was most frequently observed about the towns and villages. Several specimens were collected.

SPHYRAPICUS VARIUS VARIUS (LINNAEUS)

YELLOW-BELLIED SAPSUCKER

The female taken at the summit of Diamante Pass on April 14 is our only record for the occurrence of this species. This particular specimen is exceptionally large, and should *S. v. atrothorax* (Lesson), resurrected by Oberholser,³ prove valid, it would probably be referable to that form. Attention is called, however, to an investigation of this problem made by Wetmore.⁴ He shows rather conclusively that sufficient grounds do not exist for the recognition of a northern race of this species. Moreover, wherein Oberholser considers the name *atrothorax* to be based on a specimen from Newfoundland, Wetmore points out that Lesson also used a specimen from Philadelphia, thus making the type material composite.

³ "Bird Life of Louisiana," *La. Dept. of Conservation, Bull.*, 28, 1938: 372-374.

⁴ *Proc. U. S. Nat. Mus.*, 86, 1939: 193-195.

DRYOBATES SCALARIS SYMPLECTUS OBERHOLSER

TEXAS WOODPECKER

This species was present in rather limited numbers, being encountered only in the desert country west of Saltillo where two specimens were taken on April 22. The scarcity of the large cacti in which this species usually nests possibly accounts for the relatively few individuals observed.

TYRANNUS VOCIFERANS SWAINSON

CASSIN KINGBIRD

We found this species on infrequent occasions in the arid country near Saltillo. Specimens were collected on April 16 and 18.

MYIARCHUS CINERASCENS CINERASCENS (LAWRENCE)

ASH-THROATED FLYCATCHER

This small flycatcher was first noted on April 19 near Saltillo, where a specimen was taken. It was seen infrequently thereafter.

SAYORNIS NIGRICANS NIGRICANS (SWAINSON)

BLACK PHOEBE

The Black Phoebe proved to be unexpectedly scarce and was found in only two areas. A pair was located near the waterfall of the Chorro del Agua on April 19, where they were nesting on a low cliff. Again, the following day, a pair was found nesting in an old well near a farm house on the outskirts of Saltillo. Several specimens were collected.

SAYORNIS SAYA SAYA (BONAPARTE)

SAY PHOEBE

This proved to be another species little affected by altitude. It was found, mostly in pairs, wherever there was suitable nesting sites. As the numerous arroyos supplied this requirement, the Say Phoebe was recorded as a common breeding bird both on Diamante Pass and on the arid plateau around Saltillo. Several specimens were collected.

EMPIDONAX HAMMONDI (XANTUS)

HAMMOND FLYCATCHER

Small flycatchers were generally uncommon during the period of our work, yet judging from the specimens taken, this species would appear to be the most prevalent. Six specimens were taken between April 13

and 23 at elevations varying from about 6,500 feet at the Chorro del Agua to approximately 10,000 feet on the slope above Diamante Pass.

EMPIDONAX GRISEUS BREWSTER

GRAY FLYCATCHER

This species was encountered at about 6,500 feet near the Chorro del Agua, at Saltillo, and finally in the open desert some twenty miles west of Saltillo. A single specimen was taken at each of these localities.

EMPIDONAX DIFFICILIS BAIRD

WESTERN FLYCATCHER

A single male collected near the summit of Diamante Pass on April 23 is our only record for this species. This specimen has been tentatively identified as *salvini*, pending more complete interpretation of two recently named races, *E. d. immemoratus* and *E. d. occidentalis*. Brod-korb informs us that should these two races prove valid, our bird will be referable to one or the other.

MYIOCHANES PERTINAX PALLIDIVENTRIS (CHAPMAN)

COUES FLYCATCHER

This species was recorded but once, a female taken in a small gully just below the summit of Diamante Pass on April 13.

MYIOCHANES VIRENS (LINNAEUS)

EASTERN WOOD PEWEE

Our two records of this species are two males taken at the Chorro del Agua on April 19. It is possible that as far west as Saltillo, this species is a rather uncommon transient.

MYIOCHANES RICHARDSONI RICHARDSONI (SWAINSON)

WESTERN WOOD PEWEE

Our one record is that of a male taken at the Chorro del Agua on April 19 by Miles. Additional field work would probably reveal its presence in far greater numbers than our notes indicate.

NUTTALLORNIS MESOLEUCUS (LICHTENSTEIN)

OLIVE-SIDED FLYCATCHER

Two males taken near the summit of Diamante Pass on April 14 are our only records for this species.

PYROCEPHALUS RUBINUS MEXICANUS SCLATER

VERMILION FLYCATCHER

Altitude is apparently a factor limiting the distribution of this species, as at no time was it noted above 5,300 feet. We found it quite plentiful on the plains surrounding Saltillo. Several specimens were taken.

