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AN ANNOTATED CHECKLIST AND KEY TO THE REPTILES OF MEXICO EXCLUSIVE OF THE SNAKES

BY
HOBART M. SMITH AND EDWARD H. TAYLOR

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The present work forms No. 199 of the *Bulletin* series.

ALEXANDER WETMORE,
Secretary, Smithsonian Institution.

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[1] See U. S. Nat. Mus. Bull. 187, 1945, p. 12.

AN ANNOTATED CHECKLIST AND KEY TO THE REPTILES OF MEXICO, EXCLUSIVE OF THE SNAKES

By HOBART M. SMITH and EDWARD H. TAYLOR

INTRODUCTION

THIS volume constitutes the last of a series of checklists and keys to the herpetological fauna of Mexico. The first, "An Annotated Checklist and Key to the Snakes of Mexico" (U. S. Nat. Mus. Bull. 187), was published on October 5, 1945. The second, "An Annotated Checklist and Key to the Amphibia of Mexico" (U. S. Nat. Mus. Bull. 194), appeared on June 17, 1948. In this, the third volume, the turtles, amphisbaenians, lizards, and crocodilians are treated. The preparatory work that preceded these checklists was pursued as time permitted from 1932 to the present, a period of about 17 years. It has involved a number of expeditions to Mexico at our own expense [2] and the collecting of more than 50,000 herpetological specimens.

Except in rare instances the materials have all passed under the scrutiny of one or the other of us, and the detailed results of these studies are embodied in more than a hundred short or longer reports. Our own ideas have often changed with the acquisition of materials not originally available.

It was hoped that the long-awaited work on turtles by Stejneger and Hartweg would see the light before the appearance of the turtle checklist, but since there is still no certainty of the completion of this work in the immediate future it does not seem wise to delay on this account.

We have refrained from anticipating certain forms not now recognized that are present even in our own collection; the specimens representing them are referred without comment to the recognized form they most closely resemble. A number of such forms belong to *Anolis*, no adequate revision of which has yet been made, although the senior author is contemplating such a work. Certain other groups, especially *Cnemidophorus* and *Uta*, merit reinvestigation.

There are many other unsolved problems in Mexican herpetology; much more exploration remains to be performed. Probably no single

[2] From 1938 to 1941 I was financed by the Smithsonian Institution on several expeditions, through tenure of a Walter Rathbone Bacon Traveling Scholarship.—H. M. S.

problem of distribution is more demanding of explanation than the extreme dearth of Plethodontidae in the Guerrero "island" and in the high western plateau, and the apparent replacement of that family in the latter region, largely by the Ambystomidae.

The treatment of forms in this volume differs little from that of the two preceding volumes, except that the name of the collector of each type is added. This name often is as important perhaps as the name of the author of a species. Unfortunately, the collector is frequently unknown or uncertain. This is true of the collections from Mexico studied by Wiegmann, in which case we have given Deppe credit for obtaining most of the reptiles. The other two men constituting the collecting party, Count Von Sack and Schiede, were, we believe, engaged primarily in the collection of orchids. However, it is not at all improbable that some forms accredited to Deppe were actually taken by one of the others.

We refrain here from considering the implications that may be deduced from a perusal of the combined data of the three volumes, such as an investigation of faunal origins, lines of migration, relative age of taxonomic groups, and faunal areas of ecological relationships. However, we are fully aware that such consideration would doubtless yield valuable information.

The number of forms recognized in the herpetofauna of Mexico, including those forms described since the first of these checklists was published, is relatively large. The following table represents the numbers in the various groups:

TABLE 1.—*Number of forms recognized in the herpetofauna of Mexico*

Order or suborder	Families	Genera	Species and subspecies
Gymnophiona	1	2	2
Caudata	4	16	65
Salientia	7	25	163
Testudines	8	18	49
Amphisbaenia	1	1	3
Sauria	10	47	394
Serpentes	8	80	486
Loricata	2	2	3
Total	41	191	1,165

That there will in the future be considerable shifting of species to the subspecific category, and changing forms we regard as subspecies to the species category, is to be anticipated. On occasion we have found even ourselves at variance on certain problems of this sort. We both feel, however, that the currently and deservedly popular trend toward recognition of subspecies where they exist has brought

with it, almost inevitably, occasional overzealous reduction of species to subspecies. Such changes are made without due demand for facts, but instead with speculations that often merely serve as an excuse to tamper with an accepted arrangement that may be equally as plausible.

One of the most exasperating tasks has been the unraveling of certain purely nomenclatorial knots. Several names, for example, are of controversial orthography. Worthy of special mention are *Agkistrodon* vs. *Ancistrodon*, *Cnemidophorus tessellatus* vs. *C. tesselatus*, *Corytophanes* vs. *Corythophanes*, and *Kinosternon* vs. *Cinosternon*. Opinion 36 of the International Commission on Zoological Nomenclature interprets the permission given by Article 19 to correct any "error of transcription" to mean also "error of transliteration," whether the original author was aware of his error or not. By such procedure, the names *Ancistrodon*, *tessellatus*, *Corythophanes*, and *Cinosternon* would be recommended. On the other hand, Moore, Weller, and Knight (Journ. Paleont., vol. 16, 1942, pp. 250–261) maintain with excellent reason that only in very clear-cut and exceptional cases is any modification of the original orthography of a generic name justified. Their view is strengthened by Blackwelder, Knight, and Sabrosky (Science, vol. 108, 1948, pp. 37–38). Maintenance of original form would perpetuate *Agkistrodon*, *tesselatus*, *Kinosternon*, and *Corytophanes*. Since the proper procedure is not universally or even generally agreed upon, we see little advantage in deviation from currently accepted form until some means of real standardization is provided by the International Commission on Zoological Nomenclature.

For the first time in these checklists we here adopt the practice of placing a comma between scientific name and author in citations of all references except the original.

We wish to acknowledge the assistance of W. Leslie Burger in the laborious task of checking and rechecking various points in the manuscript, and in criticizing certain parts, and of Dr. Doris M. Cochran, zoologist, division of reptiles and amphibians, United States National Museum, who devoted much time to curatorial duties connected with the voluminous collection and in making available for study the National Museum herpetological collections. We are grateful likewise for the corrections and improvements suggested by Dr. D. F. Hoffmeister, Karl P. Schmidt, and Dr. Frederick Shannon. The Graduate Research Boards of the University of Illinois and the University of Kansas have generously provided financial support for research and clerical work involved in completion of the present project, and the Walter Rathbone Bacon Scholarship of the Smithsonian Institution furnished a substantial sum for travel and research in Mexico.

ITINERARY AND GAZETTEER OF LOCALITIES FOR THE WALTER RATHBONE BACON EXPEDITION, 1938–1941

As previously stated, the senior author was enabled to collect in and study material from Mexico by tenure of a Walter Rathbone Bacon Traveling Scholarship from 1938 to 1941. The collection obtained during those years has formed an important addition to other material from Mexico and merits an elaboration of the routes traversed by the expedition and the localities at which specimens were secured. Such an itinerary was, as a matter of fact, to have accompanied a study of the lizards of the Bacon collection, as stated in our introduction to the summary of the amphibians (Proc. U. S. Nat. Mus., vol. 95, 1945, p. 521). It now seems unlikely that a complete survey of the Bacon lizards can appear for a number of years, for a satisfactory completion of such a study involves revision of a number of very sketchily understood genera, such as *Anolis* and *Cnemidophorus*. In the meantime a need for an account of the Bacon itinerary and localities continues to exist. We have, accordingly, taken this opportunity to present this information in this the final checklist.

The expedition personnel consisted of the senior author and his wife. They received hearty support in field work from a number of individuals, through whose combined efforts about 22,000 specimens were secured during a period of two years. As closely as can now be determined (the lizards not yet having been fully studied), 500 species and subspecies (146 amphibians, 160 lizards, 1 amphisbaenian, 170 snakes, 20 turtles, 3 crocodilians) were secured.

Among those who contributed to the success of the expedition are Dr. Alexander Wetmore, who saw to it that the expedition was properly planned and could function smoothly; Dr. Doris M. Cochran, who must have nearly equaled the expedition personnel in time expended for the collection, inasmuch as the laborious task of cataloging the specimens rested with her; Dr. Linton P. Satterthwaite, who provided the facilities for our stay at Piedras Negras in the midst of a little-known, remote, and austere area; Mr. and Mrs. Dyfrig McH. Forbes, who provided for nearly two years a base of operations in Veracruz and who were a constant source of companionship, inspiration, and material; Eizi Matuda, who very generously provided facilities for a two-month stay at his finca and who sympathetically aided us in every possible way to sample the herpetofauna of the area as thoroughly as possible; Thomas MacDougall, who in Tehuantepec secured for us numerous specimens and arranged for our travel into areas otherwise difficult of access; Ernest Rateike, of Palenque, Chiapas, who accepted us as a guest in his home for a month; and a

host of local residents, far too numerous to mention, who materially augmented our collections and made our visits pleasant and successful.

Inasmuch as we traveled chiefly by car, our routes are best followed on a road map of Mexico. We entered Mexico on October 5, 1938, at Ciudad Juárez, Chihuahua, and followed the Chihuahua–El Paso highway southward to Vado (October 9). We then turned back to Ahumada and followed a poor trail through Carrizal and Rancho Nuevo to Progreso (October 10). We camped beside the Río Santa María about a mile southwest of Progreso for 5 days, interrupted only by one hurried round trip to Casas Grandes for the benefit of a snake-bitten cowboy. At this camp we were aided greatly by 10 or 15 cowboys who brought in material as fast as it could be preserved. Our specimen containers full, we determined to go to the border to ship specimens and likewise to obtain higher wheels for the car (a half-ton panel truck), with which we had encountered numerous difficulties because of deep ruts and high centers. We left the Progreso camp on October 15, passing through Casas Grandes and Ascención, and reached Las Palomas the same day. After two days in Columbus and Deming, N. Mex., we retraced our steps (October 20) from Las Palomas to Casas Grandes. As the weather had become cool, we continued southward along the road through San Buenaventura and Carmen to the main El Paso–Chihuahua highway, thence southward to Ciudad Chihuahua. We left there on October 27 for Torreón, arriving October 29. We collected in the vicinity of Torreón October 30 and 31, and on November 1 started for Ciudad Durango. We could get no farther than Pedriceña, however, and, after exploring with little success a side road to Nazas, returned to Torreón on November 4. We continued to San Pedro the next day and collected in the vicinity of that town until November 10. After a side trip to Parras off the Torreón-Saltillo highway, we made an attempt to find Jaral, Coahuila, a locality made famous zoologically by Heller and Barber. This turned out to be an abandoned ranch near Hipólito, and, as no likely habitat for the montane species recorded from Jaral appeared to be nearer than 20 miles or so, we continued to Saltillo (November 14). We collected in the vicinity of Saltillo, Arteaga, and Mount Zapalinamé until November 17, when we left for Monterrey.

On November 18 we arrived at Hacienda La Clementina (near Forlón), and we remained there until November 28, when we drove to Laredo to ship another lot of specimens. We returned to La Clementina on December 3 and left December 5 for Mexico City. We stayed at Huichihuayán for several days, leaving December 9. Our route, with brief stops at or near various towns, then led through Mexico City to Tehuacán, Puebla, thence through Orizaba to Potrero Viejo, Veracruz, where we arrived on December 11.

Potrero Viejo remained our headquarters for over a month. We made numerous short trips during that time; especially noteworthy were those to Palma Sola (on the Veracruz–Orizaba highway), to Tezonapa, Veracruz, and Cosolapa, Oaxaca, and to Cuautlapan, Orizaba, Córdoba, Acultzingo, and other localities along the Córdoba-Tehuacán road. We left Potrero Viejo on January 16, 1939, and after a brief stop in Mexico City made headquarters in Cuernavaca, Morelos, for nearly two weeks, with side trips to Puente de Ixtla (Morelos), Cacahuamilpa (Guerrero), and Zempoala (Morelos and México).

Leaving Cuernavaca February 2, we continued toward Acapulco, reaching there February 5. We collected in the vicinity of Acapulco, with side trips to Coyuca, until February 11. Our route, with frequent stops, then led northward again to Mexico City, where we arrived on March 1. After two days in search of axolotls and other ambystomids in the vicinity of Mexico City (with side trips to Texcoco, Zumpango, and Chimalhuacán), we started (March 4) on the road to Guadalajara. Our first deviation from this route was on March 9 and 10, to Pátzcuaro. On March 11 we reached Uruapan on another side trip and continued southward to Apatzingán, returning to Uruapan on March 19. An attempt was made to find *Crotalus polystictus* in the marshes of the eastern end of Lake Chapala, but without success, since most of the marshes have been drained and are now under cultivation. We reached Guadalajara on March 24 and returned to Potrero Viejo on March 26. On March 30 we left Potrero Viejo enroute to Laredo with another shipment of specimens, arriving at Laredo on April 3, 1939.

After nearly a month in the United States we left Laredo on April 29, 1939, and arrived in Potrero Viejo on May 2. From there we went to Veracruz by train and secured passage for Álvaro Obregón, arriving on May 13. A river boat was then taken, via Ciudad del Carmen, to Tenosique, Tabasco, the head of navigation on the Río Usumacinta. Our final destination, Piedras Negras, Guatemala, was reached on May 21 after two days by mule. We collected in the immediate vicinity of Piedras Negras until June 23, when we left for Tenosique.

From Tenosique (June 30) we continued downstream to Emiliano Zapata and there procured mules for a 2-day trip to San Juanito, a ranch half a mile from the village of Palenque. There we remained, with a side trip only to the ruins of Palenque several miles distant in the hills, until August 6, when we left for Álvaro Obregón and, immediately thereafter, Potrero Viejo, where we arrived on August 14. There we were joined by the junior author and with him left on August 18 for Mexico City, where we arrived, via the usual route through Tehuacán and Puebla, on August 22, after numerous brief

stops en route. After a few days spent in the environs of Mexico City searching for ambystomids, on August 29 we took the Acapulco road and followed it with only one deviation to Tixtla, Guerrero, arriving at Acapulco on September 3. We returned to Mexico City by the same route, arriving on September 6. Again we collected in the immediate environs of Mexico City, chiefly investigating montane faunas. On September 10 we left for Guadalajara but turned back near Sahuayo. We then, on September 16, started northward on the Pachuca Road to El Chico National Park in Hidalgo. After one day there we returned, September 18, to Mexico City, where Dr. Taylor left us.

We then returned, September 19, to Potrero Viejo. After a few local trips we again returned to the Guadalajara road, leaving September 29. We took the side road to the Nevado de Toluca (October 2) and then retraced our steps to Mexico City, arriving October 3. After a few days spent in local trips, we turned northward to Laredo with another load of specimens, arriving at Laredo October 17. Our only side trip enroute was to Galeana, Nuevo León, via the road from Linares, Tamaulipas (October 13, 14).

After nearly two months in the United States, we again crossed the border at Laredo on December 10, 1939, and headed directly for Potrero Viejo, Veracruz, arriving December 15. After a few local trips near Potrero Viejo, we left (December 27) for Tehuantepec by rail. We arrived on December 30 and remained until January 28, 1940. A number of side trips were taken, by truck to Cerro Arenal, by rail to Matías Romero, Oaxaca, by rail to Salina Cruz, and by rail to Tonalá. Illness necessitated return to Potrero Viejo and ultimately to Mexico City. We remained there until March 15, when we returned to Potrero Viejo. On March 17 we started on a side trip, lasting until March 24, which led by highway through Tehuacán, Tecamachalco, thence northeastward on the Jalapa road, to Teziutlán (Puebla) from El Limón, Totalco, and eastward to Puente Nacional.

Shortly thereafter we left for Tehuantepec by rail again, arriving April 1. We stayed only one day and traveled by rail to Acapetahua, whence we went by bus to Escuintla. From there pack animals were used to transport our equipment to La Esperanza, a finca about 5 miles northeast of Escuintla. We arrived there on April 4 and remained until June 5, 1940. Various short side trips were taken to nearby fincas.

On June 5 we returned to Tehuantepec and, after one day, to Potrero Viejo, arriving June 9. About one month later, on July 6, we crossed the border at Laredo with no deviations from the direct route from Potrero Viejo to the border.

We returned immediately to Mexico City by way of the Pan American Highway and remained there until August 7, except for a trip by rail to Guanajuato, Guanajuato, on July 19–21. On August 8 we again drove to Potrero Viejo. Within a few days we made a brief and final foray along the highway from Acultzingo to Tehuacán before packing all equipment that had been stored at Potrero Viejo. We left our headquarters there for the final time on August 8 and, with but a brief stop in Mexico City, traveled slowly northward along the Pan American Highway, with a heavy load, crossing the border at Laredo on August 24.

The following gazetteer includes only those localities represented by specimens in the Bacon collection that are not to be found on the National Geographic Society's 1939 map of Mexico, Central America, and the West Indies, scale 1:5,702,400. Most of the localities are plotted on other, larger-scale maps, but inasmuch as these are not always readily available we include all missing from the Geographic Society's map, which is readily available to all investigators. The localities are arranged alphabetically within the states, which are themselves alphabetically arranged.

CHIAPAS

Acacoyagua: 3 miles northwest of Escuintla.
Aguacate: 7 miles north-northeast by north of Palenque.
Belén: 20 miles southeast of Escuintla.
Cerro Obando: 3 miles northeast of La Esperanza (which see).
Colonia Hidalgo: 7 miles northeast of Acacoyagua (which see).
Colonia Soconusco: 12 miles northeast of La Esperanza (which see).
Cruz de la Piedra: 2 miles west of La Esperanza (which see).
Finca Juárez: 10 miles northeast of La Esperanza (which see).
Javarinero: 13 miles east of Palenque.
La Esperanza: 3 miles east of Acacoyagua (which see).
La Magnolia: 3 miles northwest of La Esperanza (which see).
Las Nubes: On Cerro Obando, 2 miles northeast of La Esperanza (which see).
Motozintla: 25 miles east-northeast by east of Escuintla.
Rancho Las Gradas: 2 miles west of La Esperanza (which see).
Salto de Agua: On Cerro Obando, 1 mile northeast of La Esperanza (which see).
San Juanito: 1 mile east-northeast of Palenque.
Santa Rosa: Near Comitán.

CHIHUAHUA

Carmen: 32 miles east-northeast by east of Galeana.
Carrizal: 10 miles west-southwest by south of Ahumada.
Ciudad Delicias: 5 miles south of Meoqui.
Ojo de Federico: A small ranch 8 miles southeast of Ascención.
Progreso: 35 miles northeast of Galeana, near Río Santa María.
Rancho Nuevo: A small ranch 10 miles west-northwest by west of Carrizal.
Samalayuca: 25 miles south of Ciudad Juárez.

COAHUILA

Hipólito: 25 miles north-northeast of General Cepeda.
Zapalinamé: A mountain 3 miles south of Saltillo.

DISTRITO FEDERAL

Atzacoalco: 10 miles northeast of Mexico City.
Cañada de Contreras: 5 miles southeast of Mexico City.

DURANGO

La Goma: 12 miles west of Lerdo, on the south side of the Río Nazas.
La Loma: 12 miles west of Lerdo, on the north side of the Río Nazas.
Pedriceña: 25 miles east-southeast of Nazas.

GUATEMALA

Desempeña: 4 miles southeast of Piedras Negras.
Pozo de la Jicotea: 2 miles southeast of Piedras Negras.

GUERRERO

Agua Bendita: 13 miles south of Taxco.
Agua del Obispo: 8 miles north of Dos Caminos.
Cacahuamilpa: 10 miles southeast of Tetecala, Morelos.
Coyuca: 7 miles northeast of Acapulco.
El Treinta: 20 miles north of Acapulco.
Garrapatas: 5 miles southwest of Dos Caminos.
Julian Blanco: 4 miles north of Dos Caminos.
Ocotito: 3 miles north of Dos Caminos.
Omilteme: 3 miles northwest of Chilpancingo.
Paso del Limonero: 9 miles northeast of Acapulco.
Tierra Colorada: 3 miles southwest of Garrapatas (which see).
Xaltianguis: 31 miles northeast of Acapulco.

HIDALGO

Barranca de los Horcones: 6 miles south of Durango (which see).
Chapulhuacán: 19 miles southwest of Tamazunchale, San Luis Potosí.
Colonia: 6 miles southeast of Pachuca.
Durango: 15 miles west-southwest by south of Jacala.
El Chico Parque Nacional: 15 miles northeast of Pachuca.
Maguey Verde: 7 miles south of Durango.
Tianguistengo: 10 miles north-northeast of Zacualtipán.

MÉXICO

Chalco: 13 miles northeast of Xochimilco.
Chimalhuacán: 12 miles east of Mexico City.
Lerma: 10 miles east of Toluca.
Nevado de Toluca: 32 miles south-southwest by south of Toluca.
Río Frío: 18 miles west-northwest of Texmelucán, Puebla.
Santa Magdalena: 15 miles east of Mexico City.
Zempoala: 6 miles west-southwest of Tres Cumbres, Morelos.

MICHOACÁN

Carapa(n): 23 miles north of Paracho.
El Temazcal: 20 miles east of Morelia.
La Palma: 10 miles north of Sahuayo.
Puerto Hondo: 23 miles east of Morelia.
Rancho San José: 24 miles east of Morelia.
Tacícuaro: 5 miles east of Quiroga.

NUEVO LEÓN

Mamulique Pass: 45 miles north of Monterrey.
Santa Caterina: 7 miles west of Monterrey.

OAXACA

Cajón de Piedra: 12 miles south-southwest of Salina Cruz.
Cerro Arenal: 16 miles west of Tehuantepec.
Cerro de Chipehua: 16 miles southeast of Salina Cruz.
Cerro de Huamelula: 34 miles west-southwest by south of Tehuantepec.
Cerro Guengola: 10 miles west-northwest by west of Tehuantepec.
Cosolapa: 8 miles northwest of Acatlán.
Coyol: between San Antonio and Las Cruces.
El Limón: 25 miles southeast of Tehuantepec.
Escurano: 15 miles west-northwest of Tehuantepec.
La Concepción: 32 miles west of Tehuantepec.
Lachiguiri: 29 miles northeast of Tehuantepec.
La Gloria: 8 miles southeast of Chimalapa.
Las Pilas: 4 miles northwest of Tehuantepec.
Las Vacas: 40 miles west of Tehuantepec.
Llano Ocotal: 20 miles west-southwest by west of Tehuantepec.
Matías Romero: 34 miles north of San Gerónimo.
Mixtequilla: 4 miles northwest of Tehuantepec.
Palmar: 37 miles west-northwest by west of Tehuantepec.
Pixixi: 6 miles south of Tehuantepec.
Portillo Guayabo: 16 miles west of Tehuantepec.
Portillo Las Vacas: 40 miles west of Tehuantepec.
Portillo Los Nanches: 32 miles northwest of Tehuantepec.
Rincón San Pedro: 16 miles northeast of Tehuantepec.
Río Grande: 20 miles west-southwest by south of Tehuantepec.
Río Hondo: 41 miles west-northwest by west of Tehuantepec.
San Francisco Guichina: 61 miles west-northwest by west of Tehuantepec.
San José Manteca: 61 miles west-northwest by west of Tehuantepec.
San Mateo del Mar: 14 miles east-northeast by east of Salina Cruz.
San Pedro Quiechapa: 10 miles west of Yautepec.
Tenango: 24 miles west-southwest by west of Tehuantepec.
Tres Cruces: 43 miles west-northwest by west of Tehuantepec.
Yerba Santa: 10 miles west-northwest by west of Tehuantepec.

PUEBLA

Alchichica: 10 miles southwest of Perote, Veracruz.
Cacaloapam: 8 miles southeast of Tlacotepec.
El Seco: 27 miles northeast of Tepeaca.
La Virgin: 2 miles north of Cacaloapam.

Ozumbilla: 4 miles east-southeast of Morelos.
Pájaro Verde: 300 feet west of Puebla–Veracruz state line, about 7 miles southeast of Morelos.
Tecamachalco: 15 miles northwest of Tlacotepec.

SAN LUIS POTOSÍ

Pujal: 20 miles north of Tancanhuitz.

TABASCO

El Retiro: 13 miles south of Tenosique.
Los Rieles: 10 miles south of Tenosique.
Santo Tomás: 12 miles southeast of Tenosique.

TAMAULIPAS

Ciudad Mante (=Villa Juárez): 18 miles east-northeast by north of Antiguo Morelos.
Forlón: 18 miles east-southeast of Llera.
Hacienda La Clementina: 13 miles east-southeast of Llera.

TLAXCALA

Apizaco: 8 miles north-northwest by north of Tlaxcala.

VERACRUZ

Acultzingo: 9 miles east-southeast by east of Morelos, Puebla.
Atoyac: 4 miles east-northeast of Potrero Viejo (which see).
Cerro Gordo: 20 miles east-southeast of Jalapa.
Cuautlapan: 4 miles southwest of Fortín (which see).
Cruz Blanca: 8 miles northeast of Perote.
El Limón Totalco: 10 miles southwest of Perote.
El Maguey: 8 miles east-southeast by east of Potrero Viejo (which see).
Encero: 8 miles east-southeast of Jalapa.
Fortín: 5 miles east of Córdoba.
Matacabestro: 7 miles north-northwest by north of Joaquín.
Mata de Caña: 18 miles east-southeast of Jalapa.
Medellín: 10 miles south of Veracruz.
Metlac: 1 mile west of Fortín (which see).
Ojo de Agua: 2 miles east of Paraje Nuevo (which see), near Potrero Viejo.
Pan de Olla: 8 miles south of Teziutlán, Puebla.
Paraje Nuevo: 2 miles east of Peñuela (which see).
Paso del Macho: 5 miles northeast of Atoyac.
Peñuela: 4 miles southeast of Córdoba.
Potrero Viejo: 2 miles east of Paraje Nuevo (which see).
Presidio: 22 miles southwest of Córdoba.
San Juan de La Punta: 15 miles east-southeast by south of Córdoba.
San José de Gracia: 13 miles southeast of Córdoba.
Palma Sola: 9 miles east-southeast by south of Córdoba.
Tequeyutepec: 10 miles northeast of Jalapa.
Tezonapa: 8 miles northwest of Acatlán.
Toxtlacuaya: 17 miles northwest of Jalapa.
Xuchil: 1 mile north of Potrero Viejo (which see).

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Class REPTILIA Laurenti

Reptilia Laurenti, Specimen medicum exhibens synopsin reptilium, 1768, p. 19.

Subclasses.—Three subclasses are represented by living members. All occur in Mexico.

KEY TO MEXICAN[1] SUBCLASSES, ORDERS, AND SUBORDERS OF REPTILIA

1. Provided with a shell encasing body above and below, consisting of plastron and carapace; turtles--subclass **Anapsida**--------order **Testudines** (p. 12)- 5
   Not provided with a shell---------- 2
2. Anal slit longitudinal; skull diapsid----subclass **Archosauria.**
   order **Loricata** (p. 209)
   Anal slit transverse; skull modified diapsid; lower (quadratojugal-quadrate) arch interrupted--subclass **Lepidosauria**--------order **Squamata** (p. 37)
3. Two limbs only, the forelegs; body ringed with grooves.
   suborder **Amphisbaenia** (p. 37)
   Four limbs or none; body not ringed with grooves---------- 4
4. Limbs present or, if not, movable eyelids present; lizards.
   suborder **Sauria** (p. 39)
   Limbs absent; movable eyelids absent; snakes----------suborder **Serpentes**
5. No epidermal scutes on shell---------- 6
   Epidermal scutes present---------- 7
6. Limbs without external evidence of digits, oar-shaped, clawless.
   suborder **Atheca** (p. 13)
   Limbs with distinct digits, 3 with claws------suborder **Trionychoidea** (p. 18)
7. Limbs oar-shaped, with 1 to 3 claws----------suborder **Carettoidea** (p. 14)
   Limbs not oar-shaped, at least foreleg with 4 or 5 claws.
   suborder **Cryptodira** (p. 18)

Subclass Anapsida Williston

Anapsida Williston, Journ. Geol., vol. 25, 1917, p. 419.

Orders.—A single living order exists, the Testudines.

Order TESTUDINES Batsch

Testudines Batsch, Versuch Anleit. Kenntn. Gesch. Thier. Mineral., vol. 1, 1788, p. 437.

Chelonia Macartney, *in* Ross, Transl. Cuvier's Leçons d'anatomie comparée . . . , vol. 1, 1802, tab. 3.

Testudinata Oppel, Die Ordnungen, Familien und Gattungen der Reptilien . . . , 1811, p. 3.

Suborders.—Five living suborders of Testudines are recognized; four occur in Mexico, and the fifth (Pleurodira) is restricted to southern portions of both hemispheres.

[1] Characters in all keys apply to Mexican forms but not necessarily to those in other parts of the world.

Suborder ATHECA Cope

Athecae COPE, Proc. Amer. Assoc. Adv. Sci., vol. 19, 1870, p. 235.

Families.—One.

Family DERMOCHELYIDAE [4] Fitzinger

Dermatochelydae FITZINGER, Systema reptilium, 1843, p. 30.

Genera.—One.

Range.—Tropical oceans of the world.

Genus DERMOCHELYS Blainville

Dermochelys BLAINVILLE, Bull. Soc. Philom., 1816, p. 119.

Genotype.—*Testudo coriacea* Linnaeus.

Range.—World-wide, in tropical oceans and occasionally into temperate waters.

Species.—As many as three species (or subspecies) may be valid. The species has been recorded in Mexico only from the western coast, although Atlantic records are to be expected.

DERMOCHELYS CORIACEA [5] (Linnaeus)

Testudo coriacea LINNAEUS, Systema naturae, ed. 12, vol. 1, 1766, p. 350.

Dermochelys coriacea, BLAINVILLE, Bull. Soc. Philom., 1816, p. 119.—BOULENGER, Catalogue of the chelonians . . ., 1889, p. 10.—DERANIYAGALA, Tetrapod reptiles of Ceylon, vol. 1, 1939, pp. 38–102, figs. 12–34.—SCHMIDT, Marine Life Occ. Pap., vol. 1, No. 3, 1945, pp. 7–10.

Sphargis coriacea schlegelii GARMAN, U. S. Nat. Mus. Bull. 25, 1884, p. 303 (type unknown; type locality, tropical Pacific and Indian Ocean, here restricted to Guaymas, Sonora).

Dermochelys schlegelii, STEJNEGER, U. S. Nat. Mus. Bull. 58, 1907, p. 485.

Type.—Unknown.

Type locality.—Palermo, Sicily, by present restriction.

Range.—Pacific coast and probably the tropical Atlantic coast. Recorded definitely from *Sonora:* Guaymas; *Baja California:* Los Coronados Islands.

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[4] Actually the first family name proposed for this group was Sphargidae Gray (Ann. Philos., vol. 10, 1825, p. 212), based upon the genus *Sphargis* Merrem, 1820, a junior synonym of *Dermochelys* Blainville, 1816; both genera are based upon the same type, *Testudo coriacea* Linnaeus. Many taxonomists retain the oldest family name regardless of the status of its type. We believe there is a certain degree of error courted by such a procedure, however, inasmuch as a family name based upon a generic name later found to be a junior homonym of an earlier name in another family would, very unfortunately, be preserved; and what if the senior homonym had also served as a type for its family? It seems to us that only currently valid generic names should be available as types for family names, and that all synonyms and homonyms should be regarded unavailable for that purpose.

[5] A common arrangement restricts *coriacea* to the Atlantic, *schlegelii* to the Pacific, either as species or subspecies. We are unable to find that anything more than geographic probability has led to such arrangement.

Suborder CARETTOIDEA[6] Fitzinger

Carettoidea FITZINGER, Neue Classification der Reptilien . . ., 1826, p. 5.

Families.—One.

Family CHELONIIDAE Gray

Cheloniadae GRAY, Ann. Philos., ser. 2, vol. 10, 1825, p. 212.

Genera.—Four.

Range.—Tropical oceans, world-wide.

KEY TO GENERA OF THE FAMILY CHELONIIDAE[7]

1. One pair of prefrontal scutes; costal scutes 4; horny cutting edge of lower jaw coarsely dentate, that of upper jaw strongly ribbed vertically; bony alveolar ridge of upper jaw with a low but regularly raised auxiliary ridge behind anterior ridge, which is very strong and terminates anteriorly in a tooth at posterolateral corner of premaxillary pit.....**Chelonia** (p. 17)

   Two pairs of prefrontals; costal scutes 4–9; horny cutting edge of lower jaw smooth or feebly denticulate, that of upper jaw without markedly elevated vertical ribbing on its inner surface; bony alveolar surface of upper jaw smooth or with a single ridge; this ridge not terminating anteriorly in a sharp tooth..... 2

2. Costal scutes 4 pairs; dorsal scutes usually conspicuously imbricate; bony alveolar surface of upper jaw with a sharp-crested ridge.
   Eretmochelys (p. 16)

   Costal scutes 5 pairs or more; dorsal scutes not conspicuously imbricate; bony alveolar surface of upper jaw smooth or with a rounded ridge..... 3

3. Four enlarged inframarginal scutes on bridge; dorsal color gray to olive-green; maxillaries not in contact, separated by prevomer.....**Lepidochelys** (p. 14)

   Three enlarged inframarginal scutes on bridge; dorsal color brown or reddish brown; maxillaries in contact between prevomer and premaxillaries.
   Caretta (p. 15)

Genus LEPIDOCHELYS Fitzinger

Lepidochelys FITZINGER, Systema reptilium, fasc. 1, 1843, p. 30.

Caouana GRAY, Catalogue of the tortoises . . . in the British Museum, 1844, p. 52 (type, *Chelonia olivacea* Eschscholtz).

Genotype.—*Chelonia olivacea* Eschscholtz.

Species.—Two are generally recognized.

Range.—Tropical oceans, world-wide.

KEY TO SPECIES OF LEPIDOCHELYS

1. Inframarginal scutes without pores; usually 5 pairs of costal scutes; color usually gray; bony alveolar surface of upper jaw with a conspicuous ridge.
   kempii (p. 15)

   Each inframarginal scute usually with a pore at its posterior border; usually more than 5 pairs of costal scutes; color olive; bony alveolar surface of upper jaw with a low (not conspicuous) ridge.....**olivacea** (p. 15)

[6] Deraniyagala (Spolia Zeylanica, vol. 24, 1945, p. 98) suggests that this group may be of pleurodirous origin.

[7] Adapted from Carr, Proc. New England Zool. Club, vol. 21, 1942, pp. 3–5.

LEPIDOCHELYS KEMPII (Garman)

Thalassochelys (*Colpochelys*) *kempii* GARMAN, Bull. Mus. Comp. Zool., vol. 6, 1880, p. 123.

Lepidochelys kempii, BAUR, Amer. Nat., vol. 24, 1890, p. 487.—CARR, Proc. New England Zool. Club, vol. 21, 1942, pp. 4, 8–13, pls. 2, 4.

Type.—Several cotypes, Mus. Comp. Zool.

Type locality.—Gulf of Mexico, here restricted to Key West, Fla.

Range.—Atlantic Ocean and Gulf of Mexico. In Mexico, the entire Atlantic coast. The only exact record known is from Quintana Roo (Isla de Mujeres).

LEPIDOCHELYS OLIVACEA (Eschscholtz)

Chelonia olivacea ESCHSCHOLTZ, Zoologischer Atlas, pt. 1, 1829, p. 2, pl. 3.

Lepidochelys olivacea, GIRARD, United States Exploring Expedition . . . , vol. 20, Herpetology, 1858, p. 435.—DERANIYAGALA, Tetrapod reptiles of Ceylon, vol. 1, 1939, pp. 123–163, figs. 43–65.—CARR, Proc. New England Zool. Club, vol. 21, 1942, pp. 4–5, pl. 5 (skull).

Chelonia dussumieri DUMÉRIL and BIBRON, Erpétologie générale . . . , 1835, p. 557 (type in Mus. Hist. Nat. Paris; type locality, Malabar).

Caretta remivaga HAY, Proc. U. S. Nat. Mus., vol. 34, 1908, pp. 194–197 (type, U.S.N.M. No. 9973; type locality, Ventosa Bay, Oaxaca).

Type.—Unknown.

Type locality.—Manila Bay, Philippine Islands.

Range.—Indian and Pacific Oceans. In Mexico, the entire Pacific coast. Reported only from the states of Chiapas, Oaxaca, Guerrero, Colima, and Sonora (Tiburón Island).

Genus CARETTA Rafinesque

Caretta RAFINESQUE, Specchio Sci. Palermo, vol. 2, 1814, p. 66.

Thalassochelys FITZINGER, Ann. Wien Mus., vol. 1, 1835, p. 121 (type, *Testudo caouana* Daudin).

Caouana COCTEAU, *in* Ramón de la Sagra, Historia física, política y natural de la Isla de Cuba, vol. 4, Rept., 1838, p. 31 (type, *Testudo cephalo* Schneider).

Eremonia GRAY, Hand list of shield reptiles of the British Museum, 1873, p. 91 (type, *Caouana elongata* Gray).

Genotype.—*Caretta nasuta* Rafinesque=*Caretta caretta caretta* (Linnaeus).

Species.—One, with two races, is generally recognized.

Range.—Tropical ocean, world-wide.

KEY TO SPECIES OF CARETTA

1. Neural bones usually 9 or more; if fewer, the costal bones usually interrupting the neural series by contact with each other at one or more places.
caretta gigas (p. 16)

   Neural bones 7 or 8, the series rarely interrupted by median contact of costal bones----------**caretta caretta** (p. 16)

CARETTA CARETTA CARETTA (Linnaeus)

Testudo caretta LINNAEUS, Systema naturae, ed. 10, vol. 1, 1756, p. 197.
Caretta caretta, STEJNEGER, Ann. Rep. U. S. Nat. Mus., 1902 (1904), p. 715.—CARR, Proc. New England Zool. Club, vol. 21, 1942, p. 5, pls. 1, 3.
Caretta caretta caretta, DERANIYAGALA, Tetrapod reptiles of Ceylon, vol. 1, 1939, p. 164; Spolia Zeylanica, vol. 24, 1945, p. 95.
Testudo cephalo SCHNEIDER, Algemeine Naturgeschichte der Schildkröten . . ., 1783, pp. 303–308 (type unknown; type locality, Charleston, S. C., by present restriction).
Testudo caouana DAUDIN, Histoire naturelle des reptiles, vol. 2, 1802, p. 55, pl. 16, fig. 2 (type in Mus. Hist. Nat. Paris; type locality, Jamaica, by present restriction).

Type.—Unknown.

Type locality.—"About the American Islands," here restricted to the Bermuda Islands.

Range.—Western Atlantic Ocean; the entire Atlantic coast of Mexico. Reported in Mexico only from Yucatán.

CARETTA CARETTA GIGAS Deraniyagala

Caretta gigas DERANIYAGALA, Ceylon Journ. Sci., sect. B, vol. 28, 1933, pp. 61–62.
Caretta caretta gigas, DERANIYAGALA, Tetrapod reptiles of Ceylon, vol. 1, 1939, pp. 164–185, figs. 66–73; Spolia Zeylanica, vol. 24, 1945, p. 95.

Type.—Presumably in Colombo Museum, Ceylon.

Type locality.—Ceylon.

Range.—Indian and Pacific Oceans and possibly eastern Atlantic Ocean. In Mexico, the entire Pacific coast. Reported only from Sinaloa and Baja California.

Genus ERETMOCHELYS Fitzinger

Eretmochelys FITZINGER, Systema reptilium, fasc. 1, 1843, p. 30.

Genotype.—*Testudo imbricata* Linnaeus.

Species.—One is generally recognized, but two species (or subspecies) are distinguished by some authorities.

ERETMOCHELYS IMBRICATA [8] (Linnaeus)

Testudo imbricata LINNAEUS, Systema naturae, ed. 12, 1766, p. 350.
Eretmochelys imbricata, FITZINGER, Systema reptilium, fasc. 1, 1843, p. 30.—AGASSIZ, Contributions to the natural history of the United States, vol. 1, 1857, p. 381.—DERANIYAGALA, Tetrapod reptiles of Ceylon, vol. 1, 1939, pp. 187–217, figs. 74–85.
Chelonia lachrymata CUVIER, Le règne animal, ed. 2, vol. 2, 1829, p. 13 (no type or type locality designated; Bermuda Islands by present restriction).
Chelonia pseudo-mydas LESSON, *in* Belanger, Voyage aux Indes Oriental . . ., Zool., 1834, p. 299 (type unknown; type locality, Atlantic Ocean, here restricted to the Bermuda Islands).
Chelonia pseudo-caretta LESSON, *op. cit.*, p. 302 (type and type locality as in the preceding).

[8] The Atlantic Ocean specimens are frequently regarded as *Eretmochelys imbricata* (or *E. i. imbricata*), the Pacific Ocean ones as *Eretmochelys imbricata bissa* (or *E. i. squamata*). We are unable to determine characters for such separation.

Caretta bissa RÜPPELL, Neue Wirbelthiere Abyssiniens, Amphibiens, 1835, p. 4, pl. 2 (type unknown; type locality, Red Sea).

Eretmochelys squamata AGASSIZ, Contributions to the natural history of the United States, vol. 1, 1857, p. 382 (cotypes, Mus. Comp. Zool. Nos. 1415, 1416; lectoholotype, No. 1416; type locality restricted to Singapore, Straits Settlements).

Type.—Unknown.

Type locality.—American seas, here restricted to the Bermuda Islands.

Range.—Tropical oceans, world-wide; both coasts of Mexico. Reported from Baja California, Sonora, Oaxaca, Campeche, and Quintana Roo (Isla de Mujeres).

Genus CHELONIA Brongniart

Chelonia BRONGNIART, Bull. Sci. Soc. Philom., vol. 2, 1800, p. 89.

Chelone BRONGNIART, Mem. Sav. Étrang, vol. 1, 1806, p. 610.

Chelona BURMEISTER, Handbuch der Naturgeschichte, vol. 2, 1807, p. 731.

Chelonias RAFINESQUE, Specchio Sci. Palermo, vol. 2, 1814, p. 66.

Mydas COCTEAU, *in* Ramón de la Sagra, Historia física, política y natural de la Isla de Cuba, vol. 4, 1838, p. 22.

Mydasea GERVAIS, Dict. Hist. Nat., vol. 3, 1843, p. 457.

Euchelonia TSCHUDI, Untersuchungen über die Fauna Peruana . . ., 1846, p. 22.

Megemys GISTEL, Naturgeschichte des Thierreichs, 1848, p. 8 (type of all above, *Testudo mydas* Linnaeus).

Genotype.—*Testudo mydas* Linnaeus.

Species.—Possibly four forms (species or subspecies) are recognizable. None of these are well enough known to us to diagnose properly.

Range.—Tropical oceans, world-wide.

CHELONIA MYDAS[9] (Linnaeus)

Testudo mydas LINNAEUS, Systema naturae, ed. 10, 1758, p. 197.

Chelonia mydas, BRONGNIART, Bull. Sci. Soc. Philom., vol. 2, 1800, p. 89.—SCHWEIGGER, Königsberg. Arch. Naturw. Math., vol. 1, 1812, p. 412.—DERANIYAGALA, Tetrapod reptiles of Ceylon, vol. 1, 1939, pp. 218–242, figs. 86–95.

Testudo viridis SCHNEIDER, Algemeine Naturgeschichte der Schildkröten . . ., 1782, pp. 299–303 (type unknown; type locality, Charleston, S. C., by present restriction).

Chelonia virgata SCHWEIGGER, Prodromi monographiae cheloniorum . . ., 1814, p. 21 (type unknown; type locality, "Seas of Torrid Zone," here restricted to the Bermuda Islands).

Chelonia maculosa CUVIER, Le règne animal . . ., ed. 2, vol. 2, 1829, p. 13 (type in Mus. Hist. Nat. Paris?; type locality not designated, here restricted to Ascension Island).

Chelonia agassizii BOCOURT, Ann. Sci. Nat., ser. 5, vol. 10, 1868, p. 122 (type in Mus. Hist. Nat. Paris; type locality, mouth of Río Nagualate, Guatemala); Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 1, 1870, pp. 26–28, pl. 6 (color).

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[9] A common arrangement restricts *mydas* to the Atlantic Ocean, *agassizii* to the Pacific, either as species or subspecies. We are unable to determine characters justifying such an arrangement.

Type.—Unknown.

Type locality.—Ascension Island.

Range.—Tropical oceans, world-wide, both coasts of Mexico. Reported from Veracruz, Yucatán, Quintana Roo (Isla de Mujeres), Oaxaca, Guerrero, Sonora (Tiburón Island), and Clarion Island.

Suborder TRIONYCHOIDEA Fitzinger

Trionychoidea FITZINGER, Neue Classification der Reptilien . . ., 1826, p. 7.

Families.—Two, one of which (Carettochelyidae) is restricted to New Guinea.

Family TRIONYCHIDAE Gray

Trionicidae GRAY, Ann. Philos., ser. 2, vol. 10, 1825, p. 212.

Genera.—Seven, only one of which occurs in the Americas.

Range.—Asia, Africa, North America.

Genus AMYDA Schweigger

Amyda SCHWEIGGER, *in* Geoffroy, Ann. Mus. Hist. Nat. Paris, vol. 14, 1809, p. 1.—CONANT and GOIN, Occ. Pap. Mus. Zool. Univ. Michigan, No. 510, 1948, pp. 11–19 (taxonomy).

Genotype.—*Amyda javanica* Geoffroy [=*Amyda cartilaginea* (Boddaert)].

Species.—About 21, of which 4 are American; two or three subspecies are recognized of one species (*A. spinifera*). One occurs in Mexico.[10]

Range.—Asia, North America.

AMYDA EMORYI (Agassiz)

Aspidonectes emoryi AGASSIZ, Contributions to the natural history of the United States, vol. 1, 1857, p. 407; vol. 2, 1857, pl. 6, figs. 4, 5.

Amyda emoryi, STEJNEGER and BARBOUR, Check list of North American amphibians and reptiles, 1917, p. 124.

Type.—Mus. Comp. Zool. Nos. 1901–1910, cotypes; W. H. Emory collector.

Type locality.—Rio Grande River, near Brownsville, Tex.

Range.—Southern Oklahoma and Arizona southward into northern Mexico. Recorded from *Coahuila:* Hacienda Los Borregos (near Juárez), San Juan, Cuatro Ciénegas, Hacienda La Gacha; *Nuevo León:* Rodriguez; *Tamaulipas:* Matamoros, Río Purificación north of Ciudad Victoria; *Baja California*?.

Suborder CRYPTODIRA Cope

Cryptodira COPE, Proc. Amer. Assoc. Adv. Sci., vol. 19, 1870, p. 235.

Families.—Six, all but one of which (Platysternidae, southern Asia) occur in Mexico.

[10] Müller (Verh. Naturf. Ges. Basel, vol. 6, 1878, p. 641) records *A. mutica* also from "Mexico." The record requires confirmation.

KEY TO MEXICAN FAMILIES OF CRYPTODIRA

1. Abdominal scutes in contact with marginals or separated from them only by membrane; inguinal scute short, less than half length of bridge; 12 plastral scutes 4
   All plastral scutes separated from marginals by a series of inframarginals, or inguinal scute very long, half length of bridge or longer; 12 or fewer plastral scutes 2
2. Four or 5 inframarginals ..... **Dermatemyidae** (p. 19)
   Two or 3 (rarely 1) inframarginals 3
3. Bridge very narrow, covered chiefly by the displaced abdominal scutes, which are widely separated from each other medially ..... **Chelydridae** (p. 20)
   Bridge broad, abdominal scutes in normal position ..... **Kinosternidae** (p. 21)
4. Digits with no webs whatever; rear foot stump-shaped, plantar surface as broad as long ..... **Testudinidae** (p. 27)
   Digits with at least some vestige of webs; rear foot more elongate, plantar surface longer than broad ..... **Emyidae** (p. 28)

Family DERMATEMYIDAE Gray

Dermatemyidae GRAY, Supplement to the catalogue of the shield reptiles . . ., 1870, p. 49.

Genera.—One.

Range.—Central Mexico to Honduras.

Genus DERMATEMYS Gray

Dermatemys GRAY, Proc. Zool. Soc. London, 1847, p. 55.

Chloremys GRAY, Proc. Zool. Soc. London, 1870, p. 715 (type, *Dermatemys abnormis* Cope=*D. mawii* Gray).

Limnochelone WERNER, Zool. Anz., vol. 24, 1901, p. 297 (type, *Limnochelone micrura* Werner).

Genotype.—*Dermatemys mawii* Gray.

Range.—Atlantic coast from central Veracruz to Honduras.

Species.—One recognized.

DERMATEMYS MAWII Gray

Dermatemys mawii GRAY, Proc. Zool. Soc. London, 1847, p. 55.—BOULENGER, Catalogue of the chelonians . . ., 1889, pp. 28–29.

Emys Berardii DUMÉRIL and BIBRON, *in* Duméril and Duméril, Catalogue méthodique de la collection des reptiles, livr. 1, 1851, p. 11 (type locality, environs of Veracruz, Mexico; type in Mus. Hist. Nat. Paris).

Dermatemys abnormis COPE, Proc. Acad. Nat. Sci. Philadelphia, vol. 20, 1868, p. 120 (type, U.S.N.M. No. 6545; Belize River, British Honduras).

Limnochelone micrura WERNER, Zool. Anz., vol. 24, 1901, p. 298 (type locality, Mexico, here restricted to Alvarado, Veracruz; type unknown).

Type.—Brit. Mus.

Type locality.—Unknown, here restricted to Alvarado, Veracruz.

Range.—Rivers of the Atlantic coast from central Veracruz to Guatemala, probably excluding the northern part of the Yucatán Peninsula. Recorded from the states of Veracruz, Oaxaca, Tabasco, Yucatán, and Campeche.

Family CHELYDRIDAE Swainson

Chelidridae SWAINSON, Natural history and classification of fishes, amphibians, and reptiles, vol. 2, 1839, p. 116.

Genera.—Two, one of which (*Macrochelys*) is restricted to the United States. A supposed New Guinea genus, *Devisia*, is an erroneously labeled *Chelydra serpentina*.

Range.—North America south to northern South America.

Genus CHELYDRA Schweigger

Chelydra SCHWEIGGER, Königsberg. Arch. Naturw. Math., vol. 1, 1812, p. 292.
Chelonura FLEMING, Philosophy of zoology . . ., vol. 2, 1870, p. 64 (type, *Testudo serpentina* Linnaeus).
Rapara GRAY, Ann. Philos., ser. 2, vol. 10, 1825, p. 211 (type as above).
Saurochelys LATREILLE, Familles naturelles du règne animal . . ., 1825, p. 92 (type as above).
Cheliurus RAFINESQUE, Atlantic Journ., 1832, p. 64 (type as above).
Emysaurus DUMÉRIL and BIBRON, Erpétologie générale, vol. 2, 1835, p. 548 (type as above).
Chelonura HOLBROOK, North American herpetology, vol. 1, 1836, p. 139 (type as above).

Genotype.—*Testudo serpentina* Linnaeus.

Range.—Southeastern Canada, United States east of the Rocky Mountains, south to Ecuador.

Species.—Three species or subspecies; one is definitely recorded from Mexico, another probably occurs there, and the third (*acutirostris*) is restricted to Panama and South America.

KEY TO MEXICAN SPECIES OF CHELYDRA

1. Bridge about one-seventh length of plastron; 4 chin barbels; second vertebral shield 32 to 34 percent length of carapace; height of skull at quadrate 44 to 48 percent length of skull to condyle; width of palatine bone 28 to 30 percent length of skull ..... **rossignonii** (p. 20)

   Bridge about one-ninth length of plastron; 2 chin barbels; second vertebral shield less than 30 percent length of carapace; height of skull at quadrate 38 to 43 percent length of skull to condyle; width of palatine bone 19 to 25 percent length of skull ..... **serpentina** (p. 21)

CHELYDRA ROSSIGNONII (Bocourt)

Emysaurus rossignonii BOCOURT, Ann. Sci. Nat., ser. 5, vol. 10, 1868, pp. 121–122; Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 1, 1870, pp. 18–19, pl. 5, fig. 2.
Chelydra rossignonii, BOULENGER, Ann. Mag. Nat. Hist., ser. 7, vol. 9, 1902, pp. 49–51.—SCHMIDT, Smithsonian Misc. Coll., vol. 106, No. 8, 1946, pp. 1–9.

Type.—Mus. Hist. Nat. Paris.

Type locality.—Panzós, Río Polochic, Guatemala.

Range.—Atlantic slopes of Guatemala and presumably adjacent Mexico southward to Costa Rica. Not yet reported definitely from Mexico.

CHELYDRA SERPENTINA (Linnaeus)

Testudo serpentina LINNAEUS, Systema naturae, ed. 10, vol. 1, 1758, p. 199.
Chelydra serpentina, SCHWEIGGER, Königsberg. Arch. Naturw. Math., vol. 1, 1812, p. 293.—CAHN, Illinois Biol. Monogr., vol. 16, 1937, pp. 34–45, pls. 3–4.

Type.—Unknown.

Type locality.—"Warmer region," here restricted to New Orleans, La.

Range.—North America east of the Rocky Mountains; in Mexico, Atlantic slopes south to the Yucatán Peninsula; recorded only from the states of Veracruz and Campeche.

Family KINOSTERNIDAE Agassiz

Cinosternidae AGASSIZ, Contributions to the natural history of the United States, vol. 1, 1857, p. 347.

Genera.—Three.

Range.—North America, south to northern South America.

KEY TO GENERA OF KINOSTERNIDAE

1. Plastron very small, cruciform, with 7–9 scutes; bridge narrow, its length (parallel to body axis) exceeded by its width; inframarginals little longer than broad 2
   Plastron larger, not cruciform, with 10 or 11 scutes; bridge broader, its length much exceeding its width; inframarginals about three times as long as broad, or longer ..... **Kinosternon** (p. 21)
2. A ligament between inframarginals and plastron ..... **Claudius** (p. 26)
   A suture between inframarginals and plastron ..... **Staurotypus** (p. 27)

Genus KINOSTERNON Spix

Kinosternon SPIX, Ranae et testudinis brasiliensis species novae, 1825, p. 17.
Swanka GRAY, Catalogue of the tortoises . . ., 1844, p. 32 (type, *Kinosternon scorpioides* Gray).
Platythyra AGASSIZ, Contributions to the natural history of the United States, vol. 1, 1857, p. 430, pl. 5, figs. 12–15 (type, *Platythyra flavescens* Agassiz).
Thyrosternum AGASSIZ, *op. cit.*, p. 429 (type, *Kinosternum integrum* LeConte).

Genotype.—*Kinosternon longicaudatum* Spix=*K. scorpioides* Linnaeus.

Range.—United States, except the northwestern quarter, south to northern South America.

Species.—About 22 species and subspecies, 12 of which are known to occur in Mexico.

KEY TO MEXICAN SPECIES OF KINOSTERNON

1. Plastron rounded behind, not incised or indented; stridulation organs (on concealed surfaces of shank and thigh) in males poorly developed or absent; plastron large, completely closing shell in adults 2

Plastron incised or indented behind; stridulation organs in males well developed or not; plastron at least somewhat smaller, not completely closing shell even in adults 7

2. Carapace tricarinate; axillary and inguinal scutes (if present) widely separated 3

Carapace flat or unicarinate; axillary and inguinal scutes narrowly in contact or narrowly separated 5

3. Axillary scute usually absent; posterior edge of abdominals convex. **abaxillare** (p. 22)

Axillary scute present; posterior edge of abdominals straight 4

4. Anterior lobe of plastron longer than immovable portion of plastron. **cruentatum cruentatum** (p. 23)

Anterior lobe of plastron as long as or shorter than immovable portion of plastron ..... **cruentatum consors** (p. 24)

5. Anterior lobe of plastron longer than fixed portion 6

Anterior lobe of plastron not longer than fixed portion ..... **acutum** (p. 23)

6. Gular more than half length of anterior lobe of plastron ..... **creaseri** (p. 23)

Gular less than half length of anterior lobe of plastron ..... **leucostomum** (p. 25)

7. Carapace tricarinate; stridulation organs absent; plastron slightly smaller than opening of carapace ..... **integrum** (p. 25)

Carapace flat or unicarinate; stridulation organs well developed in males; plastron distinctly smaller than opening of carapace 8

8. Ninth marginal about as high as tenth, much higher than eighth 9

Ninth marginal much lower than tenth, about height of eighth 10

9. Gular more than half length of anterior lobe of plastron (60–64 percent); length of anterior lobe less than combined length of gular plus length of interfemoral suture plus width of nuchal (83–93 percent). **flavescens stejnegeri** (p. 24)

Gular half or less than half length of anterior lobe of plastron (30–50 percent); length of anterior lobe greater than combined length of gular plus length of interfemoral suture plus width of nuchal (128–196 percent). **flavescens flavescens** (p. 24)

10. Anterior vertebral very narrow, widely separated from second marginal on each side; gular less than half length of anterior lobe; posterior marginal (eleventh) little lower than penultimate (tenth) ..... **herrerai** (p. 24)

Anterior vertebral broad, in contact with second marginal on each side; gular variable in length; posterior marginal distinctly lower than penultimate 11

11. Carapace depressed; entire shell twice as broad as deep; head light, dark-spotted; sutures between scutes of carapace not distinctly black-bordered, those between plastral scutes not or narrowly marked with brown. **sonoriense** (p. 26)

Carapace peaked, arched as viewed directly from front; shell less than twice as broad as deep; head dark, light-spotted, sutures on carapace narrowly but distinctly black-edged, those on plastron broadly marked with brown. **hirtipes** (p. 25)

KINOSTERNON ABAXILLARE Baur

Kinosternon abaxillare Baur, *in* Stejneger, Journ. Washington Acad. Sci., vol. 15, 1925, pp. 462–463.

Type.—U.S.N.M. No. 7518; C. H. Berendt collector.

Type locality.—Tuxtla Gutiérrez, Chiapas, Mexico.

Range.—Plateau of Chiapas. Recorded only from the type locality.

KINOSTERNON ACUTUM Gray

Kinosternon scorpioides acuta GRAY, Synopsis reptilium, 1831, p. 34, pl. 7, fig. 1.
Kinosternon acutum, STEJNEGER, Proc. U. S. Nat. Mus., vol. 90, 1941, pp. 457–458.
Cinosternum berendtianum COPE, Proc. Acad. Nat. Sci. Philadelphia, 1865, p. 189 (Tabasco; U.S.N.M. No. 6517; C. H. Berendt collector).
Swanka maculata GRAY, Proc. Zool. Soc. London, 1869, p. 162 (type locality, Cosamaloapam, Veracruz, Mexico; cotype in Brit. Mus.).
Cinosternon Effeldtii PETERS, Monatsb. Berlin Akad. Wiss., 1873, p. 603, pl. 5, figs. 1–3 (type locality, "presumably" Veracruz, Mexico, here restricted to Cosamaloapam; type Berl. Mus.).

Type.—Brit. Mus.

Type locality.—Unknown, here restricted to Cosamaloapam, Veracruz.

Range.—Atlantic coast from central Veracruz southward to British Honduras, excluding the northern part of the Yucatán Peninsula. Recorded from the states of Veracruz, Tabasco, and Campeche.[11]

KINOSTERNON CREASERI Hartweg

Kinosternon creaseri HARTWEG, Occ. Pap. Mus. Zool. Univ. Michigan, No. 277, 1934, pp. 1–2.

Type.—Univ. Mich. Mus. Zool. No. 73090, male; Edwin P. Creaser collector.

Type locality.—One mile south of the Hacienda, Chichen Itzá, Yucatán.

Range.—Known only from the general region of the type locality, and *Quintana Roo* (Vivienda de Platanal).

KINOSTERNON CRUENTATUM CRUENTATUM Duméril and Bibron

C[*inosternon*] *cruentatum* DUMÉRIL and BIBRON, *in* Duméril and Duméril, Catalogue méthodique de la collection des reptiles, livr. 1, 1851, pp. 16–17.—GÜNTHER, Biologia Centrali-Americana, Reptilia and Batrachia, 1885, pp. 13–14, pls. 9–11.—SIEBENROCK, Zool. Anz., vol. 30, 1906, pp. 98–99.
Kinosternon cruentatum cruentatum, WETTSTEIN, Sitzb. Akad. Wiss. Wien, math.-nat. Kl., Abth. 1, vol. 143, 1934, pp. 14–15.—SCHMIDT, Publ. Field Mus. Nat. Hist., zool. ser., vol. 22, 1941, p. 488.
K[*inosternum*] *mexicanum* LECONTE, Proc. Acad. Nat. Sci. Philadelphia, 1854, pp. 182–183 (type locality, Mexico, here restricted to San Mateo del Mar, Oaxaca; type presumably in Acad. Nat. Sci. Philadelphia).
Cinosternum triliratum LECONTE, Proc. Acad. Nat. Sci. Philadelphia, 1859, p. 6 (type locality, "Mexico," here restricted to San Mateo del Mar, Oaxaca; Pease coll.; Acad. Nat. Sci. Philadelphia?).
Cinosternon Shawianum BOCOURT (*nec* Bell), Journ. Zool., vol. 5, 1876, pp. 387, 397–398.

Type.—Mus. Hist. Nat. Paris.

Type locality.—"Amér. septentr.," here restricted to San Mateo del Mar, Oaxaca.

[11] Gadow's record (Proc. Zool. Soc. London, 1905, p. 194) for San Mateo, Oaxaca, is considered erroneous.

Range.—Atlantic and Pacific drainages in Oaxaca, Tabasco, Campeche, and Chiapas.[12] In Central America, Guatemala.

KINOSTERNON CRUENTATUM CONSORS Stejneger

Kinosternon cruentatum consors STEJNEGER, Proc. U. S. Nat. Mus., vol. 90, 1941, pp. 458–459.

Type.—U.S.N.M. No. 13912.

Type locality.—Cozumel Island, Quintana Roo.

Range.—The type locality and northern Yucatán (Progreso and Telchac Puerto).

KINOSTERNON FLAVESCENS FLAVESCENS (Agassiz)

Platythyra flavescens AGASSIZ, Contributions to the natural history of the United States, vol. 1, 1857, p. 430; vol. 2, pl. 5, figs. 12–15.—CAHN, Illinois Biol. Monogr., vol. 16, Nos. 1–2, 1937, pp. 56–62, pls. 6, 7.

Kinosternon flavescens flavescens, HARTWEG, Occ. Pap. Mus. Zool. Univ. Michigan, No. 371, 1938, pp. 2, 3.

Type.—Unknown.

Type locality.—Texas and Arizona, here restricted to Waco, Tex.

Range.—Northern Mexico from Coahuila to Tamaulipas; recorded in Coahuila (Jaral). In the United States from Arizona and Texas north to Colorado and Kansas.

KINOSTERNON FLAVESCENS STEJNEGERI Hartweg

Kinosternon flavescens stejnegeri HARTWEG, Occ. Pap. Mus. Zool. Univ. Michigan, No. 371, 1938, pp. 1–5.

Type.—Univ. Michigan Mus. Zool. No. 72235; Morrow J. Allen collector.

Type locality.—Llano, Sonora (midway between Nogales and Hermosillo).

Range.—Known only from Sonora (type locality) and Durango (Pedriceña); perhaps also from southern Coahuila (said to intergrade with *flavescens flavescens* at Jaral, Coahuila).

KINOSTERNON HERRERAI Stejneger

Kinosternon herrerai STEJNEGER, Journ. Washington Acad. Sci., vol. 15, 1925, p. 462.—SHANNON and SMITH, Trans. Kansas Acad. Sci., vol. 52, No. 4, 1949, pp. 497–498.

Type.—U.S.N.M. No. 61249; Alfonso Herrera, donor.

Type locality.—Xochimilco, Valley of Mexico, Distrito Federal, Mexico, *in errore;* here restricted to La Laja, Veracruz.

Range.—Known only from the type locality.

[12] A record from La Majada, near Apatzingán, Michoacán (Schmidt and Shannon, Fieldiana, vol. 31, 1947, p. 69), is referable to *K. integrum.*

KINOSTERNON HIRTIPES Wagler

Cinosternon hirtipes WAGLER, Natürliches System der Amphibien, . . ., 1830, pl. 5, figs. 29, 30.

Cinosternum hirtipes, GÜNTHER, Biologia Centrali-Americana, 1885, p. 15, pl. 12–15.—SIEBENROCK, Zool. Anz., vol. 30, 1906, pp. 94–97, figs.

Cinosternum henrici LECONTE, Proc. Acad. Nat. Sci. Philadelphia, 1859, p. 4 (type presumably in Acad. Nat. Sci. Philadelphia; type locality, New Mexico, T. C. Henry collector).—DITMARS, Reptile book, 1907, p. 26, pl. 11, fig.

Type.—Munich Museum.

Type locality.—Mexico, here restricted to Mazatlán, Sinaloa.

Range.—Western Texas and southern Arizona southward through the main Mexican Plateau, from Chihuahua to México; recorded from the states of Chihuahua, Sinaloa, Michoacán, Colima, Guanajuato, San Luis Potosí, Hidalgo, México, and from Distrito Federal and the Tres Marías Islands.

KINOSTERNON INTEGRUM LeConte

Kinosternum integrum LECONTE, Proc. Acad. Nat. Sci. Philadelphia, 1854, p. 183.

Cinosternum integrum, BOULENGER, Catalogue of the chelonians, rhynchocephalians and crocodiles in the British Museum, 1889, p. 42.

Cinosternum scorpioides integrum, SIEBENROCK, Zool. Anz., vol. 30, 1906, pp. 96–97.

Cinosternum rostellum BOCOURT, Journ. Zool., vol. 5, 1876, pp. 391–392 (type locality, Guanajuato, Mexico; type in Mus. Hist. Nat. Paris).

Type.—Acad. Nat. Sci. Philadelphia; Mr. Pease collector.

Type locality.—Mexico, here restricted to Acapulco, Guerrero.

Range.—The plateau of Mexico from Sonora to Oaxaca east to Veracruz. Known from Tres Marías Islands and the states of Sonora, Sinaloa, Nayarit, Colima, Michoacán, Guerrero, Oaxaca, Morelos, Guanajuato, Aguascalientes, Jalisco, San Luis Potosí, Puebla, and Veracruz.

KINOSTERNON LEUCOSTOMUM Duméril and Bibron

C[*inosternon*] *leucostomum* DUMÉRIL and BIBRON, *in* Duméril and Duméril, Catalogue méthodique de la collection des reptiles, livr. 1, 1851, p. 17, figs. 1–3.—GÜNTHER, Biologia Centrali-Americana, Reptilia and Batrachia, 1885, p. 17, pls. 16, 17.—SIEBENROCK, Zool. Anz., vol. 30, 1906, pp. 97–98.

Swanka leucostoma, GRAY, Catalogue of the shield reptiles in the British Museum, pt. 1, Testudinata, 1855, p. 69.

Swanka maculata GRAY, *ibid.*, p. 68 (type locality, "Vera Paz," Guatemala, and Cosamaloapam, Veracruz, here restricted to the latter; type in Brit. Mus. Nat. Hist.).

Cinosternum brevigulare GÜNTHER, Biologia Centrali-Americana, Reptilia and Batrachia, 1885, pp. 17–18 (type locality, Playa Vicente, Mexico, Sallé collector; type in Brit. Mus. Nat. Hist.).

Cinosternum cobanum GÜNTHER, *op. cit.*, p. 18, pl. 18, fig. B (type in Brit. Mus. Nat. Hist.; type locality, Cobán and Cahabon, Guatemala, here restricted to Cobán).

Type.—Mus. Hist. Nat. Paris.

Type locality.—"N. Orléans; Mexique; Rio-Sumasinta (Amér.

centr.): *M. Morelet.* Amér. septentr. ♂♀ ?Vallée de la Madeleine (N. Grenade), ad. et j. âge: *M. J. Goudot.* Santa-Fé de Bogotá (N. Grenade): *M. Lewy, V. V. Vélins No. 28.*" Here restricted to Cosamaloapam, Veracruz.

Range.—Atlantic slopes of southern Mexico south of central Veracruz; recorded from the states of Puebla, Veracruz, Tabasco, Campeche, and Chiapas; records from Yucatán and Cozumel Island presumably are referable to *K. creaseri* and *K. cruentatum consors.* Ranges through Central America to northern South America.

KINOSTERNON SONORIENSE LeConte

Kinosternum sonoriense LeConte, Proc. Acad. Nat. Sci. Philadelphia, 1854, p. 184.

Thyrosternum sonoriense, Agassiz, Contributions to the natural history of the United States, vol. 1, 1857, p. 428; vol. 2, pl. 5, figs. 8–11 (*Cinosternum sonoriense* LeConte).

Kinosternon sonoriense, Stejneger, Proc. U. S. Nat. Mus., vol. 25, 1902, p. 149.—Van Denburgh, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 967–970, pls. 120–121.

?*Cinosternon punctatum* Gray, Catalogue of the shield reptiles in the British Museum, 1855, p. 45, pl. 20c, figs. 5, 6 (type in Brit. Mus.; "North America," here restricted to Tucson, Ariz.).

Type.—Acad. Nat. Sci. Philadelphia.

Type locality.—Tucson, Ariz.

Range.—Sonora, Chihuahua, and Durango (Durango); in the United States: southeastern California, southern Arizona, New Mexico to western Texas.

Genus CLAUDIUS Cope

Claudius Cope, Proc. Acad. Nat. Sci. Philadelphia, 1865, p. 187.

Genotype.—Claudius angustatus Cope.

Range.—Restricted to the Atlantic coast from Veracruz to British Honduras.

Species.—One.

CLAUDIUS ANGUSTATUS Cope

Claudius angustatus Cope, Proc. Acad. Nat. Sci. Philadelphia, 1865, pp. 187, 189.—Bocourt, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 1, 1870, pp. 20–21, pl. 4 (color).

Claudius megalocephalus Bocourt, Ann. Sci. Nat., ser. 5, vol. 10, 1868, p. 122 (type locality, Mexico, here restricted to Tabasco; type in Mus. Hist. Nat. Paris).

Type.—U.S.N.M. Nos. 6518, 6525.

Type locality.—Tabasco.

Range.—Veracruz southward to British Honduras. Recorded in Mexico from the states of Veracruz, Tabasco, and Campeche.

Genus STAUROTYPUS Wagler

Staurotypus WAGLER, Natürliches System der Amphibien . . ., 1830, p. 137.
Stauremys GRAY, Proc. Zool. Soc. London, 1864, p. 127 [genotype, *Staurotypus* (*Stauremys*) *salvinii* Gray].

Genotype.—*Terrapene triporcata* Wiegmann.
Range.—Atlantic slopes of southern Mexico south to Guatemala.
Species.—Two.

KEY TO SPECIES OF STAUROTYPUS

1. Suture between humerals longest; abdominals much broader than long; length of bridge 5½ or more times in length of plastron----------**salvinii** (p. 27)
   Suture between pectorals longest; abdominals as broad as long; length of bridge less than 5½ times in length of plastron---------**triporcatus** (p. 27)

STAUROTYPUS TRIPORCATUS (Wiegmann)

Terrapene triporcata WIEGMANN, Isis von Oken, 1828, p. 364.
Staurotypus triporcatus, WAGLER, Natürliches System der Amphibien . . ., 1830, pl. 5, figs. 44–45.
Staurotypus salvinii, BOCOURT (*nec* Gray), Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 1, 1870, pp. 22–23, pl. 5, fig. 3.
Claudius pictus COPE, Proc. Acad. Nat. Sci. Philadelphia, 1872, pp. 26–27 (a name proposed for the preceding specimen of Bocourt; type locality, Vera Paz, Guatemala, here restricted to Alta Verapaz; type presumably in Acad. Nat. Sci. Philadelphia).

Type.—Presumably in the Berlin Mus.; Deppe collector.
Type locality.—Río Alvarado, Veracruz.
Range.—Atlantic slopes from Veracruz to Guatemala and British Honduras (recorded in Mexico only from the states of Veracruz and Tabasco).

STAUROTYPUS SALVINII Gray

Staurotypus salvinii GRAY, Proc. Zool. Soc. London, 1864, p. 127.
Staurotypus marmoratus FISCHER, Archiv für Naturg., 1872, p. 265, pl. 10 (type locality, "Mexico," here restricted to Santa Efigenia, Oaxaca; St. Petersburg Mus.).
Claudius severus COPE, Proc. Acad. Nat. Sci. Philadelphia, 1872, pp. 24–26 (type locality, Santa Efigenia, Oaxaca; type presumably in Acad. Nat. Sci. Philadelphia).
Staurotypus biporcatus SIEBENROCK, Zool. Jahrb., Suppl. 10, No. 3, 1909, p. 438 (type locality restricted here to that of *S. salvinii* Gray; type here restricted, as lectotype, to that of *S. salvinii* Gray).

Type.—Brit. Mus.
Type locality.—Huamuchil, Guatemala.
Range.—Pacific slopes from the Isthmus of Tehuantepec to Guatemala (in Mexico recorded only from Oaxaca).

Family TESTUDINIDAE Gray

Testudinidae GRAY, Ann. Philos., ser. 2, vol. 10, 1825, p. 210.

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Genera.—About four, of which one occurs in Mexico.

Range.—World-wide in tropical and subtropical areas, except the East Indies and Australia.

Genus GOPHERUS Rafinesque

Gopherus RAFINESQUE, Atlantic Journ., vol. 1, 1832, p. 64.

Genotype.—*Testudo polyphemus* Daudin.

Range.—Southern United States and northern Mexico.

Species.—Three recognized, two of which occur in Mexico.

KEY TO MEXICAN SPECIES OF GOPHERUS [13]

1. Carapace dome-shaped, rounded on top; carapace length about twice shell height (47–56 percent)----------**berlandieri** (p. 28)
   Carapace with flat-topped contour; carapace length more than twice shell height (36–48 percent)----------**agassizii** (p. 28)

GOPHERUS BERLANDIERI (Agassiz)

Xerobates berlandieri AGASSIZ, Contributions to the natural history of the United States, vol. 1, 1857, p. 447; vol. 2, 1857, pl. 3, figs. 17–19.

Testudo berlandieri, BOULENGER, Catalogue of the chelonians, rhynchocephalians and crocodiles in the British Museum, 1889, p. 156.

Gopherus berlandieri, STEJNEGER, North Amer. Fauna, No. 7, 1893, p. 161.

Type.—U.S.N.M. No. 60, two specimens.

Type locality.—Lower Rio Grande, Tex., here restricted to Brownsville.

Range.—Nuevo León, Tamaulipas, and Coahuila [14]; in United States: Southern Texas.

GOPHERUS AGASSIZII (Cooper)

Xerobates agassizii COOPER, Proc. California Acad. Sci., vol. 2, 1863, p. 125.