OTOCORIS ALPESTRIS DIAPHORUS OBERHOLSER⁵

TAMAULIPAS HORNED LARK

Only an occasional example of this species was observed about Saltillo. However, in Diamante Valley, at about 7,000 feet, the species was fairly common. In the latter place on April 17, we noted scattered pairs as well as small flocks, indicating that at the time nesting activities had barely begun. Oberholser has examined our six specimens and identified them as representatives of the race which he described from eastern Mexico.

TACHYGINETA THALASSINA LEPIDA MEARN'S

VIOLET-GREEN SWALLOW

This species was noted only near the summit of Diamante Pass, but there it was fairly common and was seen on each day that field work was carried on in that general area. We collected a single specimen which, due to its somewhat larger size and more purplish upper parts compared with birds from farther north, suggests that birds from this particular area are intermediate between *lepida* and *thalassina*, although definitely closer to the former.

HIRUNDO RUSTICA ERYTHROGASTER BODDAERT

AMERICAN BARN SWALLOW

This was by far the most abundant swallow observed in the area. Judging from the interest being shown by many of the birds in houses about Saltillo and neighboring villages, it would appear that the species nests commonly in this area. However, a number of the birds observed were doubtless transients on their way north. Two females and a male were collected near Saltillo.

⁵ *Otocoris alpestris diaphorus* Oberholser, *Proc. U. S. Nat. Mus.*, 24, 1902: 829 (type locality: Miquihuana, Tamaulipas).

PETROCHELIDON ALBIFRONS MELANOGASTER (SWAINSON)

MEXICAN CLIFF SWALLOW

The Cliff Swallow was noted in small numbers about Saltillo and in the nearby villages where, like the preceding species, they showed evidence of beginning to nest in many of the houses (the Mayor's office not excepted). Several pairs were found nesting in a cliff at the Chorro del Agua on April 19. On April 23 a single male was collected in Diamante Valley. Although Saltillo is the type locality for the Coahuila Cliff Swallow (*Petrochelidon fulva pallida* Nelson), we were unsuccessful in finding this species during our brief period of work.

APHELOCOMA COERULESCENS CYANOTIS RIDGWAY

BLUE-CHEEKED JAY

Although noted in small numbers at the summit of Diamante Pass at an elevation of 7,800 feet, this species was largely restricted to the lower slopes of the mountains where it was observed daily. A few birds were even noted on the outskirts of Saltillo, where they were possibly nesting at the time. Two specimens were taken at 7,800 feet.

APHELOCOMA SORDIDA COUCHII (BAIRD)

COUCH JAY

This large, noisy jay was found to be one of the characteristic birds of the upper slopes of the mountain, being observed at no time below an approximate elevation of 6,500 feet. In the area surrounding the summit of Diamante Pass it was quite common, and being vociferous and of rather inquisitive nature, there were few times when one or more were not in evidence. A nest found there on April 13 held well-grown young. It was five feet from the ground in a small dense juniper. Two males and a female were collected.

CORVUS CORAX SINUATUS WAGLER

AMERICAN RAVEN

This species proved to be a bird of the higher slopes of the mountains, although it was not uncommon in the broad open valley south of Diamante Pass. However, at no time was it noted as low as the arid country around Saltillo. A male was taken at about 7,500 feet on April 23. It measures (in millimeters) as follows: wing, 435; tail, 226; exposed culmen, 71.

CORVUS CRYPTOLEUCUS COUCH

WHITE-NECKED RAVEN

In contrast to the preceding species, this raven avoids the mountain slopes. On the arid plateau around Saltillo, we noted it frequently. Much to our surprise, we found it in small numbers in the high fertile valley south of Diamante Pass on April 23, this being, at about 7,000 feet, the uppermost limits at which it was noted. A specimen was collected there on that day.

PARUS SCLAYERI EIDOS PETERS

NORTH MEXICAN CHICKADEE

The Chickadee was observed only in the pine woods about the summit of Diamante Pass where, however, it was quite common and therefore noted at frequent intervals each day which was spent there. Specimens were collected.

AURIPARUS FLAVICEPS ORNATUS (LAWRENCE)

ARIZONA VERDIN

The Verdin was found to be somewhat scarce and decidedly local in its distribution in this area. Two birds were seen in an arroyo a few miles east of Saltillo on April 20, and two days later, an occasional bird was noted about twenty miles west of the town. A single specimen was taken at each locality.

PSALTRIPARUS MINIMUS IULUS JOUY

JOUY BUSH-TIT

The small, bushy junipers on the mountain slopes proved to be the habitat of this species. Altitude apparently has no effect on local distribution, for it was equally as common on the summit of the high ridge as on the lower slopes just outside of Saltillo. Two males and two females were taken, and rather than being typical *iulus*, they tend to approach *lloydi*.

TROGLODYTES AEDON PARKMANII AUDUBON

WESTERN HOUSE WREN

This species was noted only in small numbers about Saltillo where occasional birds, presumably migrants, were noted in thickets or stretches of underbrush fringing cultivated fields. A single male was collected on the outskirts of Saltillo on April 18.

TROGLODYTES BRUNNEICOLLIS CAHOONI BREWSTER

CAHOON BROWN-THROATED WREN

Our only record for this species is that of a single female taken on April 23 at the base of a rocky escarpment above the summit of Diamante Pass. While our one specimen is admittedly insufficient for accurate subspecific determination, it does appear remarkably similar to examples of this race with which it has been compared.

THRYOMANES BEWICKII EREMOPHILUS OBERHOLSER

BAIRD WREN

This proved without question to be the most widely distributed and abundant wren in the region. It occurred not only in the open desert country but nearly to the top of the highest ridges as well. On April 23, we worked almost to the top of the highest ridge and there we found this species just as plentiful as it was about Saltillo itself. The small series which we assembled from the various elevations proved to be uniform and clearly referable to the present subspecies.

HELEODYTES BRUNNEICAPILLUS (LAFRESNAYE)

CACTUS WREN

This large wren was found to be rather scarce and decidedly local in its distribution, being observed in only one locality. On April 22, in the open desert country west of Saltillo, an occasional bird was seen and several unoccupied nests found.

CATHERPES MEXICANUS ALBIFRONS (GIRAUD)

WHITE-THROATED CANYON WREN

Much to our surprise, the Canyon Wren was decidedly uncommon on the mountain slopes and was rarely seen. We heard a bird singing on one of the high ledges above the summit of the pass on one or two occasions, and another in a deep ravine west of Saltillo on April 23. Our only specimen is that of a male taken at the Chorro del Agua on April 19.

SALPINCTES OBSOLETUS OBSOLETUS (SAY)

COMMON ROCK WREN

This was characteristically a bird of the arroyos of the arid plateau about Saltillo, where it was fairly common and frequently noted. It also occurred on the lower slopes of the mountains, where it was seen as high as about 6,000 feet. Several specimens were taken.

MIMUS POLYGLOTTOS LEUCOPTERUS (VIGORS)

WESTERN MOCKINGBIRD

The Mockingbird was much scarcer than we expected to find it, and the few which were seen were widely scattered on the arid plateau about Saltillo. These seemed unusually shy and difficult to approach. This wariness, and their scarcity, is possibly due to their popularity as cage birds. We collected a single specimen.

TOXOSTOMA CURVIROSTRE OBERHOLSERI LAW

BROWNSVILLE CURVED-BILLED THRASHER

This thrasher was rather widely and commonly distributed, being noted from the area about the summit of Diamante Pass at 7,800 feet down to the desert country about Saltillo. Specimens were taken in both places.

TOXOSTOMA DORSALE DUMOSUM MOORE⁶

MEXICAN CRISSAL THRASHER

By strange coincidence, Moore's description of this race appeared in print just as our own description of what appears to be the same form was being prepared. We had before us four specimens, including one taken by Burleigh and Sutton in 1938. These are decidedly darker on the upper parts, grayer beneath and with a much darker crissum than examples of *dorsale* from New Mexico, Texas, Arizona, and elsewhere. Since Moore's description of the single specimen from Hidalgo alluded to the darker coloration above and below, it was obvious at the outset that the two forms were quite similar. Consequently, we prevailed upon Moore to lend us his type and only specimen of *dumosum*. Comparison is hindered by the fact that Moore's bird is a female and our entire series consists of males. Nevertheless, the two agree closely in color except for the crissum, in which respect *dumosum* is identical with *dorsale*. This leaves the bird from southeastern Coahuila distinct, should we care to draw the line, on the basis of its much darker crissum. There seems also to be a distinct size difference, but as too few specimens are presently at hand to obtain a significant average, it seems best to refer our birds tentatively to *dumosum*, with which they certainly agree more closely than with *dorsale*. The race *dumosum*, although described on the basis of only one specimen, will doubtless prove valid.

We found this species not uncommon in the lower foot-hills outside

⁶ "New Form of *Toxostoma* from Hidalgo," *Proc. Biol. Soc. Wash.*, 54, 1941: 149 (type locality: Portezuelo, Hidalgo, Mexico).

of Saltillo as well as on the summit of Diamante Pass. It was not seen, however, above approximately 7,500 feet.

TURDUS MIGRATORIUS PROPINQUUS RIDGWAY

WESTERN ROBIN

The Robin apparently breeds rather sparingly on the higher ridges for it was noted there but once. On April 15, a pair of these birds was noted in the open pine woods just below the summit of Diamante Pass, where they were possibly preparing to nest. Another was observed at the Chorro del Agua on April 19. Both of the Diamante birds were collected.