Testudo agassizii, BOULENGER, Catalogue of the chelonians, rhynchocephalians and crocodiles in the British Museum, 1889, p. 156.

Gopherus agassizii, STEJNEGER, North Amer. Fauna, No. 7, 1893, p. 161.—WOODBURY and HARDY, Ecol. Monogr., vol. 18, 1948, pp. 145–200, figs. 1–25.

Type.—Unknown.

Type locality.—Mountains near Fort Mojave, Calif.

Range.—Baja California, Sonora including Tiburón Island; in the United States, southeastern California and southwestern Arizona north into Nevada and Utah.

Family EMYIDAE [15] Gray

Emyidae GRAY, Ann. Philos., ser. 2, vol. 10, 1825, p. 210.

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[13] From Woodbury and Hardy, Ecol. Monogr., vol. 18, 1948, p. 152.

[14] Dugès's record (La Naturaleza, ser. 2, vol. 1, 1888, pp. 146–147; vol. 2, p. 479) from Bolsón de Mapimí, Chihuahua, cannot be authoritatively allocated. It may be referable to this species.

[15] See Dermochelyidae (p. 13) for a discussion of orthography of family names. The present family has as its type the genus *Emys*, not the genus *Emyda* Gray, 1831, which belongs to the family Trionychidae (a homonym, *Emyda* Rafinesque, 1815, long overlooked but of earlier date, belongs to the Emyidae, but being a substitute for the generic name *Emys*, it is not available).

Genera.—About 25, of which 6 occur in Mexico.

Range.—World-wide except Australia and East Indies.

KEY TO MEXICAN GENERA OF EMYIDAE

1. Plastron hinged, movable; no inframarginals ..... **Terrapene** (p. 34)
   Plastron fixed, immovable; inframarginals present 2
2. Alveolar surface of upper jaw with a ridge either smooth or toothed, parallel to labial cutting edge 5
   Alveolar surface of upper jaw ridgeless, smooth 3
3. A strong interrupted median keel on carapace, with a marked tubercle at the end of each vertebral; a low dorsal crest of enlarged compressed scales on tail; bridge much shorter than posterior lobe of plastron. **Malaclemys** (p. 36)
   Dorsal keel on carapace absent or continuous, not tuberculate; no crest of scales on tail 4
4. Bridge much shorter than posterior lobe of plastron ..... **Clemmys** (p. 37)
   Bridge longer than posterior lobe of plastron ..... **Geoemyda** (p. 29)
5. Rear of carapace perfectly smoothly rounded, edges of all plates even, no notches except a median rear one; a terminal notch flanked on either side by a projection on upper jaw, *and* cutting edge of lower jaw smooth. **Chrysemys** (p. 33)
   Rear of carapace at least somewhat serrate; no terminal notch flanked on either side by a projection in upper jaw, or if so cutting edge of lower jaw serrate ..... **Pseudemys** (p. 31)

Genus GEOEMYDA Gray

Geoemyda Gray, Proc. Zool. Soc. London, 1834, p. 100.—Wettstein, Sitzb. Akad. Wiss. Wien, math.-naturw. Kl., Abth. 1, vol. 143, 1934, pp. 17–19 (key to American species).

Rhinoclemys Gray, Ann. Mag. Nat. Hist., ser. 3, vol. 12, 1863, p. 182 (genotype, *Geoclemmys annulata* Gray).

Genotype.—*Testudo spengleri* Gmelin.

Range.—India to Japan and the Malay Archipelago; the coasts of central Mexico south into South America.

Species.—Nineteen species and subspecies are known, nine in the Americas, four in Mexico.

KEY TO MEXICAN SPECIES OF GEOEMYDA

1. Bridge yellow ..... **areolata** (p. 30)
   Bridge black, uniform or with a few yellow markings 2
2. Upper jaw hooked or smooth; plastron dark with a yellow margin **rubida** (p. 30)
   Upper jaw notched; plastron yellow, with a broad dark median stripe 3
3. Carapace almost uniform brown, without distinct markings, its entire border strongly bowed, nowhere straight; sides of head in front of eye with usually 2, sometimes 3, bright horizontal lines ..... **pulcherrima incisa** (p. 30)
   Carapace olive-brown, with bright, yellow-red concentric or hieroglyphic pattern of lines on each scale; young with dark, light-centered spots on costals; only lateral border of carapace strongly bowed; sides of head in front of eye always with 3 lines ..... **pulcherrima pulcherrima** (p. 30)

GEOEMYDA AREOLATA (Duméril and Bibron)

Emys areolata DUMÉRIL and BIBRON, *in* Duméril and Duméril, Catalogue méthodique de la collection des reptiles . . ., 1851, p. 10.
Geoemyda areolata, WETTSTEIN, Sitzb. Akad. Wiss. Wien, math.-nat. Kl., Abth. 1, vol. 143, 1934, p. 18.

Type.—Mus. Hist. Nat. Paris; M. Morelet collector.

Type locality.—El Petén, Guatemala, here restricted to La Libertad.

Range.—Coast of central Veracruz south to northern Guatemala and British Honduras. Recorded in Mexico from Veracruz, Tabasco, Campeche, Yucatán, and Quintana Roo (Cobá, Cozumel Island).

GEOEMYDA PULCHERRIMA PULCHERRIMA (Gray)

Emys pulcherrima GRAY, Catalogue of the shield reptiles in the British Museum, vol. 1, 1855, p. 25, pl. 25, fig. 1.—BOCOURT, Mission scientifique au Mexique, Études sur les reptiles, livr. 1, 1870, pp. 15–16, pl. 7, figs. 1, 1a, 1b (color).
Geoemyda pulcherrima pulcherrima, WETTSTEIN, Sitzb. Akad. Wiss. Wien, math.-nat. Kl., Abth. 1, vol. 143, 1934, p. 18.

Type.—Brit. Mus. Nat. Hist.

Type locality.—Mexico, here restricted to Presidio de Mazatlán, Sinaloa.

Range.—Pacific slopes from southern Sonora to Guerrero and probably western Oaxaca. Recorded from the states of Sonora, Sinaloa, Nayarit, Colima, and Guerrero.

GEOEMYDA PULCHERRIMA INCISA (Bocourt)

Emys incisa BOCOURT, Ann. Sci. Nat., vol. 10, 1868, p. 121; Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 1, 1870, pp. 11–13, pls. 1, 2.
Geoemyda pulcherrima incisa, WETTSTEIN, Sitzb. Akad. Wiss. Wien, math.-nat. Kl., Abth. 1, vol. 143, 1934, p. 18.

Type.—Mus. Hist. Nat. Paris.

Type locality.—La Unión, El Salvador.

Range.—Pacific slopes of the Isthmus of Tehuantepec southward to at least El Salvador. Recorded from Oaxaca and Chiapas.

GEOEMYDA RUBIDA (Cope)

Chelopus rubida COPE, Proc. Amer. Philos. Soc., vol. 11, 1870, p. 148.
Geoemyda rubida, SIEBENROCK, Zool. Jahrb., Suppl. 10, Heft 3, 1909, p. 500.
Rhinoclemmys mexicana GRAY, Supplement to the catalogue of shield reptiles . . ., 1870, p. 30 (type locality, "San Juan del Río"; type in Brit. Mus. Nat. Hist.; Rebouch collector).

Type.—Unknown.

Type locality.—Juchitán, Oaxaca.

Range.—The Pacific coast from Colima to the Isthmus of Tehuantepec (recorded from Colima, Michoacán, Guerrero, and Oaxaca[16]).

[16] The exact location of San Juan del Río (type locality of *Rhinoclemmys mexicana*) is uncertain; it probably is one of the two cities of that name in the state of Oaxaca.

Genus PSEUDEMYS Gray

Pseudemys Gray, Proc. Zool. Soc. London, 1855 (1856), p. 197.

Type.—*Testudo concinna* LeConte.

Species.—About 8, and a total of about 22 species and subspecies, of which 8 forms occur in Mexico.

Range.—The United States east of the Rocky Mountains, Baja California, both coasts of Mexico from the Río Grande on the east and southern Sonora on the west southward to Argentina.

KEY TO MEXICAN SPECIES OF PSEUDEMYS

1. Ridge on alveolar surface of upper jaw distinctly toothed; temporal stripe absent or not expanded 2
   Ridge on alveolar surface of upper jaw not toothed; temporal stripe or spot much expanded 3
2. A strong notch at apex of upper jaw, flanked on each side by a toothlike projection; teeth on alveolar ridge long, numerous; nostrils terminal; snout not pointed, obtuse ..... **floridana texana** (p. 33)
   No notch at apex of upper jaw, and no subterminal toothlike projections; teeth on alveolar ridge smaller, less numerous; nostrils pierced below and posterior to tip of snout; snout pointed, acuminate ..... **umbra** (p. 33)
3. A light, round temporal spot, completely isolated from orbital markings .. 4
   Supratemporal light spot elongate, reaching orbit 5
4. Temporal light spot completely isolated, not continuous with lines either anteriorly or posteriorly; bridge with longitudinal black stripes. **scripta gaigeae** (p. 33)
   Temporal light spot continuous toward rear with longitudinal light stripe; bridge black spotted ..... **scripta nebulosa** (p. 32)
5. Markings solid, intensely black, replacing or obscuring a linear juvenile pattern, and including a broad area along middle of plastron, lengthwise along middle of bridge, and on posterolateral corners of the marginal scutes above and below; these markings evident in bony plates as well as in epidermal scutes ..... **scripta hiltoni** (p. 32)
   Markings not as described 6
6. Plastral markings always present, either smudged, or, if in lines, the lines forming ocelli; supratemporal stripe, if visible, reaching eye. **scripta elegans** (p. 32)
   Plastral markings, if visible, not smudged, but in lines that tend to be arranged longitudinally, not ocellate; supratemporal stripe reaching eye or not .. 7
7. Dark ocellus of each costal scute nearest latter's posteroventral corner. **scripta cataspila** (p. 32)
   Dark ocelli nearest posterodorsal corners of costals ..... **scripta ornata** (p. 31)

PSEUDEMYS SCRIPTA ORNATA (Gray)

Emys ornata Gray, Synopsis reptilium, 1831, p. 30.—Bocourt, Mission scientifique au Mexique . . . , Études sur les reptiles, livr. 1, 1870, pl. 3, fig. 1, 1a.
Pseudemys scripta ornata, Carr, Herpetologica, vol. 1, 1938, p. 135, figs. 3, 4, 5.
Emys venusta Gray, Catalogue of the shield reptiles . . . , vol. 1, 1855, p. 24, pl. 24a (type locality, Mexico, Honduras and America, here restricted to Honduras; types in Brit. Mus.).

Type.—Brit. Mus., two cotypes.

Type locality.—Mazatlán, Sinaloa.

Range.—Pacific slopes of Mexico southward from southern Sinaloa, and both Atlantic and Pacific slopes (presumably) of Central America to Panama and possibly northern South America; Atlantic slopes of Mexico east of the Isthmus of Tehuantepec (recorded in Mexico from the states of Sinaloa, Jalisco, Oaxaca, Chiapas, Tabasco, Campeche, and Yucatán, and from Cozumel Island).

PSEUDEMYS SCRIPTA NEBULOSA (Van Denburgh)

Chrysemys nebulosa Van Denburgh, Proc. California Acad. Sci., ser. 2, vol. 5, 1895, p. 84, pls. 4–6.

Pseudemys scripta nebulosa, Carr, Amer. Mus. Nov., No. 1181, 1942, p. 1.

Type.—Destroyed.

Type locality.—Los Dolores, Baja California, Mexico.

Range.—The southern half of Baja California.

PSEUDEMYS SCRIPTA HILTONI Carr

Pseudemys scripta hiltoni Carr, Amer. Mus. Nov., No. 1181, 1942, pp. 1–4, fig. 1–3.

Type.—Amer. Mus. Nat. Hist. No. 63747; John W. Hilton collector.

Type locality.—Guirocoba, 28 miles southeast of Álamos, Sonora, Mexico.

Range.—Known only from the type locality; presumably occurs in northern Sinaloa as well as in Sonora.

PSEUDEMYS SCRIPTA CATASPILA (Günther)

Emys cataspila Günther, Biologia Centrali-Americana, Reptilia and Batrachia, 1885, p. 4, pl. 6, fig. B.

Pseudemys scripta cataspila, Carr, Herpetologica, vol. 1, 1938, p. 135.—Hartweg, Copeia, 1939, No. 1, p. 55.

? *Emys callirostris* Gray, Catalogue of the shield reptiles in the British Museum, vol. 1, 1855, p. 25, pl. 12B (type locality uncertain, here restricted to Alvarado, Veracruz; type in Brit. Mus.).

Type.—Brit. Mus., seven cotypes.

Type locality.—Mexico, here restricted to Alvarado, Veracruz.

Range.—Atlantic slopes of Mexico from the northern border to the Isthmus of Tehuantepec (recorded from the states of Tamaulipas and Veracruz).

PSEUDEMYS SCRIPTA ELEGANS (Wied)

Emys elegans Wied, Reise durch Nord-America, vol. 1, pt. 4, 1838, p. 213.

Pseudemys elegans, Cope, U. S. Nat. Mus. Bull. 1, 1875, p. 53.

Chrysemys scripta elegans, Siebenrock, Zool. Jahrb., Suppl., vol. 10, 1909, pp. 464–465.

Pseudemys troostii elegans, Stejneger and Barbour, Check list North American amphibians and reptiles, ed. 4, 1939, p. 167.—Schmidt and Owens, Publ. Field Mus. Nat. Hist., zool. ser., vol. 29, 1944, p. 101.

Pseudemys scripta elegans, Cagle, Copeia, 1944, No. 2, p. 105.

Type.—Unknown.

Type locality.—Fox River at New Harmony, Ind.

Range.—Northeastern Mexico: Coahuila, Nuevo León, and Tamaulipas. Widely distributed in central and southern United States.

PSEUDEMYS SCRIPTA GAIGEAE [17] Hartweg

Pseudemys scripta gaigeae HARTWEG, Occ. Pap. Mus. Zool. Univ. Michigan, No. 397, 1939, pp. 1–4.

Type.—Univ. Michigan Mus. Zool. No. 66472; Helen T. Gaige collector.

Type locality.—Rio Grande River, Boquillas, Brewster County, Tex.

Range.—Northern central Mexico (recorded from Coahuila and Durango).

PSEUDEMYS UMBRA (Bocourt)

Emys grayi BOCOURT, Ann. Sci. Nat., ser. 5, vol. 10, 1868, p. 121; Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 1, 1870, pp. 13–15, pl. 3, fig. 2, 2a.

Emys umbra BOCOURT, *in* O'Shaughnessy, Zool. Rec., vol. 13, 1876 (1878), Rept., p. 6 (substitute name for *Emys grayi* Bocourt, preoccupied by *Emys grayi* Günther = *Clemmys caspica caspica* [Gmelin]).—GÜNTHER, Biologia Centrali-Americana, Reptilia and Batrachia, 1885, pp. x, 5, pls. 4, 5, 6 (fig. A).

Type.—Mus. Hist. Nat. Paris.

Type locality.—Río Nagualate, Guatemala.

Range.—Pacific slopes of the Isthmus of Tehuantepec, southeastward to Guatemala. Recorded definitely only from the state of Oaxaca; other records from Chiapas may refer either to this or to *P. s. ornata.*

PSEUDEMYS FLORIDANA TEXANA Baur

Pseudemys texana BAUR, Proc. Amer. Philos. Soc., vol. 31, 1893, p. 223.
Pseudemys floridana texana, CARR, Copeia, 1938, p. 108.

Type.—Acad. Nat. Sci. Philadelphia No. 246.

Type locality.—San Antonio, Tex.

Range.—Central Texas and northeastern Mexico. Recorded only from Nuevo León.

Genus CHRYSEMYS Gray

Chrysemys GRAY, Catalogue of the tortoises . . . , 1844, p. 27.

Genotype.—*Testudo picta* Schneider.

Range.—Eastern three-fourths of the United States, extreme northern Mexico.

Species.—One, with four subspecies. One race occurs in Mexico.

[17] Schmidt and Owens (Publ. Field Mus. Nat. Hist., zool. ser., vol. 29, 1944, p. 101) regard this as a species distinct from that to which *elegans* belongs, but the distinguishing criterion mentioned appears to be one that in reality separates males from females of either form. We have not examined the specimens but regard all *Pseudemys* reported by Schmidt and Owens as *P. s. elegans.*

CHRYSEMYS PICTA BELLII (Gray)

Emys bellii GRAY, Synopsis reptilium . . . , 1831, p. 31.
Chrysemys picta bellii, BISHOP and SCHMIDT, Publ. Field Mus. Nat. Hist., zool. ser., vol. 18, 1931, p. 136.

Type.—Lost; originally in Brit. Mus.

Type locality.—Unknown, here restricted to Manhattan, Kans.

Range.—Western Illinois to Washington and British Columbia, south on the east of the Cascade Mountains to northern Chihuahua and southern Texas. Recorded only from the state of *Chihuahua:* Río Santa María, near Progreso.

Genus TERRAPENE Merrem

Terrapene MERREM, Tentamen systematis amphibiorum, 1820, p. 27.—DITMARS, Zoologica, vol. 17, 1934, pp. 1–44, figs. 1–41.

Type.—*Testudo clausa* Gmelin=*Terrapene carolina* (Linnaeus).

Range.—North America east of the Rocky Mountains and Arizona, south to Yucatán and Nayarit.

Species.—Eleven species and subspecies are recognized at present, six in Mexico.

KEY TO MEXICAN SPECIES OF TERRAPENE

1. Plastron with a conspicuous and well-defined pattern of yellow lines on a dark background (or dark lines on a yellow background)---------**ornata** (p. 36)
   Plastron without a lined pattern, either uniform or suffused here and there with dark color---------- 2
2. Pattern of carapace consisting of small, round or ovoid yellow dots 1.5–2 mm. in diameter, separated from each other by an average distance of 4 mm.
   klauberi (p. 35)
   Pattern not so---------- 3
3. Width of carapace 65–68 percent length of carapace, average 66 percent; height of shell 40–45 percent length of carapace; 4 rear claws; carapace horn-colored, without dark borders at sutures----------**coahuila** (p. 36)
   Width of carapace 68–79 percent length of carapace, average about 73 percent; height of shell 45–58 percent length of carapace, average 51 percent; rear claws 3 or 4; carapace either marked with yellow or horn-colored, but sutures always broadly margined with dark color---------- 4
4. No notch at apex of upper jaws; 4 rear claws----------**nelsoni** (p. 35)
   Apex of upper jaw notched; rear claws 3 or 4---------- 5
5. Rear claws always (so far as known) 4---------**mexicana yucatana** (p. 35)
   Rear claws generally 3 (81 percent of 32 specimens).
   mexicana mexicana (p. 34)

TERRAPENE MEXICANA MEXICANA (Gray)

Cistudo (*Onychotria*) *mexicana* GRAY, Proc. Zool. Soc. London, 1848 (Feb. 1849), vol. 16, pp. 16–17, pl. 2.
Cistudo mexicana, GRAY, Catalogue of shield reptiles in the British Museum, pt. 1, Testudinata, 1855, p. 40.
Onychotria mexicana, DUGÈS, La Naturaleza, ser. 2, vol. 1, 1888, pp. 107–108.
Cistudo carolina var. *mexicana*, BOULENGER, Catalogue of the chelonians, rhynchocephalians and crocodiles in the British Museum, 1889, p. 118.

Terrapene mexicana, BAUR, Amer. Nat., vol. 27, 1893, p. 677.—DITMARS, Zoologica, vol. 17, 1934, pp. 18–19, fig. 28.—MÜLLER, Zool. Anz., vol. 113, 1936, pp. 97–114, figs. 1–4.

Terrapene mexicana mexicana, SMITH, Publ. Field Mus. Nat. Hist., zool. ser., vol. 24, 1939, pp. 17–18.

Terrapene goldmani STEJNEGER, [18] Proc. Biol. Soc. Washington, vol. 46, 1933, pp. 119–120 (type, U.S.N.M. No. 46251; Chijol or Chijoles, southeastern corner of the state of San Luis Potosí, Mexico; E. W. Nelson and E. A. Goldman collectors).—DITMARS, Zoologica, vol. 17, 1934, pp. 20–22, figs. 34–36.

Terrapene yucatana, DITMARS (*nec* Boulenger), Zoologica, vol. 17, 1934, figs. 29, 30.

Type.—Brit. Mus. Nat. Hist.; two female cotypes; collector unknown.

Type locality.—Mexico, restricted by Müller to Tampico, Tamaulipas.

Range.—Atlantic slopes from central Tamaulipas and eastern Nuevo León to northern Veracruz. Known only from San Luis Potosí, Veracruz, and Tamaulipas.

TERRAPENE MEXICANA YUCATANA (Boulenger)

Cistudo yucatana BOULENGER, Ann. Mag. Nat. Hist., ser. 6, vol. 15, 1895, p. 330.

Terrapene yucatana, SIEBENROCK, Zool. Jahrb., Suppl., vol. 10, 1909, p. 492.

Terrapene mexicana yucatana, SMITH, Publ. Field Mus. Nat. Hist., zool. ser., vol. 24, 1939, pp. 17–18.

Type.—Brit. Mus. Nat. Hist.

Type locality.—Northern Yucatán, here restricted to Chichen Itzá.

Range.—Northern part of the peninsula of Yucatán. Recorded only from Yucatán and Quintana Roo.

TERRAPENE NELSONI Stejneger

Terrapene nelsoni STEJNEGER, Journ. Washington Acad. Sci., vol. 15, 1925, p. 463.—DITMARS, Zoologica, vol. 17, 1934, pp. 19–20, figs. 31–33.

Type.—U.S.N.M. No. 46252; E. W. Nelson and E. A. Goldman collectors.

Type locality.—Pedro Pablo, Tepic [=Nayarit], Mexico, 2,500 feet altitude.

Range.—Known only from the type locality.

TERRAPENE KLAUBERI Bogert

Terrapene klauberi BOGERT, Amer. Mus. Nov., No. 1226, 1943, pp. 1–4, figs. 1–13.

[18] Schmidt and Owens (Publ. Field Mus. Nat. Hist., zool. ser., vol. 29, 1944, p. 103) regard *T. goldmani* as a distinct species "of lowland San Luis Potosí," implying that its closest relative, *T. mexicana*, is restricted to other areas, presumably highland Mexico inasmuch as lowland San Luis Potosí is scarcely distinguishable faunistically from northern Veracruz, southern Tamaulipas, and eastern Nuevo León. The entire area, as a matter of fact, is small. However, in spite of a few records of occurrence of *T. mexicana* on the plateau, notably by Dugès (*loc. cit.*), we do not regard any of them as reliable, and believe the species is restricted to the approximate range here stated. There can, therefore, be no geographical isolation of two populations to consider.

Type.—Amer. Mus. Nat. Hist. No. 63751; John W. Hilton collector.

Type locality.—Rancho Guirocoba, about 18 miles southeast of Álamos, Sonora.

Range.—Known only from the type locality and Sierra de Batuc, 8 kilometers northeast of Matapé, Sonora.

TERRAPENE COAHUILA Schmidt and Owens

Terrapene coahuila Schmidt and Owens, Publ. Field Mus. Nat. Hist., zool. ser., vol. 29, No. 6, 1944, pp. 101–103.

Type.—Chicago Nat. Hist. Mus. No. 41234; Ernest G. Marsh collector.

Type locality.—Quatro Ciénegas, Coahuila, Mexico.

Range.—Known only from the type locality.

TERRAPENE ORNATA (Agassiz)

Cistudo ornata Agassiz, Contributions to the natural history of the United States, vol. 1, 1857, p. 445.

Terrapene ornata, Baur, Science, vol. 17, 1891, p. 191.—Ditmars, Zoologica, vol. 17, 1934, pp. 16–18, figs. 24–27.

Cotypes.—U.S.N.M. Nos. 7541, 7542, 7547(?); Mus. Comp. Zool. No. 1536, Burlington, Iowa; J. Rauch collector.

Type locality.—The upper Missouri and Iowa, here restricted to Council Bluffs, Iowa.

Range.—Widespread in the United States between the Rocky Mountains and the Mississippi River reaching east to Indiana and west to Arizona; extreme northern Mexico. Reported only from Sonora and Chihuahua.

Genus MALACLEMYS Gray

Malaclemys Gray, Catalogue of the tortoises . . ., 1844, p. 28.

Genotype.—*Testudo concentrica* Shaw.

Range.—Atlantic and Gulf coasts of the United States and Mexico.

Species.—One, of five distinct races, only one of which has been found in Mexico.

MALACLEMYS TERRAPIN LITTORALIS Hay

Malaclemmys littoralis Hay, Bull. U. S. Bur. Fish., vol. 24, 1904, p. 18, pls. 8, 9, 12, figs. 2, 3.

M[alaclemmys] terrapin littoralis, Carr, Copeia, 1946, p. 172.

Type.—U.S.N.M. No. 33913; W. P. Hay collector.

Type locality.—Rockport, Tex.

Range.—Coast of Texas southward possibly to the Yucatán Peninsula. Recorded only from "Mexico" (Strauch).

Genus CLEMMYS Ritgen

Clemmys RITGEN, Nova Acta Acad. Leopold.-Carol., vol. 14, pt. 1, 1828, p. 272.

Genotype.—*Testudo punctata* Schoepff [= *Clemmys guttata* (Schneider)].

Range.—Southern Europe, northwestern Africa, southern China and Japan, extreme western and the eastern third of the United States.

Species.—Fifteen species and subspecies are recognized, five in North America, one of which enters Mexico.

CLEMMYS MARMORATA PALLIDA Seeliger

Clemmys marmorata pallida SEELIGER, Copeia, 1945, pp. 158–159.

Type.—Mus. Vert. Zool. No. 6716; J. E. Law collector.

Type locality.—Lower Coyote Creek, near Alamitos, Orange County, Calif.

Range.—Central California near the mouth of the Sacramento River south to northwestern Baja California. Recorded only from northern Baja California.

Subclass LEPIDOSAURIA Romer

Lepidosauria ROMER, Vertebrate paleontology, ed. 2, 1945, p. 595.

Orders.—Two orders are represented by living members; one (Rhynchocephalia) is restricted to certain islands off North Island, New Zealand, and the other is world-wide in distribution.

Order SQUAMATA Oppel

Squamata OPPEL, Die Ordnungen, Familien und Gattungen der Reptilien . . . , 1811, p. 14.

Suborders.—Three living suborders are recognized: the Sauria, Serpentes, and Amphisbaenia.

Suborder AMPHISBAENIA Gray

Amphisbaenia GRAY, Catalogue of the tortoises, crocodilians and amphisbaenians in British Museum, 1844, p. 68 (as an order).

Families.—Two, only one of which occurs in Mexico. When the anatomy of the forms of amphisbaenians is better known, it is probable that several other families will be recognized.

Range.—West Indies, tropical parts of South America north to Arizona, Florida, and Baja California; Spain, Turkey through Africa.

Family BIPEDIDAE Stejneger

Bipedidae STEJNEGER, Science, vol. 21, 1905, pp. 157–158.

Genera.—One. For the present we prefer to refer all Mexican forms to the single genus *Bipes* despite the differences in digital structure.

Studies on the cranial anatomy may reveal differences not now apparent.

Range.—The southern tip of Baja California, Arizona, the Río Balsas Valley, and southern Guerrero.

Genus BIPES Latreille

Bipes Latreille, Histoire naturelle des reptiles, vol. 2, 1802, p. 90.
Bimanus Oppel, Die Ordnungen, Familien und Gattungen der Reptilien . . ., 1811, p. 18.
Hemichirotes Dugès, *in* Cope, Amer. Nat., vol. 28, 1894, p. 436 (type, *Hemichirotes tridactylus* Dugès).
Euchirotes Cope, *ibid.* (type, *Euchirotes biporus* Cope).

Genotype.—*Bipes canaliculatus* Bonnaterre.

Range.—Baja California, Guerrero, southeastern Arizona.

Species.—Three.

KEY TO SPECIES OF BIPES

1. Digits 5 2
   Digits 3, clawed ..... **tridactylus** (p. 38)
2. All digits equally developed, all generally with claws; 6 preanal pores. **canaliculatus** (p. 38)
   One digit smaller and lacking claw; 2 preanal pores ..... **biporus** (p. 38)

BIPES TRIDACTYLUS (Dugès)

Hemichirotes tridactylus Dugès, *in* Cope, Amer. Nat., vol. 28, 1894, pp. 436–437, fig. 6; La Naturaleza, ser. 2, vol. 2, 1894, pp. 411–412, pl. 20.
Bipes tridactylus, Smith and Necker, Anal. Esc. Nac. Cien. Biol., vol. 3, 1943, pp. 196–197.

Type.—Alfredo Dugès Mus., Guanajuato, Guanajuato, Mexico.

Type locality.—Tecpan de Galeana, Guerrero.

Range.—Known only from type locality (only the type specimen known).

BIPES BIPORUS (Cope)

Euchirotes biporus Cope, Amer. Nat., 1894, p. 437, figs. 5–5e; Ann. Rep. U. S. Nat. Mus., 1898 (1900), pp. 680–682, fig. 140.
Bipes biporus, Stejneger and Barbour, Check list of North American amphibians and reptiles, 1917, p. 72.

Type.—U.S.N.M. No. 8568, cotypes (?), T. H. Street collector, and No. 12599, 12 specimens, L. Belding collector.

Type locality.—Cape San Lucas, Baja California.

Range.—The cape region of southern Baja California. Reported from La Paz, Cape San Lucas.

BIPES CANALICULATUS Bonnaterre

B[*ipes*] *canaliculatus* Bonnaterre, Encyclopédie méthodique, Erpétologie, 1789, p. 68, pl. 12.
Bipes canaliculatus, Sonnini and Latreille, Histoire naturelle des reptiles, vol. 2, 1801, p. 90.—Smith, Journ. Washington Acad. Sci., vol. 39, 1949, pp. 42–43.

Chirotes canaliculatus, MERREM, Tentamen systematis amphibiorum, 1820, p. 161.—BOCOURT, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 7, 1881, pp. 487–488, pl. 21C, figs. 8, 8a–c.—BOULENGER, Catalogue of the lizards in the British Museum, vol. 2, 1885, p. 432.

Lacerta lumbricoides SHAW, Naturalists' Miscellany, vol. 6, 1795, pl. and text No. 212 (type locality, Mexico, here restricted to Mexcala, Guerrero; type originally in British Museum).

Lacerta mexicana DONNDORFF, Zool. Beiträge zur 13. Ausg. Linneschen Natursystem, vol. 3, 1798, p. 135 (here restricted to Mexcala, Guerrero).

Chalcides sulcata SUCKOW, Anfangsgründe der theoret. und angewandten Naturgeschichte der Thiere, vol. 3, 1798, p. 147 (here restricted to Mexcala, Guerrero).

Chamaesaura propus SCHNEIDER, Historia amphibiorum naturalis et literaria, fasc. 2, 1801, p. 211 (here restricted to Mexcala, Guerrero).

Type.—Not known.

Type locality.—Mexico, here restricted to Mexcala, Guerrero.

Range.—Known in the basin of Río Balsas, Guerrero. Reported from Mexcala, Tecuaiziapan, and Balsas.[19]

Suborder SAURIA Macartney

Sauria MACARTNEY, *in* Ross's translation Cuvier's Leçons d'anatomie comparée, vol. 1, 1802, table 3.

Families.—Nineteen, of which 10 occur in Mexico.

KEY TO MEXICAN FAMILIES OF SAURIA

1. Neither forelegs nor hind legs evident externally 2
   Both forelegs and hind legs visible externally 3
2. No eye opening; eye scarcely or not visible below lateral head scales; one unpaired median scale between frontal and rostral—**Anelytropsidae** (p. 170)
   Eye opening present, although small; a pair of scales on dorsal surface of head between frontal and rostral—**Anniellidae** (p. 208)
3. No movable eyelids; eyes permanently open 4
   Eyelids present, movable 6
4. All scales around middle of body uniform, flat, cycloid, smooth, in about 13 rows—**Teiidae** [20] (p. 170)
   Not so 5
5. Head covered with large, flat plates; ventral scales large, quadrangular, abruptly differentiated from granular lateral scales—**Xantusiidae** (p. 151)
   Dorsal surface of head covered with granular scales; ventral scales smaller, rounded, not abruptly differentiated from granular lateral scales. **Gekkonidae** (p. 40)
6. All scales around middle of body perfectly smooth (sometimes finely striated), cycloid, more or less equal in size (those in the middorsal row or pair or rows may be widened) 7
   Not so 8
7. Only one scale in contact with frontal anteriorly; five supraoculars. **Anguidae** [21] (p. 194)

[19] A record for "Morelia?," Michoacán (Dugès, La Naturaleza, ser. 2, vol. 2, 1896, p. 480), is unacceptable until verified.

[20] *Gymnophthalmus* only.

[21] *Diploglossus* only.

Two or three scales in contact with frontal anteriorly; three or four supraoculars---------- **Scincidae** (p. 155)

8. A granular fold along sides of body, abruptly differentiated from much enlarged dorsal *and* ventral scales---------- **Anguidae** (p. 194)
   Not so---------- 9
9. Ventral scales large, quadrangular, in 8 longitudinal series; dorsals granular. **Teiidae** (p. 170)
   Ventral scales smaller, in more numerous rows---------- 10
10. Ventral scales quadrangular; scales on top of head small, more or less uniform, tubercular; dorsal scales granular with numerous enlarged tubercles-- 11
    Ventral scales pointed or rounded, not quadrangular; body and head scales as described or not---------- 12
11. Digits on hind leg of nearly equal length; enlarged tubercles covering most of dorsal surface of body; a series of about four large, paired postmentals on midline of chin, immediately back of mental------ **Helodermidae** (p. 192)
    Digits on hind leg varying greatly in length, fourth toe three times as long as fifth; enlarged tubercles on body much less numerous, not occupying as great an area as granules; no enlarged postmentals-- **Xenosauridae** (p. 207)
12. Head and most of body, except belly, covered with very minute granules; no parietal "eye"; no keels or tubercles along ventral surfaces of digits. **Gekkonidae** (p. 40)
    Head covered with larger scales; a parietal "eye" usually visible; at least one tubercle, or several keels, on most or all of lamellae on ventral surfaces of digits---------- **Iguanidae** (p. 53)

Family GEKKONIDAE Stejneger

Geckonidae Boulenger, Catalogue of the lizards in the British Museum, vol. 1, 1885, p. 3.
Gekkonidae Stejneger, U. S. Nat. Mus. Bull. 58, 1907, p. 164.

Subfamilies.—Studies by Noble (Amer. Mus. Nov., No. 4, 1921, pp. 1–16) and by M. A. Smith (Rec. Indian Mus., 1933, p. 16) indicate that neither the Eublepharidae nor the Uroplatidae are worthy of either family or subfamily distinction.

Genera.—About 75 genera are commonly recognized.

Range.—World-wide, in tropical and semitropical areas.

Remarks.—Eight genera of this family occur in Mexican territory. Three of these have probably been introduced accidentally from other parts of the world. *Peropus*, with a single representative, arrived on the west coast of Mexico probably from the Philippines. *Hemidactylus*, with three species, has a somewhat more complicated history. One species reached the west coast, probably from the Philippines (*frenatus*), another came across the Atlantic to the east coast from Europe or Africa (*turcicus*), and a third (*mabouia*) probably came from somewhere in the West Indies or, not impossibly, from Madagascar or South Africa where it also occurs. *Aristelliger* undoubtedly was imported from the West Indies. A fourth genus, *Gonatodes*, has

only recently been reported in Mexico, and may possibly have been transported by man from Central America.

It would appear from collections that all these genera have very limited or discontinuous distribution in Mexico.

The genera *Phyllodactylus*, *Sphaerodactylus*, and *Thecadactylus* very probably reached Mexico without the aid of man.

KEY TO MEXICAN GENERA OF GEKKONIDAE

1. Eyelid fully developed, body covered with small cycloid somewhat imbricating scales, with or without somewhat larger tubercles on body or tail; a few preanal pores present; digits cylindrical, never distinctly widened. **Coleonyx** (p. 41)
   Eyelid rudimentary, not capable of covering eye 2
2. Under surface of digits unwidened, covered with flat smooth scales, lacking leaflike lamellae; no preanal or femoral pores; diminutive size. **Gonatodes** (p. 45)
   A part of under surface of digits with widened lamellae present; femoral pores present or absent; size variable 3
3. A single widened terminal lamella on digits with the claw lateral to it; no femoral pores; diminutive in size ..... **Sphaerodactylus** (p. 52)
   Digits with one pair or several pairs of widened lamellae 4
4. A single terminal pair of lamellae, the claw between them; size larger; preanal and femoral pores absent in Mexican forms ..... **Phyllodactylus** (p. 46)
   Part of under surface of digits widened with a single or double series of lamellae, usually not present under terminal joint; pores present or absent 5
5. Subdigital lamellae undivided, in a single row ..... **Aristelliger** (p. 51)
   Subdigital lamellae in two rows, divided medially 6
6. Tail with enlarged, sometimes spiny tubercles, forming longitudinal rows or transverse whorls; body with at least some enlarged tubercles, which may be flat or trihedral; femoral or preanal pores present ..... **Hemidactylus** (p. 49)
   Tail and body lacking spines or enlarged tubercles; pores present or absent .. 7
7. Tail with flat ventral surface, serrated lateral edge, and a median row of enlarged scales on ventral surface; a long, doubly curved series of femoral pores; a fold of skin on posterior side of thigh and leg ..... **Peropus** (p. 51)
   Tail rounded, tapering, covered with imbricate scales, a little larger on under surface; no femoral or preanal pores; no skin fold on hind leg. **Thecadactylus** (p. 49)

Genus COLEONYX Gray

Coleonyx GRAY, Ann. Mag. Nat. Hist., vol. 16, 1845, p. 162.—KLAUBER, Trans. San Diego Soc. Nat. Hist., vol. 10, No. 11, 1945, pp. 133–216.

Brachydactylus PETERS, Monatsb. Akad. Wiss. Berlin, 1863, p. 41 (type, *B. mitratus* Peters).

Genotype.—*Coleonyx elegans* Gray.

Range.—The genus extends from Southwestern United States to Panama.

Species.—Five, with a total of 12 forms. Four species and 10 forms are known or are to be expected in Mexico.

KEY TO MEXICAN FORMS OF COLEONYX [22]

1. Dorsal surface covered with small granular scales, without larger tubercular scales 2
   Dorsal surface with larger tubercles intermingled with the small granular scales 9
2. Two light and 3 dark bands between level of arm and leg insertions. **fasciatus** (p. 43)
   Usually 4 or parts of 4 dark bands between levels of arm and leg insertions, or the bands broken up into spots 3
3. Preanal pores small, usually 4 in number (rarely more or less), the pore-bearing scales separated medially; maximum snout-vent measurement about 59 mm ..... **brevis** (p. 43)
   Preanal pores larger, usually 6 to 10, the series continuous, not separated medially; maximum snout-vent measurement 77 mm 4
4. Usually 4 or less postmental scales touching mental ..... **variegatus slevini** (p. 45)
   Usually 5 or more postmental scales touching mental 5
5. Preanal pores in males usually 8 or more ..... **variegatus bogerti** (p. 44)
   Preanal pores in males usually 7 or less 6
6. Dark transverse body bars in the adults considerably wider than the light interspaces 7
   Dark transverse body bars in adults about equal to or narrower than the light interspaces; or bars obsolete and replaced by spotting 8
7. A middorsal light longitudinal line usually splitting the dorsal body bars in the adults ..... **variegatus sonoriensis** (p. 45)
   No middorsal light longitudinal line; adults with longitudinal edges of the dark body bars even, with narrow uniform interspaces. **variegatus peninsularis** (p. 44)
8. Dark body bands in the adults unicolor; top of head unicolor; nuchal light loop narrow and clear ..... **variegatus abbotti** (p. 44)
   Dark body bands in the adults with light centers producing a double-barred effect, or bars obsolete and replaced by spotting; top of head spotted; nuchal light loop irregular or obsolete ..... **variegatus variegatus** (p. 44)
9. Enlarged supranasals [23] separated by a median circular scale. **elegans nemoralis** (p. 43)
   Enlarged supranasals in contact ..... **elegans elegans** (p. 42)

COLEONYX ELEGANS ELEGANS Gray

Coleonyx elegans GRAY, Ann. Mag. Nat. Hist., vol. 16, 1845, p. 162.

Coleonyx elegans elegans, KLAUBER, Trans. San Diego Soc. Nat. Hist., vol. 10, 1945, pp. 191–195, map.

G[*ymnodactylus*] *scapularis* A. DUMÉRIL, in Duméril and Duméril, Catalogue méthodique de la collection des reptiles, 1851, pp. 45–46 (Petén, Guatemala, here restricted to La Libertad; Mus. Hist. Nat. Paris).

Gymnodactylus coleonyx A. DUMÉRIL, Arch. Mus. Hist. Nat. Paris, vol. 8, 1858, p. 483 (same type as *scapularis*).

Type.—Brit. Mus. Nat. Hist., male spec.; Mr. Dyson collector.

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[22] Adapted from Klauber, *op. cit.*, pp. 205–206.

[23] We believe the scale above nostril should be designated supranasal rather than prenasal; and those scales following the mental should be postmental rather than gular, since the latter term refers to throat or gullet, rather than chin.

Type locality.—Belize, British Honduras.

Range.—Atlantic slopes from central Veracruz through the Yucatán Peninsula, including Honduras and northern Guatemala; on Pacific slopes in Chiapas and undoubtedly adjacent Guatemala. Reported from *Veracruz:* Jalapa, Potrero Viejo, San Lorenzo, Orizaba, Tezonapa, Zempoala, Presidio, San Juan Cuatotolapam; *Oaxaca:* San Cristóbal, Cosolapa; *Tabasco:* Teapa, Tenosique; *Campeche:* Tuxpeña Camp, Apasote, Encarnación; *Yucatán:* Chichen Itzá, Mayapán, Puz, Gongora Caves, Ziz, Xkyc Cave; *Chiapas:* La Esperanza, Piedra Parada; *Quintana Roo:* Mujeres Island.

COLEONYX ELEGANS NEMORALIS Klauber

Coleonyx elegans, Gadow, Proc. Zool. Soc. London (vol. 2), 1905, p. 212.
Coleonyx elegans nemoralis Klauber, Trans. San Diego Soc. Nat. Hist., vol. 10, 1945, pp. 195–199.

Type.—EHT-HMS No. 10509; Hobart M. Smith collector.

Type locality.—Hacienda Paso del Río, Colima.

Range.—Colima to southeastern Oaxaca (probably also Michoacán). Probably confined to the coastal area of these states. Reported from *Guerrero:* Cocoyul, Agua del Obispo, 4 to 5 miles north of Acapulco; *Michoacán:* vicinity of Jorullo (?); *Oaxaca:* (said to be intergrades with *elegans*) Tehuantepec, Mixtequilla, Tapanatepec, etc.

COLEONYX FASCIATUS (Boulenger) [24]

Eublepharis fasciatus Boulenger, Catalogue of the lizards in the British Museum, vol. 1, 1885, p. 423.—Günther, Biologia Centrali-Americana, Reptilia and Batrachia, 1893, p. 84, pl. 31, fig. A.
Coleonyx fasciatus, Taylor, Univ. Kansas Sci. Bull., vol. 22, 1935, pp. 203–205.—Klauber, Trans. San Diego Soc. Nat. Hist., vol. 10, 1945, pp. 182–184.

Type.—Brit. Mus. Nat. Hist.; A. Forrer collector.

Type locality.—Ventanas, Durango.

Range.—Known from western Durango, and Sinaloa. The only known specific locality other than the type locality is *Sinaloa:* 10 miles south of Presidio.

COLEONYX BREVIS Stejneger

Coleonyx brevis Stejneger, North Amer. Fauna, No. 7, 1893, pp. 163–164.—Smith, Trans. Kansas Acad. Sci., vol. 36, 1933, pp. 301–314, fig. 1B, pl. 1, figs. 2–3.—Klauber, Trans. San Diego Soc. Nat. Hist., vol. 10, 1945, pp. 184–191.

Type.—U.S.N.M. No. 13627; Mr. Marnock collector.

Type locality.—Helotes, Bexar County, Tex.

Range.—The Rio Grande Valley, from northern New Mexico to southern Texas, and southward through eastern Chihuahua and

[24] Bogert and Oliver (Bull. Amer. Mus. Nat. Hist., vol. 83, 1945, p. 330) suggest the possibility of intergradation of this form with *variegatus*. There is no evidence whatsoever that such is the case. See Klauber, *loc. cit.*

western Tamaulipas to southern Coahuila and extreme eastern Durango. Reported from *Tamaulipas:* Mier; *Nuevo León:* 5 miles south of Sabinas Hidalgo, near China, Ciénega de Flores, Mamulique Pass; *Coahuila:* Monclova, Saltillo; *Durango:* 6 miles northeast of Pedriceña.

COLEONYX VARIEGATUS VARIEGATUS (Baird)

Stenodactylus variegatus Baird, Proc. Acad. Nat. Sci. Philadelphia, vol. 10, 1858, p. 254.

Coleonyx variegatus, Cope, Proc. Acad. Nat. Sci. Philadelphia, vol. 18, 1866, pp. 125, 310.—Smith, Trans. Kansas Acad. Sci., vol. 36, 1933, pp. 301–314.

Eublepharis variegatus, Boulenger (part), Catalogue of the lizards of the British Museum, vol. 1, 1885, pp. 233–234.

Coleonyx variegatus variegatus, Klauber, Trans. San Diego Soc. Nat. Hist., vol. 10, 1945, pp. 138–153, map.

Type.—U.S.N.M. No. 3217 (now lost).

Type locality.—Colorado Desert (*fide* Klauber, *loc. cit.*), here restricted to Winterhaven, Calif.

Range.—Southern Nevada south through eastern California and western Arizona to northeastern Baja California and northwestern Arizona. Reported from *Baja California:* San Felipe, Colorado River Delta, Colorado Desert; *Sonora:* Paso McDougall, Sierra Blanca, Punta Peñasco, etc.

COLEONYX VARIEGATUS ABBOTTI Klauber

Coleonyx variegatus abbotti Klauber, Trans. San Diego Soc. Nat. Hist., vol. 10, 1945, pp. 154–159.

Type.—No. 34790, collection of L. M. Klauber; William Moore collector.

Type locality.—Proctor Valley, between Jamul and Upper Otay Reservoir, San Diego County, Calif.

Range.—Southwestern California and northwestern Baja California. Reported from *Baja California:* Ensenada, 65 miles southeast of Tecate, San José (lat. 31°), ? Calmallí, Isla de Cedros.

COLEONYX VARIEGATUS BOGERTI Klauber

Coleonyx variegatus bogerti Klauber, Trans. San Diego Soc. Nat. Hist., vol. 10, 1945, pp. 176–182.

Type.—L. M. Klauber No. 32486; Lee W. Arnold collector.

Type locality.—Xavier, Pima County, Ariz.

Range.—Southeastern Arizona and presumably adjacent Sonora and New Mexico. Not yet recorded from Mexico.

COLEONYX VARIEGATUS PENINSULARIS Klauber

Coleonyx variegatus peninsularis Klauber, Trans. San Diego Soc. Nat. Hist., vol. 10, 1945, pp. 160–162.

Type.—Mus. Comp. Zool. No. 37210; Miguel L. Cornejo collector.

Type locality.—La Paz, Baja California, Mexico.

Range.—Eastern side of southern Baja California. Reported from *Baja California:* San José del Cabo, between Loreto and Comondú.

COLEONYX VARIEGATUS SLEVINI Klauber

Coleonyx variegatus slevini KLAUBER, Trans. San Diego Soc. Nat. Hist., vol. 10, 1945, pp. 167–171.

Type.—California Acad. Sci. No. 51697; J. R. Slevin collector.

Type locality.—"South Santa Inez Island" (lat. 27° W.), Gulf of California (Baja California coast).

Range.—Isla Santa Inez and Isla de San Marcos, Gulf of California.

COLEONYX VARIEGATUS SONORIENSIS Klauber

Coleonyx variegatus sonoriensis KLAUBER, Trans. San Diego Soc. Nat. Hist., vol. 10, 1945, pp. 162–166.

Type.—Mus. Zool. Univ. Michigan No. 72140; Morrow J. Allen collector.

Type locality.—Five miles southeast of Hermosillo, Sonora.

Range.—Known only from central western Sonora. Reported from La Posa 10 miles northwest of Guaymas, Tepoca Bay, Sierra Álamo (30 miles west of Caborca), Isla de Tiburón.

Genus GONATODES Fitzinger

Gonatodes FITZINGER, Systema reptilium, 1843, pp. 91–92.

Genotype.—*Gymnodactylus albogularis* Duméril and Bibron = *Gonatodes albogularis* (Duméril and Bibron).

Range.—Tropical America; West Indies. Species in South Asia, Africa, and Malaya formerly regarded as members of the genus are now placed in *Cnemaspis*.

Species.—About 10, of which only one occurs in Mexico.

GONATODES FUSCUS (Hallowell)

Stenodactylus fuscus HALLOWELL, Journ. Acad. Nat. Sci. Philadelphia, ser. 2, vol. 3, 1855, p. 33.

Gymnodactylus fuscus, A. DUMÉRIL, Arch. Mus., vol. 8, 1856, p. 477.—BOCOURT, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 2, 1873, pp. 48, 49, pl. x, fig. 5, 5a, 5b, 5c.

[*Gonatodes albogularis*] *fuscus*, BOULENGER, Catalogue of the lizards in the British Museum, ed. 2, vol. 1, 1885, pp. 59–60.

Gonatodes fuscus, STEJNEGER, Proc. U. S. Nat. Mus., vol. 53, 1917, pp. 264–265.—SMITH, Copeia, 1944, p. 187.

Goniodactylus braconnieri O'SHAUGHNESSY, Ann. Mag. Nat. Hist., ser. 4, vol. 16, 1875, p. 265 (*fide* Boulenger; type locality, Baranquilla, Colombia; Brit. Mus. Nat. Hist.; Mr. Rippon collector).

Type.—Acad. Nat. Sci. Philadelphia?

Type locality.—Nicaragua, here restricted to Rama.

Range.—Huixtla, Chiapas (only definite Mexican record), southward in Central America to northwestern South America; Jamaica (probably introduced); Florida (probably introduced).

Genus PHYLLODACTYLUS Gray

Phyllodactylus Gray, Spicilegia zoologica, 1830, p. 3.
Discodactylus Fitzinger, Systema reptilium, 1843, p. 95 (type, *Phyllodactylus pulcher* Gray).

Genotype.—*Phyllodactylus pulcher* Gray.

Range.—California to and including most of South America; Galápagos Islands, southern Asia, Africa, Madagascar, Australia, et cetera.

Species.—About 48 species are known; 9 are known from Mexico.[25]

KEY TO MEXICAN SPECIES OF PHYLLODACTYLUS

1. Dorsal squamation consisting of minute rounded scales without admixture of larger tubercles; no enlarged tubercles on tail; small, length 52 mm. **unctus** (p. 47)
   Dorsal squamation with an admixture of larger tubercles; larger tubercles present or absent on tail 2
2. Tail lacking any trace of enlarged tubercles on dorsal surface 3
   Tail with smaller or larger tubercles intermixed with dorsal lepidosis 4
3. Scales on head between middle of orbits 15–17 [26]; on dorsal and lateral surface 14 to 16 rows of large, very distinct trihedral tubercles; smaller, 44 + mm. **bordai** (p. 47)
   Scales between orbits 19–24; dorsal tubercles low, small, rather indistinct, arranged in 8 to 12 rows; larger, 90 mm ..... **delcampi** (p. 47)
4. Two rows of tubercles on dorsal surface of tail (greatly reduced or absent in *homolepidurus*) 5
   More than two rows of enlarged tubercles, at least on basal third of tail 6
5. Scales between middle of orbits 22–26; tubercles on back and tail large, well defined ..... **muralis** (p. 47)
   Scales between middle of orbits 19–24; tubercles on back much smaller than in *muralis*, the caudal tubercles reduced so that they can be discerned only with difficulty; 67 mm ..... **homolepidurus** [27] (p. 48)

[25] *Phyllodactylus pulcher* Gray, Spicilegia Zoologica, from "Tropical America," may be found to occur in Mexico. It is distinct from all others listed here by having 20 to 22 longitudinal series of dorsal tubercles (rather than 14 to 16), and larger ventral scales, in 22 longitudinal and 53 transverse series (rather than 25 to 30 and 65, respectively).

We likewise are unable to place *Phyllodactylus mentalis* Werner (Jahrb. Hamb. Wiss. Anstalten, vol. 27, No. 2, 1910, p. 5; Zool. Mus. Hamburg; L. von Pöppinghausen coll.; Central America or Mexico). Mosauer (Copeia, 1936, p. 144) includes a few notes on the type.

[26] Not counting scales on vestigial eyelids.

[27] Bogert and Oliver (Bull. Amer. Mus. Nat. Hist., vol. 83, 1945) note that at least nine species of *Phyllodactylus* have been described from western Mexico in recent years and that certain of these are allopatric and their characters strongly suggest that a more accurate "*indication of the biological conditions that exist*" may be obtained by considering them as subspecies or races of the same species. They proceed to place *homolepidurus* as a subspecies under *tuberculosus*. Since the latter name cannot be fixed at the present time, we do not follow this proposal. Unfortunately, these authors have not examined most of the described forms and have overlooked the fact that at least four of the species may occur in the same general locality. They state that "the lizards of this genus exhibit considerable variation." These forms are probably no more variable than other lizards. For many years most North American species of *Phyllodactylus* were classified in museums as "*tuberculosus*," and examination of such material might create the erroneous idea that "*tuberculosus*" was an extremely variable species.

6. Four distinct longitudinal rows of enlarged tubercles at least on basal fourth of tail, usually in rather regular transverse rows 7
   At least six distinct rows of enlarged tubercles on basal part of tail, not invariably arranged in regular transverse rows 8
7. Scales between orbits 12–16; dorsal and posterior part of thigh with numerous large conical tubercles; color darker above, cream color below; 80 mm. **lanei** (p. 48)
   Similar to above but tubercles on back heavier, higher; head deeper, less depressed, color lighter; yellow below; 66 mm. (1 specimen). **magnatuberculatus** (p. 48)
8. Scales between orbits 25–30; 95 mm ..... **magnus** (p. 48)
   Scales between orbits much fewer ..... **tuberculosus** (p. 49)

PHYLLODACTYLUS UNCTUS (Cope)

Diplodactylus unctus Cope, Proc. Acad. Nat. Sci. Philadelphia, 1863, p. 102.
Phyllodactylus (Diplodactylus) unctus, Bocourt, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 2, 1873, pp. 43–44.
Phyllodactylus unctus, Taylor, Univ. Kansas Sci. Bull., vol. 28, 1942, pp. 96–99, fig. 2, A–D.

Type.—U.S.N.M. No. 5304.
Type locality.—Cape San Lucas, Baja California.
Range.—Southern Baja California. Reported from *Baja California:* San José del Cabo; Isla Partida near Isla Espíritu Santo, Isla Gallina, and Isla San Francisco.

PHYLLODACTYLUS DELCAMPI Mosauer

Phyllodactylus delcampi Mosauer, Copeia, 1936, pp. 141–146.

Type.—Mus. Comp. Zool. No. 41238; W. Mosauer collector.
Type locality.—Tierra Colorada, Guerrero.
Range.—Known only from the type locality.

PHYLLODACTYLUS BORDAI Taylor

Phyllodactylus bordai Taylor, Univ. Kansas Sci. Bull., vol. 28, pt. 1, 1942, pp. 93–96, fig. 1.

Type.—EHT-HMS No. 27732; E. H. Taylor collector.
Type locality.—Six miles north of Taxco, Guerrero.
Range.—Northern Guerrero; known only from the type locality.

PHYLLODACTYLUS MURALIS Taylor

Phyllodactylus muralis Taylor, Univ. Kansas Sci. Bull., vol. 26, 1939 (1940), pp. 543–547, fig. 7.

Type.—EHT-HMS No. 10902; H. M. Smith collector.
Type locality.—Totolapam, Oaxaca.
Range.—Oaxaca. Reported from Totolapam, Tehuantepec, San Gerónimo, Salina Cruz.

PHYLLODACTYLUS HOMOLEPIDURUS Smith

Phyllodactylus homolepidurus SMITH, Univ. Kansas Sci. Bull., vol. 22, 1935, pp. 121–125, pl. 25, fig. 2, text fig. 1A.

Phyllodactylus tuberculosus homolepidurus, BOGERT and OLIVER, Bull. Amer. Mus. Nat. Hist., vol. 83, art. 6, 1945, pp. 344–345.

Type.—EHT-HMS No. 10853 (originally EHT field No. 146); E. H. Taylor collector.

Type locality.—Five miles southwest of Hermosillo, Sonora.

Range.—Southern Sonora and adjacent Chihuahua. Reported from *Sonora:* La Posa, 5 miles southwest of Hermosillo, Guirocoba; *Chihuahua:* Batopilas.

PHYLLODACTYLUS MAGNATUBERCULATUS Taylor

Phyllodactylus magnatuberculatus TAYLOR, Univ. Kansas Sci. Bull., vol. 26, 1939 (1940), pp. 547–549.

Type.—EHT-HMS No. 10995; H. M. Smith collector.

Type locality.—Acapulco, Guerrero.

Range.—Known only from the type locality.

PHYLLODACTYLUS MAGNUS Taylor

Phyllodactylus magnus TAYLOR, Univ. Kansas Sci. Bull., vol. 28, 1942, pp. 99–103, fig. 3.

Type.—EHT-HMS No. 21783; E. H. Taylor collector.

Type locality.—Tierra Colorada, Guerrero.

Range.—Guerrero, Oaxaca, and Chiapas. Reported from *Guerrero:* Garrapatas, El Ocotito, Tierra Colorada, Agua del Obispo; *Oaxaca:* Tehuantepec, Oaxaca, Tres Cruces, Cerro Arenal, Cajón de Piedra, Escurana; *Chiapas:* Tonalá.

PHYLLODACTYLUS LANEI [28] Smith

Phyllodactylus lanei SMITH, Univ. Kansas Sci. Bull., vol. 22, 1935, pp. 125–132, fig. 1b; pl. 25, fig. 3.—TAYLOR, Univ. Kansas Sci. Bull., vol. 26, No. 15, 1939 (1940), pp. 541–542, fig. 6.

Type.—EHT-HMS No. 10942 (originally EHT field No. 146); E. H. Taylor and H. M. Smith collectors.

Type locality.—Near Tierra Colorada, Guerrero, Mexico.

Range.—Sinaloa and (?) western Durango [29] southward to central-southern Guerrero, probably confined to the coastal areas up to an elevation of about 3,500 feet. Recorded from the states of Sinaloa (including the Tres Marías Islands), ? Durango, Nayarit, ? Jalisco, Colima, Michoacán, and Guerrero.

[28] The suggestion of common identity of *P. lanei* and *P. tuberculosus* by Mosauer is, we believe, untenable (Mosauer, Copeia, 1936, p. 194).

[29] A specimen of *Phyllodactylus* collected at Durango, Mexico by Dr. T. H. Webb (U. S. N. M. No. 3208) and figured by Baird (Reptiles of the Boundary, U. S. and Mexican Boundary Surveys, 1859, p. 12, pl. 23, figs. 1–8) may or may not belong to this species, since Durango is considerably higher than this species is known to range.

PHYLLODACTYLUS TUBERCULOSUS Wiegmann [30]

Phyllodactylus tuberculosus WIEGMANN, Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol., vol. 17, pt. 1, 1835, p. 241, pl. 18, fig. 2.

? *Phyllodactylus Xanti* COPE, Proc. Acad. Nat. Sci. Philadelphia, 1863, p. 103 (Cape San Lucas, Baja California).

Type.—? Zool. Mus. Berlin; collector unknown.

Type locality.—"Californien."

Range.—? Extreme southern part of California, south through Baja California.

Genus THECADACTYLUS Gray

Thecadactylus GRAY, Ann. Philos., ser. 2, vol. 10, 1825, p. 198.

Genotype.—*Gecko rapicauda* Houttuyn.

Range.—Southern Mexico to northern South America (Peru); Antilles; islands north of Australia in Torres Strait.

Species.—Two.

THECADACTYLUS RAPICAUDUS (Houttuyn)

Gekko rapicauda HOUTTUYN, Verh. Genootsch. wet. Vlissing., vol. 9, 1782, p. 323, pl. 3, fig. 1.

Thecadactylus rapicauda, GRAY, Catalogue of the lizards in the collection of the British Museum, 1845, p. 146.—BOULENGER, Catalogue of the lizards in the British Museum, vol. 1, 1885, pp. 111–112.

Type.—Unknown.

Type locality.—American Islands, here restricted to Chichen Itzá, Yucatán.

Range.—Southward from Yucatán through Central America to northwestern South America; Lesser Antilles. Reported from *Yucatán:* Chichen Itzá; Puz Cave, Oxkutzcab; Chakxix Cave, Tekax. The Guadalajara reference of Cope (U. S. Nat. Mus. Bull. 32, 1887, p. 28) is very doubtful.

Genus HEMIDACTYLUS Oken

Hemidactylus OKEN, Isis, 1817, p. 1183 (based on Cuvier's Hemidactyle, Règne animal, vol. 2, 1817, p. 47).

Tachybates FITZINGER, Systema reptilium, 1843, p. 105 (type, "*Hemidactylus mabuya* Cuvier").

Pnočpus FITZINGER, Systema reptilium, 1843, p. 105 (type, "*Hemidactylus javanicus* Cuvier").

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[30] We have here followed the idea that Baja California or California is the type locality. However, since there are two forms (one undescribed) in Baja California, one with a spiny tail, the other without spines on the tail, it is not certain to which the name must apply, inasmuch as the type has a reproduced tail. Direct comparison of the two species with the type of *tuberculosus* will be necessary to determine the proper application of the name on the basis of characters not now discernible from the description or figure.

There are many reports of this form in the literature, and it is impossible to determine to what species many of them refer. Although for that reason many localities are thus not here cited, we have included every state from which "*tuberculosus*" has been recorded in the records for at least one species, basing our allocation either upon actual examination of specimens or a reasonably accurate geographic indication. There is one exception: Izúcar de Matamoros, Puebla.

Genotype.—*Gekko tuberculosus* Daudin [=*Hemidactylus mabouia* Moreau de Jonnès].

Range.—Widespread in Africa, southern Eurasia, tropical America, Polynesia.

Species.—About 60 known. Three are found in Mexico.

KEY TO MEXICAN SPECIES OF HEMIDACTYLUS

1. Preanal pores 4 to 10, forming a short angular series; no femoral pores; dorsal scales minute granules intermixed with large tubercles usually larger than interspaces between them; inner digits well developed_____**turcicus** (p. 50)
   Preanal and femoral pores forming a continuous series_____ 2
2. Small granules of the dorsal surface with only a few relatively small, convex tubercles, these usually on posterior part of body; pores 15–18 on each side, not separated mesially_____**frenatus** (p. 50)
   Small granules of the dorsal surface mixed with very numerous trihedral tubercles, irregularly scattered; pores from 15 to 30 on each side.
   mabouia (p. 50)

HEMIDACTYLUS MABOUIA (Moreau de Jonnès)

Gecko mabouia Moreau de Jonnès, Bull. Soc. Philom., 1818, p. 138.
Hemidactylus mabouia, Boulenger, Catalogue of the lizards of the British Museum, vol. 1, 1885, pp. 122–123.—Loveridge, Copeia, 1941, p. 248.

Type.—Mus. Hist. Nat. Paris.

Type locality.—"Antilles," here restricted to St. Vincent, Lesser Antilles.

Range.—In Mexico known only from "Veracruz" (probably city). Widespread in the West Indies, and the northern and eastern coast of South America; Madagascar and Africa. The American localities are probably due to relatively recent introductions from Africa, or the West Indies.

HEMIDACTYLUS FRENATUS Schlegel

Hemidactylus frenatus Schlegel, *in* Duméril and Bibron, Erpétologie générale . . ., vol. 3, 1836, pp. 366–368.—Taylor, Univ. Kansas Sci. Bull., vol. 26, 1939, pp. 444.—Burt and Myers, Stanford Univ. Publ., biol. sci., vol. 8, 1942, pp. 285–286.—Smith, Anal. Inst. Biol., vol. 14, 1943, p. 342.—Edgren, Nat. Hist. Misc., No. 55, 1950, p. 1.

Type.—Leyden Mus.

Type locality.—Java.

Range.—Guerrero, in the region about Acapulco. Widespread in southern Asia, Pacific Islands, etc. Reported from *Guerrero:* Acapulco, Tierra Colorada.

HEMIDACTYLUS TURCICUS TURCICUS (Linnaeus)

Lacerta turcica Linnaeus, Systema naturae, ed. 10, 1758, p. 202.
Hemidactylus turcicus, Smith, Univ. Kansas Sci. Bull., vol. 22, 1935, pp. 132–133, pl. 23, fig. 2.—Grant and Deuel, Herpetologica, vol. 2, 1944, pp. 130–135.
Hemidactylus turcicus turcicus, Loveridge, Copeia, 1941, p. 247.

Hemidactylus exsul BARBOUR and COLE, Bull. Mus. Comp. Zool., vol. 50, 1906, p. 148 (type locality, Progreso, Yucatán; Mus. Comp. Zool. No. 7039).—STUART, Copeia, 1934, No. 4, p. 185.

Type.—Unknown.

Type locality—"Habitat in Oriente," here restricted to Cairo, Egypt.

Range.—Tamaulipas south to Yucatán, distribution very probably discontinuous. Found in the West Indies, Florida, North Africa, and southwestern Asia. Reported from *Tamaulipas:* 12 miles east of Llera; *Veracruz:* no specific locality; *Tabasco:* Álvaro Obregón, Emiliano Zapata; *Campeche:* Ciudad del Carmen; *Yucatán*: Progreso. The Mexican records are due to modern introductions, probably from northern Africa.

Genus ARISTELLIGER Cope

Aristelliger COPE, Proc. Acad. Nat. Sci. Philadelphia, 1861, p. 496.

Idiodactylus BOCOURT, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 2, 1873, p. 41 (type, *Idiodactylus georgeensis* Bocourt).

Genotype.—Aristelliger lar Cope.

Species.—Six, all West Indian except the one Yucatán form.

Range.—West Indies and the peninsula of Yucatán.

ARISTELLIGER GEORGEENSIS (Bocourt)

Idiodactylus georgeensis BOCOURT, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 2, 1873, pp. 41–42, pl. 10, fig. 1.

Aristelliger georgeensis, SCHMIDT, Publ. Field Mus. Nat. Hist., zool. ser., vol. 22, 1941, p. 490.

Aristelliger praesignis, BOULENGER, Catalogue of the lizards in the British Museum, vol. 1, 1885, pp. 146–147 (part).

Aristelliger irregularis COPE, Proc. Amer. Philos. Soc., vol. 22, 1885, p. 387 (Cozumel Island; Ridgway coll.; U.S.N.M. No. 13903).

Type.—Mus. Hist. Nat. Paris.

Type locality.—St. George Island, near Belize, British Honduras.

Range.—The eastern edge of the Yucatán Peninsula. Recorded in Mexico only from Cozumel Island (Quintana Roo).

Genus PEROPUS Wiegmann[31]

Peropus WIEGMANN, Nova Acta Acad. Leop.-Carol., vol. 17, pt. 1, 1835, p. 238.

Dactyloperus FITZINGER, Systema reptilium, 1843, p. 103 (type, *Peropus peronii* Duméril and Bibron=*Peropus mutilatus* Wiegmann).

Peripia GRAY, Catalogue of the specimens of lizards in the British Museum, 1845, p. 158 (type, *Peripia peronii* Duméril and Bibron=*Peropus mutilatus* Wiegmann).

Chalinocnemis DUGÈS, La Naturaleza, vol. 6, 1883, p. 312 (type, *Hemidactylus navarri* Dugès=*Peropus mutilatus* Wiegmann).

Spasmocnemis DUGÈS, *loc. cit.* (type as for preceding).

Genotype.—Hemidactylus mutilatus Wiegmann.

[31] We are inclined to maintain *Peropus* and *Gehyra* based on the different character of the subdigital lamellae.

Range.—Widespread in southern Asia from Ceylon to the Philippines; south through the Malay Archipelago to New Guinea; Seychelles; western Mexico.

Species.—One form occurs in Mexico, probably introduced from the Philippines by man; about 10 others are known.

PEROPUS MUTILATUS (Wiegmann)

Hemidactylus (*Peropus*) *mutilatus* WIEGMANN, Nova Acta Acad. Leop.-Carol., vol. 17, 1835, p. 238.

Peropus mutilatus, SMITH and NECKER, Anal. Esc. Nac. Cienc. Biol., vol. 3, 1943, pp. 197–199, pl. 3, fig. 3.

Hemidactylus Navarri DUGÈS, La Naturaleza, vol. 6, 1883, pp. 309–312, pl. 7a (type locality, San Blas, Nayarit; 2 types in Alfredo Dugès Museum, Guanajuato, Guanajuato.)

Type.—Zool. Mus. Berlin?.

Type locality.—Manila, Philippine Islands.

Range.—Seaports of Nayarit and Sinaloa. Widespread in southeastern Asia, Philippine Islands, Dutch Indies, to New Guinea and certain Pacific Islands. Reported from *Nayarit*: San Blas, Tepic; *Sinaloa*: Presidio, Mazatlán.

Genus SPHAERODACTYLUS Wagler

Sphaerodactylus (part) WAGLER, Natürliches System der Amphibien, 1830, p. 143.—BARBOUR, Mem. Mus. Comp. Zool., vol. 47, 1921, pp. 215–279, pls. 1–26.

Genotype.—*Sphaerodactylus sputator* Cuvier.

Range.—West Indies, southern Mexico, Central America.

Species.—About 38 forms. Three are known or expected from Mexico.[32]

KEY TO MEXICAN SPECIES OF SPHAERODACTYLUS

1. Dorsal scales granular, keeled ..... **lineolatus** (p. 52)
   Dorsal scales imbricate, smooth 2
2. A single nuchal band; two distinct spots at base of tail, light spots at elbow and knee usually discernible ..... **glaucus glaucus** (p. 53)
   A cream-colored nuchal band bordered by black bands of equal width anteriorly and posteriorly; two narrow longitudinal light lines from collar to eye; indistinct narrow light bands on back; spots on tail base absent or obsolescent; no light spots at knee and elbow in young or adult. **glaucus torquatus** (p. 53)

SPHAERODACTYLUS LINEOLATUS Lichtenstein

Sphaerodactylus lineolatus LICHTENSTEIN, Nomenclator reptilium et amphibiorum musei zoologici berolinensis, 1856, p. 46.—BARBOUR, Mem. Mus. Comp. Zool., vol. 47, 1921, pp. 233–240, pl. 4, figs 1, 2, pl. 14, figs. 1–4.

Type.—Zool. Mus. Berlin, three cotypes.

[32] Until new material is discovered in Mexico, the Mexican reports of *Sphaerodactylus fantasticus, anthracinus, punctatissimus* (*cinereus*), and *sputator*, are to be regarded as uncertain. The type locality of *anthracinus* is "Mexico," but possibly in error (see p. 213). It would not be impossible for a part of these forms to occur, as recent introductions in Mexico. Banana fruits serve as a ready means of transportation.

Type locality.—Veraguas, Panamá.

Range.—The eastern edge of the Yucatán Peninsula southeastward to Colombia. No definite records from Mexico.[33]

SPHAERODACTYLUS GLAUCUS GLAUCUS Cope

Sphaerodactylus glaucus Cope, Proc. Acad. Nat. Sci. Philadelphia, 1865, p. 192.—Boulenger, Catalogue of the lizards in the British Museum, vol. 1, 1885, p. 221, pl. 18, fig. 3.—Barbour, Mem. Mus. Comp. Zool., vol. 47, 1921, pp. 240–241, pl. 14, figs. 5–8.—Taylor, Univ. Kansas Sci. Bull., vol. 31, pt. 2, 1947, pp. 305–309, fig. 2.

Sphaerodactylus glaucus glaucus, Smith, Journ. Washington Acad. Sci., vol. 39, 1949, pp. 34–35.

Sphaerodactylus inornatus Peters, Monatsb. Akad. Wiss. Berlin, 1873, p. 738 (Zool. Mus. Berlin No. 4589; Uhde coll.; Mexico [34] here restricted to Tehuantepec, Oaxaca.

Type.—U.S.N.M. No. 6572, three cotypes (now one, No. 13570, in Mus. Comp. Zool.); Arthur Schott collector.

Type locality.—Near Mérida, Yucatán.

Range.—Known from southern Veracruz to Guatemala and British Honduras, and possibly to Costa Rica. Reported from *Oaxaca*: Tehuantepec, Salina Cruz, Guengola Mountain; *Tabasco*: Teapa; *Campeche*: Tuxpeña Camp, Ciudad del Carmen, Balchacaj, Apazote; *Veracruz*: Pérez, Coatzacoalcos River; *Yucatán*: Mérida.

SPHAERODACTYLUS GLAUCUS TORQUATUS Strauch

Sphaerodactylus torquatus Strauch, Mem. Acad. Sci. St. Petersburg, ser. 7, vol. 35, 1887, p. 35.—Taylor, Univ. Kansas Sci. Bull., vol. 31, 1947, pp. 302–305, figs. 1–2.

Sphaerodactylus glaucus torquatus, Smith, Journ. Washington Acad. Sci., vol. 39, 1949, p. 35.

Type.—Mus. Petrograd No. 3268, three specimens; Hr. Salmin collector.

Type locality.—"Mazatlan, Mexico" (= Mazatlán, Oaxaca?).

Range.—Uncertain. Known from the type locality and Cajón de Piedra, Oaxaca.[35]

Family IGUANIDAE Gray

Iguanidae Gray, Philos. Mag., ser. 2, vol. 2, 1827, p. 56.

Genera.—About 65 genera are commonly recognized; 21 occur in Mexico.

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[33] The species is included here on the strength of its occurrence in British Honduras (Schmidt, Publ. Field Mus. Nat. Hist., zool. ser., vol. 22, 1941, p. 489), for although it has been cited from "Mexico" by numerous authors, no definite record of its occurrence in that country is known to us. Its existence in at least Quintana Roo is virtually a certainty.