HYLOCICHLA GUTTATA GUTTATA (PALLAS)

ALASKA HERMIT THRUSH

The Hermit Thrush was noted in small numbers in the open woods surrounding the summit of Diamante Pass and at infrequent intervals in the arroyos on the arid plateau near Saltillo. Four specimens were taken, and all have been identified by Alden H. Miller as examples of this race.

SIALIA MEXICANA MEXICANA SWAINSON

MEXICAN BLUEBIRD

This species was common and frequently noted at the higher altitudes, but during the breeding season, at least, it apparently does not occur on the lower slopes of the mountains. We found it well distributed in the open woods about the pass, but recorded it at no time below an elevation of approximately 6,500 feet. Five males and three females were taken.

POLIOPTILA CAERULEA AMOENISSIMA GRINNELL

WESTERN GNATCATCHER

We noted this species only in the open woods at the summit of Diamante Pass, where, however, it was not uncommon. It was observed each day which was spent there and appeared, therefore, to be one of the characteristic birds of the higher ridges. A male and a female were taken on April 15.

POLIOPTILA MELANURA MELANURA LAWRENCE

PLUMBEOUS GNATCATCHER

Unlike the preceding species, this gnatcatcher was limited in its distribution to the lower altitudes and was noted only in the open desert

country west of Saltillo. Here, at an elevation below 5,000 feet, scattered pairs were noted in the numerous arroyos, where, as late as April 22, breeding activities were seemingly barely underway. A single male was collected on April 22.

REGULUS CALENDULA CALENDULA (LINNAEUS)

EASTERN RUBY-CROWNED KINGLET

This species was noted on infrequent occasions in all of the localities visited. Three specimens were taken, all females, at 7,500 feet on Diamante Pass on April 15, the Chorro del Agua on April 19, and twenty miles west of Saltillo on April 22. Somewhat surprising is the fact that all prove to be examples of the eastern race.

ANTHUS SPINOLETTA RUBESCENS (TUNSTALL)

AMERICAN PIPIT

Our only record for this species is that of a flock of ten birds seen on April 18 feeding in a newly plowed field on the outskirts of Saltillo. A single female was collected.

BOMBYCILLA CEDRORUM VIEILLOT

CEDAR WAXWING

Two small flocks were seen on April 15 in the open woods just below the summit of Diamante Pass. These proved to be our only records for the species during our stay.

PHAINOPEPLA NITENS (SWAINSON)

PHAINOPEPLA

The Phainopepla was seen only in the open woods surrounding Diamante Pass, where on April 15 and 17 scattered pairs were encountered. Unfortunately, our only specimen is that of an immature male taken on April 15 which, due to its age and state of plumage, cannot be identified subspecifically.

LANIUS LUDOVICIANUS MEXICANUS BREHM

MEXICAN SHRIKE

A male shrike taken in the open valley just below the summit of Diamante Pass on April 23 has been identified by Alden H. Miller as typical of this race, although breeding examples from this general area might be expected to be intermediate between *mexicanus* and *excubitorides*. The specimen had well developed testes, and the fact that

it was accompanied by another individual, presumably a female, indicates that the birds were nesting at the time.

LANIUS LUDOVICIANUS MIGRANS PALMER
MIGRANT SHRIKE

A female collected on the outskirts of Saltillo on April 20 has been identified by Miller as belonging to this migrant form. He states that the color of the back and the measurements, together with bill shape, are rather conclusive, and while the rump is somewhat white, indicating intergradation toward *excubitorides*, it is just the type of bird which would be found in the zone of intergradation in eastern Kansas.

VIREO HUTTONI CAROLINAE BRANDT
CHISOS VIREO

This species was found in rather limited numbers in the woods bordering the summit of Diamante Pass, where an occasional bird was seen on each day that was spent there. Two specimens, a male and a female, were collected, and on comparison prove to be examples of this recently described race.⁷

VIREO BELLI MEDIUS OBERHOLSER
TEXAS VIREO

A single female was seen and collected on April 20 in an arroyo east of Saltillo. On April 22, it was not uncommon in the open desert twenty miles west of Saltillo, where three singing males were secured.

MNIOTILTA VARIA (LINNAEUS)
BLACK AND WHITE WARBLER

This eastern transient was noted on but few occasions during our stay. On April 20, a female was secured in an orchard on the outskirts of Saltillo, and a male was collected near the top of Diamante Pass on April 23.

VERMIVORA CELATA ORESTERA OBERHOLSER
ROCKY MOUNTAIN ORANGE-CROWNED WARBLER

Only on infrequent occasions was this species noted and then only in the open woods surrounding the summit of Diamante Pass. Possibly this scarcity was due to the lateness of the date at which we made our observations. The one specimen taken is clearly referable to the Rocky Mountain race.