[34] It now seems most probable that this name was applied to a unicolor intergrade between *S. g. glaucus* and *S. g. torquatus* such as those known to occur in the vicinity of Tehuantepec, Oaxaca. The entire description, of both scutellation and coloration, fits *glaucus*, not *lineolatus*, although Barbour (*op. cit.*, p. 238) places Peters's name in the synonymy of the latter species. See Smith, *loc. cit.*, and Taylor, *loc. cit.*, for discussion.—H. M. S.

[35] The subspecies does not occur in the vicinity of the city of Tehuantepec, but only, so far as we are aware, near the coast southwest of Salina Cruz, where a village by the name of Mazatlán does exist.

Range.—Extreme southwestern Canada and extreme southeastern New York, southward throughout the Americas; Bermuda Islands; West Indies; Revillagigedos Islands; Galápagos Islands; Madagascar (two genera); Fiji and Tonga Islands (one genus).

KEY TO MEXICAN GENERA OF IGUANIDAE

1. No femoral pores 2
   Femoral pores present, conspicuous in males, less well defined in females .. 5
2. Ventral lamellae on next to last phalanx of digits expanded laterally, forming a padlike structure; posterior part of head not produced ..... **Anolis** (p. 55)
   Ventral lamellae on digits not expanded to produce a pad; posterior part of head more or less produced 3
3. Infradigital lamellae with a single, tubercular keel ..... **Laemanctus** (p. 69)
   Infradigital lamellae with several sharp keels 4
4. Toes with a lateral fringe ..... **Basiliscus** (p. 71)
   No fringe on toes ..... **Corythophanes** (p. 68)
5. A single, median, dorsal, longitudinal series of enlarged scales 6
   Scales in vertebral row not conspicuously if any larger than adjacent scales .. 9
6. Tail with whorls of much-enlarged, spiny scales, usually separated from each other by whorls of small scales 7
   Scales on dorsal and lateral surfaces of tail (except the vertebral row) subequal in size, small 8
7. A group of much enlarged, spinose, protuberant scales on shank and sometimes on thigh; basal caudal region (or entire tail in short-tailed species) highly modified, sometimes flattened and widened, with whorls of greatly enlarged scales separated from each other by no more than 1 row of small scales; total length less than 450 mm ..... **Enyaliosaurus** (p. 75)
   No conspicuously enlarged scales on shank or thigh; basal caudal area much like rest of tail (which is always long), not flattened but cylindrical, with whorls of enlarged scales separated from each other by two or more rows of small scales throughout most of tail; total length often more than 450 mm., reaching at least 1,200 mm ..... **Ctenosaura** (p. 73)
8. A large, circular shield below tympanum; a well-developed gular appendage ..... **Iguana** (p. 72)
   No shield below tympanum; no gular appendage ..... **Dipsosaurus** (p. 77)
9. Head bearing bony spines posteriorly, or elevated somewhat in a projecting ridge ..... **Phrynosoma** (p. 94)
   Head normal, not produced posteriorly in a bony ridge or in spines 10
10. Superciliary scales not imbricate, but juxtaposed, like other scales on head; rostral subdivided, with a median suture meeting lip ..... **Sauromalus** (p. 79)
    Superciliary scales strongly imbricate, large; rostral not divided, no median suture reaching lip 11
11. Sutures between supralabials diagonal, not vertical; mental very small, bordered posteriorly by a median postmental 12
    Sutures between supralabials vertical; mental larger, not bordered posteriorly by median postmental 14
12. No ear opening ..... **Holbrookia** (p. 81)
    A distinct ear opening 13
13. Interparietal much smaller than ear opening, not more than twice as large as any other dorsal head scale; several enlarged auricular lobules; a patch of enlarged scales with projecting points on rear of femur ..... **Uma** (p. 89)

Interparietal nearly as large as ear opening, or larger, much larger than any other dorsal head scale; no enlarged auricular lobules; no patch of enlarged scales on rear of femur---------- **Callisaurus** (p. 85)

14. No complete transverse gular fold, or if so body and tail compressed and dorsal scales nearly uniform, large, no more than 75 from interparietal to rear of thighs---------- 15

A complete transverse gular fold, marked by granular or reduced scales, much smaller than those preceding or following fold; dorsal scales very small, or at least not uniformly large and as few as 75 from interparietal to rear of thighs (except *Uta squamata*); body and tail flattened, never compressed even slightly---------- 16

15. A gular fold usually present; lateral scales granular; body and tail somewhat compressed---------- **Sator** (p. 139)

Gular fold never present; lateral scales not granular in those species with compressed tail---------- **Sceloporus** (p. 105)

16. Interparietal very large, about as large as or larger than ear opening---- 18

Interparietal very small, a great deal smaller than ear opening---------- 17

17. Two scales bordering mental posteriorly between infralabials; head very broad, neck narrow---------- **Crotaphytus** (p. 91)

Three or more scales bordering mental posteriorly between infralabials; head elongate, neck not so sharply defined---------- **Gambelia** (p. 93)

18. Dorsal scales all small, granular, smooth, very little larger than lateral scales; enlarged supraoculars in more than one row; one or more blackish bars across shoulders; size frequently over 75 mm. snout to vent---------- 19

Dorsal scales, at least toward middle of back, larger than lateral scales, keeled; enlarged supraoculars in one row; no blackish bars across shoulders; size less than 75 mm. snout to vent---------- 20

19. Caudal scales smaller than ventrals on body, not mucronate; three or four *black* bands across body---------- **Petrosaurus** (p. 90)

Caudal scales large, mucronate, much larger than ventrals on body; a single narrow *black* band across shoulders---------- **Streptosaurus** (p. 91)

20. A longitudinal dorsolateral line or dermal fold, usually with some enlarged scales on it; usually a second, lateral fold; no small, rounded blue blotch behind axilla; frontal divided or not---------- **Urosaurus** (p. 140)

No longitudinal dorsolateral dermal fold; often a small, rounded, dark blue blotch behind axilla; frontal always divided---------- **Uta** (p.147)

Genus ANOLIS Daudin

Anolis Daudin, Histoire naturelle générale et particulière des reptiles, year X (1802), pp. 50–51.—Barbour, Bull. Mus. Comp. Zool., vol. 78, 1934, pp. 121–155.

Dactyloa Wagler, Natürliches System der Amphibien, 1830, p. 148 (type, *Anolis viridis* Wied).

Tropidopilus Fitzinger, Systema reptilium, 1843, p. 66 (type, *Anolis fusco-auratus* d'Orbigny, monotype).

Trachypilus Fitzinger, *op. cit.*, p. 67 (type, *Anolis sagraei* Duméril and Bibron).

Pristicercus Fitzinger, *op. cit.*, pp. 67–68 (type, *Dactyloa biporcata* Wiegmann).

Ctenocercus Fitzinger, *op. cit.*, pp. 17, 68 (type, *Dactyloa bullaris* Wagler=*Anolis carolinensis* Linnaeus).

Gastrotropis Fitzinger, *loc. cit.* (type, *Dactyloa nebulosa* Wiegmann).

Coccoëssus Cope, Proc. Acad. Nat. Sci. Philadelphia, 1862, p. 178 (type, *Anolis pentaprion* Cope).

Genotype.—*Anolis bullaris* Daudin (=*Anolis carolinensis* Voigt).

Species.—Perhaps 350. Thirty-five forms are listed here, but two are not known from any definite locality, four are known only from "Mexico," and the Mexican range of another is unknown.

Range.—Southeastern United States to Brazil; West Indies.

KEY TO MEXICAN SPECIES OF ANOLIS

1. Tail strongly compressed 2
   Tail subcylindrical, no more than slightly compressed 4
2. Two continuous rows of scales along middorsal line on tail ..... **barkeri** (p. 58)
   One row of scales along middorsal line of tail 3
3. Ventrals keeled ..... **sagrei mayensis** (p. 59)
   Ventrals smooth ..... **cozumelae** (p. 59)
4. Dorsal scales as large as or larger than ventrals, and both strongly keeled 5
   Dorsal scales smaller than ventrals, or one or both sets of scales smooth; *or*, if body scales as above, occipital much larger than ear opening 8
5. Supraorbital semicircles in contact or separated by a single series of scales. **megapholidotus** (p. 59)
   Supraorbital semicircles separated by 2 or 3 series of scales 6
6. Dorsal and ventral scales subequal in size ..... **metallicus** (p. 59)
   Dorsal scales distinctly larger than ventrals 7
7. Tibia 75 percent to 85 percent length of head (to anterior border of ear); adult size smaller, about 36 mm.; dewlap brilliant red with a large purple spot at base in life ..... **humilis uniformis** (p. 60)
   Tibia 90 percent length of head, or longer; adult size larger, about 50 mm.; dewlap red, without a purple spot ..... **tropidonotus** (p. 60)
8. Ventrals smooth [36] 9
   Ventrals keeled 25
9. Supraorbital semicircles in contact and a single row of only 4 or fewer large supraoculars 10
   Supraorbital semicircles separated *or*, if in contact, supraoculars numerous (8 or more enlarged) 14
10. Two rows of loreals; female with a large gular "pouch"; all scales on body flat and granular, small and equal on back and sides, larger on belly. **impetigosus** (p. 60)
    Four to six rows of loreals; females (not known in *schmidti*) lacking a large gular pouch; dorsal scales keeled, at least faintly larger than lateral scales. 11
11. Ventrals and dorsals subequal in size; enlarged supraoculars three-fourths width of supraocular area ..... **schmidti** (p. 60)
    Ventrals distinctly larger than (at least 1¼ times as large as) dorsals; enlarged supraoculars narrower, half width of supraocular area or less 12
12. Two gulars in contact with mental between chin shields; 9 or fewer scales across snout between second canthals (counting as the first canthal that which borders the superciliaries) 13
    Three or (generally) 4 gulars in contact with mental between chin shields; 10 to 12 scales across snout between second canthals ..... **gadovii** (p. 61)
13. Six scales between nasals; 5 scales in contact with rostral between supralabials; ventrals larger ..... **dunni** (p. 61)

[36] In six species (*cymbops, laeviventris, limifrons rodriguezii, milleri, schiedii,* and *schmidti*) the ventrals may appear either smooth or keeled; these are keyed out under both categories. All others are uniformly and plainly either smooth or keeled.

Seven or 8 scales between nasals; 6 scales in contact with rostral between supralabials; ventrals smaller---------- **taylori** (p. 61)

14. All dorsals and laterals equal in size, minute, granular; tibia 85 percent length of head (to anterior border of ear); scales of supraorbital semicircles enlarged; head scales feebly keeled---------- **damulus** (p. 61)

At least 2 or more vertebral rows of slightly enlarged scales, *or*, if all dorsal scales uniform, tibia less than 70 percent length of head, and either scales of supraorbital semicircles not enlarged, or head scales perfectly smooth-- 15

15. Scales of supraorbital semicircles, at least in the frontal and frontoparietal area, not or scarcely larger than scales between; tail compressed, subtriangular in section with a serrate crest; tibia much shorter than head (70 percent or less) all dorsal and lateral scales equal in size. **pentaprion** (p. 61)

Scales of supraorbital semicircles distinctly larger than scales between; tail not or only slightly compressed, with little or no crest---------- 16

16. Supraorbital semicircles either in contact or separated by a single series of scales; postanals enlarged in males (males not known in *utowanae, cymbops, beckeri,* and *baccatus*)---------- 17

Supraorbital semicircles separated by 2 or 3 rows of scales; postanals not enlarged in males (not known in *güntherii*)---------- 22

17. Interparietal smaller than ear opening---------- 18

Interparietal larger than ear opening---------- 19

18. Three loreal rows---------- **utowanae** (p. 62)

Seven loreal rows---------- **cymbops** (p. 62)

19. All dorsal and lateral scales equal in size, minute, granular, smooth; tibia only 60 to 65 percent head length; all dorsal head scales smooth. **beckeri** (p. 62)

At least a few vertebral scales slightly enlarged, keeled; tibia longer in proportion to head length; dorsal head scales smooth or not---------- 20

20. Upper head scales tricarinate---------- **baccatus** (p. 62)

Upper head scales smooth, slightly rugose, or feebly unicarinate; postanals enlarged in males---------- 21

21. One series of 3 enlarged supraoculars; male lacking first digit on all four feet[37]; dewlap red---------- **liogaster** (p. 62)

Two series of 7 to 9 enlarged supraoculars; males with 5 digits on each foot; dewlap yellow---------- **laeviventris** (p. 62)

22. Tibia distinctly longer than head (15.5 mm. and 13.5 mm. respectively in the type and only known specimen)---------- **schiedii** (p. 63)

Head (snout to anterior border of ear opening) at least a little longer than tibia---------- 23

23. Interparietal plate twice as long as ear opening, much larger than adjacent, very small head scales---------- **guntherii** (p. 63)

Interparietal plate not more than 1½ times as long as ear opening, not more than 4 times as large as adjacent scales---------- 24

24. Ventral scales only slightly larger than dorsals; one large scale in anterolateral corner of supraocular area, in contact with superciliaries and separated from enlarged supraoculars by one row of small scales---------- **milleri** (p. 64)

Ventral scales much larger than dorsals---------- **limifrons rodriguezii** (p. 64)

25. Head shorter than tibia---------- 26

Head longer than tibia---------- 27

[37] Materia lrecently examined demonstrates that this species like others of *Anolis* possesses five digits on both limbs in both sexes.

26. Ventrals very strongly keeled; dorsal scales smooth, no larger than laterals; head broad ..... **capito** (p. 65)
    Ventrals very weakly keeled or smooth; dorsal scales keeled, somewhat larger than laterals; head longer ..... **schiedii** (p. 63)
27. Lamellae under second and third phalanges of fourth toe, about 27; interparietal scarcely enlarged, much smaller than ear opening ..... **petersii** (p. 65)
    Lamellae under second and third phalanges of fourth toe, 23 or less; interparietal variable 28
28. Two or 3 rows of scales between supraorbital semicircles 29
    Supraorbital semicircles in contact or separated from each other by no more than 1 row of scales 30
29. Ventrals very strongly keeled; 22 or 23 lamellae under phalanges 2 and 3 of fourth toe ..... **biporcatus** (p. 65)
    Ventrals very weakly keeled; not over 16 or 17 lamellae 24
30. A single row of not more than 5 large supraoculars 31
    Two or more rows of 7 or more enlarged supraoculars 35
31. Ventrals very weakly keeled; postanals enlarged and dewlap yellow in males; supraorbital semicircles broadly in contact ..... **schmidti** (p. 60)
    Ventrals very strongly keeled 32
32. Males with enlarged postanals and dewlap more or less unicolor 33
    Males without enlarged postanals and dewlap with a conspicuous central dark blue spot 34
33. Dorsal scales very slightly smaller than ventrals ..... **nebulosus** (p. 65)
    Dorsal scales markedly smaller than ventrals ..... **nebuloides** (p. 66)
34. Supraorbital semicircles in contact with each other and with interparietal. **kidderi** (p. 66)
    Supraorbital semicircles separated from each other (generally) and from interparietal (invariably) ..... **ustus** (p. 66)
35. Interparietal little if any larger than ear opening; dewlap in males without a central blue spot 36
    Interparietal nearly or fully twice as long as ear opening; dewlap in males with a central blue spot or not 38
36. Ventral scales indistinctly keeled; dorsal scales granular except two vertebral rows of abruptly enlarged scales ..... **cymbops** (p. 62)
    Ventral scales strongly keeled; dorsal scales uniform in size in both vertebral and paravertebral areas 37
37. Dorsals very small, much smaller than ventrals; 17–19 lamellae under phalanges 2 and 3 of fourth toe; 6–8 rows of loreals ..... **lemurinus bourgeaei** (p. 66)
    Dorsals rather large, distinctly smaller than ventrals; 15 or 16 lamellae; 4–6 rows of loreals ..... **cumingii** (p. 67)
38. Dorsals very slightly smaller than ventrals, in about 14 rows; a purple spot in center of gular fan in males; postanals not enlarged ..... **heliactin** (p. 67)
    Dorsals smaller; a purple spot or not; postanals enlarged or not 39
39. Both dorsals and ventrals smaller; no purple spot in center of dewlap; postanals enlarged in males ..... **laeviventris** (p. 62)
    Dorsals and ventrals larger; a purple spot in center of dewlap; postanals not enlarged in males ..... **sericeus** (p. 67)

ANOLIS BARKERI Schmidt

Anolis barkeri SCHMIDT, Publ. Field Mus. Nat. Hist., zool. ser., vol. 24, 1939, pp. 7–9, fig. 2.

Type.—Brit. Mus. Nat. Hist. No. 36.6.6.12; R. Wright Barker collector.

Type locality.—Cascajal, upper Uzpanapa River, Veracruz.

Range.—Known only from the type locality.

ANOLIS SAGREI MAYENSIS Smith and Burger

Anolis sagrei mayensis Smith and Burger, Anal. Inst. Biol., vol. 20, 1949, p. 407.

Type.—E. H. Taylor No. 11523; H. M. Smith collector.

Type locality.—Panlao, Campeche (a small island at mouth of Río Mamantel, Laguna de Términos).

Range.—The Atlantic coast from central Mexico to northern South America. Recorded in Mexico from the states of *Yucatán:* Progreso, Mérida, Chichen Itzá; *Campeche:* Balchacaj, Ciudad del Carmen, Panlao; *Tabasco:* San Juan Bautista; *Quintana Roo:* Cozumel Island.

ANOLIS COZUMELAE Smith

Anolis cozumelae Smith, Publ. Field Mus. Nat. Hist., zool. ser., vol. 24, 1939, pp. 19–20, fig. 4 (at left).

Type.—Chicago Nat. Hist. Mus. No. 751; male; C. F. Millspaugh collector.

Type locality.—Cozumel Island, Yucatán Peninsula.

Range.—Cozumel Island, Quintana Roo.

ANOLIS METALLICUS Bocourt [38]

Anolis metallicus Bocourt, Ann. Sci. Nat., ser. 5, vol. 17, art. 2, 1873, p. 1; Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 2, 1873, pl. 17 bis, fig. 1.—Boulenger, Catalogue of the lizards in the British Museum, vol. 2, 1885, p. 84.

Anolis uniformis, Barbour (part), Bull. Mus. Comp. Zool., vol. 77, No. 4, 1934, p. 153.

Anolis tropidonotus, Stuart (part), Occ. Pap. Mus. Zool. Univ. Michigan, No. 464, 1942, p. 2.

Type.—Mus. Hist. Nat. Paris.

Type locality.—Mexico.

Range.—Unknown.

ANOLIS MEGAPHOLIDOTUS Smith

Anolis megapholidotus Smith, Trans. Kansas Acad. Sci., vol. 36, 1933, pp. 318–320.

Type.—EHT-HMS No. 11149 (originally EHT-HMS field No. 1509); E. H. Taylor and H. M. Smith collectors.

Type locality.—Between Rincón and Cajones (about 40–45 km. south of Chilpancingo), Guerrero.

Range.—Known only from the type locality; presumably ranges throughout the Sierra Madre del Sur in Guerrero.

[38] Barbour (*loc. cit.*) synonymizes this with *A. h. uniformis*, and Stuart (*loc. cit.*) suggests synonymy with *A. tropidonotus*. Inasmuch as both the original description and the subsequent illustration indicate the possession by the type of relatively small dorsal scales equal in size to the ventrals, while in both *tropidonotus* and *uniformis* the dorsals are much larger, we regard *metallicus* as distinct from either.

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ANOLIS HUMILIS UNIFORMIS Cope

Anolis uniformis COPE, Proc. Amer. Philos. Soc., vol. 22, 1885, p. 392.—BOULENGER, Catalogue of the lizards in the British Museum, vol. 2, 1885, p. 84.—STUART, Occ. Pap. Mus. Zool. Univ. Michigan, No. 464, 1942, pp. 1–2.

Anolis humilis uniformis, STUART, Misc. Publ. Mus. Zool. Univ. Michigan, No. 69, 1948, p. 48.

Anolis ruthveni STUART, Occ. Pap. Mus. Zool. Univ. Michigan, No. 310, 1935, pp. 1–4 (type, Univ. Michigan Mus. Zool. No. 76622, 2 miles north of Santa Teresa, El Petén, Guatemala).

Type.—U.S.N.M., Nos. 6774, 24734–48, 24750 (Guatemala), 24859 (Yucatán), cotypes; Mus. Comp. Zool. No. 10933 (Guatemala).

Type locality.—Yucatán and Guatemala, here restricted to 2 miles north of Santa Teresa, Guatemala.

Range.—The southern portion of the Yucatán Peninsula, from Chiapas and probably Tabasco to El Petén and British Honduras. Known in Mexico from *Chiapas:* Usumacinta River (across from Piedras Negras, El Petén, Guatemala), Tlacotalpa, Mineral de Santa Fé; *Tabasco:* Teapa.

ANOLIS TROPIDONOTUS Peters

Anolis tropidonotus PETERS, Monatsb. Akad. Wiss. Berlin, 1863, p. 135.—BOCOURT, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 2, 1873, pp. 103–105, pl. 16, fig. 30.—BOULENGER, Catalogue of the lizards in the British Museum, vol. 2, 1885, pp. 83–84.

Norops tropidonotus O'SHAUGHNESSY, Ann. Mag. Nat. Hist., ser. 4, vol. 4, 1869, p. 273.

Norops yucatanicus BARBOUR and COLE, Bull. Mus. Comp. Zool., vol. 50, 1906, p. 149 (type, Mus. Comp. Zool. No. 7036, Chichen Itzá, Yucatán).

Type.—Zool. Mus. Berlin, 6 specimens; Dr. Hille collector.

Type locality.—Huanuco (*sic*) = probably, Huatusco, Veracruz.

Range.—Atlantic slopes from Veracruz to Nicaragua, including the Yucatán Peninsula. Recorded from the states of Veracruz, Tabasco, Oaxaca, Campeche, Yucatán, and Quintana Roo (Cobá).

ANOLIS IMPETIGOSUS Cope

Anolis impetigosus COPE, Proc. Acad. Nat. Sci. Philadelphia, 1864, p. 174.—BOULENGER, Catalogue of the lizards in the British Museum . . ., ed. 2, 1885, p. 55, pl. 2, fig. 3.

Type.—Brit. Mus. Nat. Hist.

Type locality.—Unknown.

Range.—Unknown.

ANOLIS SCHMIDTI Smith

Anolis schmidti SMITH, Publ. Field Mus. Nat. Hist., zool. ser., vol. 24, No. 4, 1939, pp. 21–23, fig. 4 (at right).

Type.—Chicago Nat. Hist. Mus. No. 1667; C. H. T. Townsend collector.

Type locality.—Manzanillo, Colima.

Range.—Known only from the type locality.

ANOLIS GADOVII Boulenger

Anolis gadovii BOULENGER, Proc. Zool. Soc. London, 1905, vol. 2, p. 245, pl. 6, fig. 1.—MOSAUER, Herpetologica, vol. 1, no. 2, 1936, pp. 61–63.—SMITH and SPIELER, Copeia, 1945, pp. 165–168.

Type.—Brit. Mus. Nat. Hist.; Hans Gadow collector.

Type locality.—Tierra Colorada, Guerrero.

Range.—Known only from the type locality.

ANOLIS DUNNI Smith

Anolis gadovii, SMITH (part), Trans. Kansas Acad. Sci., vol. 36, 1933, pp. 316–318.

Anolis dunni SMITH, Copeia, 1936, p. 9.—SMITH and SPIELER, Copeia, 1945, pp. 165–168.

Type.—EHT-HMS No. 1506; E. H. Taylor collector.

Type locality.—Between Rincón and Cajones, Guerrero (a place now called Agua del Obispo).

Range.—Known only from the type locality.

ANOLIS TAYLORI Smith and Spieler

Anolis taylori SMITH and SPIELER, Copeia, 1945, pp. 165–168.

Type.—U.S.N.M. (H. M. Smith field No. 10085); E. H. Taylor collector.

Type locality.—One mile north of Acapulco, Guerrero.

Range.—Known only from the type locality.

ANOLIS DAMULUS Cope

Anolis damulus COPE, Proc. Acad. Nat. Sci. Philadelphia, 1864, p. 169.—BOULENGER, Catalogue of the lizards in the British Museum . . ., ed. 2, vol. 2, 1885, pp. 47–48, pl. 2, fig. 2.

Type.—Brit. Mus. Nat. Hist.

Type locality.—Unknown.

Range.—Unknown.

ANOLIS PENTAPRION Cope

Anolis (*Coccoëssus*) *pentaprion* COPE, Proc. Acad. Nat. Sci. Philadelphia, 1862, p. 178.

Anolis pentaprion, BOULENGER, Catalogue of the lizards in the British Museum, ed. 2, vol. 2, 1885, p. 64.

Anolis sulcifrons COPE, Sci. Bull. Philadelphia Mus., No. 1, 1899, p. 6, pl. 2, fig. 1 (type, Amer. Mus. Nat. Hist. No. 38750; Baranquilla, Colombia).

Anolis panamensis BOULENGER, Proc. Zool. Soc. London, 1890, p. 81, pl. 13, fig. 2 (type, Brit. Mus. Nat. Hist. No. 89–17–2–31, 2 cotypes; Panama).

Type.—Formerly in U.S.N.M., now lost; A. Schott collector.

Type locality.—Truando River, Colombia.

Range.—Atlantic slopes from the Isthmus of Tehuantepec to Colombia. Known in Mexico only from *Chiapas:* Palenque.

ANOLIS UTOWANAE Barbour

Anolis utowanae BARBOUR, Copeia, 1932, p. 11.

Type.—Mus. Comp. Zool. No. 31035; Thomas Barbour collector (purchased from Indian).

Type locality.—Ten miles north of Mazatlán, Sinaloa.

Range.—Coastal Sinaloa, known only from the type locality.

ANOLIS CYMBOPS Cope

Anolis cymbops COPE, Proc. Acad. Nat. Sci. Philadelphia, 1864, pp. 173–174.—BOULENGER, Catalogue of the lizards in the British Museum, vol. 2, 1885, pp. 73–75.

Type.—Brit. Mus. Nat. Hist.

Type locality.—"Veracruz," Mexico.

Range.—Known only from the type locality.

ANOLIS BECKERI Boulenger

Anolis beckeri BOULENGER, Proc. Zool. Soc. London, 1881, pp. 921–922; Catalogue of the lizards in the British Museum, vol. 2, 1885, pp. 46–47.

Type.—Royal Belg. Mus., two cotypes; A. Boucard, collector.

Type locality.—Yucatán.

Range.—Yucatán Peninsula, including British Honduras. Recorded in Mexico only from *Yucatán:* Chichen Itzá.

ANOLIS BACCATUS Bocourt

Anolis baccatus BOCOURT, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 2, 1873, pp. 59–61, pl. 14, fig. 14.—BOULENGER, Catalogue of the lizards in the British Museum, vol. 2, 1885, p. 54.

Type.—Mus. Hist. Nat. Paris; Auguste Sallé collector.

Type locality.—Mexico.

Range.—Uncertain. The specimen reported from Sepaquite, Alta Verapaz, Guatemala (Barbour, Bull. Mus. Comp. Zool., vol. 77, 1934, p. 124), is actually *A. sericeus* (*fide* L. C. Stuart, *in litt.*). No definite Mexican records are known.

ANOLIS LIOGASTER Boulenger

Anolis liogaster BOULENGER, Proc. Zool. Soc. London, 1905, vol. 2, pp. 245–246, pl. 6, fig. 2.

Type.—Brit. Mus. Nat. Hist., two cotypes; Hans Gadow collector.

Type locality.—Omilteme, Guerrero (7,600 feet).

Range.—Known only from the type locality.[39]

ANOLIS LAEVIVENTRIS (Wiegmann)

D[*actyloa*] (*A*[*nolis*]) *laeviventris* WIEGMANN, Herpetologia Mexicana, 1834, p. 47.

[39] Gadow (Proc. Zool. Soc. London, 1905, pp. 195, 216) suggests also the locality Nevado de Colima, Jalisco. The record is undoubtedly unacceptable.

Anolis laeviventris, Bocourt, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 2, 1873, pp. 87–88; livr. 3, 1874, pl. 16, fig. 18, 18a.—Boulenger, Catalogue of the lizards in the British Museum, vol. 2, 1885, p. 76.—Smith, Publ. Field Mus. Nat. Hist., zool. ser., vol. 24, 1939, pp. 20–21.

Anolis wiegmanni Fitzinger, Systema reptilium, 1843, p. 67 (substitute name for *Dactyloa laeviventris* Wiegmann).

Anolis nannodes Cope (part only; a lectoparatype), Proc. Acad. Nat. Sci. Philadelphia, vol. 16, 1864, p. 173 (lectotype, U.S.N.M. No. 12200, Arriba, Costa Rica).[40]

Anolis intermedius, Boulenger, Catalogue of the lizards in the British Museum, ed. 2, vol. 2, 1885, pp. 78–79 (part).

Type.—Zool. Mus. Berl.; F. Deppe collector.

Type locality.—Mexico, here restricted to Jalapa, Veracruz.

Range.—Atlantic slopes from Central Veracruz to the Isthmus of Tehuantepec. Recorded from the states of *Veracruz:* Jalapa, Orizaba, Mirador, Actopam, Jicaltepec, Xico; and *Tabasco.*[41]

ANOLIS SCHIEDII (Wiegmann)

D[actyloa] schiedii Wiegmann, Herpetologia Mexicana, 1834, p. 48.

Anolis schiedii, Lichtenstein and Martens, Nomenclator reptilium et amphibiorum Musei Zoologici Berolinensis, 1856, p. 8.—Bocourt, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 2, 1873, pp. 64–65 (part)[42], pl. 15, fig. 19 (of type).—?Boulenger, Catalogue of the lizards in the British Museum, vol. 2, 1885, p. 52.

Type.—Zool. Mus. Berl.; Schiede collector.

Type locality.—Mexico (by inference).

Range.—Unknown.[43]

ANOLIS GUNTHERII Bocourt

Anolis guntherii Bocourt, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 2, 1873, pp. 61–62, pl. 15, fig. 15.

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[40] The original type series included two, a male and a female, in the Brit. Mus. Nat. Hist., from Cobán, Guatemala; one, U.S.N.M. No. 12206, from Arriba, Costa Rica, and one, U.S.N.M. No. 6117, now lost, from Jalapa, Veracruz. Dunn (Proc. New England Zool. Club, vol. 12, 1930, p. 18), in discussing *A. intermedius* of Central America, mentions "the type of *nannodes*, U.S.N.M. No. 12206, Costa Rica," stating that it is the same as *intermedius*. We regard this action as constituting a restriction of the name to *intermedius* and rendering U.S.N.M. No. 12206 the lectotype of *nannodes*. The Mexican specimen obviously represents *laeviventris*, while the Guatemalan species represented by the Cobán specimens remains unnamed. Stuart (Misc. Publ. Mus. Zool. Univ. Michigan, No. 69, 1948, p. 50) restricts the name *nannodes* to the Guatemalan species, inasmuch as a name is available for each of the other two species (now *laeviventris* of Mexico, *intermedius* of Costa Rica) represented in the cotypes. This procedure certainly is the most desirable, but in view of the fact that Dunn previously restricted the name to the Costa Rican species, Stuart's course cannot, apparently, be maintained. The name *Anolis stuarti* Smith, new name, is proposed for the Guatemalan species represented by the two cotypes of *nannodes* in the British Museum of Natural History, from Cobán, Alta Verapaz. For a description of the types, see Boulenger, Cat. Liz. Brit. Mus., vol. 2, 1885, p. 78.

The *Anolis nannodes* (auct.) from numerous localities in Mexico is the species *laeviventris*.—H. M. S.

[41] In various papers (first in Proc. Acad. Nat. Sci. Philadelphia, 1866, p. 123) Cope records this species from Yucatán and from "Tehuantepec"; Dugès (La Naturaleza, ser. 2, vol. 2, 1896, p. 479) records it from Tangancícuaro (Michoacán), Guadalajara (Jalisco), and Cerro de los Amoles (state?); Mocquard (Bull. Soc. Philom. Paris, ser. 9, vol. 1, 1899, pp. 155–156) records it from Guadalajara, Jalisco; and Peters (Monatsb. Berl. Acad., 1869, p. 874) records it from Matamoros, Puebla. We believe all these records refer to other species with smooth ventrals. We are unable at this time to place them accurately.

[42] Bocourt possessed for his description the type of *schiedii* and a series of specimens from Cobán, Guatemala; all the latter are, however, apparently referable to *A. cobanensis* Stuart.

[43] Cope's record (U. S. Nat. Mus. Bull. 32, 1887, p. 31) for Jalapa, Veracruz, is highly questionable.

Anolis guentherii, BOULENGER, Catalogue of the lizards in the British Museum, vol. 2, 1885, pp. 54–55.

Type.—Mus. Milano.

Type locality.—Mexico.

Range.—Unknown.

ANOLIS MILLERI Smith, new species[44]

Anolis schiedii, SMITH and LAUFE (*nec* Wiegmann), Herpetologica, vol. 3, 1945, pp. 2–4.

Type.—U.S.N.M. No. 120957; Walter S. Miller collector.

Type locality.—Quetzaltepec, Oaxaca.

Range.—Known only from the type locality.

ANOLIS LIMIFRONS RODRIGUEZII Bocourt

Anolis rodriguezii BOCOURT, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 2, 1873, pp. 62–63, pl. 13, fig. 1.

Anolis limifrons rodriguezii,[45] STUART, Misc. Publ. Mus. Zool. Univ. Michigan, No. 69, 1948, pp. 49–50.

Anolis rubigenosus BOCOURT, Ann. Sci. Nat., ser. 5, art. 2, 1873, p. 1; Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 3, 1874, pl. 17 bis, fig. 2 (type, Mus. Hist. Nat. Paris; Oaxaca [state]).[46]

Anolis aureolus COPE, Proc. Amer. Philos. Soc., 1885, pp. 390–391 (Guatemala, 2 cotypes, U.S.N.M. Nos. 24850–1; Yucatán, 3 cotypes U.S.N.M. Nos. 25854–5, 25857, one cotype Mus. Comp. Zool. No. 10929, type locality here restricted to Chichen Itzá, Yucatán).

Anolis acutirostris IVES, Proc. Acad. Nat. Sci. Philadelphia, 1891, pp. 459–460 (type, Acad. Nat. Sci. Philadelphia No. 7889; Citilpech, Yucatán).

Type.—Mus. Hist. Nat. Paris; collected by Commission Scientifique du Mexique.

Type locality.—Panzós, Alta Verapaz, Guatemala.

Range.—Atlantic slopes from the Isthmus of Tehuantepec to Honduras, including the peninsula of Yucatán except its semiarid northwestern coast. Recorded in Mexico from *Oaxaca* (no locality); *Chiapas:* Palenque; *Campeche:* Balchacaj, Champotón, Tres Brazos, Encarnación; *Yucatán:* Citilpech, Chichen Itzá, Mérida; and *Quintana Roo:* Cozumel Island.

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[44] *Diagnosis.*—As in the accompanying key (p. 57). Differs from *schiedii* in two important respects: The head length from snout to ear (15.8 mm.) is distinctly greater than tibia length (13.6 mm.), and the interparietal is much larger, its length equaling the diameter of ear opening (the tibia, 15.5 mm., is longer than head, 13.5 mm., and length of the interparietal is little more than half the greatest diameter of the ear opening, in *schiedii*). *A. schiedii* is unique, in its group of the genus, in its very long tibia.

Description.—A lengthy description of the type was published in Smith and Laufe (*loc. cit.*) and needs no repetition.—H. M. S.

[45] Spelled *ridriguezii* by error.

[46] The type, according to Bocourt's figure and description, does not differ from the form most authors in the past have called *aureolus*, except perhaps in size of the interparietal. It appears probable to us that the deceptive marking on the type of *rodriguezii* (a broad vertebral light stripe), which Bocourt apparently thought was constant, may have been responsible for his failure to consider *rodriguezii* and the type of his *rubigenosus* as conspecific.

Although no other record indicates the occurrence of *rodriguezii* in Oaxaca, the known distribution elsewhere strongly implies occurrence on Atlantic slopes of that state near or at the Isthmus of Tehuantepec.

ANOLIS CAPITO Peters

Anolis (Draconura) capito PETERS, Monatsb. Acad. Wiss. Berlin, 1863, p. 142.
Anolis capito, BOCOURT, Mission scientifique au Mexique . . . , Études sur les reptiles, livr. 2, 1873, pl. 16, fig. 27.—BOULENGER, Catalogue of the lizards in the British Museum, vol. 2, 1885, pp. 94–95.
Anolis carneus COPE, Proc. Acad. Nat. Sci. Philadelphia, 1864, p. 169 (Brit. Mus. Nat. Hist., two cotypes; lower Verapaz forest).

Type.—Zool. Mus. Ber. No. 4086, two cotypes; C. Hoffman collector.

Type locality.—Costa Rica, here restricted to Palmar.

Range.—Tabasco to Panama. Recorded in Mexico only from "Tabasco."

ANOLIS PETERSII Bocourt

Anolis petersii BOCOURT, Mission scientifique au Mexique . . . , Études sur les reptiles, livr. 2, 1873, pp. 79–80, pl. 13, fig. 2, and pl. 15, figs. 11, 11a.—BOULENGER, Catalogue of the lizards in the British Museum, vol. 2, 1885, pp. 66–67.
Anolis petersii bivittatus WERNER, Verh. zool.-bot. Ges. Wien, vol. 46, 1898, p. 351 (Munich Mus., two cotypes; Guatemala, here restricted to Cobán).

Type.—Mus. Hist. Nat. Paris No. 1641 β, two specimens; collected by Commission Scientifique du Mexique.

Type locality.—Alta Verapaz, Guatemala, here restricted to Finca Samac.

Range.—Atlantic slopes from central Veracruz to Alta Verapaz in Guatemala. Recorded in Mexico only from *Veracruz:* Cuautlapan, Mirador, Orizaba; *San Luis Potosí:* Xilitla.

ANOLIS BIPORCATUS (Wiegmann)

D.[actyloa] biporcata WIEGMANN, Herpetologia Mexicana, 1834, p. 47.
Anolis biporcatus, SCHMIDT, Publ. Field Mus. Nat. Hist., zool. ser., vol. 22, 1941, p. 491.—SMITH, Rev. Soc. Mex. Hist. Nat., vol. 7, 1946, pp. 66–67.—STUART, Misc. Publ. Mus. Zool. Univ. Michigan, No. 69, 1948, pp. 46–47.
Anolis copei BOCOURT, Mission scientifique au Mexique . . . , Études sur les reptiles, livr. 2, 1873, pp. 77–78, pl. 15, fig. 10 (Panzos, Alta Verapaz, Guatemala; Mus. Hist. Nat. Paris).—BOULENGER, Catalogue of the lizards in the British Museum, vol. 2, 1885, pp. 65–66.

Type.—Zool. Mus. Berlin; F. Deppe collector.

Type locality.—Mexico, here restricted to Piedra Parada, Chiapas.

Range.—Chiapas to Panama. Known in Mexico only from Chiapas (Piedra Parada).

ANOLIS NEBULOSUS (Wiegmann)

D[actyloa] nebulosa WIEGMANN, Herpetologia Mexicana, 1834, p. 47.
Anolis nebulosus, BOCOURT, Mission scientifique au Mexique . . . , Études sur les reptiles, livr. 2, 1873, pp. 68–69.—BOULENGER, Catalogue of the lizards in the British Museum, vol. 2, 1885, pp. 76–77.
Anolis boulengerianus THOMINOT, Bull. Soc. Philom., ser. 7, vol. 11, 1887 (Mus. Hist. Nat. Paris, three cotypes, Isthmus of Tehuantepec, F. Sumichrast collector).

Type.—Zool. Mus. Berlin, two cotypes; F. Deppe collector.

Type locality.—Mexico (by inference), here restricted to Mazatlán, Sinaloa.

Range.—Western Mexico, from Sinaloa to the Isthmus of Tehuantepec. Known from the states of Morelos, Puebla, Nayarit, Colima, Oaxaca, Guerrero, Michoacán, Sinaloa, Jalisco, Durango, and the Tres Marías Islands.[47]

ANOLIS NEBULOIDES Bocourt

Anolis nebuloides Bocourt, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 2, 1873, pp. 74–75, pl.13, fig. 10.—Boulenger, Catalogue of the lizards of the British Museum, vol. 2, 1885, p. 77.

Type.—Mus. Hist. Nat. Paris, four cotypes; collected by (?) Commission Scientifique du Mexique.

Type locality.—Putla, Oaxaca.

Range.—Western Mexico from Chihuahua to Oaxaca. Recorded from the states of Chihuahua, Sonora, Colima, Guerrero, Puebla, and Oaxaca.[48]

ANOLIS KIDDERI Ruthven

Anolis kidderi Ruthven, Occ. Pap. Mus. Zool. Univ. Michigan, No. 257, 1933, pp. 1–2.

Type.—Mus. Zool. Univ. Michigan No. 72851; Edwin P. Creaser collector.

Type locality.—Mérida, Yucatán.

Range.—The western part of the Yucatán Peninsula. Recorded from Yucatán and Campeche.

ANOLIS USTUS Cope

Anolis ustus Cope, Proc. Acad. Nat. Sci. Philadelphia, 1864, p. 172.—Boulenger, Catalogue of the lizards in the British Museum, vol. 2, 1885, p. 73.—Schmidt, Publ. Field Mus. Nat. Hist., zool. ser., vol. 22, No. 8, 1941, p. 493.—Stuart, Misc. Publ. Mus. Zool. Univ. Michigan, No. 69, 1948, pp. 49, 51.

Type.—Brit. Mus. Nat. Hist., two cotypes.

Type locality.—Belize, British Honduras.

Range.—The Yucatán Peninsula and the area at its base. Recorded in Mexico from Yucatán and Campeche.

ANOLIS LEMURINUS BOURGEAEI Bocourt

Anolis bourgeaei Bocourt, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 2, 1873, pp. 76–77, pl. 15, fig. 9.—Boulenger, Catalogue of the lizards in the British Museum, vol. 2, 1885, pp. 74–75.

Anolis limifrons bourgeaei, Stuart, Misc. Publ. Univ. Michigan Mus. Zool., No. 69, 1948, p. 49.

[47] Records from the states of Veracruz and Yucatán are probably erroneous, and that from Chihuahua is said to be referable to *A. nebuloides*. Virtually all records for both species are, for that matter, open to question. The two forms have never been adequately characterized, and very likely more than two species are involved.

[48] Undoubtedly some records of *nebulosus* belong here, and perhaps *vice versa*. A record for Veracruz is probably in error.

Anolis biporcatus, Bocourt[49] (*nec* Wiegmann), Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 2, 1873, pp. 98–99, pl. 15, fig. 8.—Boulenger, *op. cit.*, pp. 88–89.

Anolis ustus veraepacis Barbour, Proc. New England Zool. Club, vol. 12, 1932, p. 98 (type, Mus. Comp. Zool. No. 32324; A. W. Anthony coll.; Hacienda Chimoxán, Alta Verapaz, Guatemala).[50]

Type.—Mus. Hist. Nat. Paris, one female (Orizaba, collected by Bourgeau); Zool. Mus. Berlin, one male (Huatusco, collector?).

Type locality.—Huatusco and Orizaba, Veracruz, here restricted to Huatusco.

Range.—Atlantic slopes from Veracruz to Guatemala and British Honduras. Recorded in Mexico from the states of Veracruz, Tabasco, Campeche, and Yucatán.

ANOLIS CUMINGII Peters

Anolis cumingii Peters, Monatsb. Akad. Wiss. Berlin, 1863, p. 140.—Bocourt, Mission scientifique au Mexique . . . , Études sur les reptiles, livr. 2, 1873, p. 89, pl. 16, fig. 20.—Boulenger, Catalogue of the lizards in the British Museum, vol. 2, 1885, p. 80.—Burt and Myers, Stanford Univ. Publ., biol. sci., vol. 8, 1942, p. 291.—Smith, Anal. Inst. Biol. México, vol. 14, 1942, p. 342.

Type.—Zool. Mus. Berlin; Herr Cuming collector.

Type locality.—Mexico.

Range.—Uncertain; possibly the upper Balsas Basin. Recorded only from La Paz (Puebla?).

ANOLIS HELIACTIN Cope

Anolis heliactin Cope, Proc. Acad. Nat. Sci. Philadelphia, 1864, pp. 172–173.—Bocourt, Mission scientifique au Mexique . . . , Études sur les reptiles, livr. 2, 1873, pp. 106–108, pl. 13, figs. 4, 4a–c (in color), pl. 16, fig. 32.—Boulenger, Catalogue of the lizards in the British Museum, vol. 2, 1885, p. 72.

Type.—Acad. Nat. Sci. Philadelphia No. 7914.

Type locality.—Mexico.

Range.—Recorded only from "Oaxaca."

ANOLIS SERICEUS Hallowell

Anolis sericeus Hallowell, Proc. Acad. Nat. Sci. Philadelphia, vol. 8, 1856, pp. 227–228.—Barbour, Bull. Mus. Comp. Zool., vol. 77, 1934, pp. 149–150.—Schmidt, Publ. Field Mus. Nat. Hist., zool. ser., vol. 22, 1941, p. 492.

Anolis sallaei Günther, Proc. Zool. Soc. London, 1859, p. 421 (Brit. Mus. Nat. Hist.; Mexico; Salle coll.).—Bocourt, Mission scientifique au Mexique . . . , Études sur les reptiles, livr. 2, 1873, p. 90, pl. 13, fig. 3, pl. 16, fig. 21.—Boulenger, Catalogue of the lizards in the British Museum, vol. 2, 1885, pp. 79–80.

[49] And of other authors prior to Schmidt, 1941; see synonymy of *A. biporcatus*.

[50] According to Stuart (*op. cit.*, 1948, p. 51) the type and several of the paratypes of *A. u. veraepacis* Barbour are referable to *A. bourgeaei* while the remaining paratypes are *A. sericeus*.

Anolis jacobi BOCOURT, *op. cit.*, p. 74, pl. 13, fig. 8 (Mus. Hist. Nat. Paris; Veracruz, here restricted to Veracruz).

Type.—Acad. Nat. Sci. Philadelphia, now lost; Mr. Pease donor.

Type locality.—El Encero de Jalapa, Veracruz.

Range.—Atlantic slopes from Tamaulipas and Pacific slopes from the Isthmus of Tehuantepec south to Nicaragua. Recorded in Mexico from the states of Tamaulipas, San Luis Potosí, Veracruz, Oaxaca, Tabasco, and Chiapas.

Genus CORYTHOPHANES Boie

Corytophanes [*sic*] BOIE, *in* Schlegel, Isis von Oken, vol. 20, pt. 3, 1826, p. 290.

Chamaeleopsis WIEGMANN, *in* Gray, *in* Griffith, The animal kingdom . . . by the Baron Cuvier . . . , vol. 9, 1831, Synopsis, p. 45 (type, *Chamaeleopsis hernandezii* Wiegmann).[51]

Genotype.—*Agama cristata* Merrem.

Species.—Three.

Range.—Central Veracruz and the Pacific coast of Chiapas southeastward to Costa Rica.

KEY TO SPECIES OF CORYTHOPHANES

1. Nuchal crest interrupted, not continuous with dorsal crest—**hernandezii** (p. 68)
   Nuchal crest continuous with dorsal, although sometimes low where the two meet 2
2. Parietal crests joining very near extremity of helmet; upper head scales keeled or rugose ..... **percarinatus** (p. 69)
   Parietal crests joining about halfway from orbits to extremity of helmet; upper head scales smooth ..... **cristatus** (p. 69)

CORYTHOPHANES HERNANDEZII (Wiegmann)

Chamaeleopsis hernandezii WIEGMANN, *in* Gray, *in* Griffith, The animal kingdom . . ., by the Baron Cuvier . . ., vol. 9, 1831, Synopsis, p. 45; Isis von Oken, 1831, p. 298; Herpetologia Mexicana, pt. 1, 1834, pp. 15, 37, pl. 6.

Corythophanes hernandezii, LICHTENSTEIN and MARTENS, Nomenclator reptilium et amphibiorum Musei Zoologici Berolinensis, 1856, p. 8.—BOULENGER, Catalogue of the lizards in the British Museum, vol. 2, 1885, pp. 103–104.

Corythophanes chamaeleopsis DUMÉRIL and BIBRON, Erpétologie générale, vol. 4, 1837, p. 175–177 (substitute name for *Chamaeleopsis hernandezii* Gray).

Corythophanes mexicanus BOCOURT, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 3, 1874, pp. 122–123, pl. 17, fig. 1 (substitute name for *Chamaeleopsis hernandezii* Wiegmann, adopting Hernández's pre-Linnaean name *Chamaeleo Mexicanus*).[52]

[51] The author of this generic name, and of the specific name as well, has been accepted as Gray by some authors, as Wiegmann by others. Wiegmann published his own description in 1831, in great detail; Gray published but a few words, also in 1831, but attributed both names to "Wiedemann, MSS" (in error; = Wiegmann). Even though Gray's description may have preceded Wiegmann's, it seems obvious that Wiegmann was ethically the author, having provided the only reasonable description, and his manuscript having been acknowledged by Gray as the source of the latter's information. It is true that Gray stated specimens were in the British Museum (Boulenger cites one purchased by Gray), so that Gray could well have drawn up his description from them and not from Wiegmann's manuscript. The correct authorship thus remains debatable.

[52] Wiegmann cited *Chamaeleo Mexicanus* of Hernández in both of his papers (1831 and 1834) but did not adopt the name.

Type.—Zool. Mus. Berlin; F. Deppe collector.

Type locality.—Mexico, here restricted to Jalapa, Veracruz.

Range.—Atlantic slopes from central Veracruz south and east to Guatemala. Recorded in Mexico from various localities in the states of Veracruz, San Luis Potosí (Xilitla), Oaxaca, Chiapas, Yucatán, and Quintana Roo (Cobá).

CORYTHOPHANES CRISTATUS (Merrem)

Agama cristata MERREM, Tentamen systematis amphibiorum, 1821, p. 50.

Corythophanes cristatus,[53] GRAVENHORST, Acta Acad. Leop.-Carol., vol. 16, 1833, p. 938, pl. 65, figs. 6–10.—DUMÉRIL, Arch. Mus. Hist. Nat. Paris, vol. 8, 1856, p. 517, pl. 20, fig. 1.—BOULENGER, Catalogue of the lizards in the British Museum, vol. 2, 1885, pp. 101–102.

Type.—Unknown.

Type locality.—Ceylon (in error), here restricted to Orizaba, Veracruz.

Range.—Atlantic slopes from central Veracruz to Costa Rica. Reported in Mexico from the states of Veracruz, Campeche, Yucatán, and Chiapas (Usumacinta River across from Piedras Negras, Petén, Guatemala).

CORYTHOPHANES PERCARINATUS Duméril

Corythophanes percarinatus DUMÉRIL, Arch. Mus. Hist. Nat. Paris, vol. 8, 1856, p. 518, pl. 20, fig. 3.—BOCOURT, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 3, 1874, pp. 120–122, pl. 17, fig. 2.—SMITH, Journ. Washington Acad. Sci., vol. 39, 1949, p. 34.

Type.—Mus. Hist. Nat. Paris.

Type locality.—Escuintla, Guatemala.

Range.—Pacific slopes of Guatemala and Chiapas, and Atlantic slopes in Alta Verapaz, Guatemala. Known in Mexico only from Colonia Hidalgo, 8 kilometers north of La Esperanza, Chiapas.

Genus LAEMANCTUS Wiegmann

Laemanctus (part) WIEGMANN, Herpetologia Mexicana, pt. 1, 1834, pp. 45–46.

Genotype.—*Laemanctus longipes* Wiegmann.

Range.—Lowlands from San Luis Potosí south to and including Guatemala, and British Honduras; ? Colima.

Species.—Four, all occurring in Mexico.

KEY TO MEXICAN SPECIES OF LAEMANCTUS

1. Scales on upper surface of snout much larger than those on occipital region.. 2
   Scales on upper surface of snout not distinctly larger than those on occipital region; no dorsal crest; part of scales on body bicarinate or tricarinate; head yellowish above, the posterior contour black; body above dark purple or

[53] While Boie designated Merrem's species as type of his genus *Corytophanes*, he did not actually print the combination. That it was his intent so to spell the name is indicated in his article in vol. 21 (1828) of Isis von Oken, p. 363, where he (Boie) spells the name *Corytophanes*. Kaup (Isis von Oken, vol. 21, 1828, p. 1147) does likewise.

dark green, with blackish cross bands; a light lateral streak; lilac below; 690 mm.....**deborrei** (p. 71)

2. A series of projecting triangular scales on the posterior contour of the head; a feeble dorsal crest..... 3

No distinct serration on the posterior contour of head; no dorsal crest present; reddish or olive above with darker bands across back; a broad dark band from the eye to foreleg, passing through tympanum, bordered by a yellowish streak inferiorly; a yellowish streak from axilla to groin sometimes broken; a yellow spot on each side of base of tail; lower surfaces pink; 730 mm. **longipes** (p. 71)

3. Scales around middle of body, 57–61; reddish or purplish above with dark brown bands across body, most distinct in the vertebral region; a dark brown band from eye to tympanum, sometimes continued along side of back; a white streak from below the eye to forelimb, and from axilla to groin; a white spot on each side of base of tail.....**serratus** (p. 70)

Scales round middle of body, 45–51; gulars elongate; a less distinct vertebral serration; a white spot in front of and one behind thigh. **alticoronatus** [54] (p. 70)

LAEMANCTUS ALTICORONATUS Cope

Laemanctus alticoronatus Cope, Proc. Acad. Nat. Sci. Philadelphia, 1865, p. 192; Proc. Amer. Philos. Soc., 1869, pl. 11.—Boulenger, Catalogue of the lizards of the British Museum, vol. 2, 1885, p. 105.

Type.—U.S.N.M. No. 308; Arthur Schott collector.

Type locality.—Mérida, Yucatán.

Range.—Yucatán. Reported from Chichen Itzá and Mérida.

LAEMANCTUS SERRATUS Cope

Laemanctus longipes, Duméril, Arch. Mus. Hist. Nat. Paris, vol. 8, 1856, p. 512, pl. 21, fig. 4.—Bocourt, Mission scientifique au Mexique . . . , Études sur les reptiles, livr. 3, 1874, pp. 114–116, pl. 17, fig. 4 (non Wiegmann, *fide* Cope *loc. cit.*).

Laemanctus serratus Cope, Proc. Acad. Nat. Sci. Philadelphia, 1864, p. 176.—Boulenger, Bull. Soc. Zool. France, vol. 2, 1877, p. 463, pl. 7, fig. 3.—Smith and Laufe, Trans. Kansas Acad. Sci., vol. 48, 1945, pp. 229–231.—Peters, Chicago Acad. Sci. Nat. Hist. Misc., No. 27, 1948, pp. 1–3, fig. 1.

Type.—Mus. Leyden.

Type locality.—"Orizaba Valley, Mexico."

Range.—Lowlands from extreme eastern Guanajuato to Yucatán. Reported from *Yucatán*: Chichen Itzá; *Oaxaca:* "Oaxaca" (no specific locality), Tlacolula; *Veracruz:* Boca del Río, Jicaltepec, Misantla, Orizaba; *Guanajuato:* Huasteca Potosina; *Hidalgo:* Zacualtipan; *Campeche:* Champotón, Oxpemul; *San Luis Potosí*: Xilitla; *Tamaulipas:* near Gómez Farias.

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[54] Mrs. Helen T. Gaige suggests the possibility that *serratus* and *alticoronatus* may be identical since specimens from Yucatán and Campeche seem to show the characters of both (Carnegie Inst. Washington Publ. No. 457, 1936, p. 296).

LAEMANCTUS DEBORREI Boulenger

Laemanctus deborrei BOULENGER, Bull. Soc. Zool. France, vol. 2, 1877, pp. 462–463, 465–466, pl. 7, fig. 1; Catalogue of the lizards in the British Museum, vol. 2, 1885, p. 106.—SMITH, Journ. Washington Acad. Sci., vol. 34, 1944, pp. 155–156.—WEBER, Nat. Geogr. Mag., vol. 87, No. 2, 1945, pp. 209, 210, pl. 14 (col.).

Type.—Museum de Bruxelles, two adults; M. Linden collector (?).

Type locality.—Tabasco.

Range.—Atlantic slopes from Tabasco to British Honduras. Reported from *Tabasco:* La Venta; *Oaxaca:* Mountains near Santo Domingo (U. S. Nat. Mus.).

LAEMANCTUS LONGIPES Wiegmann

Laemanctus longipes WIEGMANN, Herpetologia Mexicana, pt. 1, 1834, p. 46, pl. 4.—BOULENGER, Bull. Soc. Zool. France, vol. 2, 1877, pp. 464–465, pl. 7, fig. 2; Catalogue of the lizards in the British Museum, vol. 2, 1885, pp. 105–106.

Type.—Zool. Mus. Berlin; F. Deppe collector.

Type locality.—Jalapa, Veracruz.

Range.—Eastern slopes of the plateau from Veracruz to Oaxaca, and (?) western slopes in Colima. Reported from *Veracruz:* Actopam, Jalapa, "near Veracruz," Mirador, Potrero Viejo; ? *Colima:* Paso del Río; *Oaxaca:* Oaxaca.

Genus BASILISCUS Laurenti

Basiliscus LAURENTI, Specimen medicum exhibens synopsin reptilium, 1768, p. 50.

Corythaeolus KAUP, Isis von Oken, vol. 21, 1828, p. 1147 (type, *Basiliscus vittatus* Wiegmann).

Oedicoryphus WAGLER, Natürliches System der Amphibien, 1830, p. 148 (type, *Basiliscus vittatus* Wiegmann).

Cristasaura GRAY, Ann. Mag. Nat. Hist., ser. 2, vol. 10, 1852, p. 439 (type, *Cristasaura mitrella* Gray = *Basiliscus vittatus* Wiegmann).

Paraloma COPE, Proc. Acad. Nat. Sci. Philadelphia, 1867, p. 181 (type, *Daconura bivittata* Hallowell = *Basiliscus vittatus* Wiegmann).

Genotype.—*Basiliscus americanus* Laurenti = (*Basiliscus basiliscus* (Linnaeus)).

Range.—Lowlands of Mexico south through Jalisco and Tamaulipas, through Central America to northwestern South America.

Species.—Five; one occurs in Mexico.

BASILISCUS VITTATUS Wiegmann

Basiliscus vittatus WIEGMANN, Isis von Oken, vol. 21, 1828, p. 373.—DUMÉRIL, Arch. Mus. Hist. Nat. Paris, vol. 8, 1856, pp. 522–524, pl. 21, figs. 2, 3.—BOCOURT, Mission scientifique au Mexique . . . , Études sur les reptiles, livr. 3, 1874, pp. 129–131, pl. 17, fig. 3.—BOULENGER, Catalogue of the lizards of the British Museum, vol. 2, 1885, pp. 109–110.

Cristasaura mitrella GRAY, Ann. Mag. Nat. Hist., ser. 2, vol. 10, 1852, p. 439 (Brit. Mus. Nat. Hist.; Dyson coll.; Honduras).

Daconura bivittata HALLOWELL, Proc. Acad. Nat. Sci. Philadelphia, 1860, p. 482 (Acad. Nat. Sci. Philadelphia; Nicaragua, here restricted to Greytown).
Basiliscus (*Cristasaura*) *nuchalis* COPE, Proc. Acad. Nat. Sci., Philadelphia, 1862, p. 181 (U.S.N.M. No. 5845; Caldwell collector; Greytown, Nicaragua).

Type.—Zool. Mus. Berlin; F. Deppe collector.

Type locality.—Mexico, here restricted to Veracruz, Veracruz.

Range.—The coasts from Jalisco and southern Tamaulipas, south to Nicaragua. Reported from numerous localities in the states of Tamaulipas, Veracruz, Tabasco, Campeche, Yucatán, Quintana Roo, Chiapas, Oaxaca, Guerrero, Michoacán, Colima, and Jalisco.

Genus IGUANA Laurenti

Iguana LAURENTI, Specimen medicum exhibens synopsin reptilium, 1768, p. 47.
Hypsilophus WAGLER, Natürliches System der Amphibien, 1830, p. 147 (type, *Lacerta iguana* Linnaeus).

Genotype.—*Lacerta iguana* Linnaeus.

Range.—Mexico on the Pacific coast from Sinaloa to Chiapas, on the eastern coast north to central Veracruz. Absent on the higher parts of the plateau. Lowlands of Central America, and central and northern South America.

Species.—Two, one with two subspecies. Extralimital are *Iguana iguana iguana* and *Iguana delicatissima* of South America.

IGUANA IGUANA RHINOLOPHA Wiegmann

I[*guana*] *H*[*ypsilophus*] *rhinolophus* WIEGMANN, Herpetologia Mexicana, pt. 1, 1834, pp. 44–45.
Iguana tuberculata var. *rhinolopha*, BOULENGER, Catalogue of the lizards in the British Museum, vol. 2, 1885, pp. 190–191.
Iguana iguana rhinolopha, VAN DENBURGH, Proc. Acad. Nat. Sci. Philadelphia, 1897, p. 461.—DUNN, Copeia, 1934, p. 1.
?*Iguana Hernandesii* JAN, Indice sistematico dei rettili ed anfibi esposti nel medesino, 1857, p. 58 (nomen nudum).

Type.—Zool. Mus. Berlin; F. Deppe collector.

Type locality.—Mexico, by inference here restricted to Córdoba, Veracruz.

Range.—Veracruz and Sinaloa southward along both coasts to Panama. Reported from *Sinaloa:* Mazatlán, Presidio; *Nayarit:* San Blas; *Colima:* Manzanillo, Tecomán, Colima; *Jalisco:* ?San Blas (possibly Nayarit); *Michoacán:* Hacienda California, Chacán River Sierra Madre, Jorullo; *Guerrero:* Píe de la Cuesta, Acapulco; *Puebla:* Chiautla; *Oaxaca:* Tehuantepec, Río Coatzacoalcos, ?Tetela, Agua Fría, Tequesixtlán, Totolapan; *Veracruz:* Córdoba, Vega de Alatorre, vicinity of Cuatotolapam, Matacabestro, Puente Nacional; *Tabasco:* Tlacotalpan, Tenosique; *Campeche:* Ciudad del Carmen; *Quintana Roo:* Cozumel Island; *Chiapas:* La Esperanza.

Genus CTENOSAURA Wiegmann

Ctenosaura WIEGMANN, Isis von Oken, 1828, p. 371.—BAILEY, Proc. U. S. Nat. Mus., vol. 73, art. 12, 1928, pp. 1–58, pls. 1–30 (part).[55]

Genotype.—*Ctenosaura cycluroides* Wiegmann [= *C. acanthura* (Shaw)].

Species.—Five, all but one of which (*C. bakeri* of Utilla Island, Honduras) occur in Mexico.

Range.—Baja California, Sonora, and perhaps southern Arizona on the west, and Tamaulipas on the east, south along both coasts to Panama.

KEY TO MEXICAN SPECIES OF CTENOSAURA

1. Small scales between whorls of enlarged scales reduced to 1 row (and no more than 1 row) between at least a few whorls (generally near middle of tail), often on entire distal half or more of tail 2
   Small scales in at least one complete and another incomplete row between all whorls of enlarged scales on tail 3
2. Fifth whorl of enlarged scales preceded by more than a single row of small scales ..... **acanthura** (p. 74)
   Fifth whorl of enlarged scales preceded by one row and one row only (no incomplete row) of small scales ..... **hemilopha** (p. 75)
3. Three rows of small scales, complete or incomplete, preceding each of the proximal 5 whorls of enlarged caudal scales ..... **pectinata** (p. 75)
   Small scales reduced to only two rows preceding one or more of the proximal five caudal whorls ..... **similis** (p. 73)

CTENOSAURA SIMILIS SIMILIS (Gray)

Iguana (*Ctenosaura*) *similis* GRAY, *in* Griffith, Animal Kingdom, by the Baron Cuvier, vol. 9, Synopsis . . . , 1831, p. 38.

Cyclura (*Ctenosaura*) *similis*, WIEGMANN, Herpetologia Mexicana, 1834, p. 42.

Ctenosaura similis, BAILEY, Proc. U. S. Nat. Mus., vol. 73, 1928, pp. 32–37, pls. 16–20.—SMITH, Univ. Kansas Sci. Bull., vol. 22, 1935, pp. 139–140; Journ. Washington Acad. Sci., vol. 39, 1949, pp. 35–36.

Ctenosaura similis [*similis*], BARBOUR and SHREVE, Occ. Pap. Boston Soc. Nat. Hist., vol. 8, 1934, p. 197.—SMITH, Ann. Carnegie Mus., vol. 30, 1944, p. 89.

Ctenosaura completa BOCOURT, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 3, 1874, pp. 145–146 (Mus. Hist. Nat. Paris Nos. 2251–2252, La Unión, El Salvador; Mus. Comp. Zool., 1 spec., "Mexico"; Mus Hist. Nat. Paris, 2 cotypes, "Guatemala").[56]

Type.—Lost.

Type locality.—Restricted (by Bailey) to Tela, Honduras.

Range.—Coastal areas from the Isthmus of Tehuantepec on the

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[55] We are not totally in agreement with Bailey's treatment of the species in this genus, nor with some of the more recent records no doubt influenced by his work. The four forms we recognize are more or less completely allopatric; at least such suggestions as of *C. acanthura* in Chihuahua and *C. similis* in Guerrero appear to us wholly unwarranted. The only extensive overlapping of ranges of which we are aware occurs on the Atlantic coast and involves *C. acanthura* and *C. similis*.

[56] Bocourt (*loc. cit.*) states that the types are from "Guatemala" and "La Union," El Salvador. Barbour and Loveridge (Bull. Mus. Comp. Zool., vol. 69, 1929, p. 247), however, state that a cotype in the Mus. Comp. Zool. is from "Mexico." The type locality is here restricted to La Unión.

Pacific and central Veracruz on the Atlantic south to Panama. Recorded in Mexico from the states of Veracruz, Tabasco, Campeche, Yucatán, Quintana Roo (including Mujeres and Cozumel Islands), Oaxaca, and Chiapas (Tonalá, Palenque).[57]

CTENOSAURA ACANTHURA (Shaw)

Lacerta acanthura SHAW, General zoology, vol. 3, 1802, pp. 216–217.

Ctenosaura acanthura, GRAY, Catalogue of the lizards in the collection of the British Museum, 1845, p. 191.—BAILEY, Proc. U. S. Nat. Mus., vol. 73, 1928, pp. 9–16, pls. 1–4.—SMITH, Univ. Kansas Sci. Bull., vol. 22, 1935, pp. 137–139; Journ. Washington Acad. Sci., vol. 39, 1949, p. 36.

Cyclura teres HARLAN, Journ. Acad. Nat. Sci. Philadelphia, vol. 4, 1825, pp. 242–251, pl. 26 (type lost; Tampico, Tamaulipas).

Ctenosaura cycluriodes WIEGMANN, Isis von Oken, 1828, vol. 21, p. 371 (Zool. Mus. Berl. Nos. 576, 578, Mus. Comp. Zool. No. 2253, cotypes; Mexico, here restricted to Veracruz, Veracruz).

Iguana (*Ctenosaura*) *armata* GRAY, *in* Griffith, Animal Kingdom, by the Baron Cuvier, vol. 9, Synopsis . . . 1831, p. 38 (type lost; no type locality cited, here restricted to Tampico, Tamaulipas).

Cyclura shawii GRAY, *loc. cit.* (synonymic name for *Iguana* (*Ctenosaura*) *acanthura* Gray).

Iguana (*Ctenosaura*) *lanceolata* GRAY, *loc. cit.* (type lost; no type locality cited, here restricted to Tampico, Tamaulipas).

Iguana (*Ctenosaura*) *bellii* GRAY, *loc. cit.* (type lost; no type locality cited, here restricted to Tampico, Tamaulipas).

Cyclura articulata WIEGMANN, Herpetologia Mexicana, 1834, p. 43 (types unknown; type locality, Mexico).

Cyclura denticulata WIEGMANN, *ibid.*, pp. 43–44 (substitute name for *Ctenosaura cycluroides* Wiegmann).

Cyclura semicristata FITZINGER, Systema reptilium, 1843, p. 56 (synonymic name for *Cyclura denticulata* Wiegmann).[58]

Ctenosaura multispinis COPE, Proc. Amer. Philos. Soc., vol. 23, 1886, p. 197 (U.S.N.M. No. 72737; Captain Dallas collector; Dondominguillo, Oaxaca).

Type.—Brit. Mus. Nat. Hist. No. XXII, 20-a (*fide* Bailey); collector unknown.

Type locality.—Not given by Shaw. Boulenger (Catalogue of the lizards in the British Museum, vol. 2, 1885, p. 196) gives "California," which probably means Baja California. Since the species does not occur there we accept Bailey's restriction to Tampico, Tamaulipas.

Range.—Atlantic slopes from central Tamaulipas south to the Isthmus of Tehuantepec. Reliably reported only from the states of Tamaulipas, San Luis Potosí (Pujal), Veracruz, and Oaxaca.[59]

[57] Burt and Myers (Stanford Univ. Publ., biol. ser., vol. 8, 1942, p. 299) record the species, in error, from Acapulco, Guerrero.

[58] Fitzinger (*loc. cit.*) attributes this name to Wiegmann, as do also Lichtenstein and Martens (Nomenclator . . . Berolinensis, 1856, p. 8); we are, however, unable to locate Wiegmann's use of the name and attribute it to Fitzinger, as did Bailey, Proc. U. S. Nat. Mus., vol. 73, 1928, p. 10).

[59] Reexamination of specimens in the U. S. Nat. Mus. referred by Bailey (*loc. cit.*) to *C. acanthura* reveals that two other species were confused with *C. acanthura*. One specimen from Mirador, Veracruz, is a *C. similis;* and all from Uruapan, Michoacán; Tehuantepec, Oaxaca (except Nos. 26341, 58498); Isabel Island; Tres Marías Islands; Cuicatlán, Oaxaca; Tlapa and Balsas, Guerrero, are *C. pectinata*. That all other west-coast specimens in his list, from other museums, are also *C. pectinata* we believe is virtually a certainty.

CTENOSAURA PECTINATA (Wiegmann)

Cyclura pectinata Wiegmann, Herpetologia Mexicana, 1834, p. 42, pl. 2.

Ctenosaura pectinata, Gray, Catalogue of the specimens of lizards in the collection of the British Museum, 1845, p. 191.—Bailey, Proc. U.S. Nat. Mus., vol. 73, 1928, pp. 24–27, pls. 7–11.—Smith, Univ. Kansas Sci. Bull., vol. 22, 1935, pp. 134–137; Journ. Washington Acad. Sci., vol. 39, 1949, pp. 36, 37.

Ctenosaura brevirostris Cope, Proc. Amer. Philos. Soc., vol. 23, 1886, pp. 266–268 (type, U.S.N.M. No. 24709; John Xantus collector; Colima, Colima).—Bailey, *op. cit.*, pp. 27–29, pls. 12, 13, 15.

Ctenosaura teres brachylopha Cope, Proc. Amer. Philos. Soc., vol. 23, 1886, p. 269 (type, U.S.N.M. Nos. 7180–3; Bischoff collector; Mazatlán, Sinaloa).—Bailey, Proc. U. S. Nat. Mus., vol. 73, art. 12, pp. 22–24, pl. 6.

Ctenosaura parkeri Bailey, Proc. U. S. Nat. Mus., vol. 73, art. 12, pp. 29–32, pls. 14, 15 (type, U.S.N.M. No. 18967; P. L. Jouy collector; Barranca Ibarra, Jalisco).

Type.—Mus. Zool. Berlin. No. 574; F. Deppe collector.

Type locality.—Restricted to Colima, Colima.

Range.—Pacific coast from southern Sinaloa southward to the Isthmus of Tehuantepec. Recorded from Isabel and the Tres Marías Islands and the states of Sinaloa, Durango (Ciudad, Ventanas), Nayarit, Jalisco, Colima, Michoacán, Morelos, Guerrero, Puebla, and Oaxaca. A record for the state of Guanajuato is unacceptable.

CTENOSAURA HEMILOPHA (Cope)

Cyclura (*Ctenosaura*) *hemilopha* Cope, Proc. Acad. Nat. Sci. Philadelphia, 1863, pp. 105–106.

Ctenosaura hemilopha, Cope, Proc. Acad. Nat. Sci. Philadelphia, 1866, p. 312.—Van Denburgh, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 39, 66–71.—Bailey, Proc. U. S. Nat. Mus., vol. 73, 1928, pp. 17–22, pl. 5.—Smith, Univ. Kansas Sci. Bull., vol. 22, 1935, pp. 140–142, pl. 23, fig. 1.

Ctenosaura interrupta Bocourt, Le Naturaliste, vol. 2, 1882, p. 47 (Mus. Hist. Nat. Paris Nos. 2243, 2245, 2843, Brit. Mus. Nat. Hist. 1 spec., cotypes, M. Botta collector; "Baja California", here restricted to Cape San Lucas).

Ctenosaura conspicuosa Dickerson, Bull. Amer. Nat. Hist., vol. 41, 1919, p. 461 (U.S.N.M. No. 64440; C. H. Townsend collector; San Esteban Island, Sonora).

Ctenosaura insulana Dickerson, *op. cit.*, pp. 462–463 (U.S.N.M. No. 64439; C. H. Townsend collector; Cerralvo Islands, Baja California).

Type.—U.S.N.M. No. 529, four cotypes; John Xantus collector.

Type locality.—Cape San Lucas, Baja California.

Range.—The southern two-thirds of Baja California, central Sonora (including San Pedro Nolasco Island) south to northern Sinaloa, and southwestern Chihuahua. Recorded only from the states cited. It is possible that the species extends as far north as southern Arizona.

Genus ENYALIOSAURUS Gray

Enyaliosaurus Gray, Catalogue of the specimens of lizards in the collection of the British Museum, 1845, p. 192.

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Cachryx COPE, Proc. Acad. Nat. Sci. Philadelphia, 1866, p. 124 (genotype, *Ctenosaura erythromelas* Boulenger).

Genotype.—*Cyclura quinquecarinata* Gray.

Range.—Michoacán to the Isthmus of Tehuantepec, the Peninsula of Yucatán, and northern Guatemala.

Species.—Five, all but one of which (*C. palearis* of Guatemala) occur in Mexico.

KEY TO MEXICAN SPECIES OF ENYALIOSAURUS

1. Whorls of enlarged caudal scales not interspersed with small scales. **defensor** (p. 77)
   Whorls of enlarged caudal scales interspersed with smaller scales..... 2
2. Dorsal and lateral caudal scales of nearly uniform character in each whorl. **erythromelas** (p. 77)
   Dorsal and lateral caudal scales not of nearly uniform character but median longitudinal series and outer lateral series differentiated..... 3
3. Median row of dorsal scales extending to or almost to sacrum, noticeably raised, of medium height; tail twice length of body..**quinquecarinata** (p. 76)
   Median row of dorsal scales extending only two-thirds distance to sacrum and not noticeably raised; tail about 1¼ times body length..**clarki** (p. 76)

ENYALIOSAURUS QUINQUECARINATUS (Gray)

Cyclura quinquecarinata GRAY, Zoological miscellany, 1842, p. 59.

Enyaliosaurus quinquecarinatus, GRAY, Catalogue of the specimens of lizards in the collections of the British Museum, 1845, p. 192.

Cyclura (*Ctenosaura*) *quinquecarinata*, COPE, Proc. Amer. Philos. Soc., vol. 11, p. 161.

Ctenosaura quinquecarinata, SUMICHRAST, Bull. Soc. Zool., vol. 10, 1880, p. 175.—BAILEY, Proc. U. S. Nat. Mus., vol. 73, art. 12, 1928, pp. 42–44, pls. 24, 25, 26.

Type.—Brit. Mus. Nat. Hist. No. 61; collector unknown.

Type locality.—Unknown (restricted to Tehuantepec, Oaxaca, by Bailey, *loc. cit.*).

Range.—Lowland regions of southern Oaxaca. Reported from *Oaxaca*: Tehuantepec, "Hugma, Terminos," San Pedro, and Mixtequilla Mountains, between Salina Cruz and Tequesixtlán.

ENYALIOSAURUS CLARKI (Bailey)

Enyaliosaurus quinquecarinatus, DUGÈS, La Naturaleza, ser. 2, vol. 2, 1897, pp. 523–524, pl. 34 (color).

Ctenosaura clarki BAILEY, Proc. U. S. Nat. Mus., vol. 73, art. 12, 1928, pp. 44–46, pl. 27.

Type.—Mus. Comp. Zool. No. 22454; Hans Gadow collector.

Type locality.—Ovopeo, Michoacán, elevation 1,000 feet.

Range.—Known definitely only from the type locality; a record for Cuautla, Morelos, probably belongs here (Dugès, La Naturaleza, ser. 2, vol. 2, 1896, p. 480).

ENYALIOSAURUS ERYTHROMELAS (Boulenger)

Ctenosaura erythromelas Boulenger, Proc. Zool. Soc. London, 1886, p. 241, pl. 23 (color).—Bailey, Proc. U. S. Nat. Mus., vol. 73, art. 12, 1928, pp. 46–48, pls. 28, 29.—Smith, Occ. Pap. Univ. Michigan Mus. Zool., No. 388, 1938, p. 15.
Cachryx erythromelas, Cope, U. S. Nat. Mus. Bull. 32, 1887, p. 43.
Ctenosaura (Cachryx) annectens Werner, Jahrb. Hamburg Wiss. Anst., pt. 2, 1911, p. 25 (locality unknown; P. Phol collector, Hamburg Museum; "Mexico").

Type.—Brit. Mus. Nat. Hist. No. 1 (*fide* Bailey, *loc. cit.*, p. 48); purchased alive.

Type locality.—Unknown; here restricted to Balchacaj, Campeche.

Range.—Known only from Balchacaj, Campeche.

ENYALIOSAURUS DEFENSOR Cope

Cachryx defensor Cope, Proc. Acad. Nat. Sci. Philadelphia, 1866, p. 124; Proc. Amer. Philos. Soc., 1869, pl. 10.—Bocourt, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 3, 1874, pp. 148–149, pl. 17 bis, fig. 12, 12a.
Ctenosaura defensor, Günther, Biologia Centrali-Americana, Reptilia and Batrachia, 1890, pp. 58–59.—Bailey, Proc. U. S. Nat. Mus., vol. 73, art. 12, 1928, pp. 48–50, pl. 30.

Type.—U. S. N. M. No. 12282; male, adult, and half grown, three cotypes; Arthur C. V. Schott collector.

Type locality.—Yucatán, here restricted to Chichen Itzá.

Range.—Northern part of the Yucatán Peninsula. Reported only from Chichen Itzá, Yucatán.

Genus DIPSOSAURUS Hallowell

Dipso-saurus Hallowell, Proc. Acad. Nat. Sci. Philadelphia, vol. 7, 1854, p. 92.

Genotype.—Crotaphytus dorsalis Baird and Girard.

Range.—Sonora, Baja California, and some coastal islands of the Gulf. In United States: southern and central Arizona, Colorado and Mojave Deserts east to the Colorado River, southern Nevada, and Utah.

Species.—Three, with five forms recognized.

KEY TO MEXICAN SPECIES OF DIPSOSAURUS

1. Two or more scale rows between nostril and rostral (62–83 percent); frequently with longitudinal dark lines on the body ..... **dorsalis dorsalis** (p. 78)
   One scale row between nostril and rostral (75 to 80 percent); dark lateral lines usually lacking 2
2. Dorsal pattern consisting of large, round, white spots, and no longitudinal lines; brown reticulation on throat enclosing round or oval cream spots. **dorsalis sonoriensis** (p. 79)
   Dorsal pattern consisting of short longitudinal streaks, and few if any light spots, which are not dark-edged; throat either striped with dark longitudinal streaks or without streaks, in which case large rounded spots are present. 3

3. Gular region without longitudinal dark streaks; large rounded spots on lower jaw and side of neck; central gular region suffused with dark brown; femoral pores average 19.1 ..... **catalinensis** (p. 78)
   Gular region with longitudinal dark streaks, without definite rounded light spots laterally, sometimes suffused with dark centrally 4
4. Femoral pores fewer, average 18.46 ..... **dorsalis lucasensis** (p. 78)
   Femoral pores more numerous, average 21.8 ..... **carmenensis** (p. 78)

DIPSOSAURUS CARMENENSIS Van Denburgh

Dipsosaurus carmenensis Van Denburgh, Occ. Pap. California Acad. Sci., No. 10, vol. 1, 1922, pp. 81–82.

Type.—California Acad. Sci. No. 50504; Joseph R. Slevin collector.

Type locality.—Carmen Island, Baja California.

Range.—Carmen Island and Los Coronados Islands, Baja California.

DIPSOSAURUS CATALINENSIS Van Denburgh

Dipsosaurus catalinensis Van Denburgh, Occ. Pap. California Acad. Sci., No. 10, vol. 1, 1922, pp. 83–84.

Type.—California Acad. Sci. No. 50505; Joseph R. Slevin collector.

Type locality.—Santa Catalina Island, Baja California.

Range.—Known only from the type locality.

DIPSOSAURUS DORSALIS LUCASENSIS Van Denburgh

Dipsosaurus dorsalis lucasensis Van Denburgh, Proc. California Acad. Sci., ser. 4, vol. 10, 1920, p. 33; Occ. Pap. California Acad. Sci., No. 10, 1922, vol. 1, pp. 78–81.

Type.—California Acad. Sci. No. 46090.

Type locality.—"San José del Cabo, Baja California, Mexico."

Range.—Southern tip of Baja California, southward from Santa Margarita Island; Cerralbo Island. Reported from Miraflores, San José del Cabo, Santa Anita, Agua Caliente, Eureka, etc.

DIPSOSAURUS DORSALIS DORSALIS (Baird and Girard)

Crotaphytus dorsalis Baird and Girard, Proc. Acad. Nat. Sci. Philadelphia, vol. 6, 1852, p. 126.

Dipsosaurus dorsalis, Hallowell, *ibid.*, vol. 7, 1854, p. 92.

Dipsosaurus dorsalis dorsalis, Van Denburgh, Proc. California Acad. Sci., ser. 4, vol. 10, No. 4, 1920, pp. 33–34; Occ. Pap. California Acad. Sci., No. 10, vol. 1, 1922, pp. 73–78, pl. 2.

Type.—U.S.N.M. No. ?; John LeConte collector.

Type locality.—"Desert of Colorado, Cal.," here restricted to Winterhaven (=Fort Yuma), Imperial County.

Range.—Extreme southwestern Utah and eastern California southward into northwestern Sonora, and eastern Baja California south to Magdalena Island; recorded on the latter island and on those of San Luis, Ángel de la Guarda, San Marcos, Monserrate, and San José. Reported from *Baja California:* Volcano Lake, San Felipe Bay, 13 miles northwest of El Mejor, El Cajón Cañon, San Ignacio, 600 feet, etc.; *Sonora:* Punta Peñasco.

DIPSOSAURUS DORSALIS SONORIENSIS Allen

Dipso-saurus dorsalis sonoriensis Allen, Occ. Pap. Mus. Zool. Univ. Michigan, No. 259, 1933, pp. 4–6.

Type.—Mus. Zool. Univ. Michigan No. 72121; John Piatt, John Scofield, and Morrow J. Allen collectors.

Type locality.—Hermosillo, Sonora.

Range.—Gulf slope of Sonora, except extreme northwestern part, and southward into northern Sinaloa. Reported from *Sonora:* 5 miles southwest of Hermosillo, Miramar, La Posa, Guaymas, Rancho Costa Rica, Bocoit; *Sinaloa:* Ahome.

Genus SAUROMALUS Duméril

Sauromalus Duméril, Arch. Mus. Hist. Nat. Paris, vol. 8, 1856, p. 536.—Shaw, Trans. San Diego Soc. Nat. Hist., vol. 10, 1945, pp. 269–306, map.

Euphryne Baird, Proc. Acad. Nat. Sci. Philadelphia, vol. 10, 1858, p. 253 (type, *Euphryne obesus* Baird).

Genotype.—Sauromalus ater Duméril.

Species.—Seven, one with three subspecies.

Range.—Southern Utah and southern Nevada south through southern California, western Sonora and the Gulf slopes of Baja California.

KEY TO SPECIES OF SAUROMALUS[60]

1. One or more transverse bands dorsally, across body or rump 4
   No transverse body bands present 2
2. Largest nuchal scales equally as large as or larger than frontal plates. **hispidus** (adult) (p. 80)
   Largest nuchal scales smaller than frontal plates 3
3. Dorsal pattern of large, irregular, dark brown or black blotches on a yellowish ground color ..... **varius** (p. 81)
   Dorsal pattern of small, dark brown or black spots on a gray ground color. **klauberi** (p. 80)
4. Ventral scale rows usually less than 130 5
   Ventral scale rows usually more than 130 6
5. Dorsal scales in a head length usually less than 20 **hispidus** (juvenile) (p. 80)
   Dorsal scales in a head length usually more than 20 ..... **slevini** (p. 80)
6. Transverse body bands with light centers and dark brown or black borders giving a double-banded effect 9
   Transverse bands unicolor 7
7. Scales around middle of upper foreleg (humeral scales) usually fewer than 50 8
   Humeral scales more than 50 ..... **obesus obesus** (p. 81)
8. No reddish suffusion on dorsal and ventral areas in adult males; maximum adult length averaging somewhat less than in *o. tumidus;* average scale counts lesser ..... **obesus townsendi** (p. 81)
   More or less brilliant reddish suffusion on dorsal and ventral areas in adult males; maximum adult length averaging more than in *o. townsendi;* average scale counts greater ..... **obesus tumidus** (p. 81)
9. Ventral scale rows 151 or more ..... **australis** (p. 80)
   Ventral scale rows usually less than 151 ..... **ater** (p. 80)

[60] From Shaw, Trans. San Diego Soc. Nat. Hist., vol. 10, 1945, p. 303.

SAUROMALUS HISPIDUS Stejneger

Sauromalus hispidus STEJNEGER, Proc. U. S. Nat. Mus., vol. 14, 1891, p. 409.—COPE, Ann. Rep. U. S. Nat. Mus., 1898 (1900), p. 264, fig. 22.—VAN DENBURGH, Occ. Pap. California Acad. Sci., No. 10, vol. 1, 1922, pp. 99–101, pls. 5–6.—SHAW, Trans. San Diego Soc. Nat. Hist., vol. 10, 1945, pp. 279–280.

Type.—U.S.N.M. No. 8563; Thomas H. Streets collector.

Type locality.—Ángel de la Guarda Island, Baja California.

Range.—Ángel de la Guarda, Smith, Pond, Nuevo Amor, Granite, Mejía, and South San Lorenzo Islands, Gulf of California, Baja California.

SAUROMALUS KLAUBERI Shaw

Sauromalus klauberi SHAW, Trans. San Diego Soc. Nat. Hist., vol. 9, 1941, p. 285; vol. 10, 1945, pp. 282–283.

Type.—L. M. Klauber No. 6859.

Type locality.—Santa Catalina Island, Baja California.

Range.—The type locality.

SAUROMALUS SLEVINI Van Denburgh

Sauromalus slevini VAN DENBURGH, Occ. Pap. California Acad. Sci., No. 10, vol. 1, 1922, pp. 97–99.—SHAW, Trans. San Diego Soc. Nat. Hist., vol. 10, 1945, pp. 280–282.

Type.—California Acad. Sci. No. 50503, adult male; Joseph R. Slevin collector.

Type locality.—South end of Monserrate Island, Baja California.

Range.—Monserrate, Carmen, and Coronados Islands, Baja California.

SAUROMALUS AUSTRALIS Shaw

Sauromalus australis SHAW, Trans. San Diego Soc. Nat. Hist., vol. 10, 1945, pp. 286–288.

Type.—L. M. Klauber No. 30170; Robert S. Hoard collector.

Type locality.—San Francisquito Bay, Baja California.

Range.—The mainland of central and southern Baja California on the Gulf coast.

SAUROMALUS ATER Duméril

Sauromalus ater DUMÉRIL, Arch. Mus. Hist. Nat. Paris, vol. 8, 1856, p. 536, pl. 23, figs. 3, 3a.—SHAW, Trans. San Diego Soc. Nat. Hist., vol. 10, 1945, pp. 284–286.

Type.—Mus. Hist. Nat. Paris; M. Jaurès collector? ("qui a été donné . . . par M. Jaurès, lieutenant à bord de la frégate *la Danaïde*").

Type locality.—Unknown; presumably one of the islands in the southern part of the Gulf of California, Baja California, here restricted to Espíritu Santo Island.

Range.—Espíritu Santo, Isla Partida, San Francisco, San Diego, Santa Cruz, and San Marcos Islands, Gulf of California, Baja California.

SAUROMALUS VARIUS Dickerson

Sauromalus varius DICKERSON, Bull. Amer. Mus. Nat. Hist., vol. 41, 1919, pp. 464–465.—SHAW, Trans. San Diego Soc. Nat. Hist., vol. 10, 1945, pp. 288–290.

Type.—U.S.N.M. No. 64441; C. H. Townsend collector.

Type locality.—San Esteban Island, Gulf of California.

Range.—The type locality.

SAUROMALUS OBESUS TOWNSENDI Dickerson

Sauromalus townsendi DICKERSON, Bull. Amer. Mus. Nat. Hist., vol. 41, 1919, p. 464.

Sauromalus obesus townsendi, SHAW, Trans. San Diego Soc. Nat. Hist., vol. 10, 1945, pp. 290–292.

Type.—U.S.N.M. No. 64442; C. H. Townsend collector.

Type locality.—Tiburón Island, Gulf of California.

Range.—Tiburón Island, Sonora, and adjacent coast of Sonora at least as far south as Guaymas and east to the vicinity of Hermosillo.

SAUROMALUS OBESUS TUMIDUS Shaw

Sauromalus obesus tumidus SHAW, Trans. San Diego Soc. Nat. Hist., vol. 10, 1945, No. 15, pp. 269–306.

Type.—L. M. Klauber No. 27323; L. M. Klauber collector.

Type locality.—Telegraph Pass, Gila Mountains, Yuma County, Ariz.

Range.—Extreme northwestern Sonora, southwestern and south central Arizona. Intergrades only, with *S. o. townsendi*, are recorded from Mexico; typical specimens undoubtedly occur in extreme northwestern Sonora and extreme northeastern Baja California, along the Colorado River.

SAUROMALUS OBESUS OBESUS (Baird)

Euphryne obesus BAIRD, Proc. Acad. Nat. Sci. Philadelphia, 1858, p. 253; United States and Mexican boundary survey, vol. 2, Rept., 1859, p. 6, pl. 27.

Sauromalus obesus obesus, SHAW, Trans. San Diego Soc. Nat. Hist., vol. 10, 1945, pp. 295–301.

Type.—U.S.N.M. No. 4172; G. H. Thomas collector (?).

Type locality.—Fort Yuma, Calif.

Range.—Southeastern California, southern Nevada, southern Utah, western Arizona, and extreme northern Baja California. Although known from numerous localities within a few hundred feet of the Baja California line, none have actually been taken in that state.

Genus HOLBROOKIA Girard

Holbrookia GIRARD, Proc. Amer. Assoc. Adv. Sci., vol. 4, 1851, p. 201.

Cophosaurus TROSCHEL, Arch. für Naturg., 1850 (1852), p. 389 (type, *Cophosaurus texana* Troschel).

Genotype.—*Holbrookia maculata* Girard.

Range.—Northern states of Mexico south to San Luis Potosí and Durango. In the United States: Texas, New Mexico, and Arizona.

Species.—Four, with twelve forms, of which ten are known to occur or are to be expected in Mexico.

KEY TO MEXICAN SPECIES OF HOLBROOKIA

1. Tail flat, with broad, black, ventral bands; lateroventral black marks placed far posteriorly, continued dorsally above lateral fold, and slanting anteroventrally on belly ..... **texana** (p. 85)

   Tail rounded; no ventral subcaudal marks save small spots in one subspecies; lateroventral marks placed farther anteriorly, not extending upon dorsal surface, and slanting posteroventrally on belly 2

2. Several black spots under tail; dorsal pattern of large, well-defined spots equally sharp-edged on all sides; no light dots in pattern. **maculata lacerata** (p. 83)

   No black spots under tail; pattern not as described 3

3. Dorsal body scales distinctly keeled, rather small 11

   Dorsal body scales not keeled (although sometimes pointed and somewhat convex), larger, flat 4

4. Tail generally shorter than the snout-vent measurement, usually not over 51 percent of total length (the higher proportions are of males) 5

   Tail generally as long as or longer than snout-vent measurement, 50–58 percent of total length (lower proportions are of females) 7

5. Enlarged supraoculars in contact with frontals ..... **maculata elegans** (p. 84)

   Enlarged supraoculars separated from frontals by a series of small scales 6

6. Size greater, maximum 71 mm., average 59 mm. snout to vent; in males a large blue patch surrounding lateroventral black spots on belly. **maculata dickersonae** (p. 83)

   Maximum size 61 mm., average 50 mm. snout to vent; in males a smaller blue patch, or none, partially surrounding lateroventral black spots on belly ..... **maculata approximans** (p. 83)

7. Femoral pores usually less than 12 8

   Femoral pores usually 12 or more 10

8. Upper labial region strongly flared, almost flat ..... **bunkeri** (p. 84)

   Upper labial region less flared, obtuse 9

9. Scales on limbs distinctly keeled; upper labials strongly imbricate. **maculata pulchra** (p. 84)

   Scales on limbs smooth; upper labials less strongly imbricate. **maculata dickersonae** (p. 83)

10. Femoral pores about two-thirds as wide as pore scales are long in adult males, about one-half in adult females ..... **maculata elegans** (p. 84)

    Femoral pores about one-half as wide as the pore scales are long, in adult males, about one-fourth in adult females ..... **maculata thermophila** (p. 84)

11. Anterior gulars a transverse row of 4 subequal scales, the inner pair not separated by linear or rounded scales ..... **propinqua piperata** (p. 85)

    Not so ..... **propinqua propinqua** (p. 85)

HOLBROOKIA MACULATA APPROXIMANS Baird

Holbrookia approximans BAIRD,[61] Proc. Acad. Nat. Sci. Philadelphia, 1858, p. 253.
Holbrookia maculata approximans, STEJNEGER, North Amer. Fauna, No. 3, 1890, p. 109.—SCHMIDT, Bull. Amer. Mus. Nat. Hist., vol. 46, 1922, pp. 721–723, pl. 60.—SMITH, Handbook of lizards, 1946, pp. 119–122, pl. 17.
Holbrookia maculata flavilenta COPE, Proc. Acad. Nat. Sci. Philadelphia, 1883, p. 10 (Lake Valley, Dona Ana County, N. Mex.; Acad. Nat. Sci. Philadelphia, 2 cotypes; E. D. Cope collector).

Type.—Lost.

Type locality.—Lower Rio Grande of Tamaulipas (*fide* Baird, United States-Mexican boundary survey, Reptiles, 1859, p. 8).

Range.—Western Texas to eastern Arizona, and from southeastern Utah southward through Chihuahua and central Coahuila, and southward in the west to Jalisco. Reported from *Chihuahua:* 35 and 40 miles south of Moctezuma, between Churo and Chiricahui, Ojos del Diablo, Río Santa María, Ramos, Casas Grandes; *Coahuila*: ? Concordia, Sierra de Santa Rosa, Buena Vista, Hda. La Rosita; *San Luis Potosì:* 5 miles northeast of Cándido Navarro; *Sonora:* headwaters of San Pedro; *Durango;* El Oro; *Jalisco:* Colotlán.[62]

HOLBROOKIA MACULATA DICKERSONAE Schmidt

Holbrookia dickersonae SCHMIDT, Amer. Mus. Nov., No. 22, 1921, p. 2; Bull. Amer. Mus. Nat. Hist., vol. 46, 1922, pp. 724–725.—SMITH, Univ. Kansas Sci. Bull., vol. 22, 1935, pp. 188–189.
Holbrookia maculata dickersonae, SMITH and MITTLEMAN, Trans. Kansas Acad. Sci., vol. 46, 1943, pp. 243–244.

Type.—U.S.N.M. No. 26684; Lt. D. N. Couch collector.

Type locality.—Castañuelas, Coahuila.

Range.—The northern portion of the central plateau, as far south as Guanajuato, and adjacent areas immediately northward in southern Coahuila and Durango. Reported from *Coahuila:* Castañuelas, Hipólito, Jaral, Agua Nueva, Jimulco, Saltillo, Álamo de Parras, 10 miles east of Torreón; *Durango:* near Avileo, 5 miles north of Conejos, 25 miles north of Bermejillo, Gómez Palacio; *San Luis Potosí:* Jesús María; *Zacatecas:* La Colorada, Berriozábal; *Guanajuato:* San Felipe.

HOLBROOKIA MACULATA LACERATA Cope

Holbrookia lacerata COPE, U. S. Nat. Mus. Bull. 17, 1880, p. 15.—SCHMIDT, Bull. Amer. Mus. Nat. Hist., vol. 46, 1922, p. 718.
Holbrookia maculata lacerata, STEJNEGER, North Amer. Fauna, No. 3, 1890, p. 109.—SMITH, Handbook of lizards, 1946, pp. 122–124, pl. 18.

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[61] The type locality for this name strongly indicates that the species involved is *H. propinqua*, since that is the only one of this group whose range reasonably may include the state of Tamaulipas. Nevertheless, since the description better fits *H. maculata*, and since Baird presumably well knew *H. propinqua* (having described it also), we retain the previous allocation of the name *H. approximans* pending further investigations.

[62] A number of records for "Tamaulipas," without specific locality, are regarded erroneous either by misidentification or incorrect locality data.

Type.—U.S.N.M. No. 10160.

Type locality.—Erath County, Tex., west of the Upper Brazos; on the Guadalupe River in Kendall or Comal County. Here restricted to Erath County, Tex.

Range.—Central Texas plains region south to northern Coahuila. Recorded in Mexico only from *Coahuila:* Sabinas.

HOLBROOKIA MACULATA PULCHRA Schmidt

Holbrookia pulchra SCHMIDT, Amer. Mus. Nov., No. 22, 1921, p. 1.
Holbrookia maculata pulchra, SMITH, Handbook of lizards, 1946, pp. 124–126, pl. 19.

Type.—Amer. Mus. Nat. Hist. No. 14777; R. D. Camp collector.

Type locality.—Carr Canyon, Huachuca Mountains, Ariz., 5,200 feet.

Range.—Known from the general region of the type locality; to be expected in adjacent Chihuahua and Sonora.

HOLBROOKIA MACULATA THERMOPHILA Barbour

Holbrookia thermophila BARBOUR, Proc. New England Zool. Club, vol. 7, 1921, p. 79.
Holbrookia elegans thermophila, SMITH, Univ. Kansas Sci. Bull., vol. 22, 1935, pp. 194–195, pls. 27, fig. 1, pl. 28, fig. 4.
Holbrookia maculata thermophila, SMITH, Handbook of lizards, 1946, pp. 129–132, pl. 21.

Type.—Mus. Comp. Zool. No. 14281; W. W. Brown and J. E. Thayer collectors.

Type locality.—San José de Guaymas, Sonora.

Range.—Sonora; possibly in northern Sinaloa. Reported from *Sonora:* 8 miles south of Nogales, 53 miles south of Nogales, 8 miles south of Magdalena, Canoa, near Noria, 30 miles south of Noria, 5 miles southwest of Hermosillo, 54 miles south of Hermosillo, 10 miles north of Guaymas, Batamotal, Álamos, Guirocoba. ?*Sinaloa:* ?Bacubirito.

HOLBROOKIA MACULATA ELEGANS Bocourt

Holbrookia Bischoffi COPE, Proc. Acad. Nat. Sci. Philadelphia, 1868, p. 310 (*nomen nudum*).
Holbrookia elegans BOCOURT, Mission scientifique au Mexique . . . , Études sur les reptiles, livr. 3, 1874, pp. 164–165, pl. 17 bis, figs. 8, 8a.
Holbrookia elegans elegans, SMITH, Univ. Kansas Sci. Bull., vol. 22, No. 8, 1935, pp. 191–194.

Type.—Mus. Hist. Nat. Paris.

Type locality.—Mazatlán, Sinaloa.

Range.—Sinaloa. Reported from Presidio de Mazatlán, Mazatlán, Escuinapa, ?Bacubirito, Rosario.

HOLBROOKIA BUNKERI Smith

Holbrookia bunkeri SMITH, Univ. Kansas Sci. Bull., vol. 22, 1935, pp. 185–188, pl. 28, fig. 3.

Type.—Univ. Kansas Mus. Nat. Hist. No. 19236; David H. Dunkle and Hobart M. Smith collectors.

Type locality.—15 miles south of Juárez, Chihuahua.

Range.—Known only from the type locality.

HOLBROOKIA PROPINQUA PROPINQUA Baird and Girard

Holbrookia propinqua Baird and Girard, Proc. Acad. Nat. Sci. Philadelphia, vol. 6, 1852, p. 126.—Schmidt, Bull. Amer. Mus. Nat. Hist., vol. 46, 1922, p. 714.—Smith, Handbook of lizards, 1946, pp. 132–134, pl. 22.

Holbrookia propinqua propinqua Smith and Burger, Trans. Kansas Acad. Sci., vol. 53, 1950, p. 169.

Type.—Unknown.

Type locality.—Between Indianola and San Antonio, Tex., here restricted to 9 miles southwest of Somerset, Atascosa County.

Range.—Central and southern Texas, southward presumably into Tamaulipas. No definite record for Mexico is known.

HOLBROOKIA PROPINQUA PIPERATA Smith and Burger

Holbrookia propinqua piperata Smith and Burger, Trans. Kansas Acad. Sci., vol. 53, 1950, pp. 167–169.

Type.—Univ. Illinois Mus. Nat. Hist. No. 4048; R. W. Reese and P. W. Smith collectors.

Type locality.—Beach at Etiopa, 2 miles south of Tecolutla, Veracruz.

Range.—Presumably southern Tamaulipas and northern Veracruz; recorded only from the type locality.

HOLBROOKIA TEXANA (Troschel)

Cophosaurus texanus Troschel, Wiegmann's Arch. für Naturg., Jahrg. 16, vol. 1, 1850 (1852), p. 289, pl. 6.

Holbrookia texana, Baird and Girard, Proc. Acad. Nat. Sci. Philadelphia, vol. 6, 1852, p. 124.—Cope, Ann. Rep. U. S. Nat. Mus., 1898 (1900), pp. 286–289, fig. 30.—Smith, Univ. Kansas Sci. Bull., vol. 22, 1935, pp. 190–191 (very numerous localities listed).

Holbrookia affinis Baird and Girard, Proc. Acad. Nat. Sci. Philadelphia, vol. 6, 1852 (types unknown; San Pedro, Tex.).

Type.—Not known.

Type locality.—New Braunfels, on the Guadalupe River, Tex.; latitude 28° N. (=New Braunfels, Comal County, Tex.).

Range.—Southeastern Arizona to central Texas and southward through the northern parts of all the border states in Mexico except Baja California. Reported from Tamaulipas, San Luis Potosí, Nuevo León, Coahuila, Chihuahua, Durango, and Sonora.

Genus CALLISAURUS Blainville

Callisaurus Blainville, Nouv. Ann. Mus. Hist. Nat. Paris, vol. 4, 1835, p. 286.

Megadactylus Fitzinger, Systema reptilium, 1843, p. 59 (type, *Callisaurus draconoides* Blainville).

Homalosaurus HALLOWELL, Proc. Acad. Nat. Sci. Philadelphia, 1852, p. 179 (type, *Homalosaurus ventralis* Hallowell).

Genotype.—*Callisaurus draconoides* Blainville.

Range.—Southwestern United States, southward from Nevada to Baja California, Sonora, and adjacent islands.

Species.—One species with 10 forms; only one (*C. d. myurus* Richardson of Nevada) is extralimital.

KEY TO MEXICAN SPECIES OF CALLISAURUS

1. A fringe of small spinose scales along one side of toes somewhat as in *Uma*. **draconoides crinitus** (p. 87)
   No such fringe 2
2. Males with two nearly vertical lateral black blotches usually followed by a third black spot; dorsal caudal bars never black, usually with strongly undulate or pointed posterior margins ..... **draconoides draconoides** (p. 86)
   Males with two large oblique lateral black blotches usually not followed by a third black spot; dorsal bars black and undulate or not 3
3. Dark dorsal bars on tail with strongly undulate or pointed posterior margins from base to beyond middle of tail; dorsal tail bars never black. **draconoides carmenensis** (p. 87)
   Dark dorsal bars on tail with nearly straight or slightly undulate posterior margins at least from middle to end of tail; dorsal tail bars often black .. 4
4. Dorsal tail bars black in both sexes; usually more or less red in dorsal coloration. **draconoides splendidus** (p. 87)
   Dorsal tail bars black in males only; usually little or no red in dorsal coloration. 5
5. Lateroventral black bars in males ill defined, blurred or obsolete, usually united below 6
   Lateroventral black bars in males well defined, intense, separate below 8
6. Lamellae under fourth toe 25–28 ..... **draconoides bogerti** (p. 89)
   Lamellae under fourth toe 30 or more 7
7. Lamellae under fourth toe 30 to 33 ..... **draconoides brevipes** (p. 88)
   Lamellae under fourth toe 35–39 ..... **draconoides inusitatus** (p. 88)
8. Femoral pores generally 16 or fewer; hind leg generally 92 percent of body length, or more; tail generally 58 percent of total length, or more; interparietal and supraorbital semicircles separated completely. **draconoides gabbii** (p. 87)
   Femoral pores generally 17 or more; hind leg generally 91 percent of body length, or less; tail generally 56 percent of total length, or less; interparietal and supraorbital semicircles usually not separated completely. **draconoides ventralis** (p. 88)

CALLISAURUS DRACONOIDES DRACONOIDES Blainville

Callisaurus draconoides BLAINVILLE, Nouv. Ann. Mus. Hist. Nat. Paris, vol. 4, 1835, p. 286, pl. 24, fig. 2, 2a.—SCHMIDT, Bull. Amer. Mus. Nat. Hist., vol. 46, 1922, pp. 646–647, fig. 5, pl. 51, figs. 1–3.

Callisaurus draconoides draconoides, COPE, Ann. Rept. U. S. Nat. Mus., 1898 (1900), p. 272, fig. 24.—VAN DENBURGH, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 142–145.

Type.—Mus. Hist. Nat. Paris; M. Botta collector.

Type locality.—"California," here restricted to Cape San Lucas, Baja California.

Range.—Cape region of Baja California; Isla Espíritu Santo.

CALLISAURUS DRACONOIDES CARMENENSIS Dickerson

Callisaurus carmenensis DICKERSON, Bull. Amer. Mus. Nat. Hist., vol. 41, 1919, p. 465.

Callisaurus draconoides carmenensis, VAN DENBURGH, Occ. Pap. California Acad. Sci., No. 10 (vol. 1), 1922, pp. 145–148.—LINSDALE, Univ. California Publ. Zool., vol. 38, 1932, p. 358.

Callisaurus plasticus DICKERSON, *ibid.*, p. 466 (Agua Verde Bay, Baja California, Amer. Mus. Nat. Hist. No. 5349; C. H. Townsend collector).

Type.—Amer. Mus. Nat. Hist. No. 5388, male; C. H. Townsend collector.

Type locality.—Carmen Island, Gulf of California, Baja California.

Range.—The southern two-thirds of Baja California, except the Pacific coast in the center of that area, and the Cape region, between lat. 29°30′ N. and 24° N.; the islands of San José, Carmen, San Marcos, South Santa Inés, Coronados, and Santa Margarita.

CALLISAURUS DRACONOIDES SPLENDIDUS Dickerson

Callisaurus splendidus DICKERSON, Bull. Amer. Mus. Nat. Hist., vol. 41, 1919, p. 467.—SCHMIDT, *ibid.*, vol. 46, 1922, pp. 647–648, pl. 51, fig. 1, and text fig. 6.—VAN DENBURGH, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 148–150.

Type.—Amer. Mus. Nat. Hist. No. 5372, male; C. H. Townsend collector.

Type locality.—Isla Ángel de la Guarda, Gulf of California, Baja California.

Range.—Island of Ángel de la Guarda, Baja California.

CALLISAURUS DRACONOIDES CRINITUS Cope

Callisaurus crinitus COPE, Amer. Nat., vol. 30, 1896, p. 1049.—VAN DENBURGH, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 140–142.—SCHMIDT, Bull. Amer. Mus. Nat. Hist., vol. 46, 1922, pp. 645–646, pls. 51–52, text fig. 4.

Callisaurus draconoides crinitus, TEVIS, Copeia, 1944, pp. 7–12.

Callisaurus rhodostictus COPE, *ibid.*, vol. 30, 1896, pp. 1049–1050 ("Lower California," here restricted to Santo Domingo; A. W. Anthony coll.; U. S. Nat. Mus.).

Type.—U. S. N. M. No. 14895.

Type locality.—"Lower California" [=Ballenas Bay, Baja California].

Range.—Along the Pacific shore of central Baja California from Millers Landing (lat. 28°30′ N.) to Santo Domingo (lat. 25°30′ N.).

CALLISAURUS DRACONOIDES GABBII Cope

Callisaurus ventralis gabbii COPE, Ann. Rep. U. S. Nat. Mus., 1898 (1900), p. 272.—SCHMIDT, Bull. Amer. Mus. Nat. Hist., vol. 46, 1922, pp. 648–651, pl. 51, fig. 1 (part).

Callisaurus draconoides gabbii, LINSDALE, Univ. California Publ. Zool., vol. 38, 1932, pp. 358–359; Proc. Amer. Acad. Arts and Sci., vol. 73, 1940, pp. 220–221.—TEVIS, Copeia, 1944, pp. 7–12, map fig. 2.—SMITH, Handbook of lizards, 1946, pp. 138–145, pl. 24.

Type.—Apparently none designated.

Type locality.—"Northern Lower California," here restricted to Gardners Laguna, Salton River.

Range.—Southern Nevada, western Arizona, and southeastern California southward into extreme northwestern Sonora and northeastern Baja California. Reported from several localities in *Baja California*, and from *Sonora:* Colorado River, Shoal Point.

CALLISAURUS DRACONOIDES VENTRALIS (Hallowell)

Homalosaurus ventralis HALLOWELL, Proc. Acad. Nat. Sci. Philadelphia, vol. 6, 1852, p. 179.

Callisaurus ventralis, BAIRD, United States and Mexican Boundary Survey, vol. 2, pt. 2, 1859, Rept., p. 8.

Callisaurus ventralis ventralis, CAMP, Univ. California Publs. Zool., vol. 12, 1916, pp. 508, 519.—VAN DENBURGH, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 152–163, pl. 12 (part).—SCHMIDT, Bull. Amer. Mus. Nat. Hist., vol. 46, 1922, p. 651.

Callisaurus draconoides ventralis, LINSDALE, Univ. California Publ. Zool., vol. 38, 1932, p. 359.—SMITH, Handbook of lizards, 1946, pp. 146–147, pl. 26.

Type.—U. S. N. M. No. 2670; S. W. Woodhouse collector.

Type locality.—New Mexico, here restricted to Tucson, Ariz.

Range.—Southern Arizona except the western and eastern edges, southward into northern Sonora. Recorded in Mexico only from the latter state, from between Sonoyta and Puerto Peñasco.

CALLISAURUS DRACONOIDES INUSITATUS Dickerson

Callisaurus inusitatus DICKERSON, Bull. Amer. Mus. Nat. Hist., vol. 41, 1919, pp. 465–466.—VAN DENBURGH, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 150–152.

Callisaurus ventralis inusitatus, SCHMIDT, Bull. Amer. Mus. Nat. Hist., vol. 46, 1922, p. 648, pl. 51, fig. 1, pl. 52, fig. 2.

Type.—Amer. Mus. Nat. Hist. No. 5324, male; C. H. Townsend collector.

Type locality.—Tiburón Island, Sonora.

Range.—Tiburón Island, and adjacent Sonoran coast to Guaymas.

CALLISAURUS DRACONOIDES BREVIPES Bogert and Dorson

Callisaurus draconoides brevipes BOGERT and DORSON, Copeia, 1942, No. 3, pp. 173–175.—BOGERT and OLIVER, Bull. Amer. Mus. Nat. Hist., vol. 83, 1945, pp. 314, 346–347, 401, 412, 418, 419.

Type.—Amer. Mus. Nat. Hist. No. 63668; J. W. Hilton collector.

Type locality.—Guirocoba, 18 miles southeast of Álamos, Sonora, Mexico, elevation approximately 1,485 feet.

Range.—Extreme southern Sonora (Álamos and Guirocoba) and northern Sinaloa (Río de Choix).

CALLISAURUS DRACONOIDES BOGERTI Martín del Campo

Callisaurus draconoides bogerti Martín del Campo, Anal. Inst. Biol. (Mexico), vol. 15, 1943, pp. 619–621.

Type.—Inst. Biol. México; Victoriano Rodríguez collector.

Type locality.—Isla de los Chivos, en el puerto de Mazatlán, Sinaloa.

Range.—Known only from the type locality and the vicinity of Mazatlán.

Genus UMA Baird

Uma Baird, Proc. Acad. Nat. Sci. Philadelphia, 1858, p. 253.—Heifetz, Copeia, 1941, pp. 99–111, figs. 1–7.

Genotype.—*Uma notata* Baird.

Species.—Four, one of which includes two subspecies. Three forms occur in Mexico.

Range.—Southeastern California and adjacent Arizona, Sonora and Baja California, and southwestern Coahuila.

KEY TO MEXICAN FORMS OF UMA

1. Two strongly enlarged auricular lobules; a black bar on rear of femur; dorsal pattern with 3 median rows of spots and black chevrons with reticulum outlining whitish dots or blotches ..... **exsul** (p. 89)
   Four strongly enlarged auricular lobules; no black bar on femur 2
2. Ventrolateral blotch smaller; femoral pores 20–31, usually fewer than 26. **notata notata** (p. 89)
   Ventrolateral blotch larger; femoral pores 23–32, usually more than 26. **notata cowlesi** (p. 90)

UMA EXSUL Schmidt and Bogert

Uma exsul Schmidt and Bogert, Amer. Mus. Nov., No. 1339, 1947, pp. 1–9, figs. 1–4.

Type.—Amer. Mus. Nat. Hist. No. 67404; Karl P. Schmidt and C. M. Bogert collectors.

Type locality.—Dunes 12 miles north of San Pedro de Las Colonias, Coahuila.

Range.—Presumably restricted to the vicinity of the type locality, the northern edge of the dry Laguna de Mayran.

UMA NOTATA NOTATA Baird

Uma notata Baird, Proc. Acad. Nat. Sci. Philadelphia, 1858, p. 253.
Uma notata notata, Heifetz, Copeia, 1941, pp. 101–104, figs. 1c, 2c, 3.
Uma rufopunctata Cope, Amer. Nat., vol. 29, 1895, p. 939 (U.S.N.M. Nos. 21846–52, 7 cotypes; "Yuma Desert," Ariz.).

Type.—U.S.N.M. No. 4124; Williamson and Heerman collectors.

Type locality.—"Mojave Desert," in error; restricted by Heifetz

to the "Colorado Desert" and here restricted to the vicinity of Yuma, Ariz.

Range.—Extreme southeastern Baja California, southwestern Arizona, and northeastern Baja California; possibly occurs in Sonora. Reported in Mexico only from Baja California.

UMA NOTATA COWLESI Heifetz

Uma notata cowlesi Heifetz, Copeia, 1941, pp. 104–106, fig. 5 (distribution).

Type.—California Acad. Sci. No. 53370; J. R. Slevin collector.

Type locality.—Shores of Tepoca Bay, Sonora.

Range.—The coast of northern Sonora, from Cerro Prieto to Tepoca Bay.

Genus PETROSAURUS Boulenger

Petrosaurus Boulenger, Catalogue of the lizards in the British Museum, ed. 2, 1885, vol. 2, p. 205.—Mittleman, Bull. Mus. Comp. Zool., vol. 91, 1942, pp. 110–111.

Genotype.—*Uta thalassina* Cope.

Range.—Southern Baja California and certain adjacent islands in the Gulf of California.

Species.—Two.

KEY TO SPECIES OF PETROSAURUS

1. Two series of scales between subocular and labials; snout longer, less truncate; three distinct anterior dorsal cross bars; throat yellow, orange, or pale blue centrally ..... **thalassina** (p. 90)

   One series of scales between subocular and labials; snout shorter and more truncate; four distinct anterior dark bands; throat brownish marked with blackish centrally ..... **repens** (p. 90)

PETROSAURUS REPENS (Van Denburgh)

Uta repens Van Denburgh, Proc. California Acad. Sci., ser. 2, vol. 5, 1895, p. 102, pls. 7, 8, figs. a–e; Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 189–191.—Linsdale, Univ. California Publ. Zool., vol. 38, 1932, pp. 360–361.

Petrosaurus repens, Mittleman, Bull. Mus. Comp. Zool., vol. 91, 1942, p. 111.

Type.—California Acad. Sci. No. 633; W. E. Bryant collector.

Type locality.—Comondú, Baja California.

Range.—The southern half of Baja California, exclusive of the Cape region; Isla Danzante.

PETROSAURUS THALASSINUS (Cope)

Uta thalassina Cope, Proc. Acad. Nat. Sci. Philadelphia, 1863, p. 104.—Van Denburgh, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 186–189.

Petrosaurus thalassinus, Boulenger, Catalogue of the lizards in the British Museum, ed. 2, vol. 2, 1885, p. 205.

Type.—U.S.N.M. No. 5302; John Xantus collector.

Type locality.—Cape San Lucas, Baja California.

Range.—Cape region of Baja California and certain adjacent islands. Reported on the mainland from Cape San Lucas, La Paz, San José del Cabo, Miraflores, etc.; also Isla Partida, Isla Espíritu Santo.

Genus STREPTOSAURUS Mittleman

Streptosaurus MITTLEMAN, Bull. Mus. Comp. Zool., vol. 91, 1942, pp. 111–117.

Genotype.—*Uta mearnsi* Stejneger.

Range.—Northern portion of Baja California and certain of the islands in the Gulf of California; in the United States: San Diego, Riverside, and Imperial Counties, Calif.

Species.—Two.

KEY TO FORMS OF STREPTOSAURUS

1: Throat with numerous round light spots; maximum length about 90 mm. **mearnsi** (p. 91)

Throat mottled, without definite rounded spots; larger maximum length, about 104 mm ..... **slevini**[63] (p. 91)

STREPTOSAURUS MEARNSI (Stejneger)

Uta mearnsi STEJNEGER, Proc. U. S. Nat. Mus., vol. 17, 1894, pp. 589–591.—VAN DENBURGH, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 191–194, pl. 15.

[*Streptosaurus*] *mearnsi*, MITTLEMAN, Bull. Mus. Comp. Zool., vol. 91, 1942, p. 111.—STEJNEGER and BARBOUR, Check list of North American amphibians and reptiles, ed. 5, 1943, p. 90.

Type.—U.S.N.M. No. 21882; E. A. Mearns collector.

Type locality.—"Summit of Coast Range, United States and Mexico boundary line, California."

Range.—Extreme southern California southward through the northern half of Baja California. Reported from *Baja California*: Ensenada, San Salado, San Matías, Parral, Matomi, Coyote Bay.

STREPTOSAURUS SLEVINI (Van Denburgh)

Uta slevini VAN DENBURGH, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 194–196.

Streptosaurus slevini, MITTLEMAN, Bull. Mus. Comp. Zool., vol. 91, 1942, p. 112.

Type.—California Acad. Sci. No. 50506; Joseph R. Slevin collector.

Type locality.—Mejía Island, Gulf of California.

Range.—Mejía Island and Ángel de la Guarda Island, in the Gulf of California.

Genus CROTAPHYTUS Holbrook

Crotaphytus HOLBROOK, North American herpetology, ed. 2, vol. 2, 1842, p. 79.

Genotype.—*Agama collaris* Say.

[63] The senior author has unintentionally referred *Petrosaurus repens* to this genus, owing to a lapsus; *slevini* was intended (Smith, Handbook of lizards, 1946, p. 175).

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Range.—From Kansas south to Louisiana, west to the Pacific, as far north as central Oregon, and southward into northern Mexico. Absent from the northern Great Plains and some mountainous areas.

Species.—Four, with five forms recognized, all but one (*C. c. collaris*) occurring in Mexico.

KEY TO MEXICAN SPECIES OF CROTAPHYTUS

1. Black ring or rings about neck complete or incomplete; body pattern not reticulated 2
   No black ring about neck, occasionally a black line present on shoulder; dorsal pattern boldly reticulated ..... **reticulatus** (p. 93)
2. Collar formed of a single bar or ring; snout more elongate ..... **insularis** (p. 93)
   Collar formed of 2 rings, one or both incomplete 3
3. Tail more distinctly compressed; 4 or 5 scale rows between suboculars and labials, and slightly enlarged scales on the middorsal line on tail. **dickersonae** (p. 93)
   Tail not or scarcely discernibly compressed; minimum scale rows between suboculars and labials 2 (rarely 3); scale rows between supraorbital areas 2 (or rarely 3) ..... **collaris baileyi** (p. 92)

CROTAPHYTUS COLLARIS BAILEYI [64] Stejneger

Crotaphytus baileyi STEJNEGER, North Amer. Fauna, No. 3, 1890, p. 103, pl. 12, fig. 1.

Crotaphytus collaris baileyi, STONE, Proc. Acad. Nat. Sci. Philadelphia, 1903, p. 30.—VAN DENBURGH, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 104–114; pl. 7.—SMITH, Handbook of lizards, 1946, pp. 170–172, pl. 33.

Crotaphytus collaris BURT, Occ. Pap. Mus. Zool. Univ. Michigan, No. 196, 1928, pp. 1–19 (part).

Crotaphytus collaris collaris, SMITH (*nec* Say), Univ. Kansas Sci. Bull., vol. 22, 1935, p. 143, pl. 24, fig. 1.

Type.—U.S.N.M. No. 15821; C. Hart Merriam and Vernon Bailey collectors.

Type locality.—Painted Desert, Little Colorado River, Ariz.

Range.—Southern Idaho and Oregon southeastward through eastern California and northern Baja California to San Luis Potosí. Reported in Mexico from *Baja California:* San Salada, Trinidad, Las Palmas Canyon, Comondú, La Purísima, 6 miles and 33 miles north of Canipole, et cetera; *Chihuahua:* Chihuahua, Carmen, Progreso, San Buenaventura; *Durango:* 6 miles northeast of Pedriceña; *Coahuila:* Villa Acuña, Monclova, 4 miles west of Saltillo, Cuatro Ciénegas, Pueblo Nuevo, Allende; *Nuevo León:* Pesquería Grande, Santa Catarina; *Sonora:* Hermosillo, Sierra Tule, Los Nogales, Río Grande 61 miles south of Los Nogales; *San Luis Potosí:* 30 miles north of Matehuala, Presa de Guadalupe.

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[64] With sufficient series it is probable that certain populations now associated with *baileyi* and *collaris* will be recognized as other subspecies. For instance, certain specimens from San Luis Potosí have three scale series between the supraocular regions. *C. collaris collaris* may occur.

CROTAPHYTUS INSULARIS Van Denburgh and Slevin

Crotaphytus insularis Van Denburgh and Slevin, Proc. California Acad. Sci., ser. 4, vol. 11, 1921, p. 96.—Van Denburgh, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 114–116.

Type.—California Acad. Sci. No. 49151; J. R. Slevin collector.

Type locality.—Ángel de la Guarda Island, 7 miles north of Pond Island, Gulf of California, Baja California.

Range.—Restricted to type locality.

CROTAPHYTUS DICKERSONAE[65] Schmidt

Crotaphytus dickersonae Schmidt, Bull. Amer. Mus. Nat. Hist., vol. 46, 1922, p. 638, fig. 2.

Crotaphytus collaris dickersonae, Allen, Occ. Pap. Mus. Zool. Univ. Michigan, No. 259, 1933, p. 7.

Type.—U.S.N.M. No. 64451; C. H. Townsend collector.

Type locality.—Tiburón Island, Sonora.

Range.—Known only from the type locality.

CROTAPHYTUS RETICULATUS Baird

Crotaphytus reticulatus Baird, Proc. Acad. Nat. Sci. Philadelphia, 1858, p. 253.—Cope, Ann. Rep. U. S. Nat. Mus., 1898 (1900), p. 254, fig. 20.—Smith, Handbook of lizards, 1946, pp. 173–175, pl. 34.

Type.—Two cotypes, U.S.N.M. No. 2692, Ringgold Barracks, John H. Clark collector; No. 2731, Laredo, Tex., Arthur C. B. Schott collector.

Type locality.—Laredo and Ringgold Barracks, Tex., here restricted to Laredo.

Range.—Extreme southern Texas, along the Rio Grande, as far west as Eagle Pass, and southward in the northern parts of adjacent states in Mexico. Reported in Mexico from *Tamaulipas:* Mier; *Nuevo León:* 6 miles west of China, 4 miles west of China, 5 miles east of General Bravo, "Los Herrars"; *Coahuila:* 2 miles north of Nava.

Genus GAMBELIA Baird

Gambelia Baird, United States and Mexican boundary survey, vol. 2, Rept., 1859, p. 7.—Smith, Handbook of lizards, 1946, pp. 158–159.

Genotype.—Gambelia wislizenii Baird and Girard.

Range.—Northern Idaho, Nevada, and Utah southward through southeastern California and Baja California, and into western Sonora and northern Coahuila.

Species.—One, with two subspecies. Only the typical form occurs in Mexico.

[65] This species has been reduced to subspecific status on the basis of specimens reported by Allen from Hermosillo and 40 miles north of Guaymas. Since we have not seen these specimens, and since he did not take into consideration some of the more important characters, we retain the specific status for this form pending a more considered revision.

GAMBELIA WISLIZENII WISLIZENII (Baird and Girard)

Crotaphytus wislizenii Baird and Girard, *in* Stansbury's Explorations and survey of the valley of the Great Salt Lake of Utah, 1852, pp. 340–341, pl. 3.—Van Denburgh, Occ. Pap. California Acad. Sci., No. 10, vol. 1, 1922, pp. 116–128, pl. 8.

Crotaphytus (Gambelia) wislizenii, Baird, United States and Mexican Boundary Survey, 1859, p. 7.

Gambelia wislizenii wislizenii, Smith, Handbook of lizards, 1946, pp. 159–164, pl. 30.

Crotaphytus gambelii Baird and Girard, Proc. Acad. Nat. Sci. Philadelphia, 1852, p. 126 (California; U.S.N.M. No. 2722; W. Gambell, collector).

Crotaphytus fasciatus Hallowell, Proc. Acad. Nat. Sci. Philadelphia, 1852, p. 206 ("Jornado del Muerte," Dona Ana County, N. Mex.; U.S.N.M. No. 2736; L. Sitgreaves collector).

Crotaphytus copeii Yarrow, Proc. U. S. Nat. Mus., vol. 5, 1882, p. 441 (U.S.N.M. No. 12663; La Paz, Baja California).

Crotaphytus fasciatus (*non* Hallowell), Mocquard, Nouv. Arch. Mus. Hist. Nat. Paris, ser. 5, vol. 1, 1899, p. 303, pl. 13, fig. 1 (Las Palmas, Baja California; Mus. Hist. Nat. Paris).

Crotaphytus fasciolatus Mocquard, Bull. Mus. Hist. Nat. Paris, 1903, p. 209 (new name for *C. fasciatus* Mocquard).

Type.—U.S.N.M. No. 2770; H. Mollhausen collector.

Type locality.—Near Santa Fe, N. Mex.

Range.—Northern Idaho, Nevada, and Utah southward through southeastern California and all of Baja California except northwestern corner, western Chihuahua and northern Coahuila. Reported from the states of *Baja California:* Cedros and Magdalena Islands, numerous mainland localities; *Sonora:* Tiburón Island, numerous mainland localities; *Chihuahua:* 15 miles south of Juárez, Santa María, Progreso, Lake Santa María, Chihuahua, 11 miles south of Ahumada, 2 miles south of Moctezuma; *Coahuila:* Cuatro Ciénegas.

Genus PHRYNOSOMA Wiegmann

Tapaja (or *Tapaia*, p. vi) Oken, Lehrbuch der Naturgeschichte, 1816, p. 295 (type, *Lacerta orbicularis* Linnaeus by present restriction; suppressed).

Tapayia Gray, Ann. Philos., new ser., vol. 26, 1825, p. 197 (type, *Lacerta orbicularis* Linnaeus, monotype; suppressed).

Tapaya Fitzinger,[66] Neue Classification der Reptilien, 1826, p. 17 (part only; type restricted to *T. orbicularis* Cuvier=*Lacerta orbicularis* Linnaeus, by Malcolm Smith, Fauna of British India, vol. 2, 1935, p. 211).—Bocourt, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 4, 1874, p. 220.

Phrynosoma Wiegmann, Isis von Oken, 1828, p. 367.

Batrachosoma Fitzinger, Systema reptilium, 1843, p. 79 (type, *Phrynosoma coronatum* Blainville).

Tropidogaster Fitzinger (*nec* Duméril and Bibron), *loc. cit.* (type, *Phrynosoma cornutum* Gray).

[66] Cuvier (Le règne animal, vol. 2, 1817, p. 35) has been credited with this name by some authorities. He did not, however, use the name in latinized form anywhere in the first or 1817 edition of "Le Règne Animal"; he uses the name only as "les Tapayes."

Anota HALLOWELL, Proc. Acad. Nat. Sci. Philadelphia, 1852, p. 182 (type, *Anota m'callii* Hallowell).

Tapaya GIRARD (*nec* Fitzinger), *in* Wilkes, United States Exploring Expedition, Herpetology, 1858, p. 394 (type, *Lacerta orbicularis* Linnaeus).

Doliosaurus GIRARD, *op. cit.* p. 407 (type, *Phrynosoma platyrhinos* Girard).

Genotype.—*Lacerta orbicularis* Linnaeus.

Range.—Nebraska, Kansas, Oklahoma, and Texas westward to the Pacific, northward to British Columbia and Montana, and southward through Mexico to Guatemala.

Species.—Fifteen, with about 26 forms recognized; 21 occur in Mexico.

KEY TO MEXICAN SPECIES OF PHRYNOSOMA

1. Ventral abdominal scales smooth (a few scales may be keeled on breast of *solare* and a few specimens may show faint keeling on some of abdominal scales, but this form will have four occipital spines)..... 6
   Ventral abdominal scales distinctly keeled (rarely indistinctly keeled in *cornutum*)..... 2
2. Horns (or horny spines) present on back of skull..... 3
   No horns or horny spines on back of skull, the scales that form spines in other species are low rounded protuberances; two flaring temporal expansions on back of head separated by a medial notch; lower jaw with great vertical development, the chin shields separated from the infralabials by 4 or 5 scale rows; 76 mm..... **ditmarsi** (p. 104)
3. Tail at least half length of body (usually more); large species with 2 lateral abdominal fringes of soft spines more or less clearly developed..... 4
   Tail shorter or but little longer than head; smaller species, with 1 series of lateral soft spines..... 5
4. Ventral scales large, 30 to 35 across widest part of belly; scales surrounding spines of upper lateral fringe very prominent; greater part of gular scales arranged in slightly serrate longitudinal series; 2 very prominent series of large scales widely separated on back; tail about as long as body; length, 170 mm..... **asio** (p. 102)
   Ventral scales smaller, 55 to 70 across widest part of abdomen; 3 temporal and 2 occipital spines well developed; 3 brown bands across frontal area; 3 radiating lines below eye; rarely ventral keeling is indistinct; length, 140 mm..... **cornutum** (p. 99)
5. Outer temporal part of skull prolonged backward into a very large "horn" several times size of small occipital spines; tail as long as head or slightly longer; 9–10 femoral pores..... **taurus** (p. 104)
   Outer temporal region not prolonged into a large horn; temporal spines about the same size as occipital spines; tail shorter than head; femoral pores about 10–10..... **braconnieri** (p. 100)
6. No ear-opening present; tympanum superficial, covered with scales (very rarely unscaled in some Mexican specimens of *modestum* and some *m'callii*..... 7
   Ear opening present, tympanum usually more or less deeply sunk..... 10
7. No lateral fringe of soft spines on sides of abdomen; occipital and temporal spines present but rather short; chin shields bordering labial series throughout; greater part of tail very slender and subcylindrical, not gradually tapering; venter white; chin usually speckled; 84 mm.. **modestum** (p. 101)
   At least 1 series of lateral soft spines..... 8

8. Usually less than 12 femoral-preanal pores, the pore scales usually separated by 1 or more intervening scales 9

Pore series 17–23, the pores surrounded by several small scales and usually contiguous; temporal and occipital horns very elongate; 2 series of lateral fringes on abdomen; an indistinctly enlarged series of longitudinal gular scales on each side of chin, more evident posteriorly; a dark dorsal streak; immaculate white on venter; tail much flattened; occasionally traces of abdominal keeling present ..... **m'callii** (p. 99)

9. Pore series about 8 on each side; 3 enlarged temporals and 2 enlarged occipital spines, tending to curve laterally somewhat; small species, 72 mm. snout to vent; venter immaculate white ..... **platyrhinos goodei** (p. 102)

Pore series 7–12, the temporal and occipital horn much reduced; superciliary spine short but heavy and prominent; a single series of scales in lateral fringe; venter usually punctate with dark; only rarely is the tympanum visible ..... **platyrhinos platyrhinos** (p. 101)

10. Four much-elongated, flattened occipital horns, contiguous with a like temporal series, all directed more or less in same general plane; breast scales keeled; 1 distinct lateral fringe and a small secondary fringe indicated. **solare** (p. 104)

Never more than two strongly developed occipital horns (occasionally a very small median single scale may be present) 11

11. Occipital horns at least twice as long as basal width; chin shields forming serrate series strongly visible from dorsal view of head; gulars with serrate series of enlarged scales ..... **coronatum** group 17

Occipital horns not twice as long as basal width; no serrate chin shields or specialized serrate series in gulars 12

12. Head not strongly notched or emarginate between occipital horns, distance between bases of horns one-half to rarely one and one-half times basal width of horn; occipital horns distinctly larger than superciliary horns. **orbiculare** group 14

Head strongly notched or emarginate between occipital horns; horns very short, their bases separated by a distance equal to 2 to 3½ times basal width of a horn; occipital and superciliary horns subequal in size. **douglassii** group 13

13. Tail length a little less than half snout-to-vent length but distinctly longer than width of head; gular scales not convex; chest scales smooth. **douglassii hernandesi** (p. 100)

Tail very short, very slender, length less than width of head; gular scales convex, and chest scales keeled ..... **douglassii brachycercum** (p. 100)

14. Occipital spines nearly erect, while temporal spines approach the horizontal, all relatively long; top of head conspicuously concave, superciliary region elevated ..... **boucardi** (p. 98)

Occipital spines on same plane as temporals, approaching horizontal, all shorter; top of head flat 15

15. Temporal horns not or barely extending backward as far as posterior tip of occipital horns 16

Temporal horns extending backward farther than occipital horns. **orbiculare cortezii** (p. 98)

16. Occipital horns extending posteriorly farther than posterior temporals; preanal area with preanal pores not confined to a single row (usually several irregularly placed pores or 2 longitudinal rows of 2 to 4 scales). **orbiculare orbiculare** (p. 97)

Occipital and posterior temporal horns extending back an equal distance (or very nearly so); femoral pores 14–14, confined to single row.
orbiculare dugesii (p. 98)

17. Fourth (or fifth) temporal horn (counting forward) sharply pointed and greatly exceeding fifth (or fourth) in length 18
Fourth and fifth temporal horns blunt, of nearly equal size, or fifth slightly larger 20
18. Nasal opening large; distance between inner edges less than 1¾ times maximum diameter of nostril ..... **cerroense** (p. 103)
Nasal opening moderate, the distance between inner edges more than 1¾ diameters of nostril 19
19. Postrictal spine absent or rudimentary ..... **coronatum coronatum** (p. 102)
Postrictal spine present ..... **coronatum jamesi** (p. 102)
20. Frontal plates in adults smooth, convex ..... **coronatum blainvillii** (p. 103)
Frontal plates in adults rough, striated or rugose, and flat or peaked.
coronatum frontale (p. 103)

PHRYNOSOMA ORBICULARE ORBICULARE[67] (Linnaeus)

[*Tapayaxin, Lacertus orbicularis* Hernández, Plantas y animales de la Nueva España, etc., 1651, C. xvi, p. 327, fig. (unnumbered).]

Lacerta orbicularis Linnaeus, Systema naturae, ed. 12, vol. 1, 1789, p. 1062 (part, based on Hernández).

Agama orbiculaire, Cuvier, Règne animal, vol. 2, 1817, p. 35.

Phrynosoma orbiculare, Wiegmann, Isis von Oken, 1828, p. 367.

Phrynosoma orbiculare orbiculare, Smith, Trans. Kansas Acad. Sci., vol. 37, 1934, p. 290, pl. 11, fig. 2, pl. 12, fig. 5.

Phrynosoma wiegmanni Gray, The zoology of Captain Beechey's voyage . . ., 1839, p. 96 (type unknown; type locality, "Mexico," here restricted to Mexico City, Distrito Federal).

Tapaya orbicularis longicaudatus Dugès, La Naturaleza, ser. 2, vol. 1, 1888, p. 117 (Alf. Dugès Mus., Guanajuato, Guanajuato; Valley of Mexico, here restricted to México, D. F.).—Smith and Necker, Anal. Esc. Nac. Cienc. Biol., vol. 3, 1943, pp. 216–218, pl. 2, figs. 1, 3.

Type.—Presumably the unnumbered figure in Hernández, *loc. cit.*

Type locality.—Mexico (by inference), here restricted to México, D. F.

Range.—The central plateau of Mexico from Chihuahua and Nuevo León southward to Michoacán, Morelos, and Puebla. Reported from *México:* Toluca, Lerma, San Andrés, 11 miles south of Mexico (city), Teotihuacán, Zumpango; *Puebla:* Puebla, 15 kilometers northwest of San Martín, Matamoros near Tezuitlán; *Distrito Federal:* México, Tlalpam, Río San Juan de Dios, Tlalnepantla, between Navitas and Chalco; *Hidalgo:* Guerrero near Real del Mineral, Actopan, El Chico Parque Nacional, 2–3 miles west of Tulancingo, near Pachuca; *Morelos:* near Tres Marías (Km. 57); *Chihuahua:* south of Chihuahua City; Samachique, 21 miles south of Miñaca; *Durango:* Coyotes, El Salto, Ciudad; *Jalisco:* North of

[67] We are unable to agree to the idea of the conspecificity of the Mexican *orbiculare* group and the *douglassii* group. We feel that among other important distinguishing characters the posterior indentation of the skull, so marked in the latter group, has been overlooked in the past.

Río Santiago, Guadalajara, Bolaños; *Guanajuato:* Guanajuato (city); *San Luis Potosí:* Jesús María, San Pedro; *Querétaro:* no specific locality; *Nuevo León:* Hacienda Pablillo; *Tlaxcala:* 13 kilometers northeast of Tlaxcala; *Michoacán:* "above 3000 feet" (Jorullo?); *Zacatecas:* Plateado, Sierra Madre.

PHRYNOSOMA ORBICULARE CORTEZII (Aug. Duméril and Bocourt)

Phrynosoma orbiculare, WIEGMANN, Herpetologia Mexicana, 1834, p. 53, pl. 8, fig. 1.

Tapaya orbicularis var. A, BOCOURT, *ibid.* (*infra*), livr. 4, 1874, pp. 223–224, pl. 11, fig. 2.

Tapaya Cortezii AUG. DUMÉRIL and BOCOURT,[68] Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 1, 1870, pl. 9, fig. 2, 2a–g.

Phrynosoma orbiculare cortezii, BONLENGER, Catalogue of the lizards in the British Museum, ed. 2, vol. 2, 1885, p. 242.—SMITH, Trans. Kansas Acad. Sci., vol. 37, 1934, pp. 291–292, pl. 11, fig. 1, and pl. 12, fig. 6.

Type.—Mus. Hist. Nat. Paris; Lucien Biart collector.

Type locality.—"Hacienda del Jasmin," between "Orisaba and Cordoba," Veracruz.

Range.—Eastern half of Puebla and adjoining parts of Veracruz. Reported from *Veracruz:* 15 miles east of San Marcos, 5 kilometers east of Las Vigas, Perote, Jalapa, Orizaba; *Puebla:* San Diego south of Tehuacán, Atzitzintla.

PHRYNOSOMA ORBICULARE DUGESII (Aug. Duméril and Bocourt)

Tapaya Dugesii [69] AUG. DUMÉRIL and BOCOURT, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 1, 1870, pl. 11, fig. 3, 3a–g.

Phrynosoma orbiculare (var.) *dugesii*, BOULENGER, Catalogue of the lizards in the British Museum, ed. 2, vol. 2, 1885, p. 243.

Tapaya orbicularis var. B, BOCOURT, *ibid.*, livr. 4, 1874, pp. 224–225, pl. 17, fig. 3, 3a–g.

Type.—Mus. Hist. Nat. Paris, two cotypes; Alfredo Dugès collector.

Type locality.—Colima.

Range.—Known only from Colima.

PHRYNOSOMA BOUCARDI (Aug. Duméril and Bocourt)

Tapaya Boucardii AUG. DUMÉRIL and BOCOURT, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 1, 1870, pl. 11, fig. 4, 4a–g.—BOCOURT, *ibid.*, livr. 4, 1874, pp. 225–226.

Phrynosoma boucardii, BOULENGER, Catalogue of the lizards in the British Museum, ed. 2, vol. 2, 1885, p. 243.—SMITH, Journ. Washington Acad. Sci., vol. 39, 1949, p. 38.

Type.—Mus. Hist. Nat. Paris, two males, two females; A. Boucard collector.

Type locality.—"Plateau of Mexico," here restricted to Zimapán, Hidalgo.

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[68] The name *cortezii* must be accredited to both authors of livr. 1. The name when it appears is *Tapaya cortezii* (nobis), and when quoted by Bocourt both names are used.

[69] In 1870 the name was used as a full species, when associated with the figure. The name is dropped in the livr. 4 of the same work where it is regarded as a variety B of *Tapaya orbicularis*.

Range.—Central plateau region. Reported from *Guanajuato:* León; *Hidalgo:* Zimapán.

PHRYNOSOMA CORNUTUM (Harlan)

Agama cornuta HARLAN, Journ. Acad. Nat. Sci. Philadelphia, vol. 4, 1825, p. 299, pl. 20.

Tapaya cornuta, CUVIER, Règne animal, vol. 2, 1829, p. 37.

Phrynosoma cornutum, GRAY, *in* Griffith, Cuvier's "Animal Kingdom" (Appendix), 1831, p. 9.—SMITH, Handbook of lizards, 1946, pp. 290–293, pl. 74.

Phrynosoma bufonium WIEGMANN, Isis von Oken, vol. 21, 1828, pp. 367–369 (type locality uncertain (see Herpetologia Mexicana, 1834, p. 54), here restricted to Los Nogales, Sonora; collector unknown; Zool. Mus. Berlin).

P[hrynosoma] harlanii WIEGMANN, Herpetologia Mexicana, 1834, p. 54 (substitute name for *Agama cornuta* Harlan).

Phrynosoma planiceps HALLOWELL, Proc. Acad. Nat. Sci. Philadelphia, 1852, p. 178 (western Texas near the Rio Grande, here restricted to El Paso).

Phrynosoma cornutum planiceps, BOULENGER, Catalogue of the lizards in the British Museum, vol. 2, 1885, p. 246.

Type.—Unknown.

Type locality.—Great Plains east of the Rocky Mountains, here restricted to Fort Riley, Geary County, Kans.

Range.—Kansas to Texas, west to Arizona, south to Durango and San Luis Potosí. Reported from *Tamaulipas:* Alta Mira, Mier, Soto la Marina, Charco Escondido, Matamoros, Tampico, Marmolejo; *Nuevo León:* Monterrey, Pesquería Grande, 20 miles south of Nuevo Laredo, San Juan, 1 mile south of Nuevo Laredo; *San Luis Potosí:* Charco Largo; *Coahuila:* Castañuelos, Álamo de Parras, Monclova, San Pedro, Patos, Río Nazas, El Zacate, Buena Vista, Múzquiz, et cetera; *Durango:* 7 miles south of La Loma, 25 miles north of Bermejillo; *Chihuahua:* Batopilas, 5 miles north of Moctezuma, Progreso, Chihuahua (city), Huajuquilla (Jiménez), Sauz, Guzmán, et cetera; *Sonora:* Los Nogales.

PHRYNOSOMA M'CALLII Hallowell

Anota m'callii HALLOWELL, Proc. Acad. Nat. Sci. Philadelphia, 1852, p. 182.

Doliosaurus m'calli, GIRARD, Wilkes United States Exploring Expedition, Herpetology, 1858, p. 408.

Phrynosoma m'calli, STEJNEGER, North Amer. Fauna, No. 7, 1893, p. 190.—VAN DENBURGH, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 428–430, pl. 37.

Anota maccalli,[70] BRYANT, Univ. California Publ. Zool., vol. 9, No. 1, 1911, pp. 5, 54, pl. 7.

Type.—Unknown.

Type locality.—Great Desert of the Colorado, between Vallecita and Camp Yuma, about 100 miles east of San Diego.

Range.—Northwestern Sonora and northeastern Baja California; in United States: Southeastern California and southwestern Arizona.

[70] The senior author has expressed the opinion elsewhere that if the characters on which the genus *Anota* is based should prove constant this name should replace *Phrynosoma* for this species.

Reported from *Sonora:* East bank of Colorado River, 5 miles south of United States border. *Baja California:* "Yuhu Basin north of Petrified Forest."

PHRYNOSOMA DOUGLASSII HERNANDESI (Girard)

Tapaya hernandesi GIRARD, Wilkes United States Exploring Expedition, Herpetology, 1858, p. 395.

Tapaya hernandezii, BAIRD, United States and Mexican Boundary Survey, vol. 2, Rept., 1859, p. 8.

Phrynosoma hernandesi, STEJNEGER, North Amer. Fauna, No. 3, 1890, p. 112.

Phrynosoma douglassii hernandesi, COPE, Ann. Rep. U. S. Nat. Mus., 1898 (1900), p. 413, fig. 70.—VAN DENBURGH, Occas. Pap. California Acad. Sci., No. 10, vol. 1, 1922, pp. 382–386, pl. 31.

Phrynosoma orbiculare hernandesi, KLAUBER, Bull. Zool. Soc. San Diego, vol. 4, 1939, pp. 91–93.

Phrynosoma douglassii COPE, Proc. Acad. Nat. Sci. Philadelphia, 1866, p. 302.

Type.—U.S.N.M. No. 197, a cotype.

Type locality.—New Mexico and "Sonora," restricted to Santa Fe, N. Mex. (Cope, *loc. cit.*, 1900).

Range.—Northern Sonora, Chihuahua; in United States: Colorado, southern New Mexico, southeastern and central Arizona, southwestern Texas. Reported from *Sonora:* ?"Mexican Boundary line"; *Chihuahua:* Ramos.

PHRYNOSOMA DOUGLASSII BRACHYCERCUM Smith

Phrynosoma douglassii brachycercum SMITH, Proc. U. S. Nat. Mus., vol. 92, 1942, pp. 361–363.

Type.—U.S.N.M. No. 23993; Edward Palmer collector.

Type locality.—"Durango."

Range.—Known only from the type locality.

PHRYNOSOMA BRACONNIERI Duméril and Bocourt

Phrynosoma Braconnieri AUG. DUMÉRIL and BOCOURT, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 1, 1870, pl. 12, fig. 7, 7a–g.—BOCOURT, livr. 4, 1874, pp. 233–234.—BOULENGER, Catalogue of lizards in the British Museum, vol. 2, 1885, p. 248.—SMITH, Trans. Kansas Acad. Sci., vol. 37, 1934, pp. 287–289.

Type.—Mus. Hist. Nat. Paris, adult; collected by Aide-Major Jacob; several specimens collected by Alfredo Dugès and A. Boucard.

Type locality.—Oaxaca.

Range.—Extreme southern edge of the central Mexican plateau, in semiarid portions of Puebla and Oaxaca (a specimen has been taken within a few hundred meters of the border of Veracruz, and very probably the species occurs in the mountains in the western part of that state). Reported from *Puebla:* Tehuacán, 14 miles northeast of Tehuacán, near Cacoloapam (Km. 226); *Oaxaca:* No specific locality, unless Oaxaca (city) is meant.

PHRYNOSOMA MODESTUM Girard

Phrynosoma modestum GIRARD, *in* Stansbury, Exploration and survey of the valley of the Great Salt Lake of Utah, 1852, pp. 361–362 and 365, pl. 6, figs. 4–8.—VAN DENBURGH, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 430–433, pl. 38.

Doliosaurus modestus, GIRARD, Wilkes United States Exploring Expedition, Herpetology, 1858, p. 409.

Anota modesta, COPE, Amer. Nat., vol. 30, 1896, p. 1014.