⁷ Herbert W. Brandt, "Two new birds from the Chisos Mountains, Texas," *The Auk*, 55, 1938: 269.

VERMIVORA CRISSALIS (SALVIN AND GODMAN)

COLIMA WARBLER

Of outstanding interest was the discovery that this little known species was fairly common on the steep, rugged slopes above the summit of Diamante Pass. None was seen below an elevation of approximately 7,500 feet, but above this, on April 14 and again on the following day, singing males were observed feeding in many of the small stunted oaks. Repeated trips made by a female to the base of a clump of these oaks high upon the side of a steep incline probably denoted the location of a nest. Circumstances were unfortunately such that we were not able to return and verify this supposition. Several specimens were collected.

PEUCEDRAMUS OLIVACEUS (GIRAUD)

OLIVE WARBLER

Although we had anticipated finding the Olive Warbler breeding at the summit of the pass, it was several days before we finally succeeded in locating a few of these birds in a thick pine wood at an elevation of approximately 9,500 to 10,000 feet. Apparently the species is limited to the pine forest of these higher elevations, so it must be considered decidedly uncommon in the Diamante Pass area. The female taken on April 23, the only day we encountered this distinctive species, had a well developed brood patch and was unquestionably incubating eggs.

DENDROICA AUDUBONI AUDUBONI (TOWNSEND)

AUDUBON WARBLER

This species is doubtless a common winter bird in the area around Saltillo; however, we found it in only limited numbers during our stay, their scarcity then being due possibly to the fact that we were there late in the spring. We saw small numbers each day we spent around the summit of the pass and on a few occasions in the orchards and thickets on the outskirts of Saltillo. The three males and three females which we collected are referable to *auduboni*, although two specimens might be considered intermediate toward *memorabilis*.

DENDROICA TOWNSENDI (TOWNSEND)

TOWNSEND WARBLER

This species was noted but twice during our stay. A male was collected on April 14 in a gulch near the top of the pass and another was seen south of the pass on the same date.

GEOTHYLPI TRICHAS OCCIDENTALIS BREWSTER
WESTERN YELLOW-THROAT

This species was noted only on the outskirts of Saltillo, where, however, it was not uncommon in the thickets, especially around a small stand of marsh grass bordering a pond. Three males were collected, and all must be tentatively referred to *occidentalis*, although two are less extensively yellow beneath than typical examples of that race.

GEOTHYLPI NELSONI MICRORHYNCHA RIDGWAY
HIDALGO YELLOW-THROAT

This distinctive yellow-throat was noted only on the open slopes above the summit of Diamante Pass at an elevation of about 8,000 feet. Here an occasional male was seen in the dense thickets that dotted the clearings. They proved to be exceptionally difficult to observe and collect, refusing to pay the slightest attention to the usually reliable "squeak." Only Miles was fortunate enough to secure a specimen, an adult male, which, on comparison, seems referable to the small-billed race from Hidalgo and Tamaulipas. The discovery of this species in southern Coahuila constitutes a considerable extension of range.

WILSONIA PUSILLA PILEOLATA (PALLAS)
NORTHERN PILEOLATED WARBLER

This species was found to be the most abundant of the relatively few warblers which we recorded in southeastern Coahuila. Rarely were more than one or two individuals observed at any one place. However, they were seen each day regardless of whether we were on the top of the high ridges or in the arid desert country. Seven specimens were collected and all are referable to *pileolata*. An immature male taken on April 19 at the Chorro del Agua is somewhat dark, nevertheless closest to the present form rather than typical *pusilla*.

PASSER DOMESTICUS DOMESTICUS (LINNAEUS)
ENGLISH SPARROW

This could not be considered a common bird around Saltillo or any of the villages, but it was noted regularly. Even at the Chorro del Agua it was found in small numbers, as well as in the high mountain valley south of Diamante Pass. We collected two males near Saltillo, thinking that they appeared unusually dark on the upper parts; however, a third specimen was perfectly typical!

STURNELLA NEGLECTA AUDUBON

WESTERN MEADOWLARK

The Meadowlark was found to be a common bird wherever there was sufficiently open country. It was seen daily about Saltillo and on each of our visits to the open valley south of the mountains. A small series was collected.

AGELAIUS PHOENICEUS MEGAPOTAMUS OBERHOLSER

RIO GRANDE RED-WING

A single male of this species was seen on April 18, and again on April 24 near a stretch of cat-tails and reeds fringing a pond at the edge of Saltillo, but whether this species actually nests in the area can only be surmised at present. We collected the individual seen on April 24.

ICTERUS PARISORUM BONAPARTE

SCOTT ORIOLE

This handsome oriole was apparently limited to the higher altitudes, and above 7,000 feet it was fairly common. It was observed each day that we spent in the country surrounding the summit of Diamante Pass and on April 19 at the Chorro del Agua. Three males and two females were collected.

EUPHAGUS CYANOCEPHALUS (WAGLER)

BREWER BLACKBIRD

This blackbird was characteristically a bird of the towns and villages, the scattered flocks being invariably seen feeding in the streets and near the houses. Their departure in the spring impressed us as being extremely late, for when we left the area ourselves on April 25, these birds were still as numerous as we had found them on our arrival. Two males and a female were collected in Diamante Valley on April 23.

CASSIDIX MEXICANUS PROSOPIDICOLA LOWERY

MESQUITE GRACKLE

Cultivated fields about the towns and villages appeared to be the haunts desired by this species, so while not uncommon, it was somewhat local in its distribution. It was noted daily at Saltillo, once at the Chorro del Agua, and occasionally in the open valley south of Diamante Pass. Unfortunately, only three specimens were collected, this being one of those species which one puts off collecting under the impression that it can be secured at any time. Our two female specimens

from near Saltillo, at an elevation of 5,300 feet, are typical *prosopidicola*, but the one female from Diamante Valley (at about 7,000 feet) is entirely too large and olivaceous on the pileum and under parts to represent that race. As a matter of fact, it resembles closely specimens of *mexicanus* which we have seen from Vera Cruz and other more southern points in Mexico. Should the bird of these higher elevations prove to be referable to *mexicanus*, an interesting point in the geographical distribution of this species will be established.

MOLOTHRUS ATER (BODDAERT)

COWBIRD

This species was noted in small numbers on the outskirts of Saltillo feeding in company with Brewer Blackbirds. No specimens were secured.

PYRRHULOXIA SINUATA SINUATA (BONAPARTE)

TEXAS PYRRHULOXIA

This species was found only in the open desert country west of Saltillo where, on April 22, several pairs were seen in a small arroyo. Two males and a female were secured.

GUIRACA CAERULEA INTERFUSA DWIGHT AND GRISCOM

WESTERN BLUE GROSBEEK

Our only record for this species is that of several birds seen on April 22, about twenty miles west of Saltillo, of which two males were collected.

CARPODACUS MEXICANUS POTOSINUS GRISCOM

SAN LUIS POTOSÍ HOUSE FINCH

House Finches were noted at Saltillo, in the desert country west of there, at the Chorro del Agua, and in the open valley south of Diamante Pass. Those noted at the lower elevations appeared to be engaged in mating and nesting activities while those in Diamante Valley were still observed in numerous small flocks. We secured a small series, and Robert T. Moore has pronounced them representatives of this race.

SPINUS PSALTRIA PSALTRIA (SAY)

ARKANSAS GOLDFINCH

This species was observed on but one occasion. A small flock was seen on the outskirts of Saltillo in an orchard on April 20.

*OBERHOLSERIA CHLORURA*⁸ (AUDUBON)

GREEN-TAILED TOWHEE

On but one occasion was this species encountered, that being when three birds were seen and collected in an arroyo in the open desert country about twenty miles west of Saltillo on April 22.

PIPILO MACULATUS GAIGEI VAN TYNE AND SUTTON

GAIGE SPOTTED TOWHEE

This towhee was limited in its distribution to the mountain sides. Scattered pairs were noted in the arroyos at the base of the mountain and from there up to about 8,000 feet. Van Tyne has seen our series of two males and two females, taken on April 13 and 16, and identified them as examples of this race.

PIPILO FUSCUS POTOSINUS RIDGWAY

PLATEAU BROWN TOWHEE

This species was fairly common and of general distribution in the area, occurring both on the arid plateau about Saltillo and on the mountain sides up to an elevation of about 8,000 feet. It was frequently seen each day that was spent in the field. A series of four males and one female was collected which, when compared with material kindly loaned by the Museum of Comparative Zoölogy at Harvard, indicates that birds from this area might represent an undescribed race. Although decidedly closer to *potosinus* than any other named race, in our birds the buff of the throat is more restricted and shows less tendency to invade the upper breast; the gray of the sides is much darker and more purely gray (less brown) and the upper parts are slightly grayer than *potosinus*. The wisest course seems to be that of waiting until additional material is at hand, especially from surrounding areas, before undertaking nomenclatural action.

CALAMOSPIZA MELANOCORYS STEJNEGER

LARK BUNTING

Our one record for the occurrence of this species is that of a small flock seen on April 20 in a field on the edge of Saltillo. Several specimens were taken.

⁸ For an analysis of alleged subspeciation in *O. chlorura*, Cf. Alden H. Miller, "A review of centers of differentiation for birds in the western Great Basin region," *The Condor*, vol. 43, 1941: 259.