Type.—U.S.N.M. (?), several cotypes; General Churchill and "the party under Col. J. D. Graham" collectors.

Type locality.—The Rio Grande west of San Antonio, Tex. (Churchill), and from between San Antonio and El Paso (Graham); here restricted to Las Cruces, N. Mex.

Range.—Western Texas to Arizona, southward to San Luis Potosí. Reported from *Nuevo León:* Santa Catarina, Pesquería Grande. *Chihuahua:* 11 miles south of Ahumada, Río Santa María, Guzman, near Janos, Juárez, Chihuahua (city); *Coahuila:* 1.5 miles west of Saltillo, Músquiz, Jaral, Castañuelas, Palau, Álamo de Parras, San Pedro, Agua Nueva, Monclova, Buena Vista, Río Nazas, Cuatro Ciénegas, et cetera; *Sonora:* Nariz Temporal, Los Nogales, Sierra de la Nariz; *Durango:* between Lerdo and La Goma, Pedriceña, 5 kilometers west of Torreón, 25 miles north of Bermejillo, 7 miles south of La Loma; *Zacatecas:* 3 miles west of La Colorada; *San Luis Potosí:* near Charco Largo (130 kilometers north of San Luis Potosí city), Hacienda La Parada.

PHRYNOSOMA PLATYRHINOS PLATYRHINOS Girard

Phrynosoma platyrhinos GIRARD, Stansbury's Explorations and survey of the valley of the Great Salt Lake of Utah, 1852, pp. 361, 363–364, pl. 7, figs. 1–5.—VAN DENBURGH, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 421–426, pl. 36.

Doliosaurus platyrhinos, GIRARD, *in* Wilkes, United States Exploring Expedition, Herpetology, 1858, p. 409.

Anota platyrhina, COPE, Ann. Rep. U. S. Nat. Mus., 1898 (1900), p. 443, fig. 81.

Phrynosoma platyrhinos platyrhinos, KLAUBER, Bull. Zool. Soc. San Diego, vol. 14, 1939, p. 13.

Anota calidiarum, COPE, Amer. Nat., vol. 30, No. 358, 1896, p. 333 (Death Valley, Calif.).

Phrynosoma calidiarum, DITMARS, The reptile book, 1907, p. 157, pl. 46, figs. 10, 14, pl. 50, fig. 2.

Type.—U.S.N.M. No. 189?; H. Stansbury collector.

Type locality.—Great Salt Lake, Utah.

Range.—Northeastern Baja California; widespread in Nevada, Idaho, Utah, Washington, California, and Arizona. Reported in *Baja California:* 20 miles north of San Felipe, San Felipe Bay, Pozo, San Agustín, Seven Wells on the Salton River.

PHRYNOSOMA PLATYRHINOS GOODEI Stejneger

Phrynosoma goodei STEJNEGER, North Amer. Fauna, No. 7, 1893, p. 191 (footnote), pl. 2, figs. 3a–3c.
Anota goodei, COPE, Ann. Rep. U. S. Nat. Mus., 1898 (1900), p. 442, fig. 80.
Phrynosoma platyrhinos goodei, KLAUBER, Copeia, 1935, pp. 178–179.

Type.—U.S.N.M. No. 8567a; T. H. Streets collector.

Type locality.—"Coast deserts of the state of Sonora, Mexico," here restricted to Puerto Libertad.

Range.—Known only from the gulf coast of Sonora. Reported from Puerto Libertad, 8 miles northwest of Álamo Muerto, west coast of Sonora.

PHRYNOSOMA ASIO Cope

Phrynosoma asio COPE, Proc. Acad. Nat. Sci. Philadelphia, vol. 16, 1864, pp. 178–179.—BOULENGER, Catalogue of lizards in the British Museum, vol. 2, 1885, p. 244.
Batrachosoma asio, BOCOURT, Mission scientifique au Mexique . . . , Études sur les reptiles, livr. 4, 1874, pl. 17, fig. 9, 9a–c.
Phrynosoma spinimentum PETERS, Monatsb. Akad. Wiss. Berlin, 1873, pp. 742–743 (Tehuantepec; Mus. Berlin No. 7219).

Type.—U.S.N.M. (?); John Xantus collector.

Type locality.—Colima, Colima (by present restriction).

Range.—From Colima through coastal Michoacán, Guerrero, Oaxaca to Chiapas, and in the Balsas Basin. In Central America, recorded from Guatemala. Reported from *Oaxaca:* San Pedro, Tequesixtlán, San Gerónimo, Ranchero Poso Río, vicinity of Tehuantepec, vicinity of Salina Cruz; *Guerrero:* Mexcala (on Balsas River); *Michoacán:* La Salada, Cofradía, San Salvador, Apatzingán; *Colima:* Tecomán, Colima (city); *Chiapas:* no definite locality.

PHRYNOSOMA CORONATUM CORONATUM (Blainville)

Agama (*Phrynosoma*) *coronata* BLAINVILLE, Nouv. Ann. Mus. Hist. Nat. Paris, vol. 4, 1835, p. 284, pl. 25, figs. 1–1c.
Phrynosoma coronatum coronatum, LINSDALE, Univ. California Publ. Zool., vol. 38, 1932, p. 368.—KLAUBER, Copeia, 1936, pp. 103–110, fig. 1.—TEVIS, Copeia, 1944, pp. 13–15, fig. 2, map.

Type.—Mus. Hist. Nat. Paris; P. E. Botta collector.

Type locality.—"California," here restricted to Cape San Lucas, Baja California.

Range.—Southern part of Baja California, north to about lat. 26° N.

PHRYNOSOMA CORONATUM JAMESI Schmidt

Phrynosoma jamesi SCHMIDT, Bull. Amer. Mus. Nat. Hist., vol. 46, 1922, pp. 668–669, pls. 55, 56.
Phrynosoma coronatum jamesi, KLAUBER, Copeia, 1936, p. 110.—TEVIS, Copeia, 1944, pp. 13–15, map fig. 2.

Type.—U.S.N.M. No. 64450; H. Townsend collector.

Type locality.—Shore of San Bartolomé Bay, Baja California.

Range.—Central Baja California, between lat. 26° N. and lat. 28°30′ N.

PHRYNOSOMA CORONATUM FRONTALE Van Denburgh

Phrynosoma frontalis Van Denburgh, Proc. California Acad. Sci., ser. 2, vol. 4, 1894, pp. 296–298.

Phrynosoma blainvillii frontale, Van Denburgh, Occ. Pap. California Acad. Sci., No. 5, 1897, p. 95; Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 395–401, pl. 33.—Klauber, Copeia, 1936, pp. 103–110.

Phrynosoma coronatum frontale, Linsdale, Univ. California Publ. Zool., vol. 38, 1932, p. 368.—Tevis, Copeia, 1944, pp. 13–15, fig. 2 (map).

Phrynosoma schmidti Barbour, Proc. New England Zool. Club, vol. 7, 1921, p. 113 (Mus. Comp. Zool. No. 15142; W. W. Brown collector; Cedros Island).

Phrynosoma nelsoni Schmidt, Bull. American Mus. Nat. Hist., vol. 46, 1922, p. 666 (Amer. Mus. Nat. Hist. No. 37585; E. W. Nelson and E. A. Goldman collectors; San Quintín, Baja California).

Type.—Stanford Univ. Mus. No. 93, adult male; C. H. Gilbert and W. W. Price collectors.

Type locality.—Bear Valley, San Benito County, Calif.

Range.—Discontinuous; central California east of the Sierra Nevada south to but not including extreme southwestern California; northwestern coast of Baja California except a small area adjacent to the United States border; Cedros Island.

PHRYNOSOMA CORONATUM BLAINVILLII Gray

Phrynosoma blainvillii Gray, The zoology of Captain Beechey's voyage . . . , Reptiles, 1839, p. 96, pl. 29, fig. 1.

Phrynosoma blainvillii blainvillii, Grinnell and Camp, Univ. California Publ. Zool., vol. 17, 1917, p. 164.—Van Denburgh, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 388–395, pl. 32.—Klauber, Copeia, 1936, pp. 103–110, fig. 2.

Phrynosoma ochoterenai Terron, Anal. Inst. Biol., vol. 3, 1932, p. 109 (type formerly in Mus. Hist. Nat., Mexico, now lost; J. M. Gallegos collector; Tecate, Baja California).

Type.—Brit. Mus. Nat. Hist., young specimen; de Blainville collector.

Type locality.—"California," here restricted to San Diego.

Range.—Southern California and extreme northeastern Baja California.

PHRYNOSOMA CERROENSE Stejneger

Phrynosoma cerroense Stejneger, North Amer. Fauna, No. 7, 1893, p. 187 (in footnote).—Van Denburgh, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 401–403.—Klauber, Copeia, 1936, p. 108.

Type.—U.S.N.M. No. 11977; L. Belding collector.

Type locality.—"Cerros" Island, Pacific coast of Baja California [=Cedros Island].

Range.—Known only from the type locality.

PHRYNOSOMA TAURUS Dugès

Phrynosoma taurus DUGÈS, MS. 1868, *fide* Duméril and Bocourt *loc. cit.*, p. 234; and La Naturaleza, 1869, p. 143 (*nomen nudum*).—AUG. DUMÉRIL and BOCOURT, Mission scientifique au Mexique . . . , Études sur les reptiles, livr. 1, 1870, pl. 12, figs. 8, 8a–g.—DUGÈS, La Naturaleza, 1873, pp. 302–305, figs. 1–4 (this description bears the date Nov. 23, 1870, but was not published until 1873; there were two specimens, one from "Cozcatlán," the other from Estado de Puebla).—BOCOURT, Mission scientifique au Mexique . . . , Études sur les reptiles, livr. 4, 1874, pp. 234–235.—BOULENGER, Catalogue of lizards in the British Museum, vol. 2, 1885, p. 249.—SMITH and NECKER, Anal. Esc. Nac. Cienc. Biol., vol. 3, 1943, pp. 208–210, pl. 3, figs. 1–2.

Type.[71]—Mus. Hist. Nat. Paris, 9 cotypes?; M. Boucard collector.

Type locality.—"Matamoras Izúcar," Puebla.

Range.—Puebla and Guerrero. Reported from *Puebla:* Zapotitlán, San Diego near Tehuacán, Cozcatlán (Dr. Bedel collector), Izúcar de Matamoros; *Guerrero:* 5 miles north of Chilpancingo, Amula 8,000 feet.

PHRYNOSOMA SOLARE Gray

Phrynosoma solaris GRAY, Catalogue of the specimens of lizards in the collection of the British Museum, 1845, p. 229.

Phrynosoma solare, VAN DENBURGH, Proc. California Acad. Sci., ser. 2, vol. 5, 1895, p. 115; Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 406–409, pl. 34.

Phrynosoma regale GIRARD, *in* Wilkes, United States Exploring Expedition, 1858, p. 406 (U. S. N. M. No. 161; Sierra de la Nariz, near Zuñi, Sonora).

Type.—Brit. Mus. Nat. Hist. (not listed in Boulenger, Catalogue of lizards in the British Museum, vol. 2, unless it is spec. a, ♂ [California], listed under *Phrynosoma regale*, p. 245); ? de Blainville collector.

Type locality.—"California," here restricted to Yuma, Ariz.

Range.—Southern Arizona southward into northeastern Baja California, western Sonora and into Sinaloa. Reported from *Sonora:* Santa Ana, Nogales, Hermosillo, 15 to 20 miles south and 45 miles southwest of Hermosillo, Tiburón Island, Empalme, 10 miles northwest of Guaymas, Alamos, Guirocoba; *Baja California:* Las Animas Bay; *Sinaloa:* Ahome, Sierra de Choix.

PHRYNOSOMA DITMARSI Stejneger

Phrynosoma ditmarsi STEJNEGER, Proc. U. S. Nat. Mus., vol. 29, 1906, p. 565.—DITMARS, The reptile book, 1907, p. 154, pl. 46, figs. 3, 7, pl. 48, fig. 1.—SMITH, Handbook of lizards, 1946, pp. 297–299, pl. 97.

Type.—U.S.N.M. No. 36022; Mr. Eustace collector.

[71] Whether the specimens mentioned above are really the types may be open to question. A description in manuscript was made by Dugès from a specimen in Mexico and presumably sent from Mexico to August Duméril in Paris. The Paris Museum had nine specimens of the same species. Drawings were made of one, and the drawings published under the name *Phrynosoma taurus* Dugès. Since the specimen figured is the first description or indication, we believe that the original of the drawing becomes the type and this, we believe, is a specimen in the Museum d'Histoire Naturelle de Paris. Thus the type specimen was presumably never seen by the author of the name. The specimen described by Dugès is in the Museum "Alfredo Dugès," Colegio del Estado de Guanajuato.

Type locality.—State of Sonora, not far from the boundary of Arizona.

Range.—Known only from the type locality.

Genus SCELOPORUS Wiegmann

Sceloporus WIEGMANN, Isis von Oken, 1828, p. 369.

Tropidolepis CUVIER, Règne animal . . . , ed. 1, vol. 2, 1817, p. 38 (type, *Agama undulata* Daudin).

Lysoptychus COPE, Proc. U. S. Nat. Mus., vol. 11, 1888, pp. 397-398 (type, *L. lateralis* Cope=*Sceloporus couchii* Baird).

Genotype.—*Sceloporus torquatus* Wiegmann.

Species.—In all, 104 forms are recognized at present, consisting of 54 species representing 15 groups. Eighty-nine forms of 52 species are known from Mexico.

Range.—Southern Canada on the west and southern New York on the east south throughout North and Central America to western Panama.

KEY TO MEXICAN GROUPS OF SCELOPORUS

1. Postfemoral dermal pocket present 2
   Postfemoral dermal pocket absent 4
2. Postrostral scales absent; nasals and internasals in contact with rostral. **maculosus** (p. 133)
   Postrostral scales present; internasals and nasals separated from rostral .. 3
3. Tail strongly compressed in males, rounded and light pink in females; femoral pores 24 or more on each side ..... **pyrocephalus** (p. 138)
   Tail rounded in both sexes, not pink in females; femoral pores 20 or less. **variabilis** (p. 129)
4. Lateral body scales not imbricate 5
   Lateral body scales imbricate 6
5. Preanal scales keeled in females; males with poorly developed postanals; no distinct belly patches in males; tail over twice length of body. **utiformis** (p. 135)
   Preanal scales smooth in females; males with well-developed postanals; lateral belly patches distinct in males; tail less than twice length of body. **merriami** (p. 132)
6. No postrostrals; nasals and internasals in contact with rostral 7
   Postrostrals present; nasal and internasals separated from rostral 8
7. Dorsal scales 50 or more; femoral pores 17 or more; preanals smooth in females ..... **scalaris** (p. 136)
   Dorsal scales 46 or less; femoral pores 16 or less; preanals keeled in females. **siniferus** (p. 133)
8. Ventral scales, at least laterally, pointed, not notched; preanal scales keeled in females; no lateral belly markings in males; femoral pore series widely separated medially; two postrostrals ..... **siniferus** (p. 133)
   Ventral scales notched, or, if pointed, femoral pore series closely approximated medially (separated by four scales or less); preanal scales smooth in females 9
9. Males uniform white below; anterior section of frontal longitudinally divided; femoral pore series widely separated medially ..... **chrysostictus** (p. 133)
   Males with lateral belly patches distinct or, if not, anterior section of frontal entire 10

10. Femoral pore series closely approximated medially; two postrostrals; lateral scale rows parallel or nearly so; scales on posterior surface of thigh granular; small species ..... **scalaris** (p. 136)
    Femoral pore series widely separated medially, or, if closely approximated, scales on posterior surface of thigh not granular; lateral scale rows strongly divergent; typically four postrostrals, sometimes three, rarely two 11
11. Scales on posterior surface of thigh granular 12
    Scales on posterior surface of thigh not granular 15
12. Dorsal scales highly irregular in size ..... **grammicus** (p. 119)
    Dorsal scales subequal in size 13
13. Lateral nuchal scales much smaller than and well differentiated from dorsal nuchal scales; scales of lateral row of dorsal nuchals enlarged, strongly keeled and mucronate ..... **grammicus** (p. 119)
    Lateral nuchal scales not well differentiated from dorsal nuchal scales 14
14. Throat light blue, barred or mottled with white; lateral belly patches confluent medially; preanal scales large, about seven in a row from a line between femoral pore series to anus ..... **grammicus** (p. 119)
    Throat not as described or, if so, lateral belly patches not confluent medially and preanal scales smaller 15
15. Scales on posterior surface of thigh granular, femoral pore series widely separated medially, the folds defining the preanal area passing between the femoral pore series; throat mottled with blue and white, never with a distinct, blue spot medially or on either side posteriorly **graciosus** (p. 118)
    Scales on posterior surface of thigh not granular or, if so, femoral pore series more closely approximated medially, the folds defining preanal area not or barely passing between femoral pore series 16
16. Dorsal, ventral, and lateral scales subequal in size; small species. **megalepidurus** (p. 121)
    Dorsal, ventral, and lateral scales distinctly differing in size; large or small species 17
17. A distinct, dark, light-bordered nuchal collar ..... **torquatus** (p. 121)
    No distinct, dark, light-bordered nuchal collar 18
18. Gular region mottled, not barred nor with a median or two lateral blue spots posteriorly ..... **torquatus** (p. 121)
    Gular region not mottled 19
19. Gular region barred in males and lacking a median posterior dark blue or black spot ..... **spinosus** (p. 110)
    Gular region not barred; or, if barred, with a median posterior dark blue or black spot 20
20. Gular region barred in males, with a median posterior dark blue or black spot. **undulatus** (p. 117)
    Gular region not barred 21
21. Supraoculars large, separated from superciliaries by no more than one complete and one incomplete row of small scales; and one or more of the posterior supraoculars in contact with median head scales 28
    Supraoculars large or small; if any of the posterior supraoculars are in contact with median head scales, the supraoculars are separated from superciliaries by three or more complete or incomplete rows of small scales 22
22. Males lacking lateral belly patches ..... **undulatus** (p. 117)
    Males with lateral belly patches 23
23. A pair of dark blue or black spots on posterior part of gular region. **undulatus** (p. 117)
    No pair of dark spots on posterior part of gular region 24

24. Three or more rows of small scales between supraoculars and superciliaries; or, if two, the scales of inner row considerably larger than those of outer row 25
    One complete and one incomplete row of small, subequal scales between supraoculars and superciliaries 27
25. One canthal, or, if two, the first forced above canthal ridge ..... **formosus** (p. 107)
    Two canthals, the first not forced above canthal ridge 26
26. A broad, black nuchal collar complete about neck dorsally, or anterior section of frontal longitudinally divided ..... **formosus** (p. 107)
    Neither true ..... **undulatus** (p. 117)
27. Frontal ridges present ..... **formosus** (p. 107)
    Frontal ridges absent ..... **spinosus** (p. 110)
28. Adult males a uniform bright green above ..... **formosus** (p. 107)
    Not so ..... **spinosus** (p. 110)

FORMOSUS GROUP

Species.—Six, with a total of 11 forms. Extralimital are *lunaei*, *m. malachiticus*, and *m. smaragdinus*.[72]

Range.—Michoacán and Veracruz south to western Panama.

KEY TO MEXICAN SPECIES OF THE FORMOSUS GROUP OF SCELOPORUS

1. Median frontonasal separated from lateral frontonasals 2
   Median frontonasal in contact with lateral frontonasals 4
2. Dorsals about 31; internasals large, keeled, 3 from rostral to median frontonasal ..... **prezygus** [72a] (p. 109)
   Dorsals 37 to 45; internasals smaller, not keeled, rugose or not 3
3. A complete nuchal collar, sometimes narrowly interrupted medially. **malachiticus salvini** (p. 108)
   Nuchal collar incomplete ..... **malachiticus taeniocnemis** (p. 107)
4. Anterior section of frontal usually longitudinally divided; canthals sharply ridged; no nuchal collar; ventrals a fourth, laterals not more than two-thirds, size of dorsals ..... **asper** (p. 109)
   Anterior section of frontal rarely longitudinally divided; canthals rounded; a nuchal collar or not; ventrals a half, laterals three-fourths size of dorsals 5
5. A broad, nearly or quite complete, nuchal collar 6
   Collar, if present, restricted to sides of neck 7
6. Femoral pores 12-16; one or more supraoculars generally in contact with median head scales ..... **malachiticus acanthinus** (p. 108)
   Femoral pores 16–21; supraoculars not in contact with median head scales. **stejnegeri** (p. 109)
7. Males without yellow on throat; dorsal scale rows black edged; dorsal head scales with a light blue center ..... **formosus scitulus** (p. 108)
   Males with yellow or orange on throat; dorsal surface uniform blue; head scales not light spotted ..... **formosus formosus** (p. 108)

SCELOPORUS MALACHITICUS TAENIOCNEMIS Cope

Sceloporus taeniocnemis Cope, Proc. Amer. Philos. Soc., vol. 22, 1885, p. 399.
Sceloporus malachiticus taeniocnemis, Smith, Proc. U. S. Nat. Mus., vol. 92, 1942, p. 356; Journ. Washington Acad. Sci., vol. 39, 1949, pp. 39, 40.

[72] See Smith, Proc. U. S. Nat. Mus., vol. 92, 1942, p. 356, for a key to these forms.
[72a] Material examined since this key was originally prepared places this species in the *torquatus* group.

Type.—U.S.N.M. No. 24768.

Type locality.—Guatemala, here restricted to Cobán.

Range.—Highlands of Chiapas and northern Guatemala in Alta Verapaz. Known in Mexico only from *Chiapas:* Pinobete, Mount Ovando, Teopisca.

SCELOPORUS MALACHITICUS SALVINI Günther

Sceloporus salvini GÜNTHER, Biologia Centrali-Americana, Reptilia and Batrachia, 1890, p. 68.—SMITH, Proc. Biol. Soc. Washington, vol. 49, 1936, p. 95; Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 55–58, pl. 3.

Sceloporus malachiticus salvinii, SMITH, Proc. U. S. Nat. Mus., vol. 92, 1942, p. 356; Journ. Washington Acad. Sci., vol. 39, 1949, p. 39.

Type.—Brit. Mus. Nat. Hist. cotypes: Jalapa, Hoege collector; Guatemala, Salvin collector. Lectotype specimen 0 in Boulenger, Proc. Zool. Soc. London, 1897, p. 503.

Type locality.—"Jalapa and Guatemala." Restricted (Smith, 1939, p. 40) to Jalapa, Veracruz.

Range.—Central western Veracruz to the Isthmus of Tehuantepec. Recorded only from the states of Veracruz and Oaxaca.

SCELOPORUS MALACHITICUS ACANTHINUS Bocourt

Sceloporus acanthinus BOCOURT, Ann. Sci. Nat. Zool., ser. 5, vol. 17, No. 6, 1873, p. [24] (*acathhinus*); No. 10, 1873, p. 1; Mission scientifique au Mexique . . . , Études sur les reptiles, livr. 3, 1874, pp. 180–181, pl. 18, figs. 10, 10a, 10b, pl. 19, figs. 4, 4a.—SMITH, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 74–78, pls. 6, 7.

Sceloporus malachiticus acanthinus, SMITH, Journ. Washington Acad. Sci., vol. 39, 1949, pp. 39–40.

Sceloporus guentheri STEJNEGER, Proc. Biol. Soc. Washington, vol. 31, 1918, p. 92 (type, Brit. Mus. Nat. Hist.; "Mexico," here restricted to La Esperanza, Chiapas).

Type.—Mus. Hist. Nat. Paris, male and female cotypes; Commission Scientifique collector.

Type locality.—San Agustín, near Volcán de Atitlán, Guatemala, 610 meters.

Range.—Pacific coast foothills, Chiapas to El Salvador. Known in Mexico only from the vicinity of Escuintla, Chiapas.

SCELOPORUS FORMOSUS FORMOSUS Wiegmann

Sceloporus formosus WIEGMANN, Herpetologia Mexicana, 1834, p. 50, pl. 7.

Tropidolepis formosus, DUMÉRIL and BIBRON, Erpétologie générale, vol. 4, 1837, pp. 303–304.

Sceloporus formosus formosus, WETTSTEIN, Sitzb. Akad. Wiss. Wien, math. nat. Kl., vol. 143, Abt. 1, 1934, p. 25.—SMITH, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 34–41 (part).

Sceloporus viviparus COPE, Proc. Amer. Philos Soc., vol. 22, 1885, p. 398 (Mirador, Veracruz; type, U.S.N.M. No. 25073).

Type.—? Zool. Mus. Berlin; F. Deppe collector.

Type locality.—Mexico, here restricted to Acultzingo, Veracruz.

Range.—Central Veracruz south in mountainous regions to the Isthmus of Tehuantepec. Recorded from various localities in the states of Veracruz, Puebla, and Oaxaca.

SCELOPORUS FORMOSUS SCITULUS Smith

Sceloporus formosus scitulus SMITH, Proc. U. S. Nat. Mus., vol. 92, 1942, pp. 352–354.

Type.—EHT-HMS No. 26962; R. C. Taylor and E. H. Taylor collectors.

Type locality.—Omilteme, Guerrero.

Range.—Sierra Madre del Sur Mountains in Guerrero.

SCELOPORUS ASPER Boulenger

Sceloporus asper BOULENGER, Proc. Zool. Soc. London, 1897, pp. 476, 497, 498, pl. 33 (colored).—SMITH, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 51–55.

Sceloporus obscurus VAN DENBURGH, Proc. Acad. Nat. Sci. Philadelphia, 1897 (1898), p. 462 (Tepic, Nayarit; type, California Acad. Sci. No. 3213).

Type.—Brit. Mus. Nat. Hist.

Type locality.—La Cumbre de los Arrastrados, Jalisco.

Range.—Mountainous regions of western Mexico, from Nayarit to Guerrero. Recorded from Nayarit, Jalisco, Michoacán, and Guerrero.[73]

SCELOPORUS STEJNEGERI Smith

Sceloporus stejnegeri SMITH, Proc. U. S. Nat. Mus., vol. 92, 1942, pp. 350–352.

Type.—U.S.N.M. No. 112635; E. H. Taylor, R. C. Taylor, and H. M. Smith collectors.

Type locality.—Tierra Colorada, Guerrero.

Range.—Guerrero, on southern low slopes of the Sierra Madre del Sur.

SCELOPORUS PREZYGUS Smith [74]

Sceloporus prezygus SMITH, Proc. U. S. Nat. Mus., vol. 92, 1942, pp. 354–355.

Type.—U.S.N.M. No. 46881; E. W. Nelson and E. A. Goldman collectors.

Type locality.—Conjab, 5,300 feet (between San Bartolomé and Comitán), Chiapas.

Range.—Known only from the type locality in Chiapas.

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[73] The record from this state (Chilapa) (Ahl, Zool. Anz., vol. 106, 1934, p. 184) is open to doubt. The identification needs verification.

[74] Group allocation of this species was not certain until after this account was in type. It belongs in the *torquatus* group.

SPINOSUS GROUP

Species.—Nine, with a total of 21 forms.

Range.—Guatemala northward to southern Nevada, southwestern Colorado, southern Oklahoma, and central Texas.

KEY TO THE SPINOSUS GROUP OF SCELOPORUS

1. Femoral pores on both thighs total 7 or more 3
   Femoral pores on both thighs total 6 or less 2
2. Ventral surfaces immaculate in adults of both sexes.
   horridus albiventris (p. 116)
   Sides of belly blue, frequently dark-bordered, in males; gular region barred in males, sometimes in females ..... **horridus oligoporus** (p. 116)
3. Supraoculars completely in contact with superciliaries, or with one to four very small scales between; posterior superciliary greatly enlarged; venter immaculate in both sexes ..... **edwardtaylori** (p. 112)
   Supraoculars separated from superciliaries by at least one row of small scales; posterior superciliary not enlarged; venter with distinct markings in males 4
4. Femoral pores on both thighs total 12 or less; 4 supraoculars, the fourth in contact with median head scales ..... **horridus horridus** (p. 116)
   Femoral pores on both thighs total 13 or more; or, if 12, all supraoculars separated from median head scales 5
5. Femoral pores (one side) 17 or more 6
   Femoral pores (one side) 16 or less 10
6. A black shoulder patch present, with a light posterior border 10
   No black shoulder patch; or, if present, without a light posterior border .. 7
7. Snout black; a broad, black bar across head at middle of supraocular region; chest and middle of belly orange in males; gular region in females white, with irregular, black marks; first canthal not in contact with lorilabials; ventral scales 44–54 8
   Snout not black, similar in color to rest of head; no black bar across head; chest and middle of belly not orange; gular region in both sexes bluish, with light lines following scale rows at anterior part of throat; first canthal in contact with lorilabials; ventral scales 38–42 .. **magister lineatulus** (p. 115)
8. Femoral pores usually (84 percent) 20 or less on each side; total pore counts usually (80 percent) 40 or less 9
   Femoral pores usually (78 percent) 21 or more on each side; total pore counts usually (83 percent) 41 or more; lateral belly patches usually not confluent medially in males ..... **melanorhinus melanorhinus** (p. 112)
9. Lateral nuchal pocket greatly reduced, with very few if any granules, and very little if any bare skin, shallow ..... **melanorhinus stuarti** (p. 113)
   Lateral nuchal pocket with numerous granules, considerable bare skin, and considerable depth ..... **melanorhinus calligaster** (p. 113)
10. One or more supraoculars in contact with median head scales 14
    None of supraoculars in contact with median head scales 11
11. Gular region barred 12
    Gular region not barred 13
12. Dorsal scales usually more than 30; femoral pores usually more than 9 (one side); supraoculars usually 5 to 7 ... **spinosus caeruleopunctatus** (p. 116)
    Dorsal scales usually 30 or less; femoral pores usually 9 or less (one side); supraoculars usually 4 ..... **spinosus spinosus** (p. 116)

13. Belly patches in males continuous across chest; prefrontals never in contact; no dorsolateral light lines in males; posterior surface of thigh mottled or with a broad light line, dark-bordered 14
Belly patches small, confined to sides of belly in males; prefrontals usually in contact; dorsolateral light lines present in males; posterior surface of thigh nearly immaculate or with a narrow, short black line near insertion of hind leg ..... **olivaceus** (p. 117)
14. Gular region barred 15
Gular region not barred 16
15. Femoral pores 13 or more (one side) ..... **orcutti licki** (p. 114)
Femoral pores 12 or less (one side) ..... **spinosus spinosus** (p. 116)
16. Femoral pores (one side) 12 or less 17
Femoral pores (one side) 13 or more 21
17. Outer row of labiomental scales in contact with mental.
magister magister (p. 114)
Outer row of labiomental scales separated from mental 18
18. First canthal in contact with lorilabials ..... **orcutti orcutti** (p. 114)
First canthal separated from lorilabials 19
19. Lateral scales about one-half size of dorsal scales; median frontonasal not in contact with frontal; lateral belly patches in males not passing over chest 21
Lateral scales considerably more than one-half size of dorsal scales; median frontonasal usually in contact with frontal; lateral belly patches in males passing over chest 20
20. Dorsal markings absent or very dimly visible; a broad, light line on posterior surface of thighs ..... **lundelli gaigeae** (p. 112)
Dorsal markings present and distinct at least in females, consisting of narrow, dark cross bars; posterior surface of thigh mottled.
lundelli lundelli (p. 112)
21. Femoral pores (one side) 10 or less 22
Femoral pores (one side) 11 or more 23
22. First canthal rarely in contact with lorilabials; gular region never barred; outer row of labiomentals rarely in contact with mental.
clarkii boulengeri (p. 113)
First canthal usually in contact with lorilabials; gular region barred, or outer row of labiomentals sometimes in contact with mental (not in *o. orcutti*) 23
23. First canthal separated from labiomentals; femoral pores 16 or less; lower forelegs distinctly barred; gular region never barred ..... **clarkii clarkii** (p. 113)
First canthal in contact with lorilabials, lower forelegs not barred distinctly 24
24. Outer row of labiomentals in contact with mental; gular region not barred; shoulder patch distinct 26
Outer row of labiomental scales separated from mental; gular region barred or shoulder patch indistinct 25
25. Dorsal scales 32 to 40; femoral pores 13–19; usually one or more scales in contact with both subocular and supralabials; a distinct, light-bordered black shoulder patch; dorsolateral light lines present, indistinct posteriorly, the medial edge sometimes indistinct ..... **orcutti licki** (p. 114)
Dorsal scales 28 to 36; femoral pores 10–15; usually 2 complete rows of lorilabials below subocular; shoulder patch indistinct; no dorsolateral light lines ..... **orcutti orcutti** (p. 114)

26. Supraoculars usually 5; femoral pores (one side) usually 15 or less.
magister magister (p. 114)
Supraoculars usually 6 or 7; femoral pores usually 16 or more 27
27. No dark lines in adult males on sides of lateral scale rows; femoral pores (one side) usually less than 19; lateral belly patches confluent medially in adult males ..... **magister rufidorsum** (p. 115)
Dark lines on sides of lateral scale rows present in adult males; lateral belly patches not confluent medially in adult males 28
28. A distinct, narrow dorsal stripe about 1½ scale rows wide; females and young with 2 rows of dark spots, one on each side of middorsal stripe.
magister monserratensis (p. 115)
A broad, light-colored dorsal area about 6 scale rows wide; dark spots on back absent or indistinct ..... **magister zosteromus** (p. 115)

SCELOPORUS LUNDELLI LUNDELLI Smith

Sceloporus lundelli lundelli SMITH, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 66–71, pl. 4.

Type.—Univ. Michigan Mus. Zool. No. 80674; C. L. Lundell collector.

Type locality.—Cohune Ridge (20 miles southeast of Benque Viejo), British Honduras.

Range.—The southern portion of the Yucatán Peninsula. Recorded in Mexico only from Campeche.

SCELOPORUS LUNDELLI GAIGEAE Smith

Sceloporus lundelli gaigeae SMITH, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 71–74, pl. 5.

Type.—Chicago Nat. Hist. Mus. No. 31524; H. M. Smith collector.

Type locality.—Mérida, Yucatán.

Range.—Northern Yucatán; recorded only from Yucatán.

SCELOPORUS EDWARDTAYLORI Smith

Sceloporus edwardtaylori SMITH, Herpetologica, vol. 1, 1936, pp. 6–8; Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 78–82, fig. 9.

Type.—EHT-HMS No. 8331 (EHT field No. 4221); E. H. Taylor and H. M. Smith collectors.

Type locality.—Ixtepec (= San Gerónimo), Oaxaca.

Range.—Central and southern Oaxaca.

SCELOPORUS MELANORHINUS MELANORHINUS Bocourt

Sceloporus melanorhinus BOCOURT, Ann. Sci. Nat., Zool., ser. 6, vol. 3, No. 12, 1876, pp. 2–4.—SMITH, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 82–87 (part).

Sceloporus melanorhinus melanorhinus, SMITH, Proc. U. S. Nat. Mus., vol. 92, 1942, p. 360.

Type.—Mus. Hist. Nat. Paris, three females, one male, cotypes; F. Sumichrast collector.

Type locality.—Isthmus of Tehuantepec, Oaxaca, here restricted to Tehuantepec (City).

Range.—Pacific slopes of Oaxaca.

SCELOPORUS MELANORHINUS CALLIGASTER Smith

Sceloporus melanorhinus, Smith, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 82–87 (part), pls. 9, 10.

Sceloporus melanorhinus calligaster Smith, Proc. U. S. Nat. Mus., vol. 92, 1942, pp. 360–361.

Type.—U.S.N.M. No. 112201; H. M. Smith collector.

Type locality.—Acapulco, Guerrero.

Range.—Pacific slopes below about 3,500 feet, from Nayarit to Guerrero. Recorded from Nayarit, Jalisco, Colima, Michoacán, and Guerrero.

SCELOPORUS MELANORHINUS STUARTI Smith

Sceloporus melanorhinus calligaster, Smith, Rev. Soc. Mex. Hist. Nat., vol. 7, 1947, p. 66.

Sceloporus melanorhinus stuarti Smith, Nat. Hist. Misc., No. 20, 1948, pp. 1–3.

Type.—Univ. Michigan Mus. Zool. No. 96759; L. C. Stuart collector.

Type locality.—Finca Canibal, 3,000 feet, Huehuetenango, Guatemala.

Range.—The upper valley of the Río Grijalva in Chiapas and Guatemala. Known in Mexico only from *Chiapas:* Piedra Parada, 12 miles north of Ocozucoautla.

SCELOPORUS CLARKII CLARKII Baird and Girard

Sceloporus clarkii Baird and Girard, Proc. Acad. Nat. Sci. Philadelphia, vol. 6, 1852, p. 127 (part).—Stejneger, North Amer. Fauna, No. 7, 1893, pp. 178–181, figs. 1a-c, pl. 1.—Smith, Handbook of lizards of the United States, 1945, pp. 206–208, pl. 45.

Sceloporus clarkii clarkii, Cope, U. S. Nat. Mus. Bull. 1, 1875, pp. 49, 92 (part).—Smith, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 118–128.

Type.—U.S.N.M. No. 2940, three cotypes, of which two belong to *S. m. magister*, and one, with a white tag on its leg, is designated lectotype of *S. clarkii;* John H. Clark collector.

Type locality.—"Province of Sonora" (=southern Arizona), here restricted to Santa Rita Mountains.

Range.—Southern and central Arizona (except the western part of the State), southwestern New Mexico, and all of Sonora except the extreme western and southern parts. Recorded only from the states of Sonora and Chihuahua, and the islands of San Pedro Nolasco and Tiburón.

SCELOPORUS CLARKII BOULENGERI Stejneger

Sceloporus boulengeri Stejneger, North Amer. Fauna, No. 7, 1893, p. 180, pl. 1, figs. 5a-c.

Sceloporus clarkii boulengeri, Burt, Trans. Amer. Micr. Soc., vol. 54, 1935, 171–172 (part).—Smith, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 128–133, pl. 15.

Type.—U.S.N.M. No. 14079, three cotypes; A. Forrer collector.

Type locality.—Presidio (about 50 miles south from Mazatlán), Sinaloa.

Range.—Pacific slopes, southern Sonora south to northern Jalisco. Recorded from Sonora, Sinaloa, Nayarit, and Jalisco.

SCELOPORUS ORCUTTI ORCUTTI Stejneger

Sceloporus orcutti Stejneger, North Amer. Fauna, No. 7, 1893, p. 181, pl. 1, figs. 4a–c.

Sceloporus orcutti orcutti, Smith, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 133–140, fig. 12.

Sceloporus digueti Mocquard, Nouv. Arch. Mus. Hist. Nat. Paris, ser. 4, vol. 1, 1899, pp. 311–313, pl. 12, fig. 2–2b (Mus. Hist. Nat. Paris; Santa Rosalía, Baja California).

Type.—U.S.N.M. No. 16330; C. R. Orcutt collector.

Type locality.—Milquatay Valley, San Diego County, Calif.

Range.—California, from southern San Bernardino county southward into Baja California to the Sierra de la Gigante, and on some adjacent islands.

SCELOPORUS ORCUTTI LICKI Van Denburgh

Sceloporus licki Van Denburgh, Proc. California Acad. Sci., ser. 2, vol. 5, 1895, pp. 79, 110–114, pl. 10.

Sceloporus orcutti licki, Smith, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 140–145, pl. 4.

Type.—Stanford Univ. Mus. No. 2987a, lectotype (one of two paratypes; type in California Acad. Sci. destroyed in 1906); Gustav Eisen, and Vaslet collectors.

Type locality.—Sierra San Lázaro, Baja California.

Range.—Cape region of Baja California, including Isla Espíritu Santo and Isla Partida.

SCELOPORUS MAGISTER MAGISTER Hallowell

Sceloporus magister Hallowell, Proc. Acad. Nat. Sci. Philadelphia, vol. 7, 1854, p. 93.—Stejneger, North Amer. Fauna, No. 7, 1893, pp. 160, 178–183, pl. 1, figs. 2, a-c.

Sceloporus magister magister, Linsdale, Univ. California Publ. Zool., vol. 38, 1932, p. 365.—Smith, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 145–161, pl. 15.

Type.—U.S.N.M. No. 2967; A. L. Heermann collector.

Type locality.—Fort Yuma, Ariz.

Range.—Extreme western Texas to southern California (excluding western slopes), north to southern Nevada and southwestern Colorado, south to northern Durango and southern Sonora. Reported from Chihuahua, Coahuila, Durango, Sonora, and Baja California.

SCELOPORUS MAGISTER RUFIDORSUM Yarrow

Sceloporus rufidorsum YARROW, Proc. U. S. Nat. Mus., vol. 5, 1882, pp. 442–443 (part).

Sceloporus magister rufidorsum, LINSDALE, Univ. California Publ. Zool., vol. 38, 1932, p. 366.—SMITH, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 161–165.

Type.—U.S.N.M. No. 11981; L. Belding collector.

Type locality.—"San Quentin Bay," Baja California. In Yarrow, U.S. Nat. Mus. Bull. 24, 1882, p. 64, the locality is listed "La Paz, California."

Range.—Northern Baja California, exclusive of the northeastern section, southward to include the Vizcaino Desert and Cedros Island; Coronados Islands.

SCELOPORUS MAGISTER LINEATULUS Dickerson

Sceloporus lineatulus DICKERSON, Bull. Amer. Mus. Nat. Hist., vol. 41, 1919, pp. 467–468.

Sceloporus magister lineatulus, SMITH, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 168–170, fig. 13.

Type.—U.S.N.M. No. 64263; C. H. Townsend collector.

Type locality.—Santa Catalina Island, Gulf of California.

Range.—Known only from Santa Catalina Island.

SCELOPORUS MAGISTER MONSERRATENSIS Van Denburgh and Slevin

Sceloporus monserratensis VAN DENBURGH and SLEVIN, Proc. California Acad. Sci., ser. 4, vol. 11, 1921, p. 396.

Sceloporus magister monserratensis, SMITH, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 165–168.

Sceloporus magister rufidorsum, LINSDALE, Univ. California Publ. Zool., vol. 38, 1932, p. 366 (part).

Type.—California Acad. Sci. No. 50509; Joseph R. Slevin collector.

Type locality.—Monserrate Island, Gulf of California.

Range.—Southern edge of the Vizcaino Desert in Baja California southward to the southern end of the Sierra de la Gigante; islands adjacent to the coast in the gulf except Santa Catalina.

SCELOPORUS MAGISTER ZOSTEROMUS Cope

Sceloporus zosteromus COPE, Proc. Acad. Nat. Sci. Philadelphia, 1863, p. 105.—STEJNEGER, North Amer. Fauna, No. 7, 1893, pp. 178, 181, pl. 1, fig. 3, a–c.

Sceloporus magister zosteromus, LINSDALE, Univ. California Publ. Zool., vol. 38, 1932, p. 366.—SMITH, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 170–172.

Type.—U.S.N.M. Nos. 5298 (23 specimens), 69472–69488; John Xantus collector.

Type locality.—Cape San Lucas, Baja California.

Range.—Cape region of Baja California.

SCELOPORUS HORRIDUS HORRIDUS Wiegmann

Sceloporus horridus Wiegmann, Herpetologia Mexicana, 1834, p. 50.
Sceloporus horridus horridus, Smith, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 98–106, pl. 11.

Type.—Zool. Mus. Berlin; F. Deppe collector.

Type locality.—Mexico, here restricted to Cuernavaca, Morelos.

Range.—Known in southern Morelos, Guerrero, and Oaxaca in the Balsas Basin, and southern Puebla.

SCELOPORUS HORRIDUS OLIGOPORUS Cope

Sceloporus oligoporus Cope, Proc. Acad. Nat. Sci. Philadelphia, 1864, pp. 177–178.
Sceloporus horridus oligoporus, Taylor, Univ. Kansas Sci. Bull., vol. 24, 1938, p. 520.—Smith, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 106–108.

Type.—U.S.N.M. Nos. 31386–31393, cotypes.

Type locality.—Colima, Colima.

Range.—Known from western Guerrero, central and southern Michoacán, Colima, and central Jalisco to Durango.

SCELOPORUS HORRIDUS ALBIVENTRIS Smith

Sceloporus horridus albiventris Smith, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 108–110, pl. 12.

Type.—EHT-HMS No. 8519; E. H. Taylor collector.

Type locality.—Tepic, Nayarit.

Range.—Known from coastal regions from northern Jalisco through Nayarit to Sinaloa.

SCELOPORUS SPINOSUS SPINOSUS Wiegmann

Sceloporus spinosus Wiegmann, Isis von Oken, vol. 21, 1828, p. 370; Herpetologia Mexicana, 1834, p. 50, pl. 7, fig. 3.
Sceloporus spinosus spinosus, Martín del Campo, Anal. Inst. Biol. Mexico, vol. 8, 1937, p. 262.—Smith, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 87–94, pl. 11.

Type.—? Zool. Mus. Berlin; F. Deppe collector.

Type locality.—Mexico, here restricted to Puebla, Puebla.

Range.—Durango and western Tamaulipas to northern Jalisco, Michoacán, Hidalgo, and Puebla on the Mexican Plateau. Recorded from Durango, Zacatecas, San Luis Potosí, Tamaulipas, Jalisco, Aguascalientes, Guanajuato, Hidalgo, Veracruz, México, Michoacán, Puebla, and Distrito Federal.

SCELOPORUS SPINOSUS CAERULEOPUNCTATUS Smith

Sceloporus spinosus caeruleopunctatus Smith, Univ. Kansas Sci. Bull., vol. 24, 1936 (1938), pp. 469–473; Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 94–98, fig. 10.

Type.—EHT-HMS No. 8467; H. M. Smith collector.

Type locality.—Slopes of Cerro de San Luis, about 15 miles north of Oaxaca, Oaxaca.

Range.—Known only from the highlands of Oaxaca.

SCELOPORUS OLIVACEUS Smith

Sceloporus spinosus floridanus, Stejneger, North Amer. Fauna, No. 7, 1893, p. 181 (*nec* Baird).

Sceloporus olivaceus Smith, Trans. Kansas Acad. Sci., vol. 37, 1934, pp. 263, 277–279; Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 110–118, pls. 13–14; Univ. Kansas Sci. Bull., vol. 31, 1946, pp. 103–106.

Type.—EHT-HMS No. 2508; E. H. Taylor and John S. Wright collectors.

Type locality.—Arroyo Los Olmos, 3 miles southeast of Rio Grande City, Starr County, Tex.

Range.—Extreme south-central Oklahoma, southward through central Texas to southern Tamaulipas, central Nuevo León, southeastern Coahuila, and San Luis Potosí. Recorded from each state named.

UNDULATUS GROUP

Species.—Four, with a total of 13 forms. Extralimital are 9 forms all restricted to the United States and Mexico.

Range.—British Columbia and southern New York south to northern Baja California and central Zacatecas.

KEY TO MEXICAN SPECIES OF THE UNDULATUS GROUP OF SCELOPORUS

1. Supraoculars large, entire; femoral pore series separated by 9 or more scales; gular patches small, widely separated ..... **cautus** (p. 117)
   Supraoculars smaller, divided; femoral pore series separated by 8 or fewer scales, *or*, gular patches large, often covering entire throat 2
2. Femoral pore series separated by 9 scales or more; scales on posterior surface of thigh abruptly differentiated from dorsal scales of same member, the median posterior scales not distinctly larger than adjacent lateral posterior scales ..... **occidentalis biseriatus** (p. 118)
   Femoral pore series separated by 8 scales or less; scales on posterior surface of thigh gradually merging with larger dorsals of same member, at least the median posterior scales distinctly larger than the adjacent lateral posterior scales 3
3. Males without lateral belly patches; dorsolateral and lateral light stripes very clearly defined ..... **undulatus virgatus** (p. 118)
   Males with lateral belly patches; dorsolateral and lateral light stripes poorly defined ..... **undulatus consobrinus** (p. 118)

SCELOPORUS CAUTUS Smith

Sceloporus cautus Smith, Occ. Pap. Mus. Zool. Univ. Michigan, No. 387, 1938, pp. 2–7; Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 173–174.

Type.—EHT-HMS No. 13027; E. H. Taylor and H. M. Smith collectors.

Type locality.—Thirty miles north of El Salado, San Luis Potosí, in the state of Coahuila, Mexico.

Range.—Southern Coahuila, northern San Luis Potosí, and eastern Zacatecas.

SCELOPORUS OCCIDENTALIS BISERIATUS Hallowell

Sceloporus bi-seriatus HALLOWELL, Proc. Acad. Nat. Sci. Philadelphia, vol. 7, 1854, pp. 93–94.

Sceloporus occidentalis bi-seriatus, CAMP, Univ. California Publ. Zool., vol. 17, 1916, p. 65.

Type.—Acad. Nat. Sci. Philadelphia Nos. 8474–6, cotypes.

Type locality.—"Borders of El Paso Creek and Tejon Valley," Calif., here restricted to El Paso Creek.

Range.—Southern Idaho, southwest through Nevada and western Utah into California and the San Pedro Mártir range in Baja California.

SCELOPORUS UNDULATUS CONSOBRINUS Baird and Girard

Sceloporus consobrinus BAIRD and GIRARD, *in* Marcy and McClellan, Exploration of the Red River of Louisiana, . . ., 1853, pp. 224–226, 237, pl. 10, figs. 5–12.

Sceloporus undulatus consobrinus, COPE, Ann. Rep. U. S. Nat. Mus., 1898 (1900), p. 337, fig. 60.—SMITH, Publ. Field Mus. Nat. Hist., zool ser., vol. 26, 1939, pp. 175–176.

Type.—Destroyed.

Type locality.—Beckham County, Okla., near the confluence of the north fork of the Red River and Suydam Creek.

Range.—Texas except eastern fourth, southwestern Oklahoma, extreme western and southern fourth of New Mexico, southeastern Arizona in vicinity of San Pedro River, south in Mexico to central Zacatecas, central Chihuahua on the west and central Tamaulipas on the east. Recorded only from Chihuahua, Coahuila, Durango, Nuevo León, and Zacatecas.

SCELOPORUS UNDULATUS VIRGATUS Smith

Sceloporus undulatus virgatus SMITH, Occ. Pap. Mus. Zool. Univ. Michigan, No. 387, 1938, pp. 11–14; Publ. Field Mus. Nat. Hist., zool ser., vol. 26, 1939, p. 176.

Type.—Univ. Mich. Mus. Zool. No. 81912; Berry Campbell collector.

Type locality.—Above Santa María mine, El Tigre Mountains, Sonora.

Range.—Southeastern Arizona and adjacent Mexico, at high elevations. Recorded in Mexico only from Sonora and Chihuahua.

GRACIOSUS GROUP

Species.—One, with three subspecies, only one of which occurs in Mexico.

Range.—Montana and Washington south to extreme northwestern Baja California.

SCELOPORUS GRACIOSUS VANDENBURGIANUS Cope

Sceloporus vandenburgianus COPE, Amer. Nat., vol. 30, 1896, pp. 834–835; Ann. Rep. U. S. Nat. Mus. 1898 (1900), p. 390, fig. 64.

Sceloporus graciosus vandenburgianus, CAMP, Univ. California Publ. Zool., vol. 17, 1916, p. 67.

Type.—U.S.N.M. No. 21931; E. A. Mearns collector.

Type locality.—Summit of the coast range, San Diego County, Calif.

Range.—Mountains south from Ventura County, Calif., into northwestern Baja California.

GRAMMICUS GROUP

Species.—Two, one of which includes three subspecies.

Range.—Extreme southern Texas and Chihuahua south to Oaxaca.

KEY TO SPECIES OF THE GRAMMICUS GROUP OF SCELOPORUS

1. Dorsal scales unequal; a series of enlarged scales on each side of middorsal line, separated from each other by small, flat scales--**heterolepis** (p. 121)
   Dorsal scales more or less uniform in size---------- 2
2. Scales on sides of neck not abruptly differentiated from dorsal nuchal scales; no enlarged series of scales on sides of neck; dorsal scales 48–66. **grammicus grammicus** (p. 119)
   Scales on sides of neck abruptly differentiated from dorsal nuchal scales; two series of enlarged scales on sides of neck posterior to ear; dorsal scales 52–93---------- 3
3. Dorsal scales usually less than 70 (52–74)---**grammicus disparilis** (p. 120)
   Dorsal scales usually 70 or more (68–93)-**grammicus microlepidotus** (p. 120)

SCELOPORUS GRAMMICUS GRAMMICUS Wiegmann

Sceloporus grammicus WIEGMANN, Isis von Oken, vol. 21, 1828, p. 370.—SMITH, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 179–182, fig. 16.

Sceloporus grammicus grammicus, SMITH and LAUFE, Trans. Kansas Acad. Sci., vol. 48, 1945, pp. 332–333.

Sceloporus pleurostictus WIEGMANN, Isis von Oken, vol. 21, 1828, p. 370 (Zool. Mus. Berlin; F. Deppe collector; Mexico, here restricted to Chilpancingo, Guerrero).

Sceloporus rubriventris GÜNTHER, Biologia Centrali-Americana, Reptilia and Batrachia, 1890, p. 72, pl. 32, fig. C (Omilteme, Guerrero; Brit. Mus. Nat. Hist.).

Type.—Zool. Mus. Berlin; F. Deppe collector.

Type locality.—Mexico, here restricted to Chilpancingo, Guerrero.

Range.—Southern Oaxaca (San Pedro Quiechapa, Ozolotepec) and the Sierra Madre del Sur in Guerrero (Omilteme, Chilpancingo, Tamazulapan, Iguala).

SCELOPORUS GRAMMICUS MICROLEPIDOTUS Wiegmann

Sceloporus grammicus var. *alpha* WIEGMANN, Isis von Oken, vol. 21, 1828, p. 370.
Sceloporus microlepidotus WIEGMANN, Herpetologia Mexicana, 1834, p. 51.—BOCOURT, Mission scientifique au Mexique . . . , Études sur les reptiles, livr. 3, 1874, pp. 194–195, pl. 18 bis, fig. 13, a–d.
Sceloporus microlepidotus microlepidotus, SMITH, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 184–191 (part), fig. 17, 18.
Sceloporus grammicus microlepidotus, SMITH and LAUFE, Trans. Kansas Acad. Sci., vol. 48, 1945, pp. 332–333.
Scceloporus dispar BAIRD and GIRARD, Proc. Acad. Nat. Sci. Philadelphia, vol. 6, 1852, p. 127 (Veracruz, here restricted to Cruz Blanca; type lost).
Sceloporus heterurus COPE, Proc. Acad. Nat. Sci. Philadelphia 1866 (1867), pp. 322–323 (Mirador, Veracruz; type now lost).
Sceloporus microlepidopterus HERRERA, La Naturaleza, ser. 2, vol. 1, 1890, p. 331 (*lapsus calami*).
Sceloporus microlepis BOULENGER, Proc. Zool. Soc. London, 1894, p. 731 (*lapsus calami*).

Type.—Zool. Mus. Berlin; F. Deppe, collector.

Type locality.—Mexico, here restricted to México, D. F.

Range.—Southern part of the Mexican plateau from Jalisco, northern Guanajuato, and northern Hidalgo south to Oaxaca. Recorded from the states of Colima, Distrito Federal, Guanajuato, Hidalgo, Jalisco, Oaxaca (Reyes),[75] Puebla, Veracruz, México, Morelos, Tlaxcala, and Michoacán.

SCELOPORUS GRAMMICUS DISPARILIS Stejneger

Sceloporus disparilis STEJNEGER, Proc. Biol. Soc. Washington, vol. 29, 1916, pp 227–230.
Sceloporus microlepidotus disparilis, DUNN, Proc. Acad. Nat. Sci. Philadelphia, vol. 88, 1936, p. 472.—SMITH, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 191–197, fig. 18, pl. 16.
Sceloporus grammicus disparilis, SMITH and LAUFE, Trans. Kansas Acad. Sci., vol. 48, 1945, pp. 332–333.
Sceloporus microlepidotus microlepidotus, DUNN, Proc. Acad. Nat. Sci. Philadelphia, vol. 88, 1936, pp. 472–473, 474.
Sceloporus pilsbryi DUNN, Proc. Acad. Nat. Sci. Philadelphia, vol. 88, 1936, pp. 473–474 (Alvarez, San Luis Potosí; type, Acad. Nat. Sci. Philadelphia No. 20085).

Type.—U.S.N.M. No. 33041; William Lloyd collector.

Type locality.—Lomita Ranch, 6 miles north of Hidalgo, Tex.

Range.—Northern Hidalgo, Guanajuato, and southern Zacatecas northward to central Chihuahua and northern Coahuila and the southern tip of Texas. Recorded from Chihuahua, Coahuila, Durango, Guanajuato, Hidalgo, Nuevo León, San Luis Potosí, Tamaulipas, and Zacatecas.

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[75] Intergrades of *S. g. grammicus* and *S. g. microlepidotus* are from Cerro San Felipe and Cerro San Juan, north of Oaxaca City.

SCELOPORUS HETEROLEPIS Boulenger

Sceloporus heterolepis BOULENGER, Proc. Zool. Soc. London, 1894, pp. 724, 731, pl. 48, fig. 4.—SMITH, Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 197–199, pl. 16.

Type.—Brit. Mus. Nat. Hist., part of cotypes; one cotype, Mus. Comp. Zool. No. 32346.

Type locality.—La Cumbre de los Arrastrados (to which the type locality is here restricted), Real Alto, "Riocho (=Rancho?)" La Berberia, Sierra de Bolaños.

Range.—Known only from western Jalisco (type localities and Cerro Tequila.)

MEGALEPIDURUS GROUP

Species.—Two.

Range.—Western central Veracruz and eastern Puebla.

KEY TO SPECIES OF THE MEGALEPIDURUS GROUP OF SCELOPORUS

1. Dorsal scales 44 to 56; scales between femoral pore series 2 to 5; basal subcaudals keeled in females; males with distinct blue areas on sides of belly. **pictus** (p. 121)

   Dorsal scales 54 to 62; scales between series of femoral pores 4 to 8; basal subcaudals smooth in females; males immaculate below. **megalepidurus** (p. 121)

SCELOPORUS MEGALEPIDURUS Smith

Sceloporus megalepidurus SMITH, Trans. Kansas Acad. Sci., vol. 37, 1934, pp. 272–277, pl. 9, figs. 7, 8, pl. 10, fig. 13; Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 204–209, fig. 20.

Type.—EHT-HMS No. 7543 (EHT field No. 2908); E. H. Taylor and H. M. Smith collectors.

Type locality.—Near Totalco, Veracruz.

Range.—Known only from northern Puebla, western Veracruz, and Tlaxcala (Apizaco).

SCELOPORUS PICTUS Smith

Sceloporus pictus SMITH, Amer. Mus. Nov., No. 892, 1936, pp. 1–4; Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 200–204, pl. 17, two figs.

Type.—Amer. Mus. Nat. Hist. No. 18744; Paul D. R. Rüthling, collector.

Type locality.—Santa Catarina, Puebla.

Range.—Central Puebla and central western Veracruz.

TORQUATUS[76] GROUP

Species.—Twenty-one forms, representing 10 species, are recognized.

Range.—Arizona and Texas south to Guatemala.

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[76] This group was in 1938 termed the *poinsettii* group, inasmuch as *Sceloporus poinsettii* Baird and Girard (1854) was the oldest name in the group after exclusion of *S. torquatus* Wiegmann, 1828. The latter name was considered unavailable because it was once (Wagler, 1830) placed in the genus *Tropidurus*, in which the combination *Tropidurus torquatus* (Wied, 1820) had already been made (Wied, 1824). Secondary homonyms, such as this, have not, however, been regarded in recent years as permanently suppressed: they are suppressed only as long as they actually remain homonyms. Accordingly, we revert to the name *torquatus* for this group.

KEY TO SPECIES OF THE TORQUATUS GROUP OF SCELOPORUS[76a]

1. Supraoculars in a single series, with no scale divided 2
   Supraoculars in 2 series; or, if in one series, with one or more scales divided 9
2. Femoral pores 8–14; dorsal scales 25–35 3
   Femoral pores more than 14; or dorsal scales more than 35 5
3. Dorsal nuchal collar broadly interrupted medially by a space about 5 scales wide; throat mottled ..... **torquatus binocularis** (p. 126)
   Dorsal nuchal collar broad, complete; throat not mottled 4
4. Femoral pore counts on both sides usually total more than 21; dorsal scales usually 31 or more ..... **serrifer plioporus** (p. 124)
   Femoral pore counts on both sides usually total less than 22; dorsal scales generally less than 31 ..... **serrifer serrifer** (p. 123)
5. Dorsal scales 31 or less 6
   Dorsal scales more than 31 7
6. Nuchal collar divided on each side of neck, the area between lighter in color; dorsal color light, with dark and light spots irregularly placed; size large (maximum snout-vent measurement 129 mm.); dorsal scales more strongly keeled and mucronate ..... **torquatus melanogaster** (p. 126)
   Nuchal collar broad, complete; dorsal color dark, without light spots; maximum snout-vent measurement 98 mm.; dorsal scales more weakly keeled and mucronate ..... **torquatus torquatus** (p. 125)
7. Lateral scales about one-half as large as median dorsals ..... **lineolateralis** (p. 126)
   Lateral scales as large as or larger than dorsals 8
8. Dorsal scales 40 or more; nuchal collar narrow, with light borders broken; a light line on side of head and another on side of neck; each dorsal scale usually with a light median spot ..... **jarrovii jarrovii** (p. 128)
   Dorsal scales usually less than 40; nuchal collar broad, with unbroken light borders; no light lines on sides of head and neck; no spots on dorsal scales. **bulleri** (p. 125)
9. Lateral scales with the terminal point arising well within the free posterior margin; dorsal scales 41 or more 10
   Lateral scales with the terminal point arising at or very near the free posterior margin; head scales not microscopically rugose; no oblique dark blue lines on throat 11
10. Dorsal scales 47 to 54; throat with very distinct, oblique, dark blue lines; head scales not microscopically rugose; oblique dark bands on sides of body distinct; maximum snout-vent measurement 79 mm. **dugesii intermedius** (p. 127)
    Dorsal scales 41 to 50; throat without or with very faint oblique lines; head scales microscopically rugose; oblique dark bands on sides of body indistinct or absent; maximum snout-vent measurement 87.5 mm; femoral pores not over 13 ..... **dugesii dugesii** (p. 127)
11. Dorsal scales 55 or more ..... **ornatus ornatus** (p. 127)
    Dorsal scales less than 55 12
12. Dorsal scales 47 to 53 ..... **ornatus caeruleus** (p. 127)
    Dorsal scales less than 47 13
13. Tail with very distinct, broad, alternating dark and light bands, most distinct toward tip, where they are complete; supraoculars in 2 complete rows; head scales very irregular; light borders of nuchal collar broad; a broad light band across neck behind occiput; preocular usually entire; inner row of labiomental scales generally terminating at a point posterior to suture between second and third infralabials ..... **poinsettii** (p. 125)

[76a] For one other species of this group, see footnote 72a.

Tail without distinct alternating dark and light bands of nearly equal width; bands about tail not complete toward tip; dorsal scales 40 or less 14

14. Dorsal scales 31 or less 15
Dorsal scales 32 or more 16

15. A middorsal series of very large, dark blotches, sometimes fused bandlike; all except males with a pair of parallel, closely placed dark lines down middle of throat; collar 4 scales long or less.
mucronatus mucronatus (p. 124)
No middorsal series of dark blotches; parallel throat lines absent; collar involving 4½ scale lengths or more ... **mucronatus omiltemanus** (p. 124)

16. Each dorsal scale row, in adult males, with a longitudinal light line; dorsals 30 to 38 ..... **mucronatus aureolus** (p. 124)
Scale rows not with continuous lines 17

17. Nuchal black collar 4 or 5 scales wide, bordered anteriorly and posteriorly by a light band 1 or 1½ scales wide; each border interrupted medially by a light scale; snout-vent length often more than 100 mm., reaching 143 mm ..... **cyanogenys** (p. 125)
Not so; maximum snout-vent length 100 mm 18

18. Lateral body scales distinctly decreasing in size laterally, at a point halfway between axilla and groin, distinctly smaller than dorsal scales 19
Lateral body scales not decreasing in size laterally at least up to a point halfway between axilla and groin, where they are still subequal to, or even a little larger than, middorsal scales 20

19. Dorsal scales on lower foreleg about half size of those on upper foreleg; dark transverse streaks in lateral belly patches; nuchal collar covering six scales medially, or more ..... **jarrovii sugillatus** (p. 128)
Dorsal scales on lower foreleg but little if any smaller than those on upper foreleg; no dark streaks in lateral belly patches; nuchal collar less than four scales long middorsally ..... **jarrovii immucronatus** (p. 128)

20. Supraoculars essentially in 1 row; if an outer row is evident, it is composed of scales much smaller than those of inner row, and usually number no more than two ..... **jarrovii jarrovii** (p. 128)
Supraoculars in 2 rows, those of outer row a little smaller than those of inner, usually numbering 3 or more 21

21. Adult males black above and below, with orange areas and spots on sides of head, belly, and tail; only throat, underside of tail, and posterior surface of hind leg not black; females somewhat similar, very dark above, the collar poorly defined, young with poorly defined, narrow, light borders on neck collar; dorsal scales average 37.5 ..... **jarrovii oberon** (p. 129)
Adult males light brown above, with very broad, very well defined nuchal collar; a median area on belly white except in very largest males; sides of abdomen blue, black-edged; females and young with more distinct light borders on nuchal collar; dorsal scales average 40.6 ... **jarrovii minor** (p. 128)

SCELOPORUS SERRIFER SERRIFER Cope

Sceloporus serrifer Cope, Proc. Acad. Nat. Sci. Philadelphia, 1866, p. 124.—Smith, Univ. Kansas Sci. Bull., vol. 24, 1936 (1938), pp. 558–564, figs. 5, 6, pl. 47, fig. 2.

Sceloporus serrifer serrifer, Smith, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, p. 212, fig. 23.

861316—50——9

Type.—U.S.N.M. No. 34868; Arthur Schott collector.

Type locality.—Yucatán, here restricted to Mérida.

Range.—Northern part of the Yucatán Peninsula. Recorded only from the state of Yucatán; intergrades with *S. s. plioporus* are recorded from Balchacaj, Campeche.

SCELOPORUS SERRIFER PLIOPORUS Smith

Sceloporus serrifer plioporus SMITH, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 212–214, pl. 18.

Type.—Chicago Nat. Hist. Mus. No. 32004; E. H. Taylor collector.

Type locality.—Four miles east of Encero, Veracruz.

Range.—Gulf coast of Mexico from southern Tamaulipas southward through the basal part of the Yucatán Peninsula to Petén, Guatemala. Recorded from the states of Tamaulipas, San Luis Potosí, Veracruz, and Tabasco (Tenosique); intergrades with *S. s. serrifer* are recorded from Balchacaj, Campeche.

SCELOPORUS MUCRONATUS MUCRONATUS Cope

Sceloporus torquatus mucronatus COPE, Proc. Amer. Philos. Soc., vol. 22, 1885, p. 402.

Sceloporus mucronatus mucronatus, SMITH, Univ. Kansas Sci. Bull., vol. 24, 1936 (1938), pp. 583–591, figs. 10, 11, pl. 49, fig. 2; Publ. Field Mus. Nat. Hist. zool. ser., vol. 26, 1939, pp. 218–220, figs. 26, 27.

Type.—U.S.N.M. Nos. 25074–9; No. 25077 designated as lectotype (Smith, *op. cit.*, 1938, p. 583).

Type locality.—Mirador, Veracruz.

Range.—Parts of Hidalgo, Veracruz, Puebla, and México, at high elevations.

SCELOPORUS MUCRONATUS AUREOLUS Smith

Sceloporus mucronatus omiltemanus, SMITH, Univ. Kansas Sci. Bull., vol. 24, 1936 (1938), pp. 591–598 (part), figs. 11, 12, pl. 50.

Sceloporus mucronatus aureolus SMITH, Proc. U. S. Nat. Mus., vol. 92, 1942, pp. 356–357.

Type.—U.S.N.M. No. 112232; H. M. Smith collector.

Type locality.—Two miles west of Acultzingo, Veracruz.

Range.—Western central Veracruz and southern Puebla.

SCELOPORUS MUCRONATUS OMILTEMANUS Günther

Sceloporus omiltemanus GÜNTHER, Biologia Centrali-Americana, Reptilia and Batrachia, 1890, p. 66, pl. 32, fig. A.

Sceloporus t.[orquatus] omiltemanus, TAYLOR, Proc. Biol. Soc. Washington, vol. 44, 1931, p. 129.

Sceloporus mucronatus omiltemanus, SMITH, Univ. Kansas Sci. Bull., vol. 24, 1936 (1938), pp. 591–598.

Type.—Brit. Mus. Nat. Hist.; H. H. Smith collector.

Type locality.—Omilteme, Guerrero, 8,000 feet elevation.

Range.—Central highlands of Oaxaca and the Sierra Madre del Sur in Guerrero.[77]

SCELOPORUS POINSETTII Baird and Girard

Sceloporus poinsettii Baird and Girard, Proc. Acad. Nat. Sci. Philadelphia, vol. 6, 1854, pp. 126–127.—Smith, Univ. Kansas Sci. Bull., vol. 24, 1936 (1938), pp. 606–617, pl. 51, fig. 1, text figs. 14, 15.

Type.—U.S.N.M. No. 2948 cotypes, 2 specimens, and No. 2952, 2 specimens, "Sonora"; J. H. Clark collector.

Type locality.—"Rio San Pedro of the Rio Grande del Norte, and the province of Sonora," here restricted to the former locality.

Range.—Southern New Mexico east to central Texas, south through western Nuevo León and southern Coahuila to central Durango. Recorded in Mexico from Chihuahua, Coahuila, Durango, and Nuevo León.

SCELOPORUS CYANOGENYS Cope

Sceloporus torquatus cyanogenys Cope, Proc. Amer. Philos. Soc., vol. 22, 1885, p. 402.

Sceloporus cyanogenys, Smith, Univ. Kansas Sci. Bull., vol. 24, 1936 (1938), pp. 599–606, pl. 51, fig. 2, text figs. 13–14.

Sceloporus torquatus mucronatus, Boulenger, Catalogue of the lizards in the British Museum, 1885, vol. 1, p. 220 (part).

Sceloporus torquatus poinsettii, Burt, Copeia, 1932, No. 3, p. 158 (part).

Type.—U.S.N.M. Nos. 31373–31377, cotypes; Acad. Nat. Sci. Philadelphia, 11304–11305, cotypes.

Type locality.—Monterrey, Nuevo León.

Range.—Southern Texas from Devils River and Starr County to central Tamaulipas and Nuevo León. Recorded in Mexico only from the states of Tamaulipas and Nuevo León.

SCELOPORUS BULLERI Boulenger

Sceloporus bulleri Boulenger, Proc. Zool. Soc. London, 1894, pp. 729–730, pl. 48, fig. 3.—Smith, Univ. Kansas Sci. Bull., vol. 24, 1936 (1938), pp. 579–583, figs. 8, 9, pl. 49, fig. 1.

Type.—Brit. Mus. Nat. Hist.

Type locality.—La Cumbre de los Arrastrados, Jalisco.

Range.—Western and southern parts of Jalisco.

SCELOPORUS TORQUATUS TORQUATUS Wiegmann[78]

Sceloporus torquatus Wiegmann, Isis von Oken, 1828, p. 369.

Sceloporus torquatus torquatus, Cope, Proc. Amer. Philos. Soc., vol. 22, 1885, pp. 402, 403.—Smith, Univ. Kansas Sci. Bull., vol. 24, 1936 (1938), pp. 564–571, figs. 7, 8, pl. 48, fig. 1.

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[77] A record for Chiapas (Smith, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, p. 221) is in error; the specimen referred to is an *S. prezygus*.

[78] See footnote 76 for use of this name.

Agama torquata PEALE and GREEN, Journ. Acad. Nat. Sci. Philadelphia, vol. 6, 1830, pp. 231–234 (type Acad. Nat. Sci. Philadelphia; Mexico, here restricted to México, D. F.).

Sceloporus ferrariperezi COPE, Proc. Amer. Philos. Soc., vol. 22, 1885, p. 400 (cotypes, U.S.N.M. Nos. 9874, 9876, 9878, 9880, 9895, and No. 9897 which is an *S. spinosus spinosus;* Guanajuato, Guanajuato, by present restriction).

Sceloporus ferrariperezi ferrariperezi, SMITH, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 214–216, fig. 24.

Type.—Zool. Mus. Berl.; F. Deppe collector.

Type locality.—Mexico, here restricted to México, D. F.

Range.—Central Mexico, including Hidalgo, west-central Veracruz, México, Distrito Federal, northern Puebla, eastern Morelos, southern Guanajuato, and northern Michoacán. Recorded only from the states cited.

SCELOPORUS TORQUATUS BINOCULARIS Dunn

Sceloporus binocularis DUNN, Proc. Acad. Nat. Sci. Philadelphia, vol. 88, 1936, pp. 474–475.

Sceloporus ferrariperezi binocularis, SMITH, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 216–218, pl. 18.

Type.—Acad. Nat. Sci. Philadelphia No. 20032; Henry A. Pilsbry, Francis W. Pennell, and Cyril H. Harvey collectors.

Type locality.—Trail from Pablillo to Alamar, Nuevo León.

Range.—Known only from the general region of the type locality.

SCELOPORUS TORQUATUS MELANOGASTER Cope

Sceloporus melanogaster COPE, Proc. Amer. Philos. Soc., vol. 22, 1885, pp. 400–401.

Sceloporus torquatus melanogaster, BOULENGER, Catalogue of the lizards in the British Museum, vol. 2, 1885, p. 220.—SMITH, Univ. Kansas Sci. Bull., vol. 24, 1936 (1938), pp. 571–579, pl. 48, fig. 2, text figs 1, 8.

Sceloporus ferrariperezi melanogaster, SMITH, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, p. 216.

Type.—U.S.N.M. No. 9877; Alfredo Dugès collector.

Type locality.—"Probably from Guanajuato"=Noria (Michoacán), or Tupátaro, near Cuerámaro, Guanajuato *fide* Dugès (La Naturaleza, ser. 2, vol. 1, 1887, pp. 114–115), here restricted to Tupátaro.

Range.—Northern Jalisco, west through most of Guanajuato, north through central and southern San Luis Potosí and Zacatecas. Recorded from Aguascalientes, Guanajuato, Jalisco, Michoacán, San Luis Potosí, and Zacatecas.

SCELOPORUS LINEOLATERALIS Smith

Sceloporus lineolateralis SMITH, Proc. Biol. Soc. Washington, vol. 49, 1936, pp. 92–96; Univ. Kansas Sci. Bull., vol. 24, 1936 (1938), pp. 617–624, pl. 52, figs. 16, 17; Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 225–226, fig. 31.

Type.—EHT–HMS, No. 4323; E. H. Taylor and H. M. Smith collectors.

Type locality.—Six miles northeast of Pedriceña, Durango.

Range.—Durango.

SCELOPORUS ORNATUS ORNATUS Baird

Sceloporus ornatus Baird, Proc. Acad. Nat. Sci. Philadelphia, 1858 (1859), p. 254.

Sceloporus ornatus ornatus, Smith, Univ. Kansas Sci. Bull., vol. 24, 1936 (1938), pp. 647–651, figs. 21, 22, pl. 54, fig. 1.

Type.—U.S.N.M. No. 2845; Darius Nash Couch collector.

Type locality.—Patos, Coahuila.

Range.—Southeastern Coahuila.

SCELOPORUS ORNATUS CAERULEUS Smith

Sceloporus ornatus caeruleus Smith, Copeia, 1936 (1937), No. 4, pp. 227–230; Univ. Kansas Sci. Bull., vol. 24, 1936 (1938) pp. 652–657, figs. 22–23, pl. 54, fig. 2.

Type.—Univ. Kansas Mus. Nat. Hist. (DHD–HMS field No. 350); D. H. Dunkle and H. M. Smith, collectors (lost?).

Type locality.—Five miles south of San Pedro, Coahuila.

Range.—Known only from the type locality.

SCELOPORUS DUGESII DUGESII Bocourt

Sceloporus dugesii Bocourt, Ann. Sci. Nat., Zool., ser. 5, vol. 17, No. 10, 1873, p. 2; Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 3, 1874, pp. 188–190, pl. 18, figs. 7–7b.

Sceloporus dugesii dugesii, Smith, Univ. Kansas Sci. Bull., vol. 24, 1936 (1938), pp. 657–663, figs. 22, 24, pl. 55, fig. 1.

Type.—Mus. Hist. Nat. Paris; Alfredo Dugès collector.

Type locality.—Colima.

Range.—Along the coastal ranges of western Mexico from southern Nayarit to Colima. Recorded from the states of Jalisco, Colima, and Nayarit.

SCELOPORUS DUGESII INTERMEDIUS (Dugès)

Tr[opidolepis] intermedius Dugès, La Naturaleza, vol. 1, 1869, p.143 (*nomen nudum*).

Sceloporus intermedius Dugès, La Naturaleza, vol. 4, 1877, pp. 29–34, pl. 1, figs. 21–32.

Sceloporus dugesii intermedius, Smith, Univ. Kansas Sci. Bull., vol. 24, 1936 (1938), pp. 663–670.—Smith and Necker, Anal. Esc. Nac. Cien. Biol., vol. 3, 1943, pp. 212–214, pl. 2, figs. 2, 3.

Sc[eloporus] Westphalii Dugès, La Naturaleza, vol. 4, 1877, p. 30 (substitute name for *S. intermedius*, which Dugès retained for his description of the species in 1877, although he says "Quería haberle dado el nombre de Sc. Westphalii").

Type.—Mus. Alf. Dugès; two cotypes; collector unknown.

Type locality.—La Noria, near Zamora, hacienda of D. Epifanio Jiménez (in Michoacán).

Range.—Known from Guanajuato and northern and central Michoacán.

SCELOPORUS JARROVII JARROVII Cope

Sceloporus jarrovii Cope, *in* United States Geological and Geographical Surveys West of the 100th Meridian, vol. 5, 1875, p. 569.

Sceloporus jarrovii jarrovii, Smith, Univ. Kansas Sci. Bull., vol. 24, 1936 (1938), pp. 624–631, figs. 17, 18, pl. 47, fig. 1.

Type.—U.S.N.M. Nos. 8494, two specimens, and 8495, cotypes.

Type locality.—Southern Arizona.

Range.—Central Arizona east to western New Mexico, and south through Chihuahua and western Sonora to extreme western Zacatecas and extreme northern Nayarit. Recorded in Mexico from Chihuahua, Durango, and Sonora.

SCELOPORUS JARROVII SUGILLATUS Smith

Sceloporus jarrovii sugillatus Smith, Proc. U. S. Nat. Mus., vol. 92, 1942, pp. 357–359.

Type.—U.S.N.M. No. 112100; H. M. Smith collector.

Type locality.—Lake No. 4, Zempoala, México. 10,000 feet elevation.

Range.—High elevations in Ajusco range. Known only from the type locality.

SCELOPORUS JARROVII IMMUCRONATUS Smith

Sceloporus jarrovii immucronatus Smith, Copeia, 1936 (1937), pp. 223–227; Univ. Kansas Sci. Bull., vol. 24, 1936 (1938), pp. 640–646, figs. 17, 20, pl. 53, fig. 1.

Type.—EHT-HMS No. 9358A (EHT-HMS field No. 500); E. H. Taylor and H. M. Smith collectors.

Type locality.—Ten miles north of El Pinalito, Hidalgo.

Range.—Western Querétaro through Hidalgo, eastern San Luis Potosí, to south-central Veracruz. Recorded from each state cited.

SCELOPORUS JARROVII MINOR Cope

Sceloporus torquatus minor Cope, Proc. Amer. Philos. Soc., vol. 22, 1885, p. 402.

Sceloporus jarrovii minor, Smith, Univ. Kansas Sci. Bull., vol. 24, 1936 (1938), pp. 631–639, figs. 17–19, pl. 53, fig. 2.

Type.—U.S.N.M. Nos. 26166–26167.

Type locality.—Zacatecas, here restricted to Valparaiso Mountains.

Range.—Northern Quéretero and Guanajuato through México, western Zacatecas, and most of San Luis Potosí, to western Nuevo León. Recorded from each state cited.

SCELOPORUS JARROVII OBERON Smith and Brown

Sceloporus jarrovii oberon Smith and Brown, Publ. Field Mus. Nat. Hist., zool. ser., vol. 24, 1941, pp. 253-257, fig. 24.

Type.—U.S N.M. No. 105823; H. M. Smith and Rozella Smith, collectors.

Type locality.—Arteaga, Coahuila.

Range.—Southeastern Coahuila. Recorded only from the type locality, from Diamond Pass, Mount Zapalinamé, near Saltillo, and from Sierra Guadelupe.

VARIABILIS GROUP

Species.—Nine forms, representing five species, are recognized in this group. One form, *S. variabilis olloporus* Smith, is extralimital, occurring from Guatemala to Costa Rica.

Range.—Southern central Texas south to Costa Rica, entirely on Atlantic slopes west of the Isthmus of Tehuantepec.

KEY TO SPECIES OF THE VARIABILIS GROUP OF SCELOPORUS

1. Series of femoral pores separated medially by no more than 6 scales 2
   Series of femoral pores separated medially by 10 or more scales 3
2. Dorsal scales 69 to 76; scales around body 70 to 81; dorsal scale rows at nape 18 to 21 ..... **parvus scutulatus** (p. 131)
   Dorsal scales 58 to 69; scales around body 61 to 69; dorsal scale rows at nape 15 to 18 ..... **parvus parvus** (p. 131)
3. Ventral interfemoral scales separated from ventral thigh scales by a group of small scales one-third or one-fourth size of adjacent scales; a rudimentary gular fold; lateral scales much less than half size of ventral scales; dorsal scales 69 to 83 ..... **couchii** (p. 132)
   Ventral interfemoral scales more or less continuous with ventral thigh scales; no rudimentary gular fold; lateral scales more than one-half size of ventral scales; dorsals usually less than 69 4
4. Dorsal scales 36 to 47; subnasal usually absent; shank and posterior surface of lower foreleg distinctly banded; spots on back distinct in both sexes; preocular usually divided; frontoparietals usually in contact medially ..... **teapensis** (p. 130)
   Dorsal scales 47 or more 5
5. Males and females immaculate below; femoral pores usually 9 or less on each side (occasionally more in females); dorsal scales 48 to 55; frontoparietals usually separated by an azygous scale; preocular usually entire; subnasal rarely present 6
   Males with red, blue-bordered areas on sides of abdomen; subnasal usually present; frontoparietals usually in contact medially; preocular usually divided 7
6. Postrostrals usually 2, never 4; scales around body usually 53 to 58. **cozumelae** (mainland) (p. 130)
   Postrostrals usually 4, rarely 2 or 3; scales around body usually 59 to 64. **cozumelae** (typical) (p. 130)
7. Dorsal scales 59 or more 8
   Dorsal scales usually less than 59; dorsolateral light lines 1 and 2 half scale rows wide posteriorly; maximum snout-vent measurement about 74 mm. 9

8. Dorsolateral light stripes very distinct, 2 and 2 half scale rows wide posteriorly; females with sides of belly marked as in males, but less distinctly; maximum snout-vent measurement 71 mm.....**variabilis smithi** (p. 131)
   Dorsolateral light stripes not so distinct, 1 and 2 half scale rows wide posteriorly; spots between dorsolateral light stripes very distinct; females with sides of belly immaculate; maximum snout-vent measurement 53 mm.
   variabilis marmoratus (p. 131)
9. Femoral pores 12 or more.....**variabilis variabilis** (p. 130)
   Femoral pores 11 or less.....**variabilis olloporus** (p. 129)

SCELOPORUS COZUMELAE Jones

Sceloporus cozumelae JONES, Occ. Pap. Mus. Zool. Univ. Michigan, No. 186, 1927, pp. 1–4.—SMITH, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 246–251.

Type.—U.S.N.M. No. 13904; "U. S. Fish Commission" collector.

Type locality.—Cozumel Island, Quintana Roo.

Range.—Northern half of Yucatán Peninsula and adjacent Islands. Recorded from Cozumel and Mujeres Islands and the states of Yucatán and Quintana Roo.

SCELOPORUS TEAPENSIS Günther

Sceloporus teapensis GÜNTHER, Biologia Centrali-Americana, Reptilia and Batrachia, 1890, pp. 75–76.—SMITH, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 256–262, pl. 21.

Type.—Brit. Mus. Nat. Hist., six cotypes; H. H. Smith collector.

Type locality.—Teapa, Tabasco.

Range.—Restricted to Atlantic slopes from southern Veracruz and northeastern Oaxaca, eastward through Chiapas, Tabasco, and Campeche, and through the Petén region of Guatemala to British Honduras, south to Cobán, Alta Verapaz. Recorded from each state cited in Mexico.

SCELOPORUS VARIABILIS VARIABILIS Wiegmann

Sceloporus variabilis WIEGMANN, Herpetologia Mexicana, 1834, p. 51.

Sceloporus variabilis variabilis, SMITH, Proc. Biol. Soc. Washington, vol. 47, 1934, pp. 127–129; Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 262–272, fig. 45, pl. 22.

Type.—? Zool. Mus. Berlin; F. Deppe collector.

Type locality.—Mexico, here restricted to Veracruz, Veracruz.

Range.—Southern Tamaulipas along the Atlantic coast to south-central Veracruz (Río Blanco), inland to eastern Querétaro and Puebla; through eastern Oaxaca and western Guatemala, reaching the coast only in Chiapas. Recorded from each state mentioned, and from San Luis Potosí, Guanajuato, and Hidalgo.

SCELOPORUS VARIABILIS SMITHI Hartweg and Oliver

Sceloporus variabilis smithi HARTWEG and OLIVER, Occ. Pap. Mus. Zool., Univ. Michigan, No. 356, 1937, pp. 1–5.—SMITH, Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 278–282, fig. 45, pl. 23.

Type.—Univ. Mich. Mus. Zool. No. 81777; N. Hartweg and J. A. Oliver collectors.

Type locality.—Guengola Mountain, 6 kilometers northwest of the city of Tehuantepec, Oaxaca.

Range.—Eastern Oaxaca.

SCELOPORUS VARIABILIS MARMORATUS Hallowell

Sceloporus marmoratus HALLOWELL, Proc. Acad. Nat. Sci. Philadelphia, vol. 6, 1852, p. 178.

Sceloporus variabilis marmoratus, SMITH, Proc. Biol. Soc. Washington, vol. 47, 1934, pp. 125–128; Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 272–278.

Sceloporus delicatissimus HALLOWELL, Proc. Acad. Nat. Sci. Philadelphia, vol. 6, 1852, p. 178 (San Antonio, Tex.; type, U.S.N.M. No. 16020).

Type.—Presumably lost.

Type locality.—San Antonio, Tex.

Range.—Atlantic lowlands from San Antonio, Tex., south to southern Tamaulipas, west to Coahuila. Recorded in Mexico only from the states of Coahuila, Nuevo León, and Tamaulipas.

SCELOPORUS PARVUS PARVUS Smith

Sceloporus parvus SMITH, Trans. Kansas Acad. Sci., vol. 37, 1934, pp. 263–267, figs. 1, 3, 10.

Sceloporus parvus parvus, SMITH, Occ. Pap. Mus. Zool. Univ. Michigan, No. 358, 1937, pp. 3–4; Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 251–255, fig. 44.

Type.—EHT-HMS No. 7120 (EHT field No. 279); E. H. Taylor and H. M. Smith collectors.

Type locality.—Hills 5 miles west of Sabinas Hidalgo, Nuevo León.

Range.—Northern Nuevo León to southern San Luis Potosí, west of the Sierra Oriental. Recorded only from the two states cited, and from Coahuila (Arteaga).

SCELOPORUS PARVUS SCUTULATUS Smith

Sceloporus parvus scutulatus SMITH, Occ. Pap. Mus. Zool. Univ. Michigan., No. 358, 1937, pp. 4–6; Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 255–256.

Type.—EHT-HMS No. 7129; E. H. Taylor and H. M. Smith collectors.

Type locality.—Thirty miles north of Matehuala, San Luis Potosí.

Range.—Northwestern San Luis Potosí south along the Sierra Oriental to southern Hidalgo. Recorded only from the two states cited.

SCELOPORUS COUCHII Baird

Sceloporus couchii Baird, Proc. Acad. Nat. Sci. Philadelphia, 1858 (1859), p. 254.—Smith, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 240–246, pl. 19, fig. 43.

Lysoptychus lateralis Cope, Proc. U. S. Nat. Mus., vol. 11, 1888, pp. 397–398, pl. 26, fig. 1 (San Diego, Duval County, Tex.; U. S. N. M. No. 14741).

Sceloporus lateralis, Boulenger, Proc. Zool. Soc. London, 1890, p. 78.

Type.—U.S.N.M. No. 2739 (9 specimens), cotypes; Lt. Darius Nash Couch collector.

Type locality.—Santa Catarina, Nuevo León (specimens collected by Lt. Couch were also at hand from "Pesqueria Grande," Mexico).

Range.—Central and northern Nuevo León and eastern Coahuila. In the United States, reported from southern Texas.[79]

MERRIAMI GROUP

Species.—One, with two subspecies.

Range.—Southwestern Texas and adjacent Coahuila.

KEY TO SPECIES OF THE MERRIAMI GROUP OF SCELOPORUS

1. Anterior section of frontal usually divided; frontoparietals usually divided; outer row of labiomental scales rarely terminating with the first scale wedged between first infralabial and first postmental; head scales rugose; subcaudal surface distinctly banded; gular bars extensive, confluent medially. **merriami annulatus** (p. 133)

   Anterior section of frontal rarely divided; frontoparietals rarely divided; outer row of labiomentals terminating with the first scale wedged between first infralabial and first postmental; head scales smooth; subcaudal surface nearly or quite immaculate, not barred; gular bars short, usually separate medially---------- **merriami merriami** (p. 132)

SCELOPORUS MERRIAMI MERRIAMI Stejneger

Sceloporus merriami Stejneger, Proc. Biol. Soc. Washington, vol. 17, 1904, pp. 17–20.

Sceloporus merriami merriami, Smith, Proc. Biol. Soc. Washington, vol. 50, 1937, pp. 83–86.

Type.—U.S.N.M. No. 33039; W. Lloyd collector.

Type locality.—East Painted Cave, near mouth of the Pecos River, Tex.

Range.—The Rio Grande and its immediate tributaries from western Brewster County to southeastern Val Verde County, Tex. The species occurs on the bluffs along the Mexican side of the river, but no specific records for either Coahuila or Chihuahua (in both of which states it should occur) are known.

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[79] Except possibly for the type specimen of *Lysoptychus lateralis*, no specimen of *S. couchii* has ever, to our knowledge, been taken in Texas. We consider it doubtful that the specimen came from there.

SCELOPORUS MERRIAMI ANNULATUS Smith

Sceloporus merriami annulatus SMITH, Proc. Biol. Soc. Washington, vol. 50, 1937, pp. 83–86; Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 289–290, pl. 1.

Type.—EHT-HMS No. A787; E. H. Taylor and J. S. Wright collectors.

Type locality.—East slope of the Chisos Mountains, Brewster County, Tex.

Range.—Southern and central Brewster County, Tex., and eastern Coahuila (Cuatro Ciénegas, Jaral).

MACULOSUS GROUP

Species.—One.

Range.—Eastern Durango.

SCELOPORUS MACULOSUS Smith

Sceloporus maculosus SMITH, Trans. Kansas Acad. Sci., vol. 37, 1934, pp. 267–269, pl. 8, figs. 2, 4, 5, pl. 10, fig. 11; Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 291–294, fig. 47.

Type.—EHT-HMS No. 7638; E. H. Taylor and H. M. Smith collectors.

Type locality.—Fourteen miles northeast of Pedriceña, Durango.

Range.—Known only from east-central Durango.

CHRYSOSTICTUS GROUP

Species.—One.

Range.—Yucatán Peninsula.

SCELOPORUS CHRYSOSTICTUS Cope

Sceloporus chrysostictus COPE, Proc. Acad. Nat. Sci. Philadelphia, 1866 (1867), p. 125.—SMITH, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 295–300, pl. 24.

Type.—U.S.N.M. No. 24865, six cotypes.

Type locality.—Yucatán, here restricted to Chichen Itzá.

Range.—The Yucatán Peninsula, and the area at its eastern base. Recorded in Mexico from Yucatán, Campeche, and Quintana Roo.

SINIFERUS GROUP

Species.—Four, one of which includes two subspecies.

Range.—Pacific slopes from Guerrero to Nicaragua.

KEY TO SPECIES OF THE SINIFERUS GROUP OF SCELOPORUS

1. Nasals and anterior internasals broadly in contact with rostral; no postrostrals; postanals enlarged in males; ventral scales notched---**ochoterenai** (p. 135)
   Nasals and anterior internasals separated from rostral by two or more postrostrals; ventral scales not notched---2

2. One canthal 3
   Two canthals 4
3. Femoral pores 11–12; dorsal scales 38–44 ..... **carinatus** (p. 135)
   Femoral pores 3–6; dorsal scales 28–37 ..... **squamosus** (p. 135)
4. Femoral pores 3–11; postanals not or slightly enlarged in males.
   siniferus siniferus (p. 134)
   Femoral pores 12–14; postanals distinctly enlarged in males.
   siniferus cupreus (p. 134)

SCELOPORUS SINIFERUS SINIFERUS Cope

Sceloporus siniferus Cope, Proc. Amer. Philos. Soc., vol. 11, 1869, pp. 159–160, 161.—Smith, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 313–319 (part), pl. 25.

Sceloporus humeralis Bocourt, Ann. Sci. Nat. zool., ser. 5, vol. 17, No. 10, 1873, p. 2 (Mus. Hist. Nat. Paris; Oaxaca, here restricted to the city of Tehuantepec).

Type.—U.S.N.M. Nos. 30453–30471, cotypes.

Type locality.—Pacific side of the Isthmus of Tehuantepec, here restricted to Tehuantepec (city), Oaxaca.

Range.—Pacific slopes from western Guerrero to extreme western Guatemala, and inland to Morelos. Recorded in Mexico from Guerrero, Morelos, Oaxaca, and Chiapas.

SCELOPORUS SINIFERUS CUPREUS Bocourt [80]

Sceloporus cupreus Bocourt, Ann. Sci. Nat., Zool., ser. 5, vol. 19, No. 4, 1873, p. 3; Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 4, 1874, pp. 210–212, pl. 18 bis, fig. 2, 2a–b.—Smith, Occ. Pap. Mus. Zool. Univ. Michigan, No. 358, 1937, pp. 6–9; Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 305–308.

Sceloporus cochranae Smith, Proc. Biol. Soc. Washington, vol. 49, 1936, pp. 87–89, pl. 2 (Mount Zempoaltepec, Oaxaca; U.S.N.M. No. 47605).

Sceloporus siniferus, Smith, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, p. 317 (part).

Type.—Mus. Hist. Nat. Paris; Adolphe Boucard collector.

[80] It is with some doubt that the name *cupreus* is applied to the highland form of *siniferus*. This was discussed in some detail previously (Publ Field Mus. Nat. Hist., zool, ser., vol. 29, 1939, p. 317). Specimens then available showed a higher femoral pore count for the types of *cupreus* and of *cochranae* (the latter from Mount Zempoaltepec, Oaxaca), for which the name *cupreus* was used, than for the few specimens referred to *siniferus* then available from the vicinity of Oaxaca City. However, new material from the latter region (including EHT-HMS 19195-19202, 19479-80) reveals a variation from 38 to 50 (av. 44.2) in 19 counts of dorsal scales, and from 6 to 15 (av. 9.4) in 40 counts of femoral pores.

From these data it is apparent that the highland population of *siniferus* is recognizably different from the typical subspecies and deserves a name. Handicapped by lack of adequate material from Mount Zempoaltepec and its environs, we find it difficult to determine whether the population from that area is the same as that from the Oaxaca region, since the single specimen available has enlarged postanals and broad dorsolateral light stripes. Typically *siniferus* (including Oaxaca specimens) lacks enlarged postanals; none has been observed with them well developed. Likewise, distinct and broad dorsolateral stripes do not occur in male *siniferus*, although they are present in females. None of the other characters previously thought to be peculiar to the Mount Zempoaltepec specimen are actually so, as shown by data on the Oaxaca series. Moreover, there is some slight variation in the size of the basal caudal scales and in the width and distinctness of the dorsolateral light stripes in males. In view of this variability in the only two characters defining the Mount Zempoaltepec specimen (*cupreus*, sensu stricto), we believe it best under the circumstances to extend the concept of this name to include the Oaxaca specimens; it should then, of course, be treated as a subspecies, if the present interpretation of the name is correct.

Type locality.—Oaxaca, here restricted to Mount Zempoaltepec.
Range.—Highlands of central Oaxaca.

SCELOPORUS SQUAMOSUS Bocourt

Sceloporus squamosus Bocourt, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 4, 1874, pp. 212–214, pl. 18 bis, figs. 7, 7a–c, pl. 19, fig. 3.—Smith, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 319–324, fig. 52, pl. 24.

Sceloporus fulvus Bocourt, *ibid.*, pp. 214–215, pl. 18 bis, figs. 8, 8a–c (La Unión, El Salvador; Commission Scientifique collector; Mus. Hist. Nat. Paris).

Type.—Mus. Hist. Nat. Paris; collected by (?) Commission Scientifique du Mexique.
Type locality.—"Environs de Guatemala et de l'Antigua" [=Volcán Antigua], 1,500 meters.
Range.—Pacific slopes from eastern Chiapas to Costa Rica. Recorded only from Chiapas in Mexico.

SCELOPORUS CARINATUS Smith

Sceloporus carinatus Smith, Proc. Biol. Soc. Washington, vol. 49, 1936, pp. 89–91, pl. 2, figs. 2, 3; Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 303–305.

Type.—EHT-HMS No. 15205 (EHT-HMS field No. 4866); E. H. Taylor and H. M. Smith collectors.
Type locality.—Near Tuxtla Gutiérrez, Chiapas.
Range.—Plateau of Chiapas.

SCELOPORUS OCHOTERENAI Smith

Sceloporus ochoterenae Smith, Trans. Kansas Acad. Sci., vol. 37, 1934, pp. 269–272, pl. 9, figs. 6, 9, pl. 10, fig. 12; Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 308–313, text fig. 51.

Type.—EHT-HMS No. 7158 (EHT field No. 1075); E. H. Taylor and H. M. Smith collectors.
Type locality.—Two miles north of Mazatlán, Guerrero (12 miles south of Chilpancingo, Guerrero).
Range.—Morelos and Guerrero.

UTIFORMIS GROUP

Species.—One.
Range.—Western Mexico, Sinaloa to Guerrero.

SCELOPORUS UTIFORMIS Cope

Sceloporus utiformis Cope, Proc. Acad. Nat. Sci. Philadelphia, 1864, p. 177.—Smith, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 325–330, fig. 53, pl. 26.

Type.—U.S.N.M. No. 42089; John Xantus collector.
Type locality.—Near Colima, Colima.

Range.—Pacific slopes from southern Sinaloa to western Guerrero, inland about 125 miles in the southern part of its range. Recorded only from Sinaloa, Nayarit, Jalisco, Colima, Michoacán, and Guerrero.

SCALARIS GROUP

Species.—Seven forms are recognized at present, representing four species.

Range.—High elevations from southeastern Arizona and central Nuevo León southward to the edge of the plateau in Oaxaca.

KEY TO SPECIES OF THE SCALARIS GROUP OF SCELOPORUS

1. Nasals and internasals in contact with rostral; no postrostrals—**jalapae** (p. 136)
   Nasals and internasals separated from rostral by two postrostrals 2
2. Dorsal scales 50 or more; lateral scales in slightly, although distinctly, oblique rows ..... **goldmani** (p. 137)
   Dorsal scales less than 50; lateral scales in parallel rows 3
3. One canthal 4
   Two canthals, the first occasionally forced above canthal ridge by contact of second canthal and subnasal 6
4. Males with much black in ventral coloration; females suffused with black below; gular region never barred; black shoulder spot with a light blue spot, if present, on its anterior edge; tail with a continuous dark median dorsal stripe; tibia/head proportion usually less than 0.95; maximum snout-vent measurement 58 mm ..... **aeneus aeneus** (p. 137)
   Black, if present on ventral surface, confined to bars in gular region, and a few dark, transverse bars on sides of abdomen; black shoulder spot with the light blue spot in its middle 5
5. Tibia/head proportion usually less than 0.90; scales of second pair of postmentals separated medially; dorsal scales usually more than 40; maximum snout-vent measurement 61 mm ..... **scalaris slevini** (p. 138)
   Tibia/head proportion usually more than 0.90; scales of second pair of postmentals usually in contact medially; dorsal scales usually less than 40; maximum snout-vent measurement 65 mm ..... **scalaris unicanthalis** (p. 138)
6. Males with much black in ventral coloration; black shoulder spot with the light blue spot, if present, on its anterior edge; tail with a continuous dark median dorsal stripe; tibia/head proportion usually less than 0.90; maximum snout-vent measurement 56 mm ..... **aeneus bicanthalis** (p. 137)
   Black, if present on the ventral surface, confined to bars in gular region, and a few dark transverse bars on sides of abdomen; black shoulder spot with the light blue spot in its middle; tail with dark chevron-shaped bars; tibia/head proportion usually more than 0.90; maximum snout-vent measurement 78 mm ..... **scalaris scalaris** (p. 137)

SCELOPORUS JALAPAE Günther

Sceloporus jalapae Günther, Biologia Centrali-Americana, Reptilia and Batrachia, 1890, p. 74.—Smith, Proc. Biol. Soc. Washington, vol. 47, 1934, pp. 121–125, fig. 1; Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 333–338, figs, 55, 56, pl. 27.

Type.—Brit. Mus. Nat. Hist.; Mr. Höge collector.

Type locality.—Jalapa, Veracruz.

Range.—Central Veracruz south through eastern Puebla to central Oaxaca. Recorded only from the states cited.

SCELOPORUS AENEUS AENEUS Wiegmann

Sceloporus aeneus WIEGMANN, Isis von Oken, vol. 21, 1828, p. 370.
Sceloporus aeneus aeneus, SMITH, Occ. Pap. Mus. Zool. Univ. Michigan, No. 361, 1937, p. 6; Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 353–356, text fig. 57.

Type.—Zool. Mus. Berlin; F. Deppe collector.

Type locality.—Mexico, by inference, here restricted to Tres Cumbres.

Range.—Western Puebla, to central western Michoacán, and Jalisco; north on the plateau to northern Guanajuato. Recorded from the states cited and from Distrito Federal, México, Morelos, and questionably, Jalisco.

SCELOPORUS AENEUS BICANTHALIS Smith

Sceloporus aeneus bicanthalis SMITH, Occ. Pap. Mus. Zool. Univ. Michigan, No. 361, 1937, pp. 6–8; Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 356–361, fig. 57, pl. 20.

Type.—EHT-HMS No. 7939; E. H. Taylor, collector.

Type locality.—Cofre de Perote, near Cruz Blanca, Veracruz.

Range.—From northern Hidalgo along the eastern escarpment of the plateau to central Oaxaca, including parts of Puebla, México, and Veracruz. Recorded only from the states cited.

SCELOPORUS GOLDMANI Smith

Sceloporus goldmani SMITH, Occ. Pap. Mus. Zool. Univ. Michigan, No. 361, 1937, p. 5; Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 350–353.

Type.—Univ. Michigan Mus. Zool. No. 80896; C. L. Lundell collector.

Type locality.—Charcas, San Luis Potosí.

Range.—Southern Coahuila southward in the central part of the plateau of Mexico to central San Luis Potosí. Recorded only from the states cited.

SCELOPORUS SCALARIS SCALARIS Wiegmann

Sceloporus scalaris WIEGMANN, Isis von Oken, vol. 21, 1828, p. 370.
Sceloporus scalaris scalaris, SMITH, Occ. Pap. Mus. Zool. Univ. Michigan, No. 361, 1937, pp. 2–3; Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 338–343, pl. 20.

Type.—Zool. Mus. Berlin; F. Deppe collector.

Type locality.—Mexico, here restricted to México, D. F.

Range.—Central Durango, southward over the central and southern parts of the Mexican Plateau except (apparently) Guerrero. Re-

corded from Distrito Federal and the states of Durango, Guanajuato, Hidalgo, Jalisco, México, Michoacán, Puebla, and Zacatecas.

SCELOPORUS SCALARIS UNICANTHALIS Smith

Sceloporus scalaris unicanthalis Smith, Occ. Pap. Mus. Zool. Univ. Michigan, No. 361, 1937, pp. 4–5; Publ. Field Mus. Nat. Hist. zool. ser., vol. 26, 1939, pp. 349–350.

Type.—EHT-HMS No. 7699; H. M. Smith collector.

Type locality.—Magdalena, Jalisco.

Range.—Known only from the southern border of the Mexican plateau in central Jalisco, from the eastern border of Lake Chapala westward to Nayarit. Recorded only from the state of Jalisco.

SCELOPORUS SCALARIS SLEVINI Smith

Sceloporus scalaris slevini Smith, Occ. Pap. Mus. Zool. Univ. Michigan, No. 361, 1937, pp. 3–4; Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 343–349.

Type.—Calif. Acad. Sci. No. 48013; J. R. Slevin collector.

Type locality.—Miller Peak, Huachuca Mountains, Cochise County, Ariz.

Range.—Southern Arizona south to northern Durango, and east to to Nuevo León in Mexico. Recorded from the states cited and from Sonora, Chihuahua, and Coahuila.

PYROCEPHALUS GROUP

Species.—Three.

Range.—Pacific slopes from southwestern Chihuahua to northwestern Oaxaca.

KEY TO SPECIES OF THE PYROCEPHALUS GROUP OF SCELOPORUS

1. Scales on posterior surface of thigh granular; postfemoral dermal pocket present ..... **gadoviae** (p. 138)
   Scales on posterior surface of thigh larger, imbricate; no postfemoral dermal pocket 2
2. Dorsal scales larger, 36–41; females not red-headed; males with unbroken lateral belly patches; dark spot on interparietal not enclosing or touching light pineal spot ..... **nelsoni** (p. 139)
   Dorsal scales smaller, 41–50; females red-headed, conspicuously barred below on throat; males (and usually females) with a series of broad dark bars on each side of belly; a dark spot surrounding light pineal spot. **pyrocephalus** (p. 139)

SCELOPORUS GADOVIAE Boulenger

Sceloporus gadoviae Boulenger, Proc. Zool. Soc. London, 1905, vol. 2, pp. 246–247, pl. 7, fig. 1.—Smith, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 373–377, fig. 53, pl. 31.

Type.—Brit. Mus. Nat. Hist.; Hans Gadow collector.

Type locality.—Mezquititlan, north of Chilpancingo, Guerrero.

Range.—Southern Michoacán through Guerrero, Morelos, southern Puebla to northern and western Oaxaca. Recorded only from the states cited.

SCELOPORUS PYROCEPHALUS Cope

Sceloporus pyrocephalus Cope, Proc. Acad. Nat. Sci. Philadelphia, 1864, p. 177.—Smith, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 368–373, pls. 29, 30.

Sceloporus pyrrhocephalus Cope, Proc. Amer. Philos. Soc., vol. 22, 1885, pp. 394–397 (emendation).

Type.—U.S.N.M. No. 31495; John Xantus collector.

Type locality.—Near Colima, Colima.

Range.—Central Jalisco, south and east through Colima and Michoacán to Guerrero. Recorded only from states cited.

SCELOPORUS NELSONI Cochran

Sceloporus nelsoni Cochran, Journ. Washington Acad. Sci., vol. 13, 1923, pp. 185–186.—Smith, Publ. Field Mus. Nat. Hist., zool. ser., vol. 26, 1939, pp. 364–368, pl. 28.

Type.—U.S.N.M. No. 47676; E. W. Nelson and E. A. Goldman collectors.

Type locality.—Plomosas, Sinaloa.

Range—Pacific slopes from southwestern Chihuahua to northwestern Jalisco. Recorded from Chihuahua, Sonora, Sinaloa, Nayarit, and Jalisco.

Genus SATOR Dickerson

Sator Dickerson, Bull. Amer. Mus. Nat. Hist., vol. 41, 1919, pp. 468–469.

Genotype.—*Sator grandaevus* Dickerson.

Range.—Santa Cruz and Cerralvo Islands in the Gulf of California.

Species.—Two.

KEY TO SPECIES OF SATOR

1. A poorly defined anterior gular fold, without granules; a posterior (true) gular fold immediately in front of arm insertions, but not continuous across throat; median lateral scales very small, often granular, abruptly differentiated from dorsals and ventrals----------**grandaevus** (p. 140)

   A well defined anterior gular fold, with granules; no evidence whatever, even at sides in front of arm insertions, of a posterior gular fold; median lateral scales larger, gradually merging with dorsals and ventrals-**angustus** (p. 139)

SATOR ANGUSTUS Dickerson

Sator angustus Dickerson, Bull. Amer. Mus. Nat. Hist., vol. 41, 1919, p. 469.—Schmidt, Bull. Amer. Mus. Nat. Hist., vol. 46, 1922, pp. 665–666, fig. 10.—Van Denburgh, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 256–258.

Type.—Amer. Mus. Nat. Hist. No. 5712; C. H. Townsend collector.

Type locality.—Santa Cruz Island, Gulf of California, Baja California.

Range.—Restricted to the type locality.

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SATOR GRANDAEVUS Dickerson

Sator grandaevus Dickerson, Bull. Amer. Mus. Nat. Hist., vol. 41, 1919, pp. 469–470.—Schmidt, *ibid.*, vol. 46, 1922, p. 665, figs. 8, 9.—Van Denburgh, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 259–261.

Type.—Amer. Mus. Nat. Hist. No. 5491; C. H. Townsend collector.
Type locality.—Cerralvo Island, Gulf of California, Baja California.
Range.—Restricted to the type locality.

Genus UROSAURUS Hallowell

Urosaurus Hallowell, Proc. Acad. Nat. Sci. Philadelphia, vol. 7, 1854, p. 92.—Mittleman, Bull. Mus. Comp. Zool., vol. 91, 1942, pp. 103–181, pls. 1–16.
Phymatolepis Duméril, Arch. Mus. Hist. Nat. Paris, vol. 8, 1856, p. 548 (type, *Phymatolepis bicarinatus* Duméril).

Genotype.—*Urosaurus graciosus* Hallowell.

Range.—Southern Texas west to California, entering Utah and Colorado, southward through Baja California and many adjacent islands, and through mainland Mexico from the western Texas border south to the plateau and along the western slopes to Chiapas.

Species.—Ten species and 21 forms are recognized; all 10 species and 19 forms are known to occur or are to be expected in Mexico.

KEY TO MEXICAN [81] SPECIES OF UROSAURUS

1. Enlarged anterodorsal femoral scales smooth ..... **auriculatus** (p. 146)
   Enlarged anterodorsal femoral scales strongly keeled 2
2. Enlarged dorsals in a single broad band, uninterrupted by an intervening series of smaller scales 3
   Enlarged dorsals separated into two or more parallel series by the presence of a vertebral series of smaller scales 7
3. Tail two or more times length of head and body combined ..... **graciosus** (p. 144)
   Tail less than twice length of head and body combined 4
4. Dermal folds, when present, not heavily crested with tubercles; blue abdominal patches only in males; enlarged dorsals comparatively small 5
   Dermal folds present, always crested with tubercles of fairly large size; abdominal blue patches sometimes in females as well as males 6
5. Enlarged dorsals larger, from 17 to 24 in length of head from tip of snout to posterior edge of interparietal; gular region in males deep yellow or orange. **nigricaudus** (p. 145)
   Enlarged dorsals smaller, 32 to 36 in length of head from tip of snout to posterior edge of interparietal; gular region in males usually blue. **microscutatus** (p. 145)
6. Four to seven rows of enlarged dorsal scales; abdomen of both sexes with a blue wash and/or blue patches; dorsolateral folds not converging in sacral region ..... **gadovi** (p. 145)
   About three rows of enlarged dorsal scales; only males with a blue abdomen; dorsolateral folds converging in the sacral region to form prominent ridges. **irregularis** (p. 146)
7. Three or fewer rows of lateral tubercles 12
   Four or more rows of lateral tubercles 8

[81] Adapted from Mittleman, *op. cit.*, pp. 127–133.

8. Enlarged dorsals commencing caudad of a line joining the anterior points of insertion of the forelimbs; dorsals weakly keeled, rounded posteriorly, prominently pavemented; general habitus not at all rugose—**unicus** (p. 147)

   Enlarged dorsals commencing craniad of a line joining the anterior points of insertion of the forelimbs, or else equal with such a line; dorsals prominently keeled, usually mucronate or spinose, imbricate; ventrals imbricate; general appearance rugose 9

9. Form rugose; enlarged dorsals strongly carinate and prominently mucronate; tubercles of lateral and dorsolateral folds well developed; ventrals mucronate; gular surface generally stippled, with a light median area; blue abdominal patches of males quite extensive—**bicarinatus bicarinatus** (p. 146)

   General appearance somewhat less rugose; enlarged dorsals not so often mucronate; tubercles smaller, sometimes absent; ventrals less mucronate, occasionally rounded; gular surfaces evenly stippled; abdominal blue of males sometimes restricted to small sternal patches 10

10. Ventrals rounded; dorsolateral and lateral tubercles very poorly developed; enlarged dorsals commencing on the nape—**bicarinatus nelsoni** (p. 147)

    Ventrals submucronate to mucronate; dorsolateral and lateral tubercles well developed; enlarged dorsals commencing on the shoulders just craniad of a line joining the anterior points of insertion of the forelimbs 11

11. Ventrals mucronate, prominently carinated laterally; gular scales with a tendency toward pavementation, especially anteriorly; gular surfaces evenly stippled; abdominal blue of males restricted to small sternal patches.
    bicarinatus anonymorphus (p. 146)

    Ventrals submucronate (occasionally rounded), only faintly keeled on the lateral portions of the belly, or else not at all; gular scales imbricate; gular region with an even blue wash, and only barely flecked if at all; abdominal blue of males evenly distributed—**bicarinatus tuberculatus** (p. 147)

12. Enlarged dorsals commencing on nape 13
    Enlarged dorsals commencing on shoulders or caudad of them 14

13. Enlarged dorsals strongly keeled; scales of primary and secondary series almost equal in size; postfemoral dermal pocket absent or rudimentary; no prominent lateral pattern of dark whorls—**clarionensis** (p. 142)
    Enlarged dorsals not so rugose, scales of primary series prominently larger than those of the secondary series; postfemoral dermal pocket regularly present; a distinct lateral pattern of dark whorls—**ornatus schottii** (p. 144)

14. Tail two or more times length of head and body combined—**graciosus** (p. 144)
    Tail less than twice length of head and body combined 15

15. Enlarged dorsals extending onto basal portion of tail for a distance equal to length of femur, or more; entire gular region, including sublabials, a uniform bright blue—**ornatus caeruleus** (p. 143)
    Enlarged dorsals extending onto basal portion of tail for a distance equal to less than length of femur; entire gular region including sublabials never completely blue 16

16. Enlarged dorsals often irregularly arranged; lateral tubercles not affecting diagonal arrangements; average size less than 45 mm. from snout to vent 17
    Enlarged dorsals regularly arranged in parallel series on either side of the vertebrals; tubercles in parallel diagonal series; average size greater than 45 mm. from snout to vent 18

17. Scales of primary series not twice as large as those of the secondary series; largest of the dorsals inferior in size to enlarged femorals and tibials; ventral interhumeral and interfemoral areas immaculate, or but slightly stippled ..... **ornatus schmidti** (p. 143)

    Scales of primary series almost twice as large as those of secondary series; largest of dorsals equal to, or larger than, enlarged femoral and tibial scales; ventral interhumeral and interfemoral areas heavily maculated. **ornatus ornatus** (p. 142)

18. Largest of dorsals equal to, or larger than enlarged femorals; vertebrals extending onto basal portion of tail for a distance equal to half, or slightly more, of length of femur; entire gular region in males, except sublabials, an intense blue; head length/head width ratio averaging 81 percent. **ornatus chiricahuae** (p. 143)

    Largest of dorsals inferior in size to enlarged femorals; vertebrals extending only onto rump, or but slightly farther; no uniform intense blue color present in male gular region; head length/head width ratio averaging 75 percent or less 19

19. Enlarged dorsals separated into 2 parallel series by width of vertebral series, which is greater in width than broadest of enlarged dorsals; prefrontals and frontonasals usually 3 each; general coloration pallid, light tan above, whitish below, males with bright-blue abdominal patches; average head length/width ratio 75.4 percent; average length, snout to vent, 55.1 mm. **ornatus symmetricus** (p. 144)

    Enlarged dorsals separated by a vertebral series whose width is less than that of largest of dorsal scales; prefrontals 2, rarely 3 (by inclusion of an azygous); frontonasals 5; general color variable, but usually dark brown or gray with dark cross bands, and heavily stippled, spotted, or blotched ventrally; abdominal patches in males dark blue to indigo; average head length/head width ratio 70.6 percent; average length, snout to vent, 46.4 mm. **ornatus linearis** (p. 143)

ORNATUS GROUP

Species.—Three species and 11 forms are included; all but two subspecies of *ornatus* occur or may be expected to occur in Mexico.

Range.—Utah, central Texas, and southern Nevada southward to extreme northern Mexico, reaching farther southward only along the coast to southern Sinaloa; Clarion Island.

UROSAURUS CLARIONENSIS (Townsend)

Uta clarionensis Townsend, Proc. U. S. Nat. Mus., vol. 13, 1890, p. 143.

Urosaurus clarionensis, Mittleman, Bull. Mus. Comp. Zool., vol. 91, 1942, p. 149, pl. 8 (type).

Type.—U.S.N.M. No. 15904; C. H. Townsend collector.

Type locality.—Clarion Island, Revillagigedo Islands, Mexico.

Range.—Known only from the type locality (administered by Colima).

UROSAURUS ORNATUS ORNATUS (Baird and Girard)

Uta ornata (part) Baird and Girard, Proc. Acad. Nat. Sci. Philadelphia, vol. 6, 1852, p. 126.

Uta ornata ornata (part), Schmidt, Amer. Mus. Nov., No. 22, 1921, p. 6.

Urosaurus ornatus ornatus, Mittleman, Bull. Mus. Comp. Zool., vol. 91, 1942, pp. 133–135. pl. 1 (cotypes).—Smith, Handbook of lizards, 1946, pp. 264–266, pl. 65.

Type.—U.S.N.M. No. 2750, two cotypes, male and female.

Type locality.—Restricted to Río San Pedro [=Devils River], Val Verde County, Tex.

Range.—Central and southern Texas, south to northern Coahuila. Has been taken along the Rio Grande River on the American side, and very probably occurs in Coahuila.

UROSAURUS ORNATUS CAERULEUS (Smith)

Uta caerulea SMITH, Univ. Kansas Sci. Bull., vol. 22, 1935, pp. 172–178, pl. 26.

Urosaurus ornatus caeruleus, MITTLEMAN, Bull. Mus. Comp. Zool., vol. 91, 1942, pp. 136–137, pl. 9, lower fig.

Type.—Univ. Kansas Mus. Nat. Hist., No. 19237 (Smith and Dunkle field No. 132); Hobart M. Smith and David H. Dunkle collectors.

Type locality.—Thirty miles north of Chihuahua City, Chihuahua.

Range.—Central Chihuahua. Reported only from the type locality and from 20 miles south of Chihuahua.

UROSAURUS ORNATUS CHIRICAHUAE (Mittleman)

Uta ornata chiricahuae MITTLEMAN, Proc. Biol. Soc. Washington, vol. 54, 1941, p. 165.

Urosaurus ornatus chiricahuae, MITTLEMAN, Bull. Mus. Comp. Zool., vol. 91, 1942, pp. 139–142.—SMITH, Handbook of lizards, 1946, p. 266, pl. 66.

Type.—Mus. Vert. Zool. Univ. California, No. 7751.

Type locality.—Pinery Canyon, Chiricahua Mountains, 6,000 feet, Cochise Co., Ariz.

Range.—So far as known, restricted to the Chiricahua and Dos Cabezas Mountains, Ariz.; of probable occurrence in Mexico.

UROSAURUS ORNATUS LINEARIS (Baird)

Uta ornata var. *linearis* BAIRD, United States and Mexican boundary survey, 1859, vol. 2, pt. 2, p. 7.

Uta ornata linearis, SCHMIDT, Amer. Mus. Nov., No. 22, 1921, p. 6.

Urosaurus ornatus linearis, MITTLEMAN, Bull. Mus. Comp. Zool., vol. 91, 1942, pp. 137, 139, pl. 3 (neotype).—SMITH, Handbook of lizards, 1946, pp. 268–271, pl. 67.

Type.—U.S.N.M. No. 2759 (now lost); Caleb Kennerly collector. Neotype: U.S.N.M. No. 62077, Los Nogales, Sonora, Mexico; F. J. Dyer, collector.

Type locality.—Los Nogales, Sonora, Mexico.

Range.—Southern Arizona and southern New Mexico, southward to northern Sonora and Chihuahua.

UROSAURUS ORNATUS SCHMIDTI (Mittleman)

Uta ornata schmidti MITTLEMAN, Herpetologica, vol. 2, pt. 2, 1940, pp. 33–34, pl. 3, fig. 1 (1941).

Urosaurus ornatus schmidti, MITTLEMAN, Bull. Mus. Comp. Zool., vol. 91, 1942, pp. 135–136, pl. 2 (type).—SMITH, Handbook of lizards, 1946, pp. 271–272, pl. 68).

Type.—U.S.N.M. No. 32929; V. Bailey collector.

Type locality.—Fort Davis, Jeff Davis County, Tex.

Range.—Southwestern Texas and northern Chihuahua. Reported in Mexico only from *Chihuahua*: Samalayuca.

UROSAURUS ORNATUS SCHOTTII[82] (Baird)

Uta schottii Baird, Proc. Acad. Nat. Sci. Philadelphia, vol. 10, 1858, p. 253.

Uta ornata schottii, Mittleman, Copeia, 1941, pp. 136–138.

Urosaurus ornatus schottii, Mittleman, Bull. Mus. Comp. Zool., vol. 91, 1942, pp. 149–151.

Uta (Phymatolepis) lateralis Boulenger, Ann. Mag. Nat. Hist., ser. 5, vol. 11, 1883, p. 342 (Brit. Mus. Nat. Hist.; type locality restricted to Presidio, Sinaloa).

Uta lateralis, Boulenger, Catalogue of the lizards of the British Museum, vol. 2, 1885, p. 214.

Uta ornata lateralis, Van Denburgh, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 199–201.—Oliver, Copeia, 1943, pp. 97–107, 1 fig.

Uta gularis Cragin, Bull. Washburn Lab. Nat. Hist., vol. 1, 1884, p. 7 (type now lost, formerly in Washburn College collection, Topeka, Kans.; Guaymas, Sonora; Prof. Lovewell collector).

Type.—U.S.N.M. No. 2761 (now lost); A. Schott collector.

Type locality.—"Sta. Madelina, Cal.-Mex. Boundary survey"= ?Magdalena, Sonora, Mexico.

Range.—Central Sonora and southward to southern Sinaloa, and the Tres Marías Islands; Tiburón Island.

UROSAURUS ORNATUS SYMMETRICUS (Baird)

Uta symmetrica Baird, Proc. Acad. Nat. Sci. Philadelphia, 1858, p. 253.

Uta ornata symmetrica, Schmidt, Amer. Mus. Nov., No. 22, 1921, p. 6.

Urosaurus ornatus symmetricus, Mittleman, Bull. Mus. Comp. Zool., vol. 91, 1942, pp. 142–144, pl. 4 (neotype).—Smith, Handbook of lizards, 1946, pp. 273–274, pl. 69.

Type.—U.S.N.M. No. 2760 (lost). Neotype: U.S.N.M. No. 2744; Fort Yuma, Imperial County, Calif.; M. Thomas collector.

Type locality.—Fort Yuma, Imperial County, Calif.

Range.—In United States: southern California and adjacent parts of Arizona south to western Sonora and northern Baja California. Reported from *Sonora:* 2 miles south of Nogales, Pinetos Camp, 32 miles south of Nogales, Duros Millos, Gran Desierto; *Baja California:* "Colorado River valley and desert to Delta."

UROSAURUS GRACIOSUS Hallowell

Uro-saurus graciosus Hallowell, Proc. Acad. Nat. Sci. Philadelphia, vol. 7, 1854, p. 92.—Smith, Handbook of lizards, 1946, pp. 259–262, pl. 63.

Uta graciosa, Baird, United States and Mexican boundary survey, 1859, vol. 2, pt. 2, p. 7.—Van Denburgh, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 212–216, pl. 17.

[82] The status of this form is questioned by Oliver, *loc. cit.*, who feels that the name should be *Uta ornata lateralis* Boulenger.

Urosaurus ornatus graciosus, MITTLEMAN, Bull. Mus. Comp. Zool., vol. 91, 1942, pp. 144–145, pl. 7 (cotypes).

Type.—Acad. Nat. Sci. Philadelphia Nos. 8550–8551.

Type locality.—"Lower California" [=southern California], here restricted to Winterhaven (=Fort Yuma), Calif.

Range.—Southern Nevada, western Arizona, southern California, and northern Baja California. Reported from *Baja California:* 85 miles south of Mexicali, San Felipe. It may occur also in Sonora but is not recorded from there.

NIGRICAUDUS GROUP

Species.—Four.

Range.—Jalisco, Michoacán, and Baja California.

UROSAURUS NIGRICAUDUS (Cope)

Uta nigricauda COPE, Proc. Acad. Nat. Sci. Philadelphia, 1864, p. 176.—VAN DENBURGH, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 216–219.

Urosaurus nigricaudus, MITTLEMAN, Bull. Mus. Comp. Zool., vol. 91, 1942, pp. 157–159, pl. 10.

Type.—U.S.N.M. No. 5307, 12 cotypes; John Xantus collector.

Type locality.—Cape San Lucas, Baja California.

Range.—Southern tip of Baja California, with adjacent coastal islands, Espíritu Santo, Ballena, San José, and ?Magdalena.

UROSAURUS MICROSCUTATUS (Van Denburgh)

Uta microscutata VAN DENBURGH, Proc. California Acad. Sci., ser. 2, vol. 4, 1894, p. 298; Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 219–221.

Urosaurus microscutatus, MITTLEMAN, Bull. Mus. Comp. Zool., vol. 91, 1942, pp. 159–163.—SMITH, Handbook of lizards, 1946, pp. 262–264, pl. 64.

Uta parviscutata COPE, Ann. Rep. U. S. Nat. Mus., 1898 (1900), pp. 324–325, fig. 45 (substitute name for *Uta microscutata* Van Denburgh).

Type.—Stanford Univ. Mus. No. 1221; J. M. Stowell collector.

Type locality.—San Pedro Mártir Mountains, Baja California.

Range.—Extreme southern California through all of Baja California except the southern fifth. Reported from *Baja California:* Puerto Escondido, San Xavier, San Quintín, San Pedro Mártir, Mount San Matías, and the Islands of San Francisco, San José, Danzante, Coronado, Carmen, San Marcos, Santa Magdalena.

UROSAURUS GADOVI (Schmidt)

Uta gadovi SCHMIDT, Amer. Mus. Nov., No. 22, 1921, pp. 3–4.

Urosaurus gadovi, MITTLEMAN, Bull. Mus. Comp. Zool., vol. 91, 1942, pp. 154–156, pl. 11.

Type.—Amer. Mus. Nat. Hist. No. 20355; Hans Gadow collector.

Type locality.—Cofradía, Jalisco, Mexico.

Range.—Pacific slopes of Michoacán and Jalisco. Reported from *Michoacán:* Apatzingán, Acahuato; *Jalisco:* Cofradía.

UROSAURUS IRREGULARIS (Fischer)

Phymatolepis (Uta) irregularis FISCHER, Abh. Nat. Ver. Bremen, vol. 7, 1882, pp. 232–234, pl. 17, figs. 1–4.

Uta irregularis, BOULENGER, Catalogue of the lizards in the British Museum, ed. 2, vol. 2, 1885, p. 216.

Urosaurus irregularis, MITTLEMAN, Bull. Mus. Comp. Zool., vol. 91, 1942, pp. 156–157, pl. 12 (upper fig.).

Type.—Municipal Nat. Hist. Coll. Bremen, Germany, No. 437; collector unknown.

Type locality.—"Aus dem Hochlande von Mexico."

Range.—Mexico highlands. No specific locality known.

BICARINATUS GROUP

Species.—Three, with a total of six forms.

Range.—Pacific slopes from southwestern Chihuahua south to Chiapas; Socorro Island.

UROSAURUS AURICULATUS (Cope)

Uta auriculata COPE, Proc. Boston Soc. Hist., vol. 14, 1871, p. 303.—VAN DENBURGH, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 37, 197–199.

Urosaurus auriculatus, MITTLEMAN, Bull. Mus. Comp. Zool., vol. 91, 1942, pp. 163–164, pl. 16 (type).

Type.—U.S.N.M. No. 7027; Grayson collector.

Type locality.—Socorro Island, Revillagigedo Islands.

Range.—Known only from the type locality.

UROSAURUS BICARINATUS BICARINATUS (Duméril)

Phymatolepis bi-carinatus DUMÉRIL, Arch. Mus. Nat. Hist. Nat. Paris, vol. 8, 1856, p. 549, pl. 23, figs. 2, 2a, 2b.

Uta bicarinata, COPE, Proc. Acad. Nat. Sci. Philadelphia, vol. 16, 1864, p. 177.

Uta bi-carinata bi-carinata, MITTLEMAN, Journ. Washington Acad. Sci., vol. 31, 1941, pp. 70–71, figs. 1G, 2.

Urosaurus bicarinatus bicarinatus, MITTLEMAN, Bull. Mus. Comp. Zool., vol. 91, 1942, pp. 164–166, pl. 13.

Type.—Mus. Hist. Nat. Paris, two cotypes; A. Boucard collector.

Type locality.—Mexico, here restricted to Cuernavaca, Morelos.

Range.—Pacific slopes from Michoacán to central Guerrero, and up the basin of the Río Balsas to southern Puebla. Reported from *Puebla:* "Puebla," Izúcar de Matamoros, Tlapanalá, Chiautla; *Morelos:* Cuernavaca; *Guerrero:* Agua del Obispo, Cocoyul, Chilpancingo, Mesquititlán, Iguala, Río Balsas, etc.; *Michoacán:* San Blas, Jorullo.

UROSAURUS BICARINATUS ANONYMORPHUS (Mittleman)

Uta anonymorpha MITTLEMAN, Herpetologica, vol. 2, 1940, pp. 34–38, pl. 3, fig. 2.

Uta bicarinata anonymorpha, MITTLEMAN, Journ. Washington Acad. Sci., vol. 31, 1941, pp. 71–72, figs. 1G, 2.

Urosaurus bicarinatus anonymorphus, MITTLEMAN, Bull. Mus. Comp. Zool., vol. 91, 1942, pp. 166–168, pl. 14 (type).

Type.—U.S.N.M. No. 46988; E. W. Nelson and E. A. Goldman collectors.

Type locality.—Tehuantepec, Oaxaca.

Range.—Pacific slopes in eastern Guerrero, Oaxaca and western Chiapas. Reported from *Chiapas:* Tonalá; *Oaxaca:* Tehuantepec, Juchitán, San Gerónimo, Ixtepec, Totolapam, Tres Cruces, Mount Guengola, Cerro Arenal, etc.; *Guerrero:* Tierra Colorada.

UROSAURUS BICARINATUS NELSONI (Schmidt)

Uta nelsoni SCHMIDT, Amer. Mus. Nov., No. 22, 1921, p. 4.

Uta bicarinata nelsoni, MITTLEMAN, Journ. Washington Acad. Sci., vol. 31, 1941, pp. 72–73, figs. 1H, 2.

Urosaurus bicarinatus nelsoni, MITTLEMAN, Bull. Mus. Comp. Zool., vol. 91, 1942, p. 168, pl. 15.

Type.—U.S.N.M. No. 46836; E. W. Nelson and E. A. Goldman collectors.

Type locality.—Cuicatlán, Oaxaca.

Range.—Known only from the type locality.

UROSAURUS BICARINATUS TUBERCULATUS (Schmidt)

Uta tuberculata SCHMIDT, Amer. Mus. Nov., No. 22, 1921, p. 4.

Uta bi-carinata tuberculata, MITTLEMAN, Journ. Washington Acad. Sci., vol. 31, 1941, pp. 73–74, figs. 1E, 2.—OLIVER, Copeia, 1943, p. 105.

Urosaurus bicarinatus tuberculatus, MITTLEMAN, Bull. Mus. Comp. Zool., vol. 91, 1942, pp. 169–170, pl. 12, lower fig.

Type.—Amer. Mus. Nat. Hist. No. 13737; Paul D. R. Rüthling collector.

Type locality.—Colima, Colima, Mexico.

Range.—Southern Sonora southward to Jalisco. *Sonora:* Guirocoba; *Sinaloa:* Presidio de Mazatlán; *Jalisco:* ?"North of Río Santiago"; *Colima:* Colima, Villa Alvarez, Paso del Río.

UROSAURUS UNICUS (Mittleman)

Uta unica MITTLEMAN, Journ. Washington Acad. Sci., vol. 31, 1941, pp. 74–76, fig. 3.

Urosaurus unicus, MITTLEMAN, Bull. Mus. Comp. Zool., vol. 91, 1942, pp. 170–173.—SMITH and MITTLEMAN, Trans. Kansas Acad. Sci., vol. 46, 1943, pp. 243–249.

Type.—U.S.N.M. No. 14248; Edward Wilkinson collector.

Type locality.—Chihuahua (Batopilas?).

Range.—Known only from the type locality.

Genus UTA Baird and Girard

Uta BAIRD and GIRARD, *in* Stansbury, Exploration and survey of the valley of the Great Salt Lake of Utah . . ., 1852, pp. 344–345.

Genotype.—*Uta stansburiana* Baird and Girard.

Range.—Western Texas to California, north to Washington, south through Baja California and adjacent islands, and into the northern tier of Mexican states from Sonora to Coahuila.

Species.—Nine are here listed, with a total of eleven forms; only one form (*U. s. stansburiana*) is extralimital, making a total for the genus of 12 forms. The entire genus is badly in need of careful revision, however; considerable shuffling of the nominal species and subspecies is to be expected eventually.

KEY TO MEXICAN SPECIES OF UTA

1. Dorsal scales shorter, not imbricate, not mucronate, often with intervening granules; a dark blotch behind axilla 2
   Dorsal scales larger, imbricate at least centrally, usually without intervening granules; caudal scales imbricate, keeled, and strongly mucronate 4
2. Scales on base of tail not imbricate; not unicolor above 3
   Scales on base of tail imbricate, strongly keeled and mucronate; no dark or light markings above, except rarely a few pale blue dots.
   nolascensis (p. 151)
3. Basal caudals weakly keeled, not or but shortly mucronate; about 110–125 dorsals from interparietal to back of thighs; 26–30 of largest dorsals equal length of head to back of interparietal plate; gular region bluish
   stellata (p. 150)
   Basal caudals keeled and strongly mucronate; about 106–116 dorsals from interparietal to backs of thighs; 21–25 of largest dorsals equal length of head to back of interparietal plate; gular region blackish ..... **palmeri** (p. 151)
4. Dorsal scales from interparietal to rear of thighs 70–81 ..... **squamata** (p. 149)
   Dorsal scales 82 or more 5
5. No stripes whatever in dorsal pattern of either young or adults; dorsals 92–117, generally more than 100 ..... **taylori** (p. 150)
   Stripes present in young and some adults; dorsals larger or smaller 6
6. No distinct dark blue blotch behind axilla ..... **mannophorus** (p. 149)
   A distinct dark blue spot or blotch behind axilla 7
7. Two rows of postrostrals; both internasals separated by 2 scales from rostral 8
   One row of postrostrals; one or both internasals separated from rostral by only one scale 10
8. Dorsal scales generally 17–23 in a head length (from snout to rear edge of interparietal) 9
   Dorsal scales generally 23–28 in a head length ..... **stansburiana hesperis** (p. 149)
9. Size larger (64 mm. snout to vent) ..... **martinensis** (p. 149)
   Size smaller (48 mm.) ..... **concinna** (p. 150)
10. Hind leg longer, 74–85 percent of body length ..... **stansburiana elegans** (p. 148)
    Hind leg shorter, 65–79 percent of body length.
    stansburiana stejnegeri (p. 150)

UTA STANSBURIANA ELEGANS Yarrow

Uta elegans Yarrow, Proc. U. S. Nat. Mus., vol. 5, 1882, p. 442.—Schmidt, Bull. Amer. Mus. Nat. Hist., vol. 46, 1922, pp. 656–657.

Uta stansburiana elegans, Van Denburgh, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 240–247 (part).

Type.—U.S.N.M. No. 12666.

Type locality.—La Paz, Baja California.

Range.—Southern two-thirds of Baja California and on Smiths, Mejía, Ángel de la Guarda, Isla Partida, Isla Raza, Sal Si Puedes, North San Lorenzo, South San Lorenzo, Tortuga, San Marcos, Ildefonso, East and West Las Galeras, Monserrate, San José, San Francisco, Espíritu Santo, and Ballena Islands.

UTA MANNOPHORUS Dickerson

Uta mannophorus DICKERSON, Bull. Amer. Mus. Nat. Hist., vol. 41, 1919, pp. 470–471.—VAN DENBURGH, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 252–254.

Uta elegans, SCHMIDT, Bull. Amer. Mus. Nat. Hist., vol. 46, 1922, pp. 656–657 (part).

Type.—U.S.N.M. No. 64260; C. H. Townsend collector.

Type locality.—Carmen Island, Gulf of California.

Range.—Known only from type locality and Danzante and Coronado Islands, Baja California.

UTA SQUAMATA Dickerson

Uta squamata DICKERSON, Bull. Amer. Mus. Nat. Hist., vol. 41, 1919, p. 471.—VAN DENBURGH, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 249–251.—SCHMIDT, Bull. Amer. Mus. Nat. Hist., vol. 46, 1922, p. 656.

Type.—U.S.N.M. No. 64259; C. H. Townsend collector.

Type locality.—Santa Catalina Island, Gulf of California.

Range.—Known only from type locality.

UTA STANSBURIANA HESPERIS Richardson

Uta stansburiana hesperis RICHARDSON, Proc. U. S. Nat. Mus., vol. 48, 1915, pp. 415–418.—VAN DENBURGH, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 233–239.—SCHMIDT, Bull. Amer. Mus. Nat. Hist., vol. 46, 1922, p. 655.—SMITH, Handbook of lizards, 1946, pp. 281–283, pl. 72.

Uta parva DICKERSON, Bull. Amer. Mus. Nat. Hist., vol. 41, 1919, p. 471 (U.S.N.M. No. 64258; San Bartolomé Bay, Baja California).

Type.—Univ. California Mus. Vert. Zool. No. 892; J. Grinnell collector.

Type locality.—Arroyo Seco Cañon, near Pasadena, Los Angeles County, Calif.

Range.—San Joaquin Valley of central California southward on the Pacific slope through northwestern Baja California to San Bartolomé Bay; Los Coronados Islands.

UTA MARTINENSIS Van Denburgh

Uta martinensis VAN DENBURGH, Proc. California Acad. Sci., ser. 3, vol. 4, 1905, pp. 18–19, pl. 6; Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 247–249.—SCHMIDT, Bull. Amer. Mus. Nat. Hist., vol. 46, 1922, p. 655.

Type.—California Acad. Sci. No. 4698; R. H. Beck collector.

Type locality.—San Martín Island, Baja California.

Range.—Known only from the type locality.

UTA CONCINNA Dickerson

Uta concinna DICKERSON, Bull. Amer. Mus. Nat. Hist., vol. 41, 1919, p. 470.—SCHMIDT, Bull. Amer. Mus. Nat. Hist., vol. 46, 1922, pp. 655–656.

Type.—U.S.N.M. No. 64257; C. H. Townsend collector.

Type locality.—Cerros [= Cedros] Island, Baja California.

Range.—Known only from the type locality, and the Natividad Islands, Baja California.

UTA STELLATA Van Denburgh

Uta stellata VAN DENBURGH, Proc. California Acad. Sci., Zool., ser. 3, vol. 5, 1905, pp. 21–22, pl. 8; Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 225–227.

Type.—California Acad. Sci. No. 4704, R. H. Beck collector.

Type locality.—San Benito Islands, Baja California.

Range.—Known only from the type locality.

UTA STANSBURIANA STEJNEGERI Schmidt

Uta stansburiana stejnegeri SCHMIDT, Amer. Mus. Nov., No. 15, 1921, pp. 1–2; Bull. Amer. Mus. Nat. Hist., vol. 46, 1922, pp. 654–655.—SMITH, Handbook of lizards, 1946, pp. 283–286, pl. 73.

Uta stansburiana elegans, VAN DENBURGH, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 240–247 (part), pl. 18.

Type.—Amer. Mus. Nat. Hist. No. 384; A. G. Ruthven collector.

Type locality.—Mouth of Dry Cañon, Alamogordo, Otero County, N. Mex.

Range.—Western Texas through southern Nevada to eastern California, southward into northeastern Baja California and the northern tier of Mexican states from Sonora to western Coahuila. Reported from *Baja California:* Cocopah Mountains, Volcano Lake, etc.; *Sonora:* Costa Rica Ranch, Sonoyta, Pozo de Luis, Tepoca Bay, San Pedro Bay, Ortiz, Batamotal, Guaymas, Empalme; Islands of Tiburón, Patos, Pelican, and San Esteban; *Coahuila:* 10 miles east of Torreón, San Pedro, 5 miles south of San Pedro, 30 miles west of La Rosa, Jaral, Torreón; *Durango:* Avilco, 5 miles north of Conejos, 25 miles north of Bermejillo, Lerdo; *Chihuahua:* 15 miles south of Juárez.

UTA TAYLORI Smith [53]

Uta taylori SMITH, Univ. Kansas Sci. Bull., vol. 22, 1935, pp. 158–166, pl. 26, fig. 3.

Type.—EHT-HMS No. 10692 (originally field No. 320a), male; E. H. Taylor collector.

Type locality.—Ten miles northwest of Guaymas, Sonora.

[53] The possibility of intergradation between *Uta taylori* and *Uta stansburiana*, as recently suggested, is too remote to consider. *Uta stansburiana* extends throughout the known range of *taylori*.

Range.—Known only from the region near the type locality. Reported from *Sonora:* La Posa, 54 miles southwest of Hermosillo.

UTA PALMERI Stejneger

Uta palmeri STEJNEGER, North Amer. Fauna, No. 3, 1890, p. 106.—VAN DENBURGH, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 221–223.

Type.—U.S.N.M. No. 16002; Edward Palmer collector.

Type locality.—San Pedro Mártir Island, Sonora.

Range.—Known only from the type locality.

UTA NOLASCENSIS Van Denburgh and Slevin

Uta nolascensis VAN DENBURGH and SLEVIN, Proc. California Acad. Sci., ser. 4, vol. 11, 1921, pp. 395–396.—VAN DENBURGH, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 223–225.

Type.—California Acad. Sci. No. 50508; Joseph R. Slevin collector.

Type locality.—San Pedro Nolasco Island, Sonora.

Range.—Known only from the type locality.

Family XANTUSIIDAE Baird

Xantusiidae BAIRD, Proc. Acad. Nat. Sci. Philadelphia, 1858, p. 254.

Genera.—Four genera known; the only extralimital genus is *Cricosaura* of Cuba.

Range.—Southwestern United States to Panama; Cuba.

KEY TO MEXICAN GENERA OF THE XANTUSIIDAE

1. Supraoculars present, as small scales above eyes (medial to superciliaries); dorsal scales uniformly granular----------**Xantusia** (p. 154)
   Supraoculars absent, no small scales above eyes (except superciliaries); dorsal scales heterogeneous in size---------- 2
2. Distinct, vertical rows of well-differentiated, enlarged, keeled scales on sides of body, separated from each other by granular area---**Lepidophyma** (p. 151)
   No distinct, vertical rows of enlarged scales on sides of body-**Gaigeia** (p. 153)

Genus LEPIDOPHYMA A. Duméril

Lepidophyma A. DUMÉRIL, *in* Duméril and Duméril, Catalogue méthodique de la collection des reptiles, 1851, pp. 137–138.

Poriodogaster SMITH, *in* Gray, Proc. Zool. Soc. London, 1863, p. 154 (type, *P. grayii* Smith).

Akleistops MÜLLER, Verh. Naturf. Ges. Basel, vol. 6, 1878, p. 390 (type, *A. guatemalensis* Müller).

Genotype.—*Lepidophyma flavimaculatus* A. Duméril.

Range.—From Hidalgo, Mexico, south to Costa Rica.

Species.—Two, with five forms, one of which (*flavimaculata obscura*) is extralimital.

KEY TO MEXICAN SPECIES OF LEPIDOPHYMA

1. All (except basal) whorls of enlarged scales on tail separated from each other dorsally by 4 rows of scales; femoral pores 15 to 22; median prefrontal normally present, sometimes absent....**flavimaculata flavimaculata** (p. 152)
   All whorls of enlarged scales on tail separated from each other dorsally by 3 rows of scales (rarely feeble evidence of a fourth row); femoral pores less than 14; median prefrontal present or absent.... 2
2. A median prefrontal....**smithii smithii** (p. 152)
   No median prefrontal.... 3
3. Scales in posterior temporal region (anterior to ear) minute and very uniform in size, except for a series of relatively large, projecting auricular lobules and a row of larger scales beside the upper temporals; whorls on tail relatively little differentiated....**smithii occulor** (p. 153)
   Scales in posterior temporal region (anterior to ear) larger, irregular in size; auricular lobules poorly defined or absent; no scales bordering upper temporals; tail whorls strongly differentiated....**smithii tehuanae** (p. 152)

LEPIDOPHYMA FLAVIMACULATA FLAVIMACULATA A. Duméril

Lepidophyma flavimaculatus A. Duméril, *in* Duméril and Duméril, Catalogue méthodique de la collection des reptiles (Paris Museum), 1851, pp. 138–139.
Lepidophyma flavomaculatum flavomaculatum, Smith, Proc. U. S. Nat. Mus., vol. 92, 1942, p. 379.

Type.—Mus. Hist. Nat. Paris; P. M. A. Morelet collector.

Type locality.—Province de Petén, Guatemala, here restricted to Río de la Pasión.

Range.—Atlantic slopes from southern Veracruz to British Honduras, excluding the Yucatán Peninsula. Recorded in Mexico from *Veracruz:* Río de las Playas; *Tabasco:* Río de las Playas; *Chiapas:* across the Usumacinta River from Piedras Negras, Petén, Guatemala.

LEPIDOPHYMA SMITHII SMITHII Bocourt

Lepidophyma Smithii Bocourt, Journ. Zool., Paris, vol. 5, No. 5, 1876, pp. 402–403; Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 5, 1878, pp. 309–312, pl. 20F, figs. 3–3b, and pl. 20G, figs. 2–2b.
Lepidophyma smithii smithii, Smith, Proc. U. S. Nat. Mus., vol. 92, 1942, p. 380.
Akleistops guatemalensis Müller, Verh. Naturf. Ges. Basel, vol. 6, 1878, pp. 390–398, pls. 1, 2 (Nat. Mus. Basel; Mazatenango, Guatemala).

Type.—Mus. Hist. Nat. Paris, six cotypes; "Commission Scientifique" collector.[84]

Type locality.—"Tehuantepec, and west coast of Guatemala," restricted to "Guatemala," here restricted to Mazatenango.

Range.—Pacific slopes of Chiapas and western Guatemala. Recorded in Mexico only from *Chiapas*: La Esperanza near Escuintla.

LEPIDOPHYMA SMITHII TEHUANAE Smith

Lepidophyma smithii tehuanae Smith, Proc. U. S. Nat. Mus., vol. 92, 1942, pp. 377–378.

[84] On the basis of the figures given of the types, Smith believes they represent a population characteristic of Chiapas and Guatemala, and not of the region of Tehuantepec city.

Type.—U.S.N.M. No. 111488; H. M. Smith collector.

Type locality.—Cerro Arenal, 30 kilometers west of Tehuantepec, Oaxaca.

Range.—Pacific slopes of Oaxaca and Chiapas (?) in the vicinity of the Isthmus of Tehuantepec. Reported from Tres Cruces, El Limón, Cerro Arenal, La Concepción, Santa Efigenia, mountains near Santo Domingo, near Tehuantepec, Cafetal Concordia; ? *Chiapas*: Tonalá.

LEPIDOPHYMA SMITHII OCCULOR Smith

Lepidophyma smithii occulor SMITH, Proc. U. S. Nat. Mus., vol. 92, 1942, pp. 378–379.

Type.—U.S.N.M. No. 47133; E. W. Nelson and E. A. Goldman collectors.

Type locality.—Jalpan, Querétaro.

Range.—Atlantic slopes presumably from northern Veracruz into southern Tamaulipas. Recorded only from *San Luis Potosí:* Tamazunchale; *Querétaro*: Jalpan.