PASSERCULUS SANDWICHENSIS (GMELIN)
SAVANNAH SPARROW

Savannah Sparrows were not uncommon in the cultivated fields about Saltillo, but at the higher elevations they were very rare or entirely absent. A single bird was seen at the summit of Diamante Pass on April 13, and a few in Diamante Valley several days later. In all, only three specimens were taken, and strange as it may seem, each constitutes a different race. One represents a considerable extension of its known winter range. James L. Peters, in identifying these for us, makes the following comment, which may well be quoted: "M. L. Miles number 106 is certainly *brunnescens*; the stain below is adventitious. LSU number 5286 is *anthinus*. LSU number 5285 is nearest *brooksi*! It is a trifle too brown, but the length of wing and proportions of the bill are characteristic. This is considerably beyond the known winter range of this form but I can hardly call it anything else."

POOECETES GRAMINEUS CONFINIS BAIRD
WESTERN VESPER SPARROW

We encountered this species only in Diamante Valley and even there it appeared to be quite uncommon. A single female was collected from a small group feeding in a freshly plowed field on April 17.

AIMOPHILA RUFICEPS BOUCARDI (SCLATER)
BOUCARD SPARROW

This species was found to be common and of general distribution throughout the mountainous areas and to some extent in the arroyos of the open desert country. It was not noted, however, above approximately 8,000 feet. In all, we collected six males and two females.

AMPHISPIZA BILINEATA GRISEA NELSON
DESERT SPARROW

The Desert Sparrow, as the name implies, is a bird of the open desert country. It was seen frequently on the arid plateau around Saltillo, but was not noted on any occasion on the mountain sides or in Diamante Valley, and thus is probably limited to elevations below 6,000 feet. A series of six males and one female was collected.

JUNCO PHAEONOTUS PALLIATUS RIDGWAY
ARIZONA JUNCO

This Red-backed Junco proved to be a common bird of the mountain slopes above an elevation of about 7,000 feet. On each day which we

spent in the vicinity of the summit of Diamante Pass, numerous singing males were observed. Two males and two females which were collected have been identified as intermediate between *palliatus* and *phaeonotus*, but are somewhat closer to the former.

SPIZELLA PASSERINA ARIZONAE COUES

WESTERN CHIPPING SPARROW

This sparrow was found to be quite common and of general distribution throughout the region. It was noted daily about Saltillo and on the mountain sides up to an elevation of about 7,500 feet. Specimens taken on April 16 just outside Saltillo, and those taken on April 17 in the open woods just below the top of Diamante Pass, were found to be still in molt and therefore extremely ragged in appearance.

SPIZELLA PALLIDA (SWAINSON)

CLAY-COLORED SPARROW

Large flocks of sparrows, mostly of this species, were noted on frequent occasions in the cultivated fields and orchards on the outskirts of Saltillo. Three males and an unsexed specimen, all in poor plumage due to molt, were taken on April 19 and 20.

SPIZELLA BREWERI BREWERI CASSIN

BREWER SPARROW

We could not distinguish this species in the field with certainty from the foregoing; thus, our only definite record is that of a female and a male taken near Saltillo on April 16 and 18.

SPIZELLA PUSILLA WORTHENI RIDGWAY

WORTHEN FIELD SPARROW

This form was encountered but once during our period of work. Ray collected one of the two seen by him just outside the limits of Saltillo on April 16. This specimen, a male, was later compared with the type and six other examples of *Spizella wortheni* in the U. S. National Museum. At the same time we learned that the Sanford Collection in the American Museum contained a series of *wortheni* taken by W. W. Brown at Miquihuana, Tamaulipas, during June and July, 1922. These, as well as eight additional specimens in the Museum of Comparative Zoölogy taken by the same collector at Miquihuana in 1924, have been examined in the present connection.

A careful analysis has been made of the alleged characters on the

basis of which *wortheni* has been assigned specific rank. As a result, we see no grounds for maintaining this status and accordingly contend that *Spizella wortheni* is nothing more than a Mexican race of *Spizella pusilla*.

While certain previous authors have associated *wortheni* with *S. passerina*, it is obvious that such treatment is erroneous. The relatively short tail of *wortheni*, when compared with *S. pusilla arenacea* only, suggests a Chipping Sparrow, but it must be remembered that *arenacea* is an extremely long-tailed form. All other respects (e.g., plumage, bill and tarsus color) definitely relegate it to the *pusilla* group.

Ridgway⁹ differentiates *wortheni* from *S. pusilla arenacea* on the basis of the "tail being much shorter (both absolutely and relatively); wing bands less distinct, and sides of head gray, relieved only by a whitish orbital ring, there being no brown postocular streak as in *S. p. pusilla* and *S. p. arenacea*."