Genus GAIGEIA Smith

Gaigeia SMITH, Publ. Field Mus. Nat. Hist., zool. ser., vol. 24, 1939, p. 24.

Genotype.—Lepidophyma gaigeae Mosauer.

Range.—Hidalgo and Oaxaca.

Species.—Four.

KEY TO MEXICAN SPECIES OF GAIGEIA

1. All whorls on tail complete, none restricted to dorsal surface.....**gaigeae** (p. 154)
   Some of scale whorls on tail restricted to dorsal surface..... 2
2. Only one row of scales on ventral surface between whorls of enlarged scales (i. e., every third whorl restricted to dorsal surface)..... 3
   Proximally 2 and distally 3 rows of scales on ventral surface between whorls of enlarged scales.....**sylvatica** (p. 154)
3. Numerous, very closely approximated, enlarged, keeled scales, separated by small granules, present on sides of body; 2 or 3 rows of granules in vertebral region.....**radula** (p. 153)
   Dorsal scales practically uniform in size; 4 rows of granules in vertebral region. **dontomasi** (p. 153)

GAIGEIA DONTOMASI Smith

Gaigeia dontomasi SMITH, Proc. U. S. Nat. Mus., vol. 92, 1942, pp. 374–376.

Type.—U.S.N.M. No. 111473; Thomas MacDougall collector.

Type locality.—Lachiguiri, Oaxaca, 7,100 feet elevation.

Range.—Known only from the type locality.

GAIGEIA RADULA Smith

Gaigeia radula SMITH, Proc. U. S. Nat. Mus., vol. 92, 1942, pp. 378–379.

Type.—U.S.N.M. No. 111472; H. M. Smith collector.

Type locality.—San José Manteca, 5 kilometers from San Carlos Yautepec, Oaxaca.

Range.—Known only from the type locality.

GAIGEIA SYLVATICA (Taylor)

Lepidophyma sylvatica TAYLOR, Copeia, 1939, pp. 131–133, figs. 1, 2.
Gaigeia sylvatica, SMITH, Proc. U. S. Nat. Mus., vol. 92, 1942, p. 380.

Type.—EHT-HMS No. 16259; E. H. Taylor collector.

Type locality.—Seven miles north of Zacualtipan, Hidalgo.

Range.—Known only from the type locality.

GAIGEIA GAIGEAE (Mosauer)

Lepidophyma gaigeae MOSAUER, Herpetologica, vol. 1, 1936, pp. 3–5, pl. 2.
Gaigeia gaigeae, SMITH, Publ. Field Mus. Nat. Hist., zool. ser., vol. 24, 1939, p. 24.

Type.—Mus. Comp. Zool. No. 42145; Walter Mosauer collector.

Type locality.—Durango, Hidalgo.

Range.—The immediate vicinity of the type locality.

Genus XANTUSIA Baird

Xantusia BAIRD, Proc. Acad. Nat. Sci. Philadelphia, 1858, p. 255.
Zablepsis COPE, Amer. Nat., vol. 29, 1895, p. 758 (type, *Xantusia henshawi* Stejneger).
Amoebopsis COPE, Amer. Nat., vol. 29, 1895, p. 758 (type, *Xantusia gilberti* Van Denburgh).

Genotype.—*Xantusia vigilis* Baird.

Range.—Southern California, Arizona, southern Utah, Baja California, and adjacent islands.

Species.—Five, one of which includes two subspecies; three species occur in Mexico.

KEY TO MEXICAN SPECIES OF XANTUSIA

1. Ventral plates in 12 series 2
   Ventral plates in 14 series ..... **henshawi** (p. 155)
2. A single frontal, eye large ..... **vigilis** (p. 154)
   A pair of frontals, eye small ..... **gilberti** (p. 155)

XANTUSIA VIGILIS Baird

Xantusia vigilis BAIRD, Proc. Acad. Nat. Sci. Philadelphia, 1858, p. 255.—VAN DENBURGH, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 477–482, pl. 49.—SMITH, Handbook of lizards, 1946, pp. 330–333, pl. 91.

Type.—U.S.N.M. No. 3063 (three cotypes); John Xantus collector.

Type locality.—"Fort Tejon," California.

Range.—Southwestern Utah and eastern California southward into northern Baja California as far as San Felipe Bay and San Matías Pass.

XANTUSIA HENSHAWI Stejneger

Xantusia henshawi STEJNEGER, Proc. U. S. Nat. Mus., vol. 16, 1893, p. 467.—VAN DENBURGH, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 484–486, pl. 50.—SMITH, Handbook of lizards, 1946, pp. 325–327, pl. 88.

Xantusia picta COPE, Amer. Nat., vol. 29, 1895, pp. 859, 939 (Tejon Pass, Calif.; probably Poway, San Diego County, Calif., *fide* Van Denburgh).

Type.—U.S.N.M. No. 20339; H. W. Henshaw collector.

Type locality.—Witch Creek, San Diego County, Calif., elevation 2,700 feet.

Range.—Extreme southwestern California and northern Baja California, in the San Pedro Mártir Mountains.

XANTUSIA GILBERTI Van Denburgh

Xantusia gilberti VAN DENBURGH, Proc. California Acad. Sci., vol. 5, 1895, p. 121, pl. 11; Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 482–484.

Type.—California Acad. Sci. No. 401; Gustav Eisen collector.

Type locality.—San Francisquito, Sierra Laguna, Baja California.

Range.—Cape region of southern Baja California.

Family SCINCIDAE Gray

Scincidae GRAY, Ann. Philos., ser. 2, vol. 10, 1825, p. 201.

Genera.—About 60, of which three occur in Mexico. Of these three, none are confined to the Western Hemisphere. Only two other genera occur in the Americas: *Cryptoblepharus* (South America), a wanderer from the Pacific Islands, and *Neoseps* (Florida).

Range.—Southern Canada south through Central America and South America to Argentina; West Indies; Africa and Madagascar; south Asia; China; Japan; Philippine Islands; Dutch Indies; Pacific Islands and Australia.

KEY TO MEXICAN GENERA OF SCINCIDAE

1. Two supranasals between rostral and frontonasal; frontoparietal always divided; lower eyelid with a translucent disk or not; palatine bones in contact or not 2

   Supranasals absent, the single frontonasal in contact with rostral; frontoparietal divided or not; an undivided translucent disk on lower eyelid; palatine bones in contact on median line ..... **Scincella** (p. 156)

2. An undivided translucent disk on lower eyelid; palatine bones in contact on median line ..... **Mabuya** (p. 155)

   Lower eyelid without a translucent disk, or if so it is divided into several parts; palatine bones separated on median line ..... **Eumeces** (p. 160)

Genus MABUYA Fitzinger

Mabuya FITZINGER, Neue Classification der Reptilien, 1826, pp. 23, 52.

Genotype.—*Lacertus mabouya* Lacépède (by absolute tautonymy, *fide* M. A. Smith, Fauna British India, etc., 1935, Reptilia and Am-

phibia, vol. 2, p. 257). This is contrary to opinion 92 of the International Commission on Zoological Nomenclature, which states that *Scincus sloanii* of Daudin is the type. Fitzinger did not list that form.[85]

Range.—Southern Mexico on both coasts; Central America, South America; Africa, Madagascar; southern Asia, Philippines, East Indies.

Species.—About 85 species, only one of which occurs in Mexico.

MABUYA MABOUYA MABOUYA (Lacépède)

Lacertus Mabouya LACÉPÈDE, Histoire naturelle des quadrupèdes ovipares et des serpens, vol. 2, 1788, p. 378, pl. 24 (part).

Mabuya mabouya mabouya, DUNN, Proc. Acad. Nat. Sci. Philadelphia, vol. 87, 1935, pp. 537–546 (part).

Scincus agilis RADDI, Mem. Soc. Ital. Modena, vol. 19, No. 18, 1823, p. 62 (type unknown; Rio de Janeiro).

Mabuia alliacea COPE, Journ. Acad. Nat. Sci. Philadelphia, ser. 2, vol. 8, 1875, p. 115, pl. 6, fig. 1 (U. S. N. M. Nos. 30619–20; Costa Rica).[86]

Type.—Apparently unknown.

Type locality.—Restricted by Dunn to the Lesser Antilles; here restricted to St. Vincent.

Range.—Coastal and foothill areas from southern Veracruz and Colima southward to Ecuador, Bolivia, and southern Brazil. Recorded from numerous localities in the states of Colima, Michoacán, Guerrero, Oaxaca, Veracruz, Tabasco, Campeche, Yucatán, Quintana Roo (Cobá), and Chiapas.

Genus SCINCELLA Mittleman

Leiolopisma AUCT. in part, *nec* Duméril and Bibron, Erpétologie générale, vol. 5, 1839, p. 742 (type, *Scincus telfairii* Desjardines).

Scincella [87] MITTLEMAN, Herpetologica, vol. 6, 1950, p. 19.

Genotype.—Scincus lateralis Say.

Range.—Greater part of eastern United States east of the Rocky Mountains; Mexico from Hidalgo southward through Central America to Panama. Ceylon, southern Asia, China, Philippines, East Indies, Tasmania, Africa, New Zealand.

Species.—About 50 species. Seven species and 10 forms are known in the Americas, all except *S. incertum* of Guatemala occurring in Mexico (even this exception may actually occur).

KEY TO MEXICAN SPECIES OF SCINCELLA

1. Frontoparietal divided; many median subcaudals in contact on each side with 2 scales 2
   Frontoparietal single; median subcaudals in contact with only 1 scale on each side 6

[85] Also see Travassos, Bol. Mus. Nac. Brasil, new ser., Zool., No. 37, 1945, pp. 1-7.

[86] This is the only name based upon continental (as opposed to island) specimens north of South America. It may be revived, for undoubtedly geographically segregated variants of taxonomic magnitude do exist within the enormous range now included within this supposedly single race.

[87] Adoption here of this name is the decision of solely the senior author.

2. Usually 3 or more pairs of nuchals; upper tertiary temporal (occasionally split) in contact with parietal; 26–28 scale rows around middle of body; limbs short, separated by 10–12 scales when adpressed---**laterale** (p. 159)
   Two pairs of nuchals, or fewer; upper tertiary temporal separated from parietal by contact of upper secondary temporal and nuchal---- 3
3. Limbs, when adpressed, touching or overlapping in adults, forelimb reaching rear corner of eye; scale rows at middle of body often 30 or 32---- 4
   Limbs, when adpressed, separated from each other by 1 or more scale lengths; scale rows at middle of body rarely 30 and apparently never 32---- 5
4. "Usually 1 pair of nuchals or less; lamellae under fourth toe 19 or fewer; dorsolateral light stripe continuous". (Smith)---**caudaequinae** (p. 158)
   Usually 2 pairs of nuchals; lamellae under fourth toe 20 (constant?); dorsolateral light stripe dark-spotted, interrupted---**silvicolum** (p. 158)
5. Usually nuchals on the two sides 1–2 or more (89 percent); lateral light line along head and neck poorly defined; axilla-groin/snout-vent percentage 59; 65 mm. maximum snout-vent measurement.
   gemmingeri gemmingeri (p. 159)
   Usually nuchals on the two sides 1–1 or less (88 percent); lateral light line along head and neck fairly well defined; axilla-groin/snout-vent percentage 56; 54 mm. maximum snout-vent measurement.
   gemmingeri forbesorum (p. 159)
6. Scale rows 30 or more---- 7
   Scale rows less than 30---- 9
7. Tail blue or blue-gray, with traces of a cross-banded pattern evidenced by feeble dark bars visible laterally or by transverse series of light spots; legs longer, usually overlapping in adults---- 8
   Tail pink or reddish, with no traces of a cross-banded pattern, but instead with a longitudinal dark line on each side at least at base; legs shorter, never overlapping in adults; dorsal scales 65 to 79, usually 69 or more.
   assatum assatum (p. 160)
8. Dorsal scales 65 to 72, average 69.1---**cherriei stuarti** (p. 158)
   Dorsal scales 59 to 67, average 63.2---**cherriei cherriei** (p. 157)
9. Tail blue or blue-gray, with traces of a cross-banded pattern evidenced by feeble dark bars visible laterally or by transverse series of light spots; legs longer, usually overlapping in adults; dorsal scales 54 to 60, average 57.
   cherriei ixbaac (p. 158)
   Tail pink or reddish, with no traces of a cross-banded pattern, but instead with a longitudinal dark line on each side at least at base; legs shorter, never overlapping in adults; dorsal scales 58 to 72, average over 66.
   assatum taylori (p. 160)

SCINCELLA CHERRIEI CHERRIEI (Cope)

Mocoa cherriei Cope, Proc. Amer. Philos. Soc., vol. 31, 1893, p. 339.
Lygosoma assatum cherriei, Stuart, Occ. Pap. Mus. Zool. Univ. Michigan, No. 421, 1940, pp. 13–14.
Lygosoma cherriei cherriei, Smith, Proc. Biol. Soc. Washington, vol. 54, 1941, pp. 181–182.
Leiolopisma cherriei cherriei, Smith, Herpetologica, vol. 3, 1946, p. 111.
Scincella cherriei cherriei, Mittleman, Herpetologica, vol. 6, 1950, p. 20.

Type.—Amer. Mus. Nat. Hist. No. 9531; George K. Cherrie collector.

Type locality.—Palmar, Costa Rica.

Range.—Tabasco and northern Chiapas on Atlantic slopes, and Costa Rica on Pacific slopes, eastward to Panama. Recorded in Mexico only from *Tabasco:* Teapa; *Chiapas:* Palenque.

SCINCELLA CHERRIEI IXBAAC (Stuart)

Lygosoma assatum ixbaac STUART, Occ. Pap. Mus. Zool. Univ. Michigan, No. 421, 1940, pp. 8–10.
Leiolopisma cherriei ixbaac, SMITH, Herpetologica, vol. 3, 1946, p. 111.
Scincella cherriei ixbaac, MITTLEMAN, Herpetologica, vol. 6, 1950, p. 20.

Type.—Univ. Michigan Mus. Zool. No. 80820; Milton Trautman.

Type locality.—Chichen Itzá, Yucatán.

Range.—The peninsula of Yucatán, southward as far as Campeche and northern Petén, Guatemala. Recorded in Mexico only from *Yucatán:* Chichen Itzá; *Campeche:* Tres Brazos.

SCINCELLA CHERRIEI STUARTI (Smith)

Leiolopisma cherriei, SMITH, Proc. Biol. Soc. Washington, vol. 52, 1939, pp. 191–192, 193, pl. 2, fig. 7.
Lygosoma cherriei stuarti SMITH, Proc. Biol. Soc. Washington, vol. 54, 1941, pp. 81–82.
Leiolopisma cherriei stuarti, SMITH, Herpetologica, vol. 3, 1946, p. 111.
Scincella cherriei stuarti, MITTLEMAN, Herpetologica, vol. 6, 1950, p. 20.

Type.—U.S.N.M. No. 115174; H. M. Smith collector.

Type locality.—Potrero Viejo, Veracruz.

Range.—Central Veracruz, in foothills, southward to the Isthmus of Tehuantepec; recorded only from the states of Veracruz and Oaxaca (between Río Grande and La Gloria).

SCINCELLA CAUDAEQUINAE (Smith)

Leiolopisma caudaequinae SMITH, Univ. Kansas Sci. Bull., vol. 34, 1950, p. —.

Type.—Univ. Illinois Mus. Nat. Hist. No. 10131; J. P. Craig.

Type locality.—Salto Cola de Caballo, 25 miles south of Monterrey, Nuevo León.

Range.—Eastern foothills from central Nuevo León southward to southern San Luis Potosí (known only from the type locality and 10 miles west of Naranjo, San Luis Potosí).

SCINCELLA SILVICOLA (Taylor)

Leiopisma silvicolum TAYLOR, Copeia, 1937, No. 1, pp. 5–7.—SMITH, Journ. Washington Acad. Sci., vol. 39, 1949, p. 41; Univ. Kansas Sci. Bull., vol. 34, 1950, p. —.
Scincella silvicola, MITTLEMAN, Herpetologica, vol. 6, 1950, p. 20.

Type.—EHT-HMS No. 10033, adult female; E. H. Taylor collector.

Type locality.—Forested hill about 10 miles southeast of Córdoba, near San Lorenzo, Veracruz.

Range.—Atlantic slopes in central Veracruz and in the headwaters of the Río Papaloapam in Oaxaca. Recorded from *Veracruz:* San José de Gracia; *Oaxaca:* Cuicatlán.

SCINCELLA GEMMINGERI GEMMINGERI (Cope)

Oligosoma gemmingeri Cope, Proc. Acad. Nat. Sci. Philadelphia, 1864, p. 180.
Lygosoma (Mocoa) Gemmingeri, Bocourt, Mission scientifique au Mexique. . . . Études sur les reptiles, livr. 7, 1881, pp. 449–450.
Leiolopisma gemmingeri, Taylor, Copeia, 1937, pp. 7–8.—Smith, Journ. Washington Acad. Sci., vol. 39, 1949, pp. 40, 41.
Leiolopisma gemmingeri gemmingeri, Smith, Univ. Kansas Sci. Bull, vol. 34, 1950, p. —.
Lygosoma laterale (part), Boulenger, Catalogue of the lizards in the British Museum, vol. 3, 1887, p. 263.

Type.—U.S.N.M. No. 6331, four cotypes; François Sumichrast collector.

Type locality.—Orizaba, Veracruz.

Range.—Eastern Hidalgo, central and southern Veracruz, and Oaxaca south to Tehuantepec, on the slopes of the plateau and in lowlands. Recorded only from *Veracruz:* Tequeyutepec, La Perla, Río Verde, Jalapa, Orizaba; *Hidalgo;* Zacualtipan (possibly referable to *L. g. forbesorum*); *Oaxaca:* Ixcuintepec, Tres Cruces, San José Manteca, 17 miles north of Niltepec, Cafetal Concordia.

SCINCELLA GEMMINGERI FORBESORUM (Taylor)

Leiolopisma forbesorum Taylor, Copeia, 1937, pp. 8–11.
Leiolopisma gemmingeri forbesorum, Smith, Univ. Kansas Sci. Bull., vol. 34, 1950, p. —.

Type.—EHT-HMS No. 10043, E. H. Taylor collector.

Type locality.—La Placita, Hidalgo, 8 miles south of Jacala, elevation 7,000 feet.

Range.—Known only from higher mountains of Hidalgo, in the vicinity of the type locality.

SCINCELLA LATERALE (Say)

Seincus lateralis Say, *in* Long's Expedition to the Rocky Mountains, vol. 2, 1823, p. 234.
Leiolopisma laterale, Jordan, Manual of the vertebrates of the northern United States, ed. 8, 1899, p. 324.—Cope, Ann. Rep. U. S. Nat. Mus., 1898 (1900), pp. 622–624, fig. 123.—Smith, Handbook of lizards, 1946, pp. 337–340, pl. 92.
Scincella laterale, Mittleman, Herpetologica, vol. 6, 1950, p. 19.

Type.—U.S.N.M. No. 3152.

Type locality.—Mississippi River, below Cape Girardeau, Mo.

Range.—New Jersey and southward to the Gulf and to central Coahuila, excluding the lower Rio Grande Valley. Reported from *Coahuila:* Nogales (Sabinas River near Múzquiz).

SCINCELLA ASSATA ASSATA (Cope)

Lampropholis assatus Cope, Proc. Acad. Nat. Sci. Philadelphia, 1864, pp. 179–180.
Leiolopisma assatum, Burt, Trans. American Micr. Soc., vol. 54, 1935, p. 177.
Leiolopisma assatum [*assatum*], Oliver, Occ. Pap. Mus. Zool. Univ. Michigan, No. 360, 1937, p. 12.—Smith, Herpetologica, vol. 3, 1946, p. 111; Journ. Washington Acad. Sci., vol. 39, 1949, p. 40.
Lygosoma assatum assatum, Stuart, Occ. Pap. Mus. Zool. Univ. Michigan, No. 421, 1940, pp. 12–13.
Scincella assata assata, Mittleman, Herpetologica, vol. 6, 1950, p. 20.

Type.—Acad. Nat. Sci. Philadelphia No. 9465.

Type locality.—Volcán Isalco, El Salvador.

Range.—Pacific slopes, southeastern Chiapas southward to Honduras. Recorded in Mexico from *Chiapas:* Huehuetan, Escuintla.

SCINCELLA ASSATA TAYLORI (Oliver)

Leiolopisma assatum taylori Oliver, Occ. Pap. Mus. Zool. Univ. Michigan, No. 360, 1937, pp. 12–15.—Smith, Journ. Washington Acad. Sci., vol. 39, 1949, p. 40.
Scincella assata taylori, Mittleman, Herpetologica, vol. 6, 1950, p. 20.

Type.—Mus. Zool. Univ. Michigan No. 80107; A. Bakewell and J. A. Oliver collectors.

Type locality.—Santiago, Colima.

Range.—Colima to southwestern Chiapas, in lower areas. Recorded from *Colima:* Santiago, Paso del Río; *Guerrero:* Between Rincón and Cajones, Mazatlán, Chilpancingo, Agua del Obispo, Tierra Colorada; *Jalisco:* Tenacatita; *Chiapas:* Tonalá; *Oaxaca:* Matías Romero, Santa Efigenia, Tapanatepec.

Genus EUMECES Wiegmann

Eumeces Wiegmann, Herpetologia Mexicana, 1834, pt. 1, p. 36.
Lamprosaurus Hallowell, Proc. Acad. Nat. Sci. Philadelphia, 1852, p. 206 (type, *Lamprosaurus guttulatus* Hallowell=*Plestiodon obsoletum* Baird and Girard).
Platypholis Dugès, La Naturaleza, ser. 2, vol. 1, 1887, p. 486 (type, *Eumeces altamirani* Dugès).

Genotype.—*Scincus pavimentatus* Geoffroy=*Eumeces pavimentatus* (see Wiegmann, Archiv für Naturg., vol. 2, 1835, p. 288).

Range.—Southern Canada southward through the United States, Mexico, and Central America to Nicaragua; Bermuda; North Africa; southwestern Asia; China; French Indo-China; Japan.

Species.—About 58 species and 76 forms are recognized; 23 forms of 22 different species occur in Mexico.

KEY TO MEXICAN SPECIES OF EUMECES

1. Median dorsal scales at least three times the width of adjoining scales--- 2
   Dorsal scales not greatly widened, rarely twice as wide as adjoining scales--- 3
2. Scales in 21 rows about middle of body; 3 broad black stripes begin on snout, pass back and break up on middle of back----------**schwartzei** (p. 162)

Scales in 19 rows about middle of body; no stripes, but scales with black dots---------- **altamirani** (p. 163)

3. Three supraoculars; no postnasal; 1 postmental---------- 4
   Four supraoculars; postnasals and postmentals variable---------- 5
4. Parietals enclose interparietal; scale rows about middle of body, 24; seventh labial in contact with upper secondary temporal---------- **dugesii** (p. 169)
   Parietals not enclosing interparietal; scale rows usually 24; seventh labial not in contact with upper secondary temporal--**lynxe furcirostris** (p. 163)
5. Postmentals normally 2---------- 6
   Postmental normally 1---------- 12
6. Body without white stripes at any time; lateral scale rows generally oblique; young black with a blue tail; head with cream spots; adults olive with darker areas on scales; limbs large, overlapping when adpressed; scales 26–28 rows; 125 mm. snout to vent---------- **obsoletus** (p. 165)
   Body with white stripes in young, retained in adult, or approaching uniform olive coloration in adults, especially old males; lateral scale rows parallel; young never black but usually with blue or pink (red) or orange tail--- 7
7. Dorsolateral light stripes distinct and confined to third scale row. **multivirgatus** (p. 165)
   Dorsolateral light stripes not involving third scale row at all, or else including also second scale row---------- 8
8. Median light line beginning between arms running forward bifurcating on head; or median line lost and the bifurcating lines only, remain on head- 9
   No trace of a median light line or bifurcating lines on head; usually 4 light lines, 2 lateral and 2 dorsolateral---------- 10
9. Parietals enclose interparietal; scale rows usually 28 at middle of body; postnasal usually present; median white line to shoulder; limbs short, not touching when adpressed---------- **callicephalus** (p. 164)
   Parietals not enclosing interparietal; bifurcating lines on head, but median line obsolete; postnasal absent; limbs touch in young when adpressed, in adults separated by 3 or 4 scale lengths; postmental single or divided; 26–28 scale rows; maximum size about 70 mm---------- **tetragrammus** (p. 165)
10. Parietals enclose interparietal; 24 scale rows; seventh labial broadly in contact with upper secondary temporal; tail orange in young; 4 light lines retained in adults; limbs fail to touch when adpressed---------- **lagunensis** (p. 167)
    Parietals do not enclose interparietal---------- 11
11. Snout-vent length greater than 75 mm., or interparietal nearly parallel-sided; specimens under 50 mm. snout-vent length with pink tail (no blue); 8 supralabials on each side (98 percent)---**gilberti rubricaudatus** (p. 167)
    Snout-vent length not more than 75 mm.; interparietal bluntly wedge-shaped; juveniles, usually adults, with blue tail; 7 supralabials on one or both sides (94 percent)---------- **skiltonianus** (p. 167)
12. A median light line bifurcating on frontal---------- 13
    Median light line present or absent, if present bifurcating behind frontal- 14
13. Median line from middle of body bordered with darker, and bifurcating on anterior half of frontal; limbs separated when adpressed; usually 24 scales about body---------- **lynxe lynxe** (p. 163)
    Median light line bifurcating on the posterior part of frontal, or all lines lost in adult olive coloration; limbs overlapping when adpressed; subcaudals widened; maximum snout to vent length, 100 mm---**sumichrasti** (p. 164)
14. Parietals enclosing interparietal---------- 15
    Parietals not enclosing interparietal---------- 17

15. Limbs long, overlapping when adpressed; strong, wide dorsolateral light lines; seventh labial broadly in contact with secondary upper labial; no primary temporal; frontoparietals narrowly separated; scale rows, 28; snout to vent, 65 mm ..... **colimensis** (p. 169)
    Limbs shorter, separated when adpressed 16
16. Seventh labial not touching upper secondary temporal; primary temporal as large as upper secondary temporal; 24 scale rows; maximum length snout to vent, 51 mm ..... **parvulus** (p. 166)
    Seventh labial broadly in contact with upper secondary temporal; primary temporal present, smaller than upper secondary temporal; 22–24 scale rows around middle of body; maximum length snout to vent, 66 mm. **indubitus** (p. 168)
17. Primary temporal absent; limbs short, not touching when adpressed; seventh labial in contact with upper secondary temporal; 22 scale rows; dorsolateral lines growing dim posteriorly ..... **dicei** (p. 169)
    Primary temporal present 18
18. Four narrow dark dorsal lines and narrow dorsolateral light lines; 22–24 scale rows; no postnasal; limbs widely separated when adpressed; maximum snout to vent length, 76 mm ..... **copei** (p. 166)
    Dorsal pattern not of 4 narrow black lines 19
19. Bifurcating lines on head; lateral and dorsolateral light lines rarely reaching farther back than arm; scale rows, 26–28; maximum snout to vent length, 66 mm ..... **brevilineatus** (p. 164)
    No bifurcating lines on head 20
20. A postnasal; usually bronze olive, with lateral brown stripe, with sometimes trace of a dorsolateral light line; 26 scale rows; the limbs adpressed, the toes may or may not touch ..... **humilis** (p. 166)
    No postnasal 21
21. Scale rows 20 around body; ear small, median dorsal scales widened. **parviauriculatus** (p. 166)
    Scale rows more than 20 22
22. Scale rows 22 (rarely 24); body slender, dorsolateral lines distinct to tail; seventh labial usually touching upper secondary temporal; snout to vent 56 mm ..... **ochoterenai** (p. 169)
    Scale rows usually 24, rarely 22; dorsolateral lines to tail or not; parietal usually not enclosed but occasionally may be enclosed, variable. **brevirostris** (p. 168)

EUMECES SCHWARTZEI Fischer

Eumeces schwartzei Fischer, Abh. Nat. Ver. Hamburg, vol. 8, 1884, pp. 3-5, pl. 7, fig. 1.—Taylor, Univ. Kansas Sci. Bull., vol. 23, pt. 1, 1935 (1936), pp. 94–101, figs. 5, 6, pl. 1.

Type.—Naturh. Mus., Hamburg, Germany.[88]

Type locality.—"Einer kleinen Insel in der Laguna de Términos (Campeche Bai)."

Range.—Campeche, Tabasco, Yucatán; in Central America it is known from Guatemala and British Honduras. Reported from *Campeche:* Tres Brazos, Encarnación, Isla de Carmen; *Tabasco:* Tenosique; *Yucatán:* Chichen Itzá.

[88] This specimen was actually taken aboard ship in a cargo of dyewood and collected on board ship, alive, collector unknown. It was sent to the Zoologischen Garten in Hamburg. At its death it was sent to the Naturhistorischen Museum of Hamburg.

EUMECES ALTAMIRANI Dugès

Eumeces altamirani Dugès, La Naturaleza, ser. 2, vol. 1, 1887–1890 (1891), pp. 485, 486, pl. 22, 6 figs.—Taylor, Proc. Biol. Soc. Washington, vol. 49, 1936, pp. 55–58; Univ. Kansas Sci. Bull., vol. 23, 1935 (1936), pp. 102–103, fig. 6, pl. 2.—Smith and Necker, Anal. Esc. Nac. Cienc. Biol., vol. 3, 1943, pp. 190–192.

Type.—In Museo "Alfredo Dugès" in Colegio del Estado de Guanajuato in Guanajuato (without number); Federico Altamirano collector.

Type locality.—"Regiones Cálidas del Estado de Michoacán" (later designated by Dugès as Apatzingán de la Constitución, Michoacán).

Range.—Known only from Michoacán, on the southern slopes of the plateau. Reported from El Sabino, Apatzingán.

EUMECES LYNXE LYNXE (Wiegmann)

Scincus quinquelineatus var., Wiegmann, Isis von Oken, 1828, p. 373 (*non* Linnaeus).

Plestiodon quinquelineatum, Duméril and Bibron, Erpétologie générale, vol. 5, 1839, pp. 707–708 (part).

Euprepes lynxe Wiegmann, Herpetologia Mexicana, 1834, pp. 36–37.

Eumeces lynxe, Peters, Monatsb. Akad. Wiss. Berlin, 1864, p. 484.—Smith, Journ. Washington Acad. Sci., vol. 39, 1949, p. 41.

Eumeces lynxe lynxe, Taylor, Univ. Kansas Sci. Bull., vol. 23, pt. 1, 1935 (1936), pp. 163–173, pl. 41, figs. 18, 19, fig. B.

Plestiodon Bellii Gray, Catalogue of the specimens of lizards in the collection of the British Museum, 1845, p. 92 (type locality not designated, here restricted to El Chico, Hidalgo).

Type.—Zool. Mus., Berlin; F. Deppe collector.

Type locality.—"Specimena nostra prope Chico invenit Deppe." Very probably (and here restricted to) El Chico (or Mineral El Chico) near Pachuca, Hidalgo, where the species has been found to be abundant.

Range.—Known definitely from Hidalgo, Veracruz, San Luis Potosí and Puebla; recorded, probably erroneously, from Guerrero, Guanajuato and Michoacán. Reported from *Hidalgo:* Zacualtipan, San Miguel, Guerrero, Durango, El Chico; *Veracruz:* Jalapa, Mount Orizaba; *San Luis Potosí:* Alvarez; *Puebla:* Zacatlán.

EUMECES LYNXE FURCIROSTRIS Cope

Eumeces furcirostris Cope, Proc. American Philos. Soc., vol. 22, 1885, pp. 169–170.—Taylor, Univ. Kansas Sci. Bull., vol. 23, pt. 1, 1935 (1936), pp. 173–178, figs. 18, 20; Univ. Kansas Sci. Bull., vol. 29, 1943, pp. 272–273.

Type.—Acad. Nat. Sci. Philadelphia No. 11327; Dr. Flohr collector.

Type locality.—Jalapa, Veracruz.

Range.—Puebla, central northern Veracruz, and possibly eastern Hidalgo. Reported from *Puebla:* Tezuitlán; *Veracruz:* Toxtlacuaya, Jalapa, Las Vigas, Cofre de Perote; *Hidalgo:* Zacualtipan.

EUMECES SUMICHRASTI (Cope)

Plistodon sumichrasti Cope, Proc. Acad. Nat. Sci. Philadelphia, 1866, p. 321.

Eumeces sumichrasti, Bocourt, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 6, 1879, p. 422.—Taylor, Univ. Kansas Sci. Bull., vol. 23, 1935 (1936), pp. 178–186, figs. 21–23, pl. 12.—Smith and Necker, Anal. Esc. Nac. Cienc. Biol., vol. 3, 1943, pp. 192–194, pl. 3, fig. 4.—Smith, Journ. Washington Acad. Sci., vol. 39, 1949, p. 41.

Eumeces rovirosae Dugès, La Naturaleza, ser. 2, vol. 2, 1895–1896 (1895), pp. 298–299, pl. 13 (type locality, Mineral de Santa Fé, Chiapas; type in Alfredo Dugès Museum, Colegio del Estado de Guanajuato).

Eumeces schmidti Dunn, Proc. Acad. Nat. Sci. Philadelphia, vol. 84, Mar. 22, 1932, pp. 30–31 (type locality, Lancetilla, Honduras; Acad. Nat. Sci. Philadelphia No. 19877).

Type.—U.S.N.M. No. 6601; François Sumichrast collector.

Type locality.—"Orizava" *ex errore*, = Potrero, Veracruz. The specimen bears Sumichrast's original tag, "Potrero, No. 4, F. Sumichrast." Later Sumichrast published notes that he had found the species "en los encinales de Potrero, cerca de Cordoba a una altura de 590 metros."

Range.—Veracruz to Chiapas in lowlands; Central America; Honduras, British Honduras, and Guatemala. Reported from *Veracruz:* Potrero, Jalapa; *Chiapas:* Palenque, La Esperanza, Mineral de Santa Fé.

EUMECES BREVILINEATUS Cope

Eumeces brevilineatus Cope, U. S. Nat. Mus. Bull. 17, 1380, pp. 18–19, 44, 46.—Taylor, Univ. Kansas Sci. Bull., vol. 23, 1935 (1936), pp. 283–290, figs. 41, 42, 43, pl. 22.

Type.—Lectotype, designated by Taylor, loc. cit., U.S.N.M. No. 10159, one of four cotypes; G. W. Marnock collector.

Type locality.—Helotes, Bexar County, Tex.

Range.—Tamaulipas and Nuevo León; in the United States: southern Texas. Reported from *Tamaulipas:* 26 kilometers north of El Limón; *Nuevo León:* 4 miles west of Sabinas Hidalgo, 31 miles south of Sabinas Hidalgo.

EUMECES CALLICEPHALUS Bocourt

Eumeces callicephalus Bocourt, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 6, 1879, pp. 431–433, pl. 22D, figs. 2–2c, pl. 22E, fig. 2.—Taylor, Univ. Kansas Sci. Bull., vol. 23, 1935 (1936), pp. 290–298, figs. 44, 45, pl. 23.

Type.—Mus. Nat. Hist. Nat. Paris; Alfredo Dugès collector.

Type locality.—Guanajuato [Guanajuato].

Range.—Sonora (Álamos), Chihuahua, Durango, Zacatecas, Jalisco, Guanajuato, Michoacán, Querétaro (Huaxteca Potosina), Nayarit; in United States: Arizona (southeastern).

EUMECES TETRAGRAMMUS (Baird)

Plestiodon tetragrammus BAIRD, Proc. Acad. Nat. Sci. Philadelphia, 1858, p. 256.
Eumeces tetragrammus, COPE, U. S. Nat. Mus. Bull. 1, 1875, p. 45—TAYLOR, Univ. Kansas Sci. Bull., vol. 23, pt. 1, 1935 (1936), pp. 298–304, fig. 46; *ibid.*, vol. 29, 1943, p. 274.
[*Eumeces tetragrammus*] var. *funebrosus* Cope, Ann. Rep. U. S. Nat. Mus., 1898 (1900), p. 661 (type locality, Matamoros, Tamaulipas; U. S. N. M. No. 3120, two cotypes).

Type.—U. S. N. M. No. 3124; Darius Nash Couch collector.

Type locality.—"Lower Rio Grande." (Later indicated by Baird, as "Matamoras, Mex." A second specimen was at hand collected by Dr. Kennerly at "Salado River," U. S. N. M. No. 3139.)

Range.—Tamaulipas, San Luis Potosí, and Veracruz, in lowlands; in the United States: southern Texas. Reported from *Tamaulipas:* 3½ miles west of El Forlón, San José, Matamoros; *San Luis Potosí:* Antiguo Morelos, Ébano; *Veracruz:* south of Tampico.

EUMECES OBSOLETUS (Baird and Girard)

Plestiodon obsoletum BAIRD and GIRARD, Proc. Acad. Nat. Sci. Philadelphia, vol. 6, 1852, p. 129.
Eumeces obsoletus, COPE, U. S. Nat. Mus. Bull. 1, 1875, p. 45.—TAYLOR, Univ. Kansas Sci. Bull., vol. 23, pt. 1, 1935 (1936), pp. 305–320, figs. 47, 48, pl. 24.
Lamprosaurus guttulatus HALLOWELL, Proc. Acad. Nat. Sci. Philadelphia, 1852, pp. 206–207 (type locality, "Jornada del Muerte," New Mexico; Acad. Nat. Sci. Philadelphia).

Type.—U. S. N. M., No. 3133; John H. Clark collector.

Type locality.—"Valley of the Rio San Pedro of the Rio Grande del Norte," now Devils River, Tex.

Range.—Tamaulipas, Nuevo León, Coahuila, and Chihuahua. In United States: Arizona, New Mexico, and Texas, north to Utah, Colorado, Nebraska, and Kansas. Reported from *Tamaulipas:* Matamoros; *Nuevo León:* Santa Catarina; *Chihuahua:* Chihuahua (city); *Coahuila:* Cuatro Ciénegas.

EUMECES MULTIVIRGATUS (Hallowell)

Plestiodon multivirgatum HALLOWELL, Proc. Acad. Nat. Sci. Philadelphia, 1857, p. 215.
Eumeces multivirgatus, COPE, U. S. Nat. Mus. Bull. 1, 1875, p. 45.—TAYLOR, Univ. Kansas Sci. Bull., vol. 23, 1935 (1936), pp. 341–353, figs. 54–56, pls. 27, 28.

Type.—Acad. Nat. Sci. Philadelphia No. 9371; Dr. Hammond collector.

Type locality.—"Posa Creek, 460 miles west of Fort Riley, Kansas"(=Cow Creek,[88a] Larimer County, Colo.).

Range.—The central high plains and proplateau areas south from southwestern Nebraska to extreme western Texas, northern Arizona,

[88a] The original tag attached to the specimen definitely states Cow Creek. The "Posa" is a bad interpretation of poor chirography.

and presumably western Chihuahua. Recorded in Mexico only from *Chihuahua:* no specific locality.[89]

EUMECES HUMILIS Boulenger

Eumeces Bocourtii (non Brocchi) BOULENGER, Ann. Mag. Nat. Hist., ser. 5, vol. 11, 1883, p. 342.

Eumeces humilis BOULENGER, Catalogue of the lizards in the British Museum, vol. 3, 1887, p. 377 (new name for *Eumeces Bocourtii*).—TAYLOR (part), Univ. Kansas Sci. Bull., vol. 23, 1935 (1936), pp. 358–363, figs. 58, 59.—SMITH, Proc. New England Zool. Club, vol. 21, 1942, pp. 94, 95.

Type.—Brit. Mus. Nat. Hist. Nos. 83,4,5,33–34 (two cotypes); Alfonso Forrer collector.

Type locality.—Presidio [Sinaloa]. There is a strong presumption that the locality is in Sinaloa although not known positively to be so.

Range.—Sinaloa. Known only from the type locality. (Specimens previously referred to this species from Texas and New Mexico have been referred to another form, *Eumeces taylori,* by Smith.)

EUMECES PARVULUS Taylor

Eumeces parvulus TAYLOR, Proc. Biol. Soc. Washington, vol. 46, 1933, pp. 175–178, fig. 1; Univ. Kansas Sci. Bull., vol. 23, 1935 (1936), pp. 363–367, figs. 59, 60, pl. 31, figs. 3, 4.—SMITH, Copeia, 1943, p. 250.

Type.—U.S.N.M. No. 56903; collector unknown. Originally in the Julius Hurter collection.

Type locality.—Tepic, Nayarit.

Range.—Colima, Nayarit and Sinaloa. Reported from *Colima:* Paso del Río; *Nayarit:* Tepic, Compostela, Minimán; *Sinaloa:* Plomosas.

EUMECES PARVIAURICULATUS Taylor

Eumeces parviauriculatus TAYLOR, Proc. Biol. Soc. Washington, vol. 46, 1933, pp. 178–181, fig. 2; Univ. Kansas Sci. Bull., vol. 23, 1935 (1936), pp. 368–371, fig. 59, pl. 31, fig. 5.

Type.—U.S.N.M. No. 47536; E. A. Goldman collector.

Type locality.—Near Álamos, Sonora.

Range.—Sonora and western Chihuahua. Reported from *Sonora:* Near Álamos; *Chihuahua:* Mojárachic.

EUMECES COPEI Taylor

Eumeces copei TAYLOR, Proc. Biol. Soc. Washington, vol. 46, 1933, pp. 133–137; Univ. Kansas Sci. Bull., vol. 23, 1935 (1936), pp. 387–394, figs. 64, 65, pl. 33.

Type.—EHT-HMS No. 29717 (EHT field No. 3859); H. M. Smith and E. H. Taylor collectors.

Type locality.—Ten miles southeast of Asunción, in the western part of the state of México.

[89] This specimen, U. S. N. M. No. 30833, very likely represents a distinct species (see Taylor, *loc. cit.*, p. 353), but we hesitate to attempt a characterization of it because of certain obvious abnormalities the specimen possesses, and because of its intimate and entirely uncertain relationship with populations farther to the north in Arizona and New Mexico.

Range.—Puebla, Distrito Federal, Morelos, México, and Michoacán. Reported from *Puebla:* Near Río Frío (México); *México:* Río Frío, near Salazar, 10 miles southeast of Asunción, 8 miles west of Villa Victoria, 15 kilometers west of Toluca, 3 miles west of Zinacatepec; *Morelos:* Tres Marías, Lagunas de Zempoala; *Distrito Federal:* Santa Lucía; *Michoacán:* Cerro de Tecolote, Mount Tancítaro.

EUMECES SKILTONIANUS (Baird and Girard)

Plestiodon skiltonianum Baird and Girard, Proc. Acad. Nat. Sci. Philadelphia, 1852, p. 69.

Eumeces skiltonianus, Cope, U. S. Nat. Mus. Bull. 1, 1875, p. 45.—Rodgers and Fitch, Univ. California Publ. Zool., vol. 48, 1947, pp. 193–198, pl. 8a (col.).

Eumeces skiltonianus skiltonianus, Taylor, Univ. Kansas Sci. Bull., vol. 23, pt. 1, 1935 (1936), pp. 415–428, fig. 68, pls. 35, 36, figs. 2, 3, 4.

Eumeces skiltonianus amblygrammus Cope, Ann. Rep. U. S. Nat. Mus., 1898 (1900), p. 643 (type locality, Fort Humboldt, Calif.; U.S.N.M. No. 3166).

Type.—U.S.N.M. No. 3172, two cotypes, smaller one designated as lectotype; Rev. George Gary (or Geary) collector.

Type locality.—Oregon, here restricted to The Dalles.

Range.—Southern British Columbia to northwestern Baja California and adjacent islands, and eastward to western Montana and Utah. Reported in Baja California from Los Coronados Islands, Todos Santos Islands; Ensenada, San José, Rancho San José, Alcatraz, San Pedro Mártir Mountains, Arroyo Encantada, San Quintín, etc.

EUMECES GILBERTI RUBRICAUDATUS Taylor

Eumeces quadrilineatus Hallowell (*nec* Blyth), Reports of explorations and surveys, to ascertain the most practicable and economical route for a railroad from the Mississippi River to the Pacific Ocean, 1853–6, vol. 10, pt. 4, Zool., Rept., 1859, p. 10, pl. 9, figs. 3a, b, c, d (type locality, "Upper California, near Mohave river and in San Bernardino Valley," here restricted to Mojave River; U. S. Nat. Mus.).

Eumeces gilberti rubricaudatus Taylor, Univ. Kansas Sci. Bull., vol. 23, 1935 (1936), pp. 446–451, figs. 72–73, pl. 39, vol. 29, 1943, p. 277; Rodgers and Fitch, Univ. California Publ. Zool., vol. 48, 1947, pp. 203–205, pl. 8e (col.).

Type.—California Acad. Sci. No. 39002.

Type locality.—Tehachapi Mountains, Calif.

Range.—Southern California and extreme northwestern Baja California. Reported in Mexico only from *Baja California:* San Antonio del Mar, North Coronado Island.

EUMECES LAGUNENSIS Van Denburgh

Eumeces lagunensis Van Denburgh, Proc. California Acad. Sci., ser. 2, vol. 5, 1895, pp. 79, 134–135, pl. 13.—Taylor, Univ. Kansas Sci. Bull., vol. 23, 1935 (1936), pp. 431–437, figs. 69, 70, pl. 36, fig. 1.—Rodgers and Fitch, Univ. California Publ. Zool., vol. 48, 1947, pp. 205–206.

Plestiodon lagunensis, VAN DENBURGH and SLEVIN, Proc. California Acad. Sci., ser. 4, vol. 11, 1921, pp. 28, 40, 44, 52.

Plestiodon skiltonianus lagunensis, NELSON, Mem. Nat. Acad. Sci., vol. 16, 1921, pp. 114–115.

Eumeces skiltonianus lagunensis, LINSDALE, Univ. California Publ. Zool., vol. 38, 1932, p. 374.

Eumeces skiltonianus, LOVERIDGE, Copeia, No. 173, 1930, pp. 111–112.

Type.—Originally California Acad. Sci. Nos. 400 and 402, cotypes (destroyed in the earthquake and fire in 1906); Gustav Eisen collector. Neotype.—U. S. N. M. No. 67398; W. M. Mann collector; February 1924, "on the Trail between Loreto and Comondú."

Type locality.—San Francisquito, Sierra de la Laguna, Baja California.

Range.—Confined to the southern third of Baja California in the mountains. Reported from *Baja California:* Comondú; San Francisquito, Sierra de la Laguna; between Loreto and Comondú.

EUMECES BREVIROSTRIS (Günther)

Mabouia brevirostris GÜNTHER, Proc. Zool. Soc. London, 1860, pp. 316–317.

Eumeces brevirostris, BOCOURT, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 6, 1879, pp. 439–440, pl. 22A, figs. 7, 7a, 7b, and pl. 22E, fig. 1a.—TAYLOR, Univ. Kansas Sci. Bull., vol. 23, pt. 1, 1935 (1936), pp. 459–466, figs. 76, 77, pl. 41.

Type.—Brit. Mus. Nat. Hist.; Auguste Sallé collector.

Type locality.—Oaxaca, here restricted to the city of Oaxaca.

Range.—Durango to Oaxaca and east to Veracruz, in highlands. Reported from *Guerrero:* Omilteme; *Oaxaca:* Cerro San Felipe, La Parada, San José Lachiguiri, Tehuantepec; *Veracruz:* Laguna, Perote, San Bernardino, Totalco, Orizaba; *Puebla:* Near Río Frío (México), Texmelucan, El Seco (Km. 205); *Durango:* Ciudad, El Salto, Coyote; *Jalisco:* La Cumbre de los Arrastrados, Talpa, Mascota, Sierra de Juanocatlan, La Laguna; *Michoacán:* No specific record.

EUMECES INDUBITUS Taylor

Eumeces indubitus TAYLOR, Univ. Kansas Sci. Bull., vol. 21, 1933 (1934), pp 257–267, pls. 24, 25; vol. 23, pt. 1 (1936), pp. 466–472, figs. 76, 78, pl. 42.

Type.—EHT–HMS No. 29715 (EHT field No. 1731); E. H. Taylor and H. M. Smith collectors.

Type locality.—Kilometer 63 (Mexico-Cuernavaca highway), near Cuernavaca, Morelos.

Range.—Known from the states of Morelos, México, and Michoacán. Reported from *Morelos:* near Cuernavaca, Tepoztlán, Lagunas de Zempoala, Huajintlán; *México:* Asunción; *Michoacán:* 15 miles southeast of Zitácuaro, Puerto Hondo.

EUMECES DUGESII Thominot

Eumeces (*Plestiodon*) *Dugesii* THOMINOT, Bull. Soc. Philom. Paris, ser. 7, vol. 7 (1882–1883), 1883, pp. 138–139.—TAYLOR, Univ. Kansas Sci. Bull., vol. 23, pt. 1, 1935 (1936), pp. 472–478, figs. 76, 79, pl. 43.

Type.—Mus. Hist. Nat. Paris; Alfredo Dugès collector.

Type locality.—"Province Guanajuato," here restricted to the city of Guanajuato.

Range.—Guanajuato, Jalisco (?), and Michoacán. Reported from *Guanajuato:* Guanajuato; *Michoacán:* Carapa, Rancho San José, 9 miles west of Zacapú, Tangancícuaro, Patamban, El Soledad (Tancítaro), Apatzingán; *Jalisco:* Nevado de Colima.[90]

EUMECES COLIMENSIS Taylor

Eumeces colimensis TAYLOR, Publ. Field Mus. Nat. Hist., zool. ser., vol. 20, 1935, pp. 77–80, fig. 7; Univ. Kansas Sci. Bull., vol. 23, 1935 (1936), pp. 478–482, figs. 76–80, pl. 40, fig. 3.

Type.—Chicago Nat. Hist. Mus. No. 1649; collector unknown.

Type locality.—Colima, Colima.

Range.—Known only from the type locality.

EUMECES DICEI Ruthven and Gaige

Eumeces dicei RUTHVEN and GAIGE, Occ. Pap. Mus. Zool. Univ. Michigan, No. 260, 1933, pp. 1–3.—TAYLOR, Univ. Kansas Sci. Bull., vol. 23, 1935 (1936), pp. 482–485, figs. 76–81; vol. 29, 1943, pp. 280–282.

Type.—Mus. Zool. Univ. Michigan No. 69253; Lee R. Dice collector.

Type locality.—Marmolejo, Tamaulipas.

Range.—Tamaulipas and Nuevo León. Reported from *Nuevo León:* Pablillo, Cieneguillas south of Galeana; *Tamaulipas:* Marmolejo.

EUMECES OCHOTERENAI Taylor

Eumeces ochoterenae TAYLOR, Proc. Biol. Soc. Washington, vol. 46, 1933, pp. 129–133, 2 figs.; Univ. Kansas Sci. Bull., vol. 23, 1935 (1936), pp. 485–489, figs. 76, 82, pl. 43.

Type.—EHT-HMS No. 29716 (EHT Field No. 1015); E. H. Taylor and H. M. Smith collectors.

Type locality.—Mazatlán; "4 mi. north of Chilpancingo, Guerrero" (actually about 15 km. south of Chilpancingo).

Range.—Known only from Guerrero; probably confined to the Sierra Madre del Sur. Reported from Agua del Obispo, 7 miles east of Chilpancingo, Mazatlán, vicinity of Chilpancingo, between Rincón and Cajones, Chilapa.

[90] Gadow (Proc. Zool. Soc. London, 1905, pp. 195, 218–219) records a "*fuscirostris*" (=*furcirostris*) from this locality. Inasmuch as the most distinctive feature of *d. furcirostris* is the possession of three supraoculars, it seems highly probable that Gadow observed this character in his specimen from the Nevado. In such case the specimen would be *dugesii*, the only species in that area that possesses this character.

Family ANELYTROPSIDAE Cope

Anelytropsidae Cope, Proc. Acad. Nat. Sci. Philadelphia, 1864, p. 228; Ann. Rep. U. S. Nat. Mus. for 1898 (1900), p. 665.

Genera.—A single genus, *Anelytropsis* Cope, is known.

Range.—Foothills of the plateau in central eastern Mexico.

Genus ANELYTROPSIS Cope

Anelytropsis Cope, Proc. Amer. Philos. Soc., vol. 22, 1885, p. 380; Ann. Rep. U. S. Nat. Mus. for 1898 (1900), p. 667.

Genotype.—*Anelytropsis papillosus* Cope.

Range.—Central eastern part of Mexico.

Species.—One.

ANELYTROPSIS PAPILLOSUS Cope

Anelytropsis papillosus Cope, Proc. Amer. Philos. Soc., vol. 22, 1885, pp. 380–381, pl. (unnumbered), fig. 9 (opposite p. 184).—Smith, Univ. Kansas Sci. Bull., vol. 22, 1935, p. 146, pl. 24, figs. 2, 3.

Type.—Unknown; originally two cotype specimens.

Type locality.—Near Jalapa, Veracruz.

Range.—Eastern San Luis Potosí and eastern central Veracruz. Reported from *San Luis Potosí:* 20 miles south of Valles; *Veracruz:* Jalapa, Motzorongo.

Family TEIIDAE Gray

Teiidae Gray, Philos. Mag., ser. 2, vol. 2, 1827, p. 55.

Genera.—About 40 genera, 3 of which, *Cnemidophorus*, *Ameiva*, and *Gymnophthalmus*, occur in Mexico.

KEY TO MEXICAN GENERA OF TEIIDAE

1. Anterior nasal plates not separated by a frontonasal; frontoparietal present; inner finger well developed; scales granular; eyelids present 2
   Nasal plates widely separated by a frontonasal; inner finger absent; no eyelids; scales cycloid, quincuncial; prefrontals present but no frontoparietals. **Gymnophthalmus** (p. 192)
2. Central gular scales not or scarcely enlarged as compared with adjacent lateral scales; tongue somewhat widened posteriorly, and notched behind; no basal sheath between base of tongue and larynx ..... **Cnemidophorus** (p. 174)
   Central gular scales enlarged, often abruptly so; tongue not, or less widened posteriorly, a basal sheath evident between the base of tongue and larynx. **Ameiva** (p. 170)

Genus AMEIVA Meyer

Ameiva Meyer, Synopsis reptilium . . . sistema generum methodum . . ., 1795, p. 27.

Genotype.—*Lacerta americana* Seba [=*Ameiva ameiva* (Linnaeus)].

Range.—Tamaulipas and Jalisco to Brazil; West Indies.

Species.—About 13, with some 28 forms. Two species with 11 subspecies occur in Mexico.

KEY TO MEXICAN SPECIES OF AMEIVA

1. Outer row of ventrals considerably smaller than the others.
festiva edwardsii (p. 174)
Outer row of ventrals as large as the others ---- 2
2. Preanal scales in 2 rows ---- 3
Preanal scales in one row or with no more than 1 posterior scale divided ---- 9
3. Two rows of granules between third supraocular and superciliaries; third supraoculars generally completely separated from frontoparietals by granules ---- **undulata parva** (p. 173)
A single row of granules between third supraoculars and superciliaries; third supraoculars in contact with frontoparietals anteriorly ---- 4
4. Median gulars abruptly enlarged ---- 6
Median gulars little enlarged, gradually merging with lateral gulars ---- 5
5. Upper lateral vertical light lines from axilla to groin, 12 or more light lines.
undulata gaigeae (p. 172)
Upper lateral vertical lines from axilla to groin, 11 or less light lines.
undulata hartwegi (p. 171)
6. Median gulars irregular or no more than 2 regular (87 percent); lamellae under fourth toe 28 or more; no upper lateral light stripe, although large spots take its place in adult males ---- **undulata podarga** (p. 172)
At least 3 median gulars regular (100 percent in all except *u. amphigramma*, with 87 percent); lamellae variable; upper lateral light stripe present or absent ---- 7
7. Dorsolateral dark stripes present except in some large adults, in which the upper lateral light spots if present are much narrower than the spaces between them; lamellae on the fourth toe usually (88 percent) 27 or less.
undulata stuarti (p. 173)
No dorsolateral dark stripes; upper lateral light spots as wide as or wider than spaces between, or represented by a continuous upper lateral light stripe; lamellae variable ---- 8
8. Upper lateral light spots or lines not contacting dorsolateral light area or line in adult males, separated by a narrow dark area; lateral gulars not or scarcely enlarged ---- **undulata amphigramma** (p. 172)
Upper lateral light spots merged with dorsolateral light line in adult males; lateral gulars markedly enlarged ---- **undulata thomasi** (p. 173)
9. Last preanal scale generally (86 percent) divided; lateral markings showing little tendency to be arranged vertically; middorsal markings greatly reduced ---- **undulata dextra** (p. 173)
Last preanal scale generally entire; lateral markings tending to be arranged vertically; middorsal markings well developed ---- 10
10. Upper lateral light spots in adult males large, wider than intervening dark spaces; generally (95 percent) 5 or less rows of preanals.
undulata sinistra (p. 174)
Upper lateral light spots in adult males small, narrower than intervening dark spaces in all males; frequently (65 percent) 6 or more rows of preanals
undulata undulata (p. 174)

AMEIVA UNDULATA HARTWEGI Smith

Ameiva undulata hartwegi SMITH, Proc. Biol. Soc. Washington, vol. 53, 1946, p. 55.—SMITH and LAUFE, Univ. Kansas Sci. Bull., vol. 31, 1946, pp. 35–30, pl. 2, fig. b.

861316—50——12

Type.—U.S.N.M. No. 108600; H. M. Smith collector.

Type locality.—"Across the Río Usumacinta from Piedras Negras, Guatemala, in Chiapas, Mexico."

Range.—Atlantic slopes of Mexico and Guatemala from the vicinity of the southeastern end of Laguna de Términos south and eastward across the base of the Yucatán Peninsula to northwestern Honduras. Recorded in Mexico only from Chiapas (the type locality); it probably occurs also in Campeche and Quintana Roo.

AMEIVA UNDULATA GAIGEAE Smith and Laufe

Ameiva undulata gaigeae Smith and Laufe, Univ. Kansas Sci. Bull., vol. 31, 1946, pp. 37–39, fig. 1C, pl. 2C.

Type—EHT-HMS No. 11927; Progreso, Yucatán; Hobart M. Smith collector.

Type locality.—Progreso, Yucatán.

Range.—Northern half of the Yucatán Peninsula and southward to the island Carmen along the extreme eastern coast. Reported from *Yucatán:* Chichen Itzá, La Vega, Tunkas; *Quintana Roo:* Cobá, Mujeres Island; *Campeche:* Champotón.

AMEIVA UNDULATA PODARGA Smith and Laufe

Ameiva undulata podarga Smith and Laufe, Univ. Kansas Sci. Bull., vol. 31, 1946, figs. 1D, 2A, pp. 40–43.

Type.—EHT-HMS No. 14471; Hobart M. Smith and David H. Dunkle collectors.

Type locality.—Seven miles west of Ciudad Victoria, Tamaulipas.

Range.—Known from southern Tamaulipas and eastern San Luis Potosí and probably extends into Veracruz and Hidalgo lowlands. Reported from *Tamaulipas:* Alta Mira, Victoria, Hacienda La Clementina near Forlón, Antiguo Morelos; *San Luis Potosí:* near Ciudad del Maíz, Río Guayala near Magiscatzin, near Valles, Huichihuayán, Tamazunchale.

AMEIVA UNDULATA AMPHIGRAMMA Smith and Laufe

Ameiva undulata amphigramma Smith and Laufe, Trans. Kansas Acad. Sci., vol. 48, 1945, pp. 338–344; Univ. Kansas Sci. Bull., vol. 31, 1946, pp. 43–47, pl. 1, figs. C, D.

Type.—EHT-HMS No. 11983; H. M. Smith collector.

Type locality.—San Andrés Tuxtla, Veracruz.

Range.—Northern Veracruz southward at low elevations to the Isthmus of Tehuantepec, westward into valleys extending into extreme eastern Oaxaca and probably northeastern Puebla. Reported from *Veracruz:* Atoyac, Boca del Río, Cuatotolapam, Lake Catemaco, Potrero Viejo, Rodríguez Clara, San Andrés Tuxtla, etc.; *Oaxaca:* Cosolapa, Matías, Agua Fría, Tuxtepec; *Tabasco:* La Venta; *Puebla:* 1 mile northeast of Huauchinango.

AMEIVA UNDULATA THOMASI Smith and Laufe

Ameiva undulata thomasi Smith and Laufe, Univ. Kansas Sci. Bull., vol. 31, 1946, pp. 47–50.

Type.—EHT-HMS No. 15327, H. D. Thomas, collector.

Type locality.—La Libertad, Chiapas, near Río Cuilco where it crosses the Guatemalan border.

Range.—Upper tributaries of Río Grijalva in the interior of Chiapas and adjacent Guatemala. Recorded in Mexico only from the type locality.

AMEIVA UNDULATA STUARTI Smith

Ameiva undulata stuarti Smith, Proc. Biol. Soc. Washington, vol. 53, 1940, pp. 55–56.—Smith and Laufe, Univ. Kansas Sci. Bull., vol. 31, 1946, pp. 50–51, fig. 1B, pl. 1, fig. B.

Type.—U.S.N.M. No. 108601, H. M. Smith collector.

Type locality.—Palenque, Chiapas.

Range.—Atlantic slopes of Mexico from the middle of the Isthmus of Tehuantepec eastward in the lowlands to the southern borders of Laguna de Términos and to Tenosique, Tabasco; southward up the valley of the Río Grijalva at least as far as Tuxtla Gutiérrez, Chiapas. Reported from *Chiapas:* Palenque, San Ricardo, Tuxtla Gutiérrez; *Campeche:* Balchacaj, Tres Brazos; *Tabasco:* Tenosique, Frontera, Teapa; *Oaxaca:* Isthmus of Tehuantepec (intergrades?).

AMEIVA UNDULATA PARVA Barbour and Noble

Ameiva undulata parva Barbour and Noble, Bull. Mus. Comp. Zool., vol. 59, 1915, pp. 476–477.—Smith and Laufe, Univ. Kansas Sci. Bull., vol. 31, 1946, pp. 51–54, fig. 1A, pl. 2, fig. A.

Type.—Mus. Comp. Zool. No. 5831; Van Patten collector.

Type locality.—Guatemala (restricted by Smith and Laufe to Mazatenango).

Range.—Pacific slopes from the Isthmus of Tehuantepec in Oaxaca to Costa Rica. Reported in Mexico from *Oaxaca:* near Niltepec; *Chiapas:* Tapachula, Tonalá, La Esperanza, Huehuetán.

AMEIVA UNDULATA DEXTRA Smith and Laufe

Ameiva undulata dextra Smith and Laufe, Univ. Kansas Sci. Bull., vol. 31, 1946, pp. 54–59, fig. 2C.

Type.—EHT-HMS No. 11966; E. H. Taylor and H. M. Smith collectors.

Type locality.—Near Rincón, Guerrero.

Range.—Southern slope of the Sierra Madre del Sur. Known from Oaxaca and Guerrero. Reported from *Oaxaca:* Juquila; *Guerrero:* Chilpancingo, Cocoyul, Los Cajones, Rincón, Órganos, El Treinta, Acapulco, 8 miles east of Coyuca.

AMEIVA UNDULATA SINISTRA Smith and Laufe

Ameiva undulata sinistra Smith and Laufe, Univ. Kansas Sci. Bull., vol. 31, 1946, pp. 59–62.

Type.—EHT-HMS No. 11908; H. M. Smith collector.

Type locality.—Manzanillo, Colima.

Range.—Pacific slopes from Jalisco to the arid Balsas basin in Michoacán, thence inland along the northern drainage of the Río Balsas to Puebla. Reported from *Colima:* Colima, Quesería, Hda. Paso del Río, Salvador, Pascuales, Periquillo, Manzanillo; *Jalisco:* Tenacatita, Ixtapa, Tenacatita Bay; *Michoacán:* Uruapan; *Puebla:* Chiautla; *Morelos:* Puente de Ixtla.

AMEIVA UNDULATA UNDULATA (Wiegmann)

Cnemidophorus undulatus Wiegmann, Herpetologia Mexicana, 1834, p. 27.

Ameiva undulata, Gray, Catalogue of the specimens of lizards in the British Museum, 1845, p. 20.

Ameiva undulata undulata, Smith and Laufe, Univ. Kansas Sci. Bull., vol. 31, 1946, pp. 62–64, fig. 2B.

Type.—Zool. Mus. Berlin; F. Deppe collector.

Type locality.—Mexico, by inference. Restricted by Smith (Proc. Biol. Soc. Washington, vol. 53, 1940, p. 56) to Tehuantepec.

Range.—Pacific slopes of the Isthmus of Tehuantepec as far west as Puerto Ángel, and eastward to Niltepec. Known only in the state of *Oaxaca:* El Limón, Palmar, Tres Cruces, Cafetal Concordia, Juchitán, Puerto Ángel, Totontepec, Tehuantepec, Ranchería La Manga.

AMEIVA FESTIVA EDWARDSII Bocourt

Ameiva edwardsii Bocourt, Ann. Sci. Nat., ser. 5, vol. 17, 1873, art. 17, pp. 1–2.

Ameiva festiva edwardsii, Stuart, Occ. Pap. Mus. Zool. Univ. Michigan, No. 471, 1943, p. 21, fig. 7.—Smith and Laufe, Univ. Kansas Sci. Bull., vol. 31, 1946, pp. 64–66.

Type.—Mus. Hist. Nat. Paris; Commission Scientifique collector.

Type locality.—Izabal and Santa María de Panzós, near Río Polochic, Guatemala; here restricted to Panzós.

Range.—Atlantic foothills from the Isthmus of Tehuantepec through Honduras, in heavy forests. Recorded in Mexico only from *Chiapas:* Ixtacomitán, Palenque, across the Río Usumacinta from Piedras Negras (Petén, Guatemala).

Genus CNEMIDOPHORUS Wagler

Cnemidophorus Wagler, Natürliches System der Amphibien . . ., 1830, p. 154.—Burt, U. S. Nat. Mus. Bull. 154, 1931.—Burger, Chicago Acad. Sci. Nat. Hist. Misc., No. 65, 1950, pp. 1–9.

Aspidoscelis Fitzinger, Systema reptilium, 1843, p. 20 (type, *Lacerta sexlineata* Linnaeus).

Verticaria Cope, Proc. Amer. Philos. Soc., vol. 11, 1869, p. 158 (type, *Cnemidophorus hyperythrus* Cope).

Genotype.—*Seps murinus* Laurenti.

Range.—North America south from Oregon, Wisconsin, and Maryland through Central America to southern Brazil and Bolivia.

Species.—About 18, and a total of about 47 species and subspecies; 15 species and 41 forms, as here recognized, occur in Mexico. These 18 species represent 5 distinct groups, all but one of which (the *lemniscatus* group, restricted to Central and South America, of 3 species and 5 forms as recognized by Burt, *op. cit.*), occur in Mexico.

KEY TO MEXICAN SPECIES OF CNEMIDOPHORUS

1. Only one frontoparietal scale [91] 2
   Two frontoparietals 9
2. Dorsal surface unicolor, not striped or reticulated ..... **hyperythrus pictus** (p. 186)
   Dorsal surface striped or reticulated, not unicolor 3
3. Lateral stripes more or less broken; at least a few spots or cross bars present; body often tessellated; adults large ..... **ceralbensis** (p. 188)
   Lateral stripes distinct and in even, continuous lines; spots and cross bars absent; size always small 4
4. Usually 2 or 3 longitudinal light lines in vertebral area 5
   Usually 1 median dorsal light line, forked anteriorly or not 6
5. Usually 3 light lines along middle of back; second supraocular usually without granules between it and frontal ..... **hyperythrus hyperythrus** (p. 187)
   Usually 2 light lines; second supraocular usually at least in part separated from frontal by granules ..... **hyperythrus beldingi** (p. 186)
6. Dorsal stripe not of same intensity and width as lateral stripes but fainter and usually narrower 7
   Dorsal stripe of same intensity and width as lateral stripes 8
7. More than half of second supraocular usually in contact with frontal. **hyperythrus schmidti** (p. 187)
   Half or less than half of second supraocular usually in contact with frontal. **hyperythrus beldingi** (p. 186)
8. Ground color of sides (between the 2 distinct lateral stripes) reddish gray; dorsal ground color gray or black, abruptly contrasted with lateral ground color ..... **hyperythrus danheimae** (p. 186)
   Ground color of sides not usually reddish gray, but often reddish or brownish; dorsal ground color of same general shade as that of the sides and not in sharp contrast to it ..... **hyperythrus caeruleus** (p. 186)
9. Supraoculars normally 3; striped at least in the young 10
   Supraoculars normally 4, *or*, if 3, no stripes at any stage, but a pattern of small, scattered light spots on a dark background 15
10. Scales between midventral scutes and anus 4 to 8; snout-vent measurement never exceeding 92 mm 12
    Scales between midventral scutes and anus 9 to 15; snout-vent measurement reaching 138 mm 11
11. Adults and subadults spotted, the spots often dim ..... **guttatus guttatus** (p. 179)
    Adults and subadults (as well as young) striped, the stripes sometimes broken up into spots ..... **guttatus immutabilis** (p. 180)

[91] The species possessing this character were formerly regarded as members of the genus *Verticaria* Cope. Burt (U. S. Nat. Mus. Bull. 154, 1931, p. 14) has concluded, however, that the group is not a natural one, since one species (*ceralbensis*) is related to the *tesselatus* group, while the others are related to the *sexlineatus* group. The character is, furthermore, subject to a slight variation.

12. An accessory scute between frontoparietal and parietal.
deppii cozumelus (p. 179)
No accessory scute 13
13. Femoral pores usually 17 or fewer (81–82 percent) 14
Femoral pores usually 18 or more (94 percent) ..... **deppii deppii** (p. 178)
14. Lower preocular generally (79 percent) in contact with loreal; a broad mid-dorsal light band ..... **deppii lineatissimus** (p. 179)
Lower preocular generall (73 percent) not in contact with loreal; narrow light stripes on back as on sides ..... **deppii oligoporus** (p. 179)
15. Enlarged scales immediately preceding gular fold (mesoptychials) small (not more than 3 times diameter of smallest scales in median part of pregular fold); *or*, if larger, no evidence whatever of longitudinal light lines, or else at least a few dark spots on throat below level of ear openings 16
Mesoptychials larger; a lined pattern always present in the young, generally in adults; no dark spots on throat below level of ear openings; *or*, if less than 3 times diameter of smallest scales in median part of pregular fold, 7 light lines and intervening dark spaces absolutely straight, continuous and disconnected 28
16. Mesoptychials moderately or considerably enlarged, more than 3 times diameter of smallest scales in median part of pregular fold 17
Mesoptychials smaller 19
17. No evidence of a longitudinal arrangement of lines on back 18
Dorsal surface distinctly lined ..... **tesselatus** (p. 188)
18. No spotting in area above level of tympanum and anterior to insertion of forearm, spots relatively well defined, very small, not yellowish.
bacatus (p. 187)
Spots present in area above tympanum and anterior to insertion of forearm; spots often obscure and diffuse, usually orange or yellowish.
catalinensis (p. 188)
19. Ventral surfaces of tail and limbs more or less suffused with red or pink .. 20
Not so 21
20. Black markings on temporal regions absent or few or ill-defined; dorsal and lateral markings on body showing both transverse and longitudinal arrangement in at least large specimens; each dark unit or spot square or rectangular in outline, not noticeably rounded ..... **tigris rubidus** (p. 191)
Black markings on temporal region well defined; dorsal and lateral markings on body showing a predominantly longitudinal arrangement; back covered by alternate longitudinal chains of black and white, individual spots in black chain rarely square or rectangular ..... **tigris celeripes** (p. 190)
21. Dorsal markings consisting of either fine reticulations or light spots, *and* these markings without longitudinal arrangement 22
Dorsal markings with at least some indication of longitudinal arrangement 23
22. Labials deep or moderate brown or black ..... **tigris martyris** (p. 191)
Labials light gray, slate or light brown ..... **tigris canus** (p. 190)
23. Dorsal light lines only 3 on each side (exclusive only of a pair of lateral lines), twice as wide as interspaces ..... **maximus** (p. 188)
Dorsal light lines more numerous or narrower, or both 24
24. Dorsal pattern of 6–8 persistent longitudinal light stripes 25
Dorsal pattern of fewer than 6 unbroken light stripes; at least lower lateral stripe on each side broken by dark vertical bars 27

25. Dark fields between dorsal light stripes unspotted and unbroken throughout life; entire ventrum black in adults ..... **tigris aethiops** (p. 189)
    At least some of dark fields broken into rows of spots; ventrum not entirely black in adults 26
26. Middorsal dark field or row of spots distinctly wider than paravertebral light stripes; throat white, spotted or barred with black. **tigris multiscutatus** (p. 191)
    Middorsal dark field or row of spots as wide as or slightly narrower than paravertebral light stripes; throat and chest black; belly spotted. **tigris gracilis** (p. 188)
27. Four longitudinal light stripes persisting unbroken in middorsum of adults, the dark fields between represented by rows of black spots; sides with bold vertical bars ..... **tigris tigris** (p. 189)
    Six longitudinal light stripes persisting unbroken in adults, or, if any broken, dorsal pattern generally light and without any bold markings. **tigris marmoratus** (p. 190)
28. Anterior nasal in contact with second upper labial; femoral pores never more than 14 42
    Anterior nasal usually separated from second upper labial; if in contact, femoral pores usually more than 14 29
29. Enlarged scales preceding gular fold relatively small, frequently grading into granular scales of fold 30
    Enlarged scales preceding gular fold relatively large, abruptly differentiated from granular scales of throat 31
30. Postantebrachials enlarged; ventral surfaces light bluish in adults; juvenile striped pattern retained throughout life; maximum snout-vent length 70 mm.; dorsal scales relatively large, 50 to 70 in a transverse row between enlarged belly plates ..... **inornatus** (p. 184)
    Postantebrachials not enlarged; belly, chest, or gular region dark (black) in adults; snout-vent length reaching 95 mm.; dorsal scales 85 or more in a transverse row ..... **tigris aethiops** [92] (p. 189)
31. In addition to a dorsolateral light stripe on tail, a lateral light stripe present, bordered below by a black line (near base of tail) continuing onto otherwise unicolor posterior surface of thigh; no light spots in dark field between stripes in adults; postantebrachials not enlarged in either sex; neither sex dark blue or orange below ..... **sexlineatus** (p. 184)
    No lateral light stripe on tail, at least not distinguishable from ventral tail color; thighs mottled or unicolor, no posterior light stripe except sometimes feebly indicated at insertion of leg; light spots often present in dark fields between stripes; postantebrachials distinctly enlarged generally, sometimes less so in females; males frequently dark blue on belly or chest, or else cream, not at all bluish 32
32. Only 5 light lines, including a vertebral, 2 dorsolateral and 2 lateral lines through the ear; ventral surfaces cream even in males, never blue; light lines very broad, more than half width of intervening dark spaces in adults; no marking between light lines, except series of small spots in dark spaces in juveniles (disappearing in adults) ..... **burti** (p. 185)
    Not so 33

[92] Young only key out here; adults key out through couplet 16 to couplet 25.