The measurements of the twenty-seven specimens of *wortheni* examined are included in the following table:

TABLE 1
TABLE OF COMPARATIVE MEASUREMENTS OF THREE RACES OF
SPIZELLA PUSILLA

	wing	tail	exposed culmen
18 ♂ <i>S. pusilla wortheni</i>	66.0-72.5 (69.0)	58.1-65.0 (61.0)	8.8-9.5 (9.0)
9 ♀ <i>S. pusilla wortheni</i>	63.5-68.0 (65.5)	55.5-61.0 (58.3)	8.1-9.2 (8.8)
18 ♂ <i>S. pusilla pusilla</i> ¹⁰	62.2-67.3 (64.5)	58.4-65.2 (62.0)	8.6-9.9 (9.4)
17 ♀ <i>S. pusilla pusilla</i> ¹⁰	59.4-62.7 (61.0)	54.4-62.2 (58.9)	8.6-9.9 (9.1)
3 ♂ <i>S. pusilla arenacea</i> ¹⁰	68.3-71.1 (69.6)	66.0-71.8 (68.8)	9.4-9.9 (9.6)

⁹ "Birds of North and Middle America," *U. S. Nat. Mus. Bull.* 50, pt. 1, 1901: 321.

¹⁰ Ridgway, *op. cit.*

From the above measurements, it is obvious that although there is a slight absolute difference between the tail length of *wortheni* and *arenacea*, too few specimens of the latter have been measured to support Ridgway's claim in this regard. As a matter of fact, there is only one millimeter difference between the extremes as it is, indicating that the measurement of a large sample of typical *arenacea* would probably result in an overlapping in this character. Inasmuch as *wortheni* was first discovered in New Mexico and named by Ridgway from a single specimen from that state, it is logical that he should have attached great importance to the manner in which *wortheni* differs from *arenacea* rather than *pusilla* of the eastern United States. However, now that *wortheni* is well known to be a breeding bird in northeastern Mexico, its relationships with breeding populations of *Spizella pusilla* in central-southern Texas and the northern Gulf Coast must be taken into consideration. From the table of measurements it is obvious that no significant difference exists between *wortheni* and *pusilla*, except that in the former the wing averages slightly longer.

Ridgway further distinguishes *wortheni* from *S. pusilla arenacea* by the less distinct wing bands, the absence of a postocular patch, and the presence of a white orbital ring. Our Miquihuana material is not in strictly comparable plumage with that of the specimens of *arenacea* at hand, so the comparative difference in the wing bands cannot be stated. However, it can be stated that *wortheni* does sometimes show a trace of a postocular patch. Moreover, the distinctiveness of the eye ring in *wortheni* is decidedly over emphasized. We have observed in the field and collected examples of *arenacea* in which the eye ring is just as distinct as in many of the specimens of *wortheni* examined.

It thus appears that *wortheni* possesses no really trenchant character by which it can be separated from *Spizella pusilla*. Every single character by which *wortheni* is defined is bridged in either *S. p. pusilla* or *S. p. arenacea*. The reduction of *wortheni* to the status of a subspecies of *Spizella pusilla* is therefore a logical nomenclatural consequence. Our Coahuila specimen actually suggests intergradation between typical *wortheni* and examples of *pusilla* which we have examined from south-central Texas, in which the wing and tail average longer than in populations of *pusilla* from farther east. The Coahuila bird is also darker above than specimens of *wortheni* from Miquihuana and in this respect closer to *pusilla*.

SPIZELLA ATROGULARIS ATROGULARIS (CABANIS)

MEXICAN BLACK-CHINNED SPARROW

We noted this species only at the foot of the mountains where, at an elevation of approximately 6,000 feet, scattered pairs were encountered. Further field work might reveal that it is less local in its distribution and possibly more common than our notes indicate. Four adult males were collected on April 16.

ZONOTRICHIA LEUCOPHRYS LEUCOPHRYS (FORSTER)

WHITE-CROWNED SPARROW

Small flocks of White-crowned Sparrows were seen at infrequent intervals in thickets and stretches of underbrush on the outskirts of Saltillo on April 18 and again on April 24. This species was also noted in an orchard near a small town some twenty miles west of Saltillo on April 22. Two females collected near Saltillo were exceedingly ragged in appearance as a result of molting.

MELOSPIZA LINCOLNII LINCOLNII (AUDUBON)

LINCOLN SPARROW

This inconspicuous sparrow was noted only in one particular grain field situated between a small pond and a narrow stream on the outskirts of Saltillo. Proximity to water afforded a suitable habitat for this species, and we seldom failed to flush one or more of these birds in crossing the field. Four specimens were collected, and have been subsequently identified by Alden H. Miller as examples of the nominate race.