33. Space between paravertebral light stripes (i. e., those originating even with parietal scales, not with median interparietal) narrower or at least no wider than space between dorsolateral and upper lateral light stripes; if stripes not visible, they are replaced by dorsal pattern of dark cross bars 34
Space between paravertebral light stripes wider; if stripes not visible, they are replaced by numerous scattered light spots 37
34. Adults without a cross-barred pattern 35
Adults cross-barred 36
35. Dark interspaces or rows of dark spots continuing to area above hind legs. **sackii stictogrammus** (p. 183)
Dark interspaces or rows of spots disappearing anterior to area above hind legs ..... **sackii semifasciatus** (p. 184)
36. Postantebrachials generally scutelike ..... **sackii scalaris** (p. 182)
Postantebrachials generally polygones, little enlarged **sackii australis** (p. 181)
37. Hind legs mottled in adults, but not with small light spots; dorsal pattern cross-barred in adults ..... **sackii sackii** (p. 180)
Hind legs with small light spots in adults; dorsal pattern not cross-barred 38
38. Stripes absent in adult, replaced by numerous, scattered light dots especially toward rear half of body ..... **sackii bocourti** (p. 181)
Stripes present in adults 39
39. Collar black in adults; stripes obsolete except for lateral stripes; keels on caudal scutes nearly parallel ..... **sackii mariarum** (p. 183)
Collar light; stripes not obsolete; keels on caudal scales strongly oblique 40
40. Ventral surfaces of tail and limbs pink ..... **sackii angusticeps** (p. 183)
Ventral surfaces of tail and limbs cream or white 41
41. Stripes becoming rows of light spots in adults **sackii communis** (p. 182)
Stripes persistent ..... **sackii gularis** (p. 183)
42. Femoral pores 11–15 in known specimens ..... **labialis** (p. 185)
Femoral pores 19–20 in known specimens ..... **gadovi** (p. 185)

DEPPII GROUP

Species.—Six forms, belonging to two species, now recognized.

Range.—Central Veracruz on the Atlantic coast and Nayarit on the Pacific southward to Costa Rica.

CNEMIDOPHORUS DEPPII DEPPII Wiegmann

Cnemidophorus deppii Wiegmann, Herpetologia Mexicana, 1834, p. 29.—Bocourt, Mission scientifique au Mexique . . . , Études sur les reptiles, livr. 3, 1874, p. 281, pl. 20c, fig. 5, pl. 20d, fig. 1.

Cnemidophorus deppei [*deppei*], Gadow, Proc. Zool. Soc. London, 1906, pp. 309–316, figs. 71 D–G, 72 A–G.

Cnemidophorus deppii deppii, Burt, U.S. Nat. Mus., Bull. 154, 1931, pp. 56–63 (part), fig. 14, right.—Hartweg and Oliver, Occ. Pap. Mus. Zool. Univ. Michigan, No. 359, 1937, pp. 1–3.—Smith, Ann. Carnegie Mus., vol. 30, 1944, pp. 90–91.

Cnemidophorus decemlineatus Hallowell, Proc. Acad. Nat. Sci. Philadelphia, 1860, p. 482 (U.S.N.M. No. 6058, 12 cotypes; Nicaragua; C. Wright collector).

Cnemidophorus lativittis Cope, Proc. Amer. Philos. Soc., vol. 17, 1877, p. 94 (U.S.N.M. No. 30227; Juchitán, Oaxaca; F. Sumichrast collector).

Cnemidophorus alfaronis Cope, Proc. Acad. Nat. Sci. Philadelphia, 1894, p. 199 (Amer. Mus. Nat. Hist. No. 16315; San Mateo, Costa Rica; A. Alfaro collector).

Type.—Zool. Mus. Berlin; F. Deppe collector.

Type locality.—Mexico, restricted to Tehuantepec, Oaxaca.

Range.—Southern Guerrero on Pacific slopes and the Salamá Basin in Guatemala on Atlantic slopes, south to Costa Rica. Recorded in Mexico only from the states of Guerrero, Oaxaca, and Chiapas.

CNEMIDOPHORUS DEPPII COZUMELUS Gadow

Cnemidophorus deppei cozumela GADOW, Proc. Zool. Soc. London, 1906, p. 136.
Cnemidophorus deppii cozumelus, BURT, U. S. Nat. Mus. Bull. 154, 1931, pp. 63–65, fig. 14 left.—STUART, Occ. Pap. Mus. Zool. Univ. Michigan, No. 292, 1934, pp. 12–13, fig. 1.

Type.—Brit. Mus. Nat. Hist. Nos. 1886.4.15.17–20, four cotypes.

Type locality.—Cozumel Island, east coast of Quintana Roo.

Range.—The eastern portion of the Yucatán Peninsula. Recorded in Mexico only from Quintana Roo (Mujeres and Cozumel Island).

CNEMIDOPHORUS DEPPII LINEATISSIMUS Cope

Cnemidophorus lineatissimus COPE, Proc. Amer. Philos. Soc., vol. 17, 1877, p. 94.
Cnemidophorus deppii lineatissimus, HARTWEG and OLIVER, Occ. Pap. Mus. Zool. Univ. Michigan, No. 359, 1937, p. 2.

Type.—U.S.N.M. Nos. 24937–40, 32299–32314, 20 cotypes; Höge collector.

Type locality.—Colima and Guadalajara (Jalisco), here restricted to Colima, Colima.

Range.—Pacific slopes from Nayarit to central and perhaps southern Guerrero. The range interdigitates with that of *C. d. deppii* in central Guerrero. Recorded only from Nayarit, Jalisco, Colima, Michoacán, Guerrero, and Puebla (Chiautla).

CNEMIDOPHORUS DEPPII OLIGOPORUS Smith

Cnemidophorus deppii oligoporus SMITH, Publ. Field Mus. Nat. Hist., zool. ser., vol. 24, 1939, pp. 26–27; SMITH and BURGER, Trans. Kansas Acad. Sci., vol. 53, 1950, pp. 173–174.

Type.—Chicago Nat. Hist. Mus. No. 29145; Julius Friesser.

Type locality.—Perez, Veracruz.

Range.—Atlantic slopes from northern Veracruz to Campeche. Recorded only from the states of Veracruz and Campeche (Ciudad del Carmen).

CNEMIDOPHORUS GUTTATUS GUTTATUS Wiegmann

Cnemidophorus guttatus WIEGMANN, Herpetologia Mexicana, 1834, p. 29.—BOCOURT, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 3, 1874, p. 285, pl. 20c, fig. 4.—BURT, U.S. Nat. Mus. Bull. 154, 1931, pp. 66–74 (part).
Cnemidophorus guttatus guttatus, COPE, Trans. Amer. Philos. Soc., vol. 17, 1892, p. 32.—GADOW, Proc. Zool. Soc. London, 1906, pp. 309, 325–326, fig. 75.—HARTWEG and OLIVER, Occ. Pap. Mus. Zool. Univ. Michigan, No. 359, 1937, p. 3.

Cnemidophorus unicolor COPE, Proc. Amer. Philos. Soc., vol. 17, 1877, p. 93 (U. S. Nat. Mus.; "West Tehuantepec," Oaxaca; F. Sumichrast collector).

Type.—Zool. Mus. Berlin; F. Deppe collector.

Type locality.—Mexico, here restricted to Veracruz, Veracruz.

Range.—Atlantic slopes, from central Veracruz to the Isthmus of Tehuantepec. Recorded only from the states of Veracruz and Oaxaca.

CNEMIDOPHORUS GUTTATUS IMMUTABILIS Cope

Cnemidophorus immutabilis COPE, Proc. Amer. Philos. Soc., vol. 17, 1877, p. 93

Cnemidophorus guttatus immutabilis, COPE, Trans. Amer. Philos. Soc., vol. 17 1892, p. 31.—GADOW, Proc. Zool. Soc. London, 1906, pp. 309, 326–327 figs. 74, 75.—HARTWEG and OLIVER, Occ. Papers Mus. Zool. Univ. Michigan No. 359, 1937, pp. 3–7.

Cnemidophorus microlepidopus COPE, *loc. cit.* (U.S.N.M. No. 30187; "West Tehuantepec," here restricted to the city of Tehuantepec, Oaxaca; F. Sumichrast collector).

Cnemidophorus guttatus striatus GADOW, Proc. Roy. Soc. London, vol. 72, 1903, p. 115 (Brit. Mus. Nat. Hist., "Isthmus of Tehuantepec," here restricted to the city of Tehuantepec, Oaxaca; Hans Gadow collector).

Type.—U.S.N.M. No. 30141; F. Sumichrast collector.

Type locality.—"West Tehuantepec," Oaxaca, here restricted to the city of Tehuantepec.

Range.—Pacific slopes from Colima to Chiapas. Recorded only from the states of Colima (Manzanillo), Michoacán, Guerrero, Morelos, Oaxaca, and Chiapas (Tonalá).

SEXLINEATUS GROUP

Species.—Six, with a total of 16 forms as at present recognized.

Range.—Southern California, southeastern Wyoming, Wisconsin, and Maryland southward to the Gulf of Mexico, to Guatemala and into northwestern Baja California.

Remarks.—The arrangement presented herewith for this group is far from final. We have, however, made an attempt to correlate zoogeography with variations pointed out by others, and the tentative conclusions we trust will at least be a step forward. The present picture does make some geographic sense, as previous arrangements have not.

CNEMIDOPHORUS SACKII SACKII Wiegmann

Cnemidophorus sackii WIEGMANN, Herpetologia Mexicana, 1834, pp. 28–29.—BURT, U. S. Nat. Mus. Bull. 154, 1931, pp. 249–251.[93]

Cnemidophorus sexlineatus sackii, BURT, Proc. Biol. Soc. Washington, vol. 44, 1931, pp. 73–78.

Cnemidophorus sackii sackii, SMITH, Journ. Washington Acad. Sci., vol. 39, 1949, pp. 41–42.

[93] See also discussions in Taylor, Univ. Kansas Sci. Bull., vol. 24, 1938, pp. 520–523; Schmidt and Stuart, Publ. Field Mus. Nat. Hist., zool. ser., vol. 24, 1941, pp. 244–255; and Stuart, Misc. Publ. Mus. Zool. Univ. Michigan, No. 69, 1948, pp. 57–59.

Cnemidophorus mexicanus PETERS, Monatsb. Akad. Wiss. Berlin, 1869, pp. 62–63 (Zool. Mus. Berlin, three cotypes; Uhde collector; "Mexico,"[94] here restricted to Matamoros, Puebla).

Cnemidophorus costatus COPE, Proc. Amer. Philos. Soc., vol. 17, 1877, pp. 95–96 (U.S.N.M. No. 31359; Boucard collector; "Mexico," here restricted to Cuernavaca, Morelos).

Cnemidophorus mexicanus balsas GADOW, Proc. Zool. Soc. London, 1906, pp. 363–367, fig. 83 (many cotypes, Chicago Nat. Hist. Mus. and Brit. Mus. Nat. Hist.; lectotype here designated as Brit. Mus. Nat. Hist. No. 1906.6.1.71; Hans Gadow collector; type locality here restricted to Cuernavaca, Morelos).

Type.—Zool. Mus. Berlin No. 884; F. Deppe collector.

Type locality.—"Mexico," restricted to Cuernavaca, Morelos.

Range.—The Río Balsas Valley. Recorded from numerous localities in Morelos, Guerrero, Puebla, and Michoacán.

CNEMIDOPHORUS SACKII BOCOURTI Boulenger

Cnemidophorus bocourti BOULENGER, Catalogue of the lizards in the British Museum, vol. 2, 1885, p. 367.

Cnemidophorus communis bocourti, GADOW, Proc. Zool. Soc. London, 1906, pp. 356–358, fig. 80.

Cnemidophorus sackii bocourti, SMITH, Rev. Soc. Mex. Hist. Nat., vol. 7, 1946, pp. 69–70.

Cnemidophorus sexlineatus sackii, BOCOURT, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 4, 1874, pp. 276–277, pl. 20c, fig. 6.

Cnemidophorus sackii, SCHMIDT and STUART, Publ. Field Mus. Nat. Hist., zool. ser., vol. 24, 1941, pp. 244–245.

Cnemidophorus communis copei, GADOW, Proc. Zool. Soc. London, 1906, pp. 350–351 (specimen from Santo Domingo, Oaxaca, only).

Cnemidophorus motaguae SACKETT, Notulae Nat., No. 77, 1941, pp. 1–4 (Acad. Nat. Sci. Philadelphia No. 22143; J. T. Sackett collector; Motagua River Valley 10 kilometers northeast of Zacapa, Zacapa, Guatemala).

Type.—Brit. Mus. Nat. Hist., three cotypes; No. 1857.10.28.81 here designated lectotype.

Type locality.—"Mexico" and "California," here restricted to Oaxaca, Oaxaca.

Range.—Uplands from central Oaxaca through central Chiapas into central Guatemala; range perhaps discontinuous. Recorded in Mexico only from *Oaxaca*: Oaxaca, Santo Domingo; and *Chiapas:* Piedra Parada.

CNEMIDOPHORUS SACKII AUSTRALIS Gadow

Cnemidophorus communis australis GADOW, Proc. Zool. Soc. London, 1906, pp. 352–356, figs. 62C, D, 64C, D, 65F, 79B, C.

Cnemidophorus mexicanus typica GADOW, Proc. Zool. Soc. London, 1906, pp. 360–363, fig. 81A–D, fig. 82.

[94] Gadow (*op. cit.*, p. 358) states that Peters's cotypes are immature and therefore not readily placed. The original description is of little assistance. We do not follow Gadow's allocation of the name, with a distinct southern race, for two reasons: (1) The name can simply be disposed of, if the types are unidentifiable, by placing it in synonymy; and (2) we believe it quite probable that the types actually came from southwestern Puebla in the Balsas Basin, where a number of Peters's species are known to be restricted. This latter area is occupied by *C. s. sackii*, of which Peters's name can reasonably be held a synonym.

Type.—Numerous cotypes, Brit. Mus. Nat. Hist. and Chicago Nat. Hist. Mus.; lectotype here designated as Brit. Mus. Nat. Hist. No. 1906.7.19.11.

Type locality.—Not specified, Lagunas or Cuicatlán, Oaxaca; here restricted to Cuicatlán, Oaxaca.

Range.—Foothills about the central Oaxacan highlands, excluding the Balsas Basin, in the upper headwaters of the Río Papaloapam and Río Tehuantepec, and near the Isthmus of Tehuantepec.

CNEMIDOPHORUS SACKII COMMUNIS Cope

Cnemidophorus communis Cope, Proc. Amer. Philos. Soc., vol. 17, 1877, p. 95.

Cnemidophorus communis occidentalis Gadow, Proc. Zool. Soc. London, 1906, pp. 339–346, fig. 69, 77A–F, 78B, 79A (many cotypes, Brit. Mus. Nat. Hist. and Chicago Nat. Hist. Mus.; lectotype here designated as Brit. Mus. Nat. Hist. No. 1892.2.8.33, from Ixtlán, Nayarit).

Cnemidophorus communis copei Gadow, Proc. Zool. Soc. London, 1906, pp. 346–352, fig. 78A, C, E (cotypes in Brit. Mus. Nat. Hist. and Chicago Nat. Hist. Mus.; lectotype here designated as Brit. Mus. Nat. Hist. No. 1906.7.19.5, from Colima, Colima; a cotype from Santo Domingo de Guzmán we refer to *C. s. bocourti*).

Type.—Numerous cotypes, all lost.

Type locality.—Not definitely stated: Colima, Guadalajara, Córdoba, Cobán (Guatemala) or San Antonio (Texas); here restricted to Colima, Colima.

Range.—Most of the central plateau of Mexico, from Chihuahua and presumably Nuevo León southward to central Puebla; the Pacific coast from the Balsas basin northward to southern Sinaloa and perhaps Sonora. Recorded from ? Sonora, Chihuahua, Durango, Coahuila, Tamaulipas, San Luis Potosí, Zacatecas, Hidalgo, Querétaro, Guanajuato, Aguascalientes, Jalisco, Sinaloa, Nayarit (including Isabel Island), Colima, Michoacán, México, Distrito Federal, Puebla, and Veracruz.

CNEMIDOPHORUS SACKII SCALARIS Cope

Cnemidophorus sexlineatus tigris Cope (*nec* Baird and Girard), Proc. Amer. Philos. Soc., vol. 23, 1886, p. 283 (types not designated; Chihuahua, Chihuahua).

Cnemidophorus gularis scalaris Cope, Trans. Amer. Philos. Soc., vol. 17, 1892, p. 47.—Smith and Mittleman, Trans. Kansas Acad. Sci., vol. 46, 1943, pp. 246–247.

Cnemidophorus gularis gularis verus Cope, *op. cit.*, p. 45 (no types designated; Chihuahua, Chihuahua).

Cnemidophorus gularis gularis obsoletus Cope, *loc. cit.* (as above).

Type.—U.S.N.M. Nos. 8319, 14302, seven cotypes (No. 14302a, lectotype); John Potts collector.

Type locality.—Not specifically designated, either "Mexican plateau south of Chihuahua," or "City of Chihuahua;" here restricted to Chihuahua, Chihuahua.

Range.—Central and eastern Chihuahua, western Coahuila and northern Durango. Recorded from each state mentioned.

CNEMIDOPHORUS SACKII STICTOGRAMMUS Burger

Cnemidophorus sackii stictogrammus, BURGER, Chicago Acad. Sci. Nat. Hist. Misc., No. 65, 1950, p. 5.

Cnemidophorus gularis octolineatus, SMITH (*nec* Baird), Handbook of lizards, 1946, pp. 409–412, figs. 126–127, pl. 114 (part).

Type.—U.S.N.M. (Hensley-Burger No. 768).

Type locality.—Yank Springs, 6 miles southeast of Ruby, Santa Cruz County, Ariz.

Range.—Central Arizona and Mexico southward through Sonora and probably northern Sinaloa, and the northern parts of Chihuahua and Coahuila. Recorded in Mexico from Sonora and Chihuahua.

CNEMIDOPHORUS SACKII MARIARUM Günther

Cnemidophorus mariarum GÜNTHER, Biologia Centrali-Americana, Reptilia and Batrachia, 1885, p. 28.—STEJNEGER, North Amer. Fauna, No. 14, 1899, pp. 67–68.—GADOW, Proc. Zool. Soc. London, 1906, pp. 328–330.

Type.—Brit. Mus. Nat. Hist. Nos. 1881.10.1.81–82, 86–88, five cotypes.

Type locality.—Tres Marías Islands.

Range.—Restricted to the Tres Marías Islands, on each one of which it has been taken.

CNEMIDOPHORUS SACKII ANGUSTICEPS Cope

Cnemidophorus angusticeps COPE, Proc. Amer. Philos. Soc., vol. 17, 1877, p. 95.—SMITH, Publ. Field Mus. Nat. Hist., zool. ser., vol. 24, 1939, pp. 24–25.

Type.—U.S.N.M. Nos. 24876–24878, three cotypes.

Type locality.—"Yucatán," here restricted to Chichen Itzá.

Range.—The northern and western portions of the Yucatán Peninsula. Recorded from *Yucatán:* Chichen Itzá, Progreso, Tunkas; *Quintana Roo:* Cobá, Cozumel Island; *Campeche:* Champotón.

CNEMIDOPHORUS SACKII GULARIS Baird and Girard

Cnemidophorus gularis BAIRD and GIRARD, Proc. Acad. Nat. Sci. Philadelphia, 1852, p. 128..

Cnemidophorus gularis gularis, COPE, Trans. Amer. Philos. Soc., vol. 17, 1892, p. 334.—SMITH, Handbook of lizards, 1946, pp. 406–409, fig. 121, pl. 113.

Cnemidophorus guttatus HALLOWELL (*nec* Wiegmann), Proc. Acad. Nat. Sci., Philadelphia, 1854, p. 192 (types lost; Texas, here restricted to Brownsville).

Cnemidophorus gularis sealous COPE, Amer. Nat., vol. 26, 1892, p. 522 (*nomen nudum*).

Cnemidophorus gularis sericeus COPE, Trans. Amer. Philos. Soc., vol. 17, 1892, p. 48 (U.S.N.M. No. 15650; Wm. Taylor collector; San Diego, Tex.).

Cnemidophorus gularis meeki GADOW, Proc. Zool. Soc. London, 1906, pp. 332–334 (numerous cotypes, Brit. Mus. Nat. Hist. and Chicago Nat. Hist. Mus.; lectotype here designated as Chicago Nat. Hist. Mus. No. 1294, the larger male specimen, from Montemorelos, Nuevo León).

Type.—U.S.N.M. Nos. 3022, 2989, 14 cotypes (lectotype No. 3022a); Colonel Graham collector.

Type locality.—"Indianola and the Valley of the Rio Grande del Norte," restricted to mouth of Devils River, Tex.

Range.—Oklahoma and most of Texas southward through Tamaulipas and eastern Nuevo León to northern Veracruz. Recorded in Mexico from Tamaulipas, San Luis Potosí, Veracruz, and Nuevo León.

CNEMIDOPHORUS SACKII SEMIFASCIATUS Cope

Cnemidophorus gularis semifasciatus COPE, Trans. Amer. Philos. Soc., vol. 17, 1892, p. 49.

Cnemidophorus sackii semifasciatus, BURGER, Chicago Acad. Sci. Nat. Hist. Misc., No. 65, 1950, pp. 4–5.

Cnemidophorus septemvittatus COPE, Trans. Amer. Philos. Soc., vol. 17, 1892, p. 40 ("El Dorado County, California," in error; restricted to Marfa, Presidio County, Tex.; U.S.N.M. No. 42141).

Cnemidophorus octolineatus SCHMIDT and SMITH (*nec* Baird), Publ. Field Mus. Nat. Hist., zool. ser., vol. 29, 1944, pp. 85–86.

Type.—U.S.N.M. No. 9248; Lieutenant Couch collector.

Type locality.—Agua Nueva, Coahuila.

Range.—Big Bend area of Texas and adjacent Coahuila. Recorded in Mexico only from the state of Coahuila.

CNEMIDOPHORUS INORNATUS Baird

Cnemidophorus inornatus BAIRD, Proc. Acad. Nat. Sci. Philadelphia, 1858, p. 255.—SCHMIDT and OWENS, Publ. Field Mus. Nat. Hist., zool. ser., vol. 29, 1944, pp. 106–107; BURGER, Chicago Acad. Sci. Nat. Hist. Misc., 1950 (in press).

Cnemidophorus octolineatus BAIRD, Proc. Acad. Nat. Sci. Philadelphia, 1858, p. 255 (Pesquería Grande, Nuevo León; U.S.N.M. No. 3009; Lieutenant Couch collector).

Cnemidophorus perplexus (*nec* BAIRD and GIRARD), VAN DENBURGH, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 495–497.—SCHMIDT and SMITH, Publ. Field Mus. Nat. Hist., zool. ser., vol. 29, 1944, pp. 86–87.—SMITH, Handbook of lizards, 1946, pp. 412–414, pl. 15.

Cnemidophorus arizonae VAN DENBURGH, Proc. California Acad. Sci., ser. 2, vol. 6, 1896, p. 344 (Stanford Univ. No. 2631; W. W. Price, collector; Fairbank, Cochise County, Ariz.).

Cnemidophorus gularis velox SPRINGER, Copeia, No. 169, 1928, p. 102 (Butler Univ. No. 848; Pueblo Bonito, San Juan County, N. Mex., by present restriction).

Type.—U.S.N.M. No. 3032; Lieutenant Couch collector.

Type locality.—Pesquería Grande (=García), Nuevo León.

Range.—Western Texas to extreme southeastern Arizona, southward into Chihuahua, Coahuila, and Nuevo León. Recorded in Mexico only from the states cited.

CNEMIDOPHORUS BURTI Taylor

Cnemidophorus burti Taylor, Univ. Kansas Sci. Bull., vol. 24, 1938, pp. 485-487, pl. 42, fig. 2.

Type.—EHT-HMS No. 13117; E. H. Taylor collector.

Type locality.—La Posa, 10 miles northwest of Guaymas, Sonora.

Range.—Southwestern Sonora. Known only from the vicinity of Guaymas.

CNEMIDOPHORUS SEXLINEATUS (Linnaeus)

Lacerta sexlineata Linnaeus, Systema naturae, ed. 12, vol. 3, 1766, p. 364.

Cnemidophorus sexlineatus, Duméril and Bibron, Erpétologie générale, vol. 5, 1839, p. 131.—Taylor, Univ. Kansas Sci. Bull., vol. 24, 1939, pp. 520–522.—Smith, Handbook of lizards, 1946, pp. 415–418, figs. 13, 122, pl. 116.

Cnemidophorus sexlineatus sexlincatus, Cope, Ann. Rep. U. S. Nat. Mus., 1898 (1900), pp. 598, 603–605.—Burt, U. S. Nat. Mus., Bull. 154, 1931, pp. 76–97, fig. 20.

?*Cnemidophorus perplexus* Baird and Girard, Proc. Acad. Nat. Sci. Philadelphia, 1852, p. 128 (U. S. N. M. No. 3060); Wm. Gambell collector; type locality unknown).

Type.—Not known.

Type locality.—"Carolina," here restricted to Charleston, S. C.

Range.—Eastern United States from Wisconsin, southeastern Wyoming, and Maryland southward to the Gulf as far west as, perhaps, the mouth of the Rio Grande. No definitely reliable records are known for Mexico, but we are informed by Bryce Brown that the species occurs near Brownsville, Tex., and may be expected across the river in Tamaulipas. Records available from Matamoros, Tamaulipas, may or may not belong here.

CNEMIDOPHORUS GADOVI Burger

Cnemidophorus gadovii Burger, Chicago Acad. Sci. Nat. Hist. Misc., No. 65, 1950, p. 2.

Type.—U.S.N.M. No. 40042.

Type locality.—Hermosillo, Sonora.

Range.—Known only from the type locality.

CNEMIDOPHORUS LABIALIS Stejneger

Cnemidophorus labialis Stejneger, Proc. U. S. Nat. Mus., vol. 12, 1890, pp. 643–644.—Cope, Ann. Rep. U. S. Nat. Mus., 1898 (1900), pp. 610–612, fig. 122.—Burt, U. S. Nat. Mus. Bull. 154, 1931, pp. 141–146.—Tevis, Copeia, 1944, pp. 16–17.

Type.—U.S.N.M. No. 15596; L. Belding collector.

Type locality.—"Cerros Island," Pacific coast, Baja California.

Range.—Northwestern Baja California between San Quintín and Punta Eugenia, Cedros Island.

HYPERYTHRUS GROUP

Species.—One, represented by six forms as at present recognized.

Range.—Extreme southwest California south throughout the peninsula of Baja California and on adjacent islands.

CNEMIDOPHORUS HYPERYTHRUS BELDINGI (Stejneger)

Verticaria beldingi STEJNEGER, Proc. U. S. Nat. Mus., vol. 17, 1894, p. 17.
Verticaria hyperythra beldingi, VAN DENBURGH, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 560–563, pl. 55.
Cnemidophorus hyperythrus beldingi, GRINNELL and CAMP, Univ. California Publ. Zool., vol. 17, 1917, p. 175.

Type.—U.S.N.M. No. 11980; L. Belding collector.

Type locality.—"Cerros" Island, Baja California.

Range.—Extreme southwestern California southward on Pacific slopes (not Gulf) to Cedros Island.

CNEMIDOPHORUS HYPERYTHRUS CAERULEUS (Dickerson)

Verticaria caerulea DICKERSON, Bull. Amer. Mus. Nat. Hist., vol. 41, 1919, p. 472.
Cnemidophorus hyperythrus caeruleus, BURT, U. S. Nat. Mus. Bull. 154, 1931, pp. 240–242.

Type.—Amer. Mus. Nat. Hist. No. 5517; C. H. Townsend collector.

Type locality.—Carmen Island, Baja California.

Range.—Known only from the type locality.

CNEMIDOPHORUS HYPERYTHRUS DANHEIMAE Burt

Verticaria sericea VAN DENBURGH, Proc. California Acad. Sci., ser. 2, vol. 5, 1895, pp. 132–133, pl. 12.
Cnemidophorus hyperythrus danheimae BURT, Proc. Biol. Soc. Washington, vol. 42, 1929, p. 154 (new name for *Verticaria sericea* Van Denburgh, 1895, preoccupied by *Cnemidophorus gularis sericeus* Cope, 1892); U. S. Nat. Mus. Bull. 154, 1931, pp. 244–246.

Type.—California Acad. Sci. No. 435; Walter E. Bryant collector.

Type locality.—San José Island, Gulf of California, Baja California.

Range.—Known only from the type locality.

CNEMIDOPHORUS HYPERYTHRUS PICTUS (Van Denburgh and Slevin)

Verticaria picta VAN DENBURGH and SLEVIN. Proc. California Acad. Sci., ser. 4, vol. 11, 1921, p. 98.
Cnemidophorus hyperythrus pictus, BURT, U. S. Nat. Mus. Bull. 154, 1931, pp. 242–244.

Type.—California Acad. Sci. No. 49155; Joseph R. Slevin collector.

Type locality.—Monserrate Island, Baja California.

Range.—Known only from the type locality.

CNEMIDOPHORUS HYPERYTHRUS SCHMIDTI (Van Denburgh and Slevin)

Verticaria hyperythra schmidt VAN DENBURGH and SLEVIN, Proc. California Acad. Sci., ser. 4, vol. 11, 1921, p. 397.—VAN DENBURGH, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 563–566.

Cnemidophorus hyperythrus schmidti, LINSDALE, Univ. California Publ. Zool., vol. 38, 1932, p. 373.

Type.—California Acad. Sci. No. 50512; Joseph R. Slevin collector.

Type locality.—San Marcos Island, Gulf of California, Baja California.

Range.—The central fifth of the peninsula of Baja California from about lat. 28° south to 25° 30′ N. (the Vizcaino Desert south to Comondú), and adjacent islands.

CNEMIDOPHORUS HYPERYTHRUS HYPERYTHRUS Cope

Cnemidophorus hyperythrus COPE, Proc. Acad. Nat. Sci. Philadelphia, 1863, p. 103.

Verticaria hyperythra hyperythra, VAN DENBURGH, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 556–559.

Cnemidophorus hyperythrus hyperythrus, BURT, Proc. Biol. Soc. Washington, vol. 42, 1929, p. 154 (part); U. S. Nat. Mus., Bull. 154, 1931, pp. 226–240 (part).—LINSDALE, Univ. California Publ. Zool., vol. 38, 1932, pp. 372–373.

Verticaria espiritensis VAN DENBURGH and SLEVIN, Proc. California Acad. Sci., ser. 4, vol. 11, 1921, p. 397 (Calif. Acad. Sci. No. 50511; Espíritu Santo Island, Baja California; J. R. Slevin collector).—VAN DENBURGH, *op. cit.,* pp. 566–568.

Verticaria franciscensis VAN DENBURGH and SLEVIN, *loc. cit.* (Calif. Acad. Sci. No. 50513; San Francisco Island, Baja California; J. R. Slevin collector).—VAN DENBURGH, *op. cit.,* pp. 568–570.

Type.—U.S.N.M. No. 5299; John Xantus collector.

Type locality.—Cape San Lucas, Baja California.

Range.—The southern third of the peninsula of Baja California and its adjacent islands on both the Gulf and Pacific sides, south from about lat. 25°30′.

TESSELATUS GROUP

Species.—Six, one of which is represented by eleven subspecies, as now recognized.

Range.—Western United States from Idaho and Oregon south through Baja California and western Texas to southern Coahuila, Chihuahua, and Sonora.

CNEMIDOPHORUS BACATUS Van Denburgh and Slevin

Cnemidophorus bacatus VAN DENBURGH and SLEVIN, Proc. California Acad. Sci., ser. 4, vol. 11, 1921, p. 97.—VAN DENBURGH, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 544–546.—BURT, U. S. Nat. Mus. Bull. 154, 1931, pp. 211–213.

Type.—California Acad. Sci. No. 49152; Joseph R. Slevin collector.

Type locality.—San Pedro Nolasco Island, Sonora.

Range.—Known only from the type locality.

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CNEMIDOPHORUS CATALINENSIS Van Denburgh and Slevin

Cnemidophorus catalinensis Van Denburgh and Slevin, Proc. California Acad. Sci., ser. 4, vol. 11, p. 396.—Van Denburgh, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 542–544.—Burt, U. S. Nat. Mus. Bull. 154, 1931, pp. 213–216, fig. 29.

Type.—California Acad. Sci. No. 50507; Joseph R. Slevin collector.

Type locality.—Santa Catalina Island, Baja California.

Range.—Known only from the type locality.

CNEMIDOPHORUS CERALBENSIS (Van Denburgh and Slevin)

Verticaria ceralbensis Van Denburgh and Slevin, Proc. California Acad. Sci. ser. 4, vol. 11, 1921, p. 396.—Van Denburgh, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 554–556.

Cnemidophorus ceralbensis, Burt, U. S. Nat. Mus. Bull. 154, 1931, pp. 216–218.

Type.—California Acad. Sci. No. 50510; Joseph R. Slevin collector.

Type locality.—Ceralbo Island, Baja California.

Range.—Known only from the type locality.

CNEMIDOPHORUS TESSELATUS (Say)

Ameiva tesselata Say, *in* Long's Expedition to the Rocky Mountains, vol. 2, 1823, p. 50.

Cnemidophorus tesselatus, Smith and Burger, Bull. Chicago Acad. Sci., vol. 8, 1949, p. 282.

Cnemidophorus grahamii Baird and Girard, Proc. Acad. Nat. Sci. Philadelphia, 1852, p. 128 (U.S.N.M. No. 3036, 2 cotypes; Colonel Graham collector; between San Antonio and El Paso, Texas, here restricted to Fort Davis).—Strecker, Baylor Univ. Bull. No. 13, 1910, pp. 8–13, pl. 1.—Smith, Handbook of lizards, 1946, pp. 419–421, pl. 117.

Type.—Lost.

Type locality.—Arkansas River, near Castle Rock Creek, Colo. (= Beaver Creek, Fremont County).

Range.—Western Texas, eastern New Mexico, and probably southern Colorado, southward into adjacent northern Chihuahua and Coahuila. No reliable Mexican records are known to us; Yarrow (U. S. Nat. Mus. Bull. 24, 1883, p. 43) records it from "between Panos and St. Luis, Mexico," and Cope (U. S. Nat. Mus. Bull. 32, 1887, p. 45) cites it from "between Mexico City and Chihuahua," but neither record definitely refers to the species as now understood, and even if they did, the locality of collection is very uncertain.

CNEMIDOPHORUS MAXIMUS Cope

Cnemidophorus maximus Cope, Proc. Acad. Nat. Sci. Philadelphia, 1863, p. 104; Ann. Rep. U. S. Nat. Mus., 1898 (1900), pp. 570–571, fig. 104.—Van Denburgh, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 506–508.—Burt, U. S. Nat. Mus. Bull. 154, 1931, pp. 218–221.

Type.—U.S.N.M. No. 5297; John Xantus collector.

Type locality.—Cape San Lucas, Baja California.

Range.—Southern Baja California, southward from La Paz Bay, or perhaps Magdalena Bay.

CNEMIDOPHORUS TIGRIS TIGRIS Baird and Girard

Cnemidophorus tigris Baird and Girard, Proc. Acad. Nat. Sci. Philadelphia, 1852, p. 69.

Cnemidophorus tigris tigris, Camp, Univ. California Publ. Zool., vol. 17, 1916, pp. 71–72.—Smith and Burger, Bull. Chicago Acad. Sci., vol. 8, 1949, p. 282.

Cnemidophorus tessellatus tessellatus, Cope (*nec* Say), U. S. Nat. Mus. Bull. 1, 1875, p. 46.—Van Denburgh, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 508–516, pl. 23.—Burt, U. S. Nat. Mus. Bull. 154, 1922, pp. 146–199 (part).—Smith, Handbook of lizards, 1946, pp. 421–424, pl. 118.

Type.—U.S.N.M. No. 4103; Capt. Howard Stansbury collector.

Type locality.—"Valley of the Great Salt Lake," Utah, restricted to Salt Lake City, Utah.

Range.—Southern Idaho and southeastern Oregon south through western Utah and southeastern California to extreme northeastern Baja California, and extreme northwestern Sonora. Recorded in Mexico only from Baja California and Sonora (between Sonoyta and Puerto Peñasco).

CNEMIDOPHORUS TIGRIS GRACILIS Baird and Girard

Cnemidophorus gracilis Baird and Girard, Proc. Acad. Nat. Sci. Philadelphia, 1852, p. 69.

Cnemidophorus tigris gracilis, Burger, Chicago Acad. Sci. Nat. Hist. Misc., No. 65, 1950, p. 6.

Cnemidophorus melanostethus Cope, Proc. Acad. Nat. Sci. Philadelphia, 1863, p. 104 (U.S.N.M. No. 3067, 12 cotypes; H. B. Mollhausen collector; "region of the Colorado, California," here restricted to Yuma, Ariz.).

Type.—U.S.N.M. No. 3034; J. L. LeConte collector.

Type locality.—"Desert of Colorado," restricted to Yuma, Ariz.

Range.—Extreme eastern California in Colorado River Valley, southern Arizona south of the plateau, extreme southwestern New Mexico, northern Sonora. Recorded in Mexico only from the state of Sonora.

CNEMIDOPHORUS TIGRIS AETHIOPS Cope

Cnemidophorus tessellatus aethiops Cope, Ann. Rep. U. S. Nat. Mus., 1898 (1900), p. 582.—Smith, Handbook of lizards, 1946, pp. 424–426, pl. 119 (part).

Cnemidophorus tigris aethiops, Smith and Burger, Bull. Chicago Acad. Sci., vol. 8, 1949, p. 282.

Cnemidophorus disparilis Dickerson, Bull. Amer. Mus. Nat. Hist., vol. 41, 1919, p. 473 (U.S.N.M. No. 64445; C. H. Townsend collector; Tiburón Island, Sonora).

Cnemidophorus estebanensis Dickerson, *op. cit.*, p. 474 (U.S.N.M. No. 64446; C. H. Townsend collector; San Esteban Island, Sonora).

Cnemidophorus punctilincatus Dickerson, *op. cit.*, p. 475 (U.S.N.M. No. 64447; C. H. Townsend collector; Tiburón Island, Sonora).

Cnemidophorus melanostethus, VAN DENBURGH, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 529–533 (part).

Type.—U.S.N.M. Nos. 64240–5, cotypes; Jenkins and Evermann collectors.

Type locality.—Hermosillo, Sonora.

Range.—Southern Sonora and adjacent islands (Tiburón, San Esteban).

CNIMIDOPHORUS TIGRIS MARMORATUS Baird and Girard

Cnemidophorus marmoratus BAIRD and GIRARD, Proc. Acad. Nat. Sci. Philadelphia, 1852, p. 128.

Cnemidophorus tigris marmoratus, BURGER, Chicago Acad. Sci. Nat. Hist. Misc., No. 65, 1950, p. 7.

Cnemidophorus variolosus COPE, Proc. Acad. Nat. Sci. Philadelphia, 1863, p. 39 (U.S.N.M. No. 3066; Lieutenant Couch collector; Parras, Coahuila).

Type.—U.S.N.M. No. 3024; two cotypes; J. H. Clark collector.

Type locality.—"Between San Antonio and El Paso," restricted to El Paso, Tex.

Range.—Southwestern New Mexico to southwestern Coahuila. Recorded in Mexico only from Chihuahua, Durango (5 km. west of Torreón), and Coahuila.

CNEMIDOPHORUS TIGRIS CANUS Van Denburgh and Slevin

Cnemidophorus canus VAN DENBURGH and SLEVIN, Proc. California Acad. Sci., ser. 4, vol. 11, No. 6, 1921, p. 97.—VAN DENBURGH, Occ. Pap. California Acad. Sci., vol. 10, 1922, pp. 540–542.

Cnemidophorus tessellatus canus, BURT, U. S. Nat. Mus. Bull. 154, 1931, pp. 208–211.

Cnemidophorus tigris canus, SMITH and BURGER, Bull. Chicago Acad. Sci., vol. 8, 1949, p. 282.

Type.—California Acad. Sci. No. 49153; Joseph R. Slevin collector.

Type locality.—Sal Si Puedes Island, Gulf of California, Baja California.

Range.—The type locality, and North and South San Lorenzo Islands (on the latter, intergrades with *C. t. martyris*).

CNEMIDOPHORUS TIGRIS CELERIPES Dickerson

Cnemidophorus celeripes DICKERSON, Bull. Amer. Mus. Nat. Hist., vol. 41, 1919, p. 472.—VAN DENBURGH, Occ. Pap. California Acad. Sci., vol. 10, 1922, pp. 549–551.

Cnemidophorus tessellatus celeripes, BURT, U. S. Nat. Mus. Bull. 154, 1931, pp. 202–205.

Cnemidophorus tigris celeripes, SMITH and BURGER, Bull. Chicago Acad. Sci., vol. 8, 1949, p. 282.

Type.—Amer. Mus. Nat. Hist. No. 5514; C. H. Townsend collector.

Type locality.—San José Island, Baja California.

Range.—Known only from the type locality.

CNEMIDOPHORUS TIGRIS MARTYRIS Stejneger

Cnemidophorus martyris STEJNEGER, Proc. U. S. Nat. Mus., vol. 14, 1891, p. 407.—VAN DENBURGH, Occ. Pap. California Acad. Sci., vol. 10, 1922, pp. 538–540.

Cnemidophorus tessellatus martyris, BURT, U. S. Nat. Mus. Bull. 154, 1931, pp. 205–208.

Cnemidophorus tigris martyris, SMITH and BURGER, Bull. Chicago Acad. Sci.,. vol. 8, 1949, p. 282.

Type.—U.S.N.M. No. 15620; E. Palmer collector.

Type locality.—San Pedro Mártir Island, Gulf of California, Sonora.

Range.—The type locality (intergrades with *C. t. canus* on South San Lorenzo Island).

CNEMIDOPHORUS TIGRIS RUBIDUS Cope

Cnemidophorus tessellatus rubidus COPE, Trans. Amer. Philos. Soc., ser. 2, vol. 17, 1892, p. 36, pl. 12, fig. 1.—BURT, U. S. Nat. Mus. Bull. 154, 1931, pp. 199–202.

Cnemidophorus rubidus, VAN DENBURGH, Occ. Pap. California Acad. Sci. vol. 10, 1922, pp. 546–549.

Cnemidophorus tigris rubidus, SMITH and BURGER, Bull. Chicago Acad. Sci., vol. 8, 1949, p. 282.

Cnemidophorus vandenburghi DICKERSON, Bull. Amer. Mus. Nat. Hist., vol. 41, 1919, p. 477 (U.S.N.M. No. 64449; C. H. Townsend collector; Carmen Island, Baja California).

Type.—U.S.N.M. Nos. 15149–15155, cotypes; U. S. Fish Commission collector.

Type locality.—Santa Margarita Island, Baja California.

Range.—The southern third of Baja California, south of San Marcos Island, including adjacent islands in the Gulf and off the western edge of the peninsula (notably Carmen, Santa Margarita, and Magdalena Islands, Baja California).

CNEMIDOPHORUS TIGRIS MULTISCUTATUS Cope

Cnemidophorus tessellatus multiscutatus COPE, Trans. Amer. Philos. Soc., vol. 17, 1892, p. 38.

Cnemidophorus stejnegeri VAN DENBURGH, Proc. California Acad. Sci., ser. 2, vol. 4, 1894, p. 300 (Stanford Univ. Mus. No. 1861; Ensenada, Baja California; J. M. Stovell collector).

Cnemidophorus tessellatus stejnegeri, STEJNEGER and BARBOUR, Check list North American Amphibia and Reptilia, ed. 1, 1917, p. 68.—VAN DENBURGH, Occ. Pap. California Acad. Sci., vol. 10, 1922, pp. 519–523, pl. 54.—SMITH, Handbook of lizards, 1946, pp. 426–428, pl. 120.

Cnemidophorus bartolomas DICKERSON, Bull. Amer. Mus. Nat. Hist., vol. 41, 1919, p. 476 (U.S.N.M. No. 64448; C. H. Townsend collector, San Bartolomé Bay, Baja Calfornia).

Cnemidophorus dickersonae VAN DENBURGH and SLEVIN, Proc. California Acad. Sci., ser. 4, vol. 11, 1921, p. 97 (California Acad. Sci. No. 49154; J. R. Slevin collector; Isla Partida near Ángel de la Guarda Island, Baja California).

Type.—U.S.N.M. Nos. 15160–3; U. S. Fish Commission donor.

Type locality.—Cedros Island, Baja California.

Range.—Southern California west of the Sierra Nevada, south to central Baja California, exclusive of the extreme northeastern corner; islands in the Gulf of California near the center of the Peninsula (Isla Partida, Ángel de la Guarda).

Genus GYMNOPHTHALMUS Merrem

Gymnophthalmus Merrem, Tentamen systematis Amphibiorum, 1820, p. 74.—Stuart, Occ. Pap. Mus. Zool. Univ. Michigan No. 409, 1939, pp. 1–10, pl. 1.
Epaphelus Cope, Journ. Acad. Nat. Sci. Philadelphia, 1875, p. 115 (type, *Epaphelus sumichrasti* Cope).
Blepharactisis Hallowell, Proc. Acad. Nat. Sci. Philadelphia, 1860, p. 484 (type, *Blepharactisis speciosa* Hallowell).

Genotype.—*Lacerta quadrilineata* Linnaeus [=*Gymnophthalmus lineata* (Linnaeus)].

Range.—Central Argentina north through South and Central America. In Mexico, Oaxaca and possibly Chiapas.

Species.—Seven. Only one occurs in Mexico.

GYMNOPHTHALMUS SUMICHRASTI (Cope)

Epaphelus sumichrasti Cope, Journ. Acad. Nat. Sci. Philadelphia, 1876, p. 115.
Gymnophthalmus sumichrasti,[95] Bocourt, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 7, 1881, pp. 471–472, pl. 22H, fig. 2, 2a–2h.—Boulenger, Catalogue of the lizards in the British Museum, vol. 2, 1885, pp. 428–429.—Stuart, Occ. Pap. Mus. Zool. Univ. Michigan, No. 409, 1939, pp. 5–6.

Type.—U.S.N.M. No. 30245–46; François E. Sumichrast collector.

Type locality.—"Western part of the State of Tehuantepec" ("Near Ventose Bay" *fide* Dunn *in* Stuart, *loc. cit.*).

Range.—Southern Oaxaca near the Isthmus of Tehuantepec eastward on Pacific slopes possibly to Honduras. Recorded in Mexico only from *Oaxaca*: Tehuantepec, Bahía Ventosa, Mount Guengola, Cacoprieto. A specimen, presumably of this species, was seen near San Ricardo, Chiapas, by the junior author.

Family HELODERMIDAE Gray

Helodermidae Gray, Proc. Zool. Soc. London, 1837, p. 132.

Genera.—A single genus, *Heloderma* Wiegmann, is known.

Range.—Southern Utah to the Isthmus of Tehuantepec, on Pacific slopes.

Genus HELODERMA Wiegmann

Trachyderma Wiegmann (*nec* Latreille), Isis von Oken, vol. 22, 1829, p. 421 (type, *Trachyderma horridum* Wiegmann).
Heloderma Weigmann, Isis von Oken, vol. 22, 1829, p. 624.

[95] *Gymnodactylus sumichrasti* Gadow, Proc. Zool. Soc. London, 1905, p. 211, from the Isthmus of Tehuantepec, appears to be a lapsus for this species.

Genotype.—*Trachyderma horridum* Wiegmann.
Range.—Southern Utah to the Isthmus of Tehuantepec.
Species.—Two.

KEY TO SPECIES OF HELODERMA

1. Tail equal to or longer than body; head and neck about half of body length; predominating color black; pterygopalatine teeth present--**horridum** (p. 193)
   Tail about two-thirds of body length; head and neck about one-third of body length; colors pink, yellowish, and black; none or rarely 1 or 2 pterygopalatine teeth----------**suspectum** (p. 193)

HELODERMA SUSPECTUM Cope

Heloderma suspectum Cope, Proc. Acad. Nat. Sci. Philadelphia, 1869, pp. 5–6; Ann. Rep. U. S. Nat. Mus., 1898 (1900), pp. 476–483, fig. 87.—Smith, Handbook of lizards, 1946, pp. 472–475, pl. 134.

Type.—U.S.N.M. No. 2971, three cotypes; Major Emory collector.
Type locality.—Sierra de la Unión, "Sonora"(=Arizona).
Range.—Sonora as far south as Guaymas; in the United States, Arizona, southern Nevada, and southwestern Utah. Recorded from *Sonora*: Guadelupe Cañon, San Pedro Bay, La Posa about 10 miles northwest of Guaymas, Monument 88, San Bernardino, Niggerhead Mountain, 10 miles south of Noria, etc.

HELODERMA HORRIDUM (Wiegmann)

Trachyderma horridum Wiegmann, Isis von Oken, vol. 22, 1829, p. 421.
Heloderma horridum, Wiegmann, Isis von Oken, vol. 22, 1829, p. 628; Herpetologia Mexicana, pt. 1, 1834, pp. 24–25, pl. 1.—Günther, Biologia Centrali-Americana, Reptilia and Batrachia, 1885, pp. 43–44, pl. 26.—Smith, Univ. Kansas Sci. Bull., vol. 22, 1935, pp. 145–146.
Heloderma Hernandesii Wiegmann, Herpetologia Mexicana, pt. 1, 1834, p. 25 (for a theoretical form).

Type.—Zool. Mus. Berlin; Ferdinand Deppe collector.
Type locality.—"Vivit in ferventibus terrae Mexicanae regionibus," here restricted to Huajintlan, Guerrero.
Range.—Coastal areas from Oaxaca to Sonora, extending up the Río Balsas Valley to Morelos.[96] Recorded from *Sonora:* Álamos, Guirocoba; *Sinaloa:* Presidio near Mazatlán, San Blas; *Jalisco:* Autlán, Barranca de San Cristóbal; *Morelos:* Cañon del Lobo near Cuernavaca; *Oaxaca:* Tapanatepec, Salina Cruz, Jimiltepec, Juchitán, Tehuantepec, Quiengola and Mixtequilla Mountains; *Michoacán:* Apatzingán, Parécuaro, Oropeo, Etúcuaro, Puruarán; *Colima:* Paso del Río, Colima; *Guerrero:* Huajintlán; *Chiapas:* Rancho San Bartolo.

[96] A sight record for Zongolica, Veracruz (Martín del Campo, Anal. Inst. Biología, vol. 6, 1935, p. 297) is unacceptable and may be referable to *Xenosaurus*. Likewise unacceptable are records for Guanajuato and Yucatán. We are unable to find authoritative records for Nayarit, although Martín del Campo (*loc. cit.*) cites the state.

Family ANGUIDAE Cope

Angu[i]dae Gray, Ann. Philos., vol. 26, 1825, p. 201.
Anguidae Cope, Proc. Acad. Nat. Sci. Philadelphia, 1864, p. 228.

Genera.—Eleven, of which nine are restricted to the Americas, one (*Anguis*) is restricted to the Old World, and one (*Ophisaurus*) occurs in both hemispheres. Five occur in Mexico.[97]

Range.—Southern Canada to Argentina, West Indies, Europe, northern Africa, southern Asia.

KEY TO MEXICAN GENERA OF ANGUIDAE

1. No lateral fold ..... **Celestus** (p. 194)
   A lateral fold present 2
2. Lateral fold weakly developed, containing few or no granules; sides of neck with coarse granules; head much widened and depressed; pterygoid teeth absent; minimum scales in a transverse row across neck 4–6; arboreal species ..... **Abronia** (p. 196)
   Lateral fold moderately to well developed, containing a moderate or large granular area; sides of neck with fine granules; head thicker, not depressed; pterygoid teeth various; minimum scales in a transverse row across neck no less, often more numerous; terrestrial species 3
3. No anterior internasals, but instead a pair of enlarged supranasals, which much resemble internasals; no unpaired median internasals; nasal in contact with rostral; pterygoid teeth well developed ..... **Elgaria** (p. 205)
   Anterior internasals, posterior internasals and supranasals[98] all present; nasal seldom in contact with rostral; pterygoid teeth various 4
4. One or more median, unpaired postrostrals; frontals in contact with maxilla; pterygoid teeth well developed; tail extremely elongate ..... **Gerrhonotus** (p. 202)
   No postrostrals; frontals separated from maxilla; pterygoid teeth absent or vestigial; tail normal ..... **Barisia** (p. 198)

Genus CELESTUS Gray

Celestus Gray, Ann. Mag. Nat. Hist., vol. 2, 1839, p. 288.[99]
Siderolamprus Cope, Proc. Acad. Nat. Sci. Philadelphia, 1860, p. 368 (type, *S. enneagrammus* Cope).

Genotype.—*Celestus striatus* Gray.
Range.—West Indies, Central America, and southern Mexico.
Species.—About 18, two (possibly three) of which occur in Mexico.

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[97] *Ophisaurus ventralis*, cited from Jalapa, Veracruz, as early as 1884 (Yarrow, U. S. Nat. Mus. Bull. 24, 1884, p. 46), and retained in accounts of the species even up to the present time, has never been authoritatively recorded from Mexico and probably does not occur there. It almost certainly does not occur at Jalapa. It is possible that the record arose from a simple misunderstanding of Peale and Green's *Scincus ventralis* (=*Gerrhonotus liocephalus*) which occurs in the same general area. Regardless of the nature of the error, we emphatically believe the record *is* erroneous.

[98] Supranasals absent in *Gerrhonotus liocephalus austrinus*, which has a postrostral.

[99] Dunn (Notulae Nat., No. 4, 1939, p. 3) expresses the opinion that forms here referred to *Celestus*, characterized by absence of sheaths on the claws, are congeneric with *Diploglossus* (Wiegmann, Herpetologia Mexicana, 1834, p. 36; type "*Sc. fasciatus* Gray"=*Diploglossus fasciatus*), which possesses sheaths.

KEY TO MEXICAN SPECIES OF CELESTUS

1. Median prefrontal in contact with 2 supraoculars, wider than long; no lateral prefrontals (fused with median loreal); 2 dorsolateral light stripes in adults separated by 4 and 2 half scale rows----------**atitlanensis** (p. 195)
   Median prefrontal in contact only with anterior supraocular, as long as wide; small lateral prefrontals usually present; adults not with 2 dorsolateral light stripes---------- 2
2. Snout normal, not especially elongate or flattened; lamellae under fourth toe, 15–18; scales in 33–35 rows; first labial reaching to middle of naris; distance between anterior and posterior loreals less than the length of either; no vertical light bars on sides in young or adults--------**enneagrammus** (p. 195)
   Snout flattened, elongate; lamellae under fourth toe, 23–26; scales in 31–33 rows; first labial reaching to anterior border of naris; distance between anterior and posterior loreals as great or greater than length of either; vertical light bars present on sides in young and adults----------**rozellae** (p. 195)

CELESTUS ROZELLAE Smith

Diploglossus steindachneri, GÜNTHER (*nec* Cope), Biologia Centrali-Americana, Reptilia and Batrachia, 1885, p. 34, pl. 22, fig. A.

Celestus rozellae SMITH, Proc. U. S. Nat. Mus., vol. 92, 1942, pp. 372–374.

Type.—U.S.N.M. No. 113526; Rozella Smith collector.

Type locality.—Palenque, Chiapas.

Range.—Atlantic slopes, presumably from the Isthmus of Tehuantepec to British Honduras. Recorded in Mexico only from the type locality.

CELESTUS ATITLANENSIS Smith, new species[1]

Diploglossus (*Celestus*) *steindachneri*, BOCOURT (*nec* Cope), Mission scientifique au Mexique . . . , Études sur les reptiles, livr. 6, 1879, pp. 383-384, pl. 22, fig. 3.

Type.—Mus. Hist. Nat. Paris, specimen figured as above.

Type locality.—Atitlán, Guatemala.

Range.—Known only from the type specimen from Atitlán, Guatemala, but probably occurring along Pacific slopes from Chiapas to Nicaragua.

CELESTUS ENNEAGRAMMUS (Cope)

Siderolamprus enneagrammus COPE, Proc. Acad. Nat. Sci. Philadelphia, 1860, p. 368.

Celestus enneagrammus, COPE, U. S. Nat. Mus. Bull. 32, 1887, p. 43; Ann. Rep. U. S. Nat. Mus., 1898 (1900), pp. 504–505.—SMITH, Proc. U. S. Nat. Mus., vol. 92, 1942, pp. 370–372, 374.

Diploglossus steindachneri COPE, Proc. Acad. Nat. Sci. Philadelphia, 1864, p. 179 (type locality, Orizaba, Veracruz; U.S.N.M. No. 6342).—BOULENGER, Catalogue of the lizards in the British Museum, vol. 2, 1885, p. 293.

[1] *Diagnosis.*—Allied to *C. enneogrammus* and *C. rozellae*, but with median prefrontal in contact with two (instead of one) supraoculars, no lateral prefrontals (presumably fused to median loreals), a very broad median prefrontal (broader than long), and a pattern in the single known adult (112 mm. snout to vent) consisting of two dorsolateral light stripes separating three broad dark stripes from each other. Similar to *C. bivittatus* Boulenger but with three loreals instead of two, seven supralabials to a point below middle of eye instead of six.—H. M. S.

Diploglossus chalybaeus COPE, Proc. Acad. Nat. Sci. Philadelphia, 1866, p. 321 (type locality, Orizaba, Mexico, 4,000–6,000 feet; U.S.N.M. No. 6603).

Type.—Mus. Comp. Zool. No. 2848; R. Montes de Oca collector.

Type locality.—Jalapa, Veracruz.

Range.—Atlantic foothills of Veracruz and Oaxaca. Reported from *Veracruz:* Orizaba, Jalapa, Tequeyutepec, "one to three miles west of La Goya"; *Oaxaca:* Totontepec, "Tehuantepec," Santa Efigenia.

Genus ABRONIA Gray

Abronia GRAY, Ann. Mag. Nat. Hist., ser. 1, vol. 1, 1838, p. 389.—TIHEN, Amer. Midl. Nat., vol. 41, 1949, pp. 587–591.

Genotype.—*Gerrhonotus deppii* Wiegmann [=*Abronia deppii* (Wiegmann).]

Range.—Hidalgo, south to Guerrero and Chiapas. In Central America, Guatemala.

Species.—Nine species, 10 forms; 6 species and 7 forms in Mexico.

KEY TO MEXICAN FORMS OF ABRONIA

1. Postmental unpaired 2
   Postmental paired 3
2. Scale rows 30–33; parietal separated from supraoculars or very narrowly in contact; dorsal markings usually indistinct, those on neck, if present, combining to form a large single mark ..... **ochoterenai** (p. 197)
   Scale rows 39; parietals broadly in contact with the supraocular; markings on back distinct, those on neck discrete, not forming a large single mark. **matudai** (p. 196)
3. Suboculars missing or reduced to minute scales; one anterior temporal bordering orbit ..... **deppii** (p. 197)
   Suboculars present, well developed; 2 anterior temporals bordering orbit .. 4
4. Area of granular scales on sides of neck very narrow; no granular zone in lateral fold ..... **oaxacae** (p. 197)
   Area of granular scales covering entire sides of neck; a granular zone in lateral fold 5
5. Prominent light markings along the sides; dorsal osteoderms absent over posterior part of body; dorsal scales about 31–34 (average about 33); minimum number of scales in a single nuchal transverse row usually 6. **taeniata taeniata** (p. 197)
   No light markings on sides of body; dorsal osteoderms present over the whole body 6
6. Dorsal scale rows 25 to 29; minimum number of scales in a transverse nuchal row, 4 or 5 (75 percent); chin and lower labials white with occasionally a few scattered dark blotches ..... **taeniata graminea** (p. 198)
   Dorsal scale rows 30–31; minimum number of scales in a transverse nuchal row, 6; infralabials darker than chin and as dark as granular area of neck, with indistinct lighter bands ..... **fuscolabialis** (p. 198)

ABRONIA MATUDAI (Hartweg and Tihen)

Gerrhonotus matudae HARTWEG and TIHEN, Occ. Pap. Mus. Zool. Univ. Michigan, No. 497, 1946, pp. 3–5.

Abronia matudai, TIHEN, Amer. Midl. Nat., vol. 41, 1949, p. 591.

Type.—Univ. Michigan Mus. Zool. No. 88331; Eizi Matuda collector.

Type locality.—Volcán de Tacaná, Chiapas, 2,000 meters.

Range.—Known only from the type locality.

ABRONIA OCHOTERENAI (Martín del Campo)

Gerrhonotus vasconcelosii ochoterenai MARTÍN DEL CAMPO, Anal. Inst. Biol. México, vol. 10, 1939, pp. 357–359, fig. 3 (cotypes).

[*Gerrhonotus*] *ochoterenai*, SMITH, Proc. U. S. Nat. Mus., vol. 92, 1942, p. 368.

Abronia ochoterenai, TIHEN, Amer. Midl. Nat., vol. 41, 1949, p. 591.

?*Gerrhonotus fimbriatus*,[2] MARTÍN DEL CAMPO, Anal. Inst. Biol. México, vol. 10, 1939, p. 359.

Type.—Instituto de Biología, México, cotypes, male and female; Mario del Toro collector.

Type locality.—Santa Rosa, Comitán, Chiapas.

Range.—Known only from the type locality.

ABRONIA DEPPII (Wiegmann)

Gerrhonotus deppii WIEGMANN, Isis von Oken, vol. 21, 1828, p. 379; Herpetologia Mexicana, pt. 1, 1834, pp. 31–32, pl. 9, figs. 3, 4.

Abronia deppii, GRAY, Ann. Nat. Hist., vol. 1, 1838, p. 389.—TIHEN, Amer. Midl. Nat., vol. 41, 1949, p. 590.

Gerrhonotus (*Abronia*) *Deppei*, BOCOURT, Mission Scientifique au Mexique . . . , Études sur les reptiles, livr. 5, 1878, pp. 325–327, pl. 21A, figs. 3, 3a.

Type.—Zool. Mus. Berlin; F. Deppe collector.

Type locality.—Mexico. Here restricted to Omilteme, Guerrero.

Range.—Sierra Madre del Sur. Known only from the vicinity of Omilteme, Guerrero.

ABRONIA OAXACAE (Günther)

Gerrhonotus oaxacae GÜNTHER, Biologia Centrali-Americana, Reptilia and Batrachia, 1885, p. 36, pl. 24, figs. A, A′, A″.

Abronia oaxacae, TIHEN, Amer. Midl. Nat., vol. 41, 1949, p. 591.

Type.—Brit. Mus. Nat. Hist., 2 adult males, 1 young; A. Boucard collector.

Type locality.—"Oaxaca," Mexico.

Range.—Mountains in Oaxaca. Reported definitely only from "Luvina, Tehuantepec, Oaxaca."

ABRONIA TAENIATA TAENIATA (Wiegmann)

Gerrhonotus taeniatus WIEGMANN, Isis von Oken, vol. 21, 1828, p. 379; Herpetologia Mexicana, 1834, p. 32, pl. 9, fig. 1, 2.

Abronia taeniatus, GRAY, Ann. Nat. Hist., vol. 1, 1838, p. 390.—TIHEN, Amer. Midl. Nat., vol. 41, 1949, p. 590.

Gerrhonotus (*Abronia*) *taeniatus*, BOCOURT, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 5, 1878, pp. 327–329, pl. 21A, figs. 4, 4a, and 5.

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[2] This arrangement has been suggested verbally by Dr. Tihen.

Gerrhonotus deppii digueti MOCQUARD, Bull. Mus. Hist. Nat. Paris, 1905, p. 79 (Mus. Hist. Nat. Paris; Sierra de Zacapoaxtla, Puebla; Léon Diguet, collector).

Type.—Zool. Mus. Berlin; F. Deppe collector.

Type locality.—Mexico. Here restricted to El Chico, Hidalgo.[3]

Range.—Southern Hidalgo, central and northern Puebla. Reported from *Hidalgo:* El Chico; *Puebla:* Zacapoaxtla, Ahuacatlán. Intergrades of *taeniata* and *graminea* are reported from La Joya, *Veracruz.*

ABRONIA TAENIATA GRAMINEA (Cope)

Gerrhonotus gramineus COPE, Proc. Acad. Nat. Sci. Philadelphia, Aug. 1864, p. 179.—GÜNTHER, Biologia Centrali-Americana, Reptilia and Batrachia, 1885, p. 36, pl. 24, fig. B.

Abronia taeniata graminea, TIHEN, Amer. Midl. Nat., vol. 41, 1949, p. 591.

Type.—U.S.N.M. (Field No. 50); François E. Sumichrast collector.

Type locality.—Orizaba, Mexico.

Range.—Central Veracruz and eastern Puebla. Reported from *Puebla:* Pájaro Verde, Puente Colorado; *Veracruz:* Orizaba, Acultzingo.

ABRONIA FUSCOLABIALIS (Tihen)

Gerrhonotus fuscolabialis TIHEN, Copeia, 1944, pp. 112–115, figs. 1–3.

Abronia fuscolabialis, TIHEN, Amer. Midl. Nat., vol. 41, 1949, p. 591.

Type.—R. T. Moore coll. No. 400 (California Inst. Tech.).

Type locality.—Mount Zempoaltepec, Oaxaca.

Range.—Known only from the type locality.

Genus BARISIA Gray

Barisia GRAY, Ann. Mag. Nat. Hist., ser. 1, vol. 1, 1838, p. 390.—TIHEN, Amer. Midl. Nat., vol. 41, 1949, pp. 596–598, figs. 10–12; Univ. Kansas Sci. Bull., vol. 23, 1949, pp. 217–256, pls. 1–2, fig. 1.

Mesaspis COPE, Proc. Amer. Philos. Soc., vol. 17, 1877, p. 96 (type, *M. moreletii* Bocourt).

Genotype.—*Gerrhonotus imbricatus* Wiegmann [=*Barisia imbricata imbricata* (Wiegmann)].

Range.—Chihuahua and Coahuila south to Chiapas; Central America to Panamá.

Species.—Nine, with 16 forms; 8 species, 12 forms, occur in Mexico.

KEY TO MEXICAN SPECIES OF BARISIA

1. Postmental unpaired; prefrontal bones in contact 2
   Postmental paired; prefrontal bones separated by frontonasal 4
2. Eighteen to 20 longitudinal dorsal scale rows; frontonasal normally present. 3
   Fourteen longitudinal dorsal scale rows; frontonasal normally absent.
   viridiflava (p. 200)
3. Upper postnasal separated from lower by a loreonasal contact.
   moreleti rafaeli (p. 199)

[3] It is known that Deppe collected in this region.

Upper and lower postnasals in contact.....**moreleti temporalis** (p. 199)

4. Superciliary series complete; pterygoid teeth absent..... 5
   Superciliary series incomplete; pterygoid teeth vestigial..... 8
5. Supranasals unexpanded; an anterior canthal present..... 6
   Supranasals expanded; no anterior canthal..... 7
6. Scales of neck keeled; anterior loreal in contact with anterior canthal.
   gadovii gadovii (p. 200)
   Scales of neck smooth; anterior loreal separated from anterior canthal by a contact of posterior loreal with upper postnasal..**gadovii levigata** (p. 200)
7. Frontonasal and postrostral present.....**modesta** (p. 201)
   No frontonasal or postrostral present.....**antauges** (p. 200)
8. One loreal; more than 33 dorsal scale rows..... 9
   Two loreals; fewer than 33 dorsal scale rows.....**rudicollis** (p. 202)
9. More than 1 superciliary (usually 3); transverse dorsal scale rows usually fewer than 47..... 10
   A single (middle) superciliary element; transverse dorsal scale rows usually more than 47.....**levicollis** (p. 202)
10. Fewer than 16 longitudinal dorsal scale rows; contact of anterior superciliary with loreal usually smaller than that of first medial supraocular with loreal..... 11
    Sixteen longitudinal dorsal scale rows; contact of anterior superciliary with loreal as great or greater than that of first medial supraocular with loreal.
    imbricata imbricata (p. 201)
11. Lowest primary temporal in contact with penultimate as well as with antepenultimate supralabial; 39–45 transverse dorsal scale rows.
    imbricata ciliaris (p. 202)
    Lowest primary temporal not in contact with penultimate supralabial; 35–39 transverse dorsal scale rows.....**imbricata planifrons** (p. 201)

BARISIA MORELETI RAFAELI (Hartweg and Tihen)

Gerrhonotus moreleti rafaeli HARTWEG and TIHEN, Occ. Pap. Mus. Zool. Univ. Michigan, No. 497, 1946, pp. 8–10.

Barisia moreleti rafaeli, TIHEN, Amer. Midl. Nat., vol. 41, 1949, pp. 223–224.

Type.—Mus. Zool. Univ. Michigan No. 88228; Eizi Matuda collector.

Type locality.—16 km. south of Siltepec, Chiapas, 2,300 meters elevation.

Range.—High mountains of southern Chiapas. Reported from Cerro Paxtal, 1,500 meters; Chiquihuite, Volcán de Tacaná, 2,500 meters; Cerro Malé.

BARISIA MORELETI TEMPORALIS (Hartweg and Tihen)

Gerrhonotus moreleti temporalis HARTWEG and TIHEN, Occ. Pap. Mus. Zool. Univ. Michigan, No. 497, 1946, pp. 10–15.

Barisia moreleti temporalis, TIHEN, Amer. Midl. Nat., vol. 41, 1949, pp. 224–225.

Type.—Mus. Zool. Univ. Michigan No. 94910; Norman Hartweg collector.

Type locality.—Eleven km. southeast of Ciudad de las Casas, Chiapas, 2,300 meters elevation.

Range.—Known only from the type locality.

BARISIA GADOVII GADOVII (Boulenger)

Gerrhonotus gadovii BOULENGER, Ann. Mag. Nat. Hist., ser. 8, vol. 12, 1913, pp. 564–565.
Barisia gadovii gadovii, TIHEN, Univ. Kansas Sci. Bull., vol. 33, 1949, pp. 230–231.

Type.—Brit. Mus. Nat. Hist., two cotypes; Hans Gadow collector.
Type locality.—Omilteme, Guerrero.
Range.—Sierra Madre del Sur, in Guerrero. Known only from mountains west of Chilpancingo and the type locality.

BARISIA GADOVII LEVIGATA Tihen

Barisia gadovii levigata TIHEN, Univ. Kansas Sci. Bull., vol. 33, 1949, pp. 231–233, pl. 2, figs. 3–5.

Type.—U.S.N.M. No. 47212; E. W. Nelson and E. A. Goldman collectors.
Type locality.—"Valley of Oaxaca," Oaxaca.
Range.—Mountains of central Oaxaca. Reported from "mountains west of Oaxaca city."

BARISIA VIRIDIFLAVA (Bocourt)

Gerrhonotus viridiflavus BOCOURT, Ann. Sci. Nat., vol. 17, 1873, art. 2 (unpaged).
Barisia viridiflava, TIHEN, Amer. Midl. Nat., vol. 41, 1949, pp. 227–229, fig. 1.
Gerrhonotus bocourti PETERS, Monatsb. Acad. Wiss. Berlin, 1876, p. 297 (type locality, "Mexico," here restricted to Oaxaca, Oaxaca; Zool. Mus. Berl.).
Gerrhonotus antauges (part), BOCOURT, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 5, 1878, pp. 346–349, pl. 21B, figs. 7, 7a.
Gerrhonotus obscurus GÜNTHER, Biologia Centrali-Americana, Reptilia and Batrachia, 1895, p. 40, pl. 25, figs. E, E′ (type locality, "Mexico," here restricted to Oaxaca, Oaxaca; Brit. Mus. Nat. Hist.).

Type.—Mus. Hist. Nat. Paris; "un seul exemplaire qui a été cédé par M. Boucard, comme provenant des collections de M. F. Sumichrast."
Type locality.—Mexico. Restricted by Tihen to the highlands of central Oaxaca, near the city of Oaxaca.
Range.—Mountains north of Oaxaca (city). Reported from "summit of Cerro San Felipe north of Oaxaca" (city).

BARISIA ANTAUGES Cope

Barissia antauges COPE, Proc. Acad. Nat. Sci. Philadelphia, 1866, p. 132.
Barisia antauges, TIHEN, Amer. Midl. Nat., vol. 41, 1949, pp. 235–236.

Type.—U. S. N. M. No. 30221; François E. Sumichrast collector.
Type locality.—Orizaba, Veracruz [=Volcán Citlaltépetl].
Range.—Volcán Citlaltépetl (Mount Orizaba), Veracruz; known only from the type locality.

BARISIA MODESTA (Cope)

Pterogasterus modestus Cope, Proc. Amer. Philos. Soc., 1877, pp. 96, 97.
Gerrhonotus modestus, Boulenger, Catalogue of the lizards in the British Museum, vol. 2, 1885, p. 276.
Barisia modestus, Tihen, Amer. Midl. Nat., vol. 41, 1949, pp. 234–235.

Type.—U. S. Nat. Mus., three specimens; collector unknown.

Type locality.—"Probably Guatemala," here restricted to Mount Orizaba.

Range.—Region of Mount Orizaba (Volcán Citlaltépetl), Veracruz (not known from Guatemala).

BARISIA IMBRICATA IMBRICATA (Wiegmann)

Gerrhonotus imbricatus Wiegmann, Isis von Oken, vol. 21, 1828, p. 379; Herpetologia Mexicana, 1834, pt. 1, p. 34, pl. 10, figs. 2, 5.
Barissia imbricata, Gray, Catalogue of the lizards in the British Museum, 1845, p. 55.
Gerrhonotus (Barissia) imbricatus, Bocourt, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 5, 1878, pl. 21B, figs. 1, 1a, 2, 2a, and livr. 6, 1879, pp. 363–365.
Barisia imbricata imbricata, Tihen, Amer. Midl. Nat., vol. 41, 1949, pp. 240–244.
Gerrhonotus lichenigerus Wagler, Descriptiones et icones amphibiorum, 1833, pl. 34, fig. 2 (type locality here restricted to Mexico, D. F.).—Wiegmann, Herpetologia Mexicana, 1834, pl. 10, figs. 2–5.
Gerrhonotus adspersus Wiegmann, Herpetologia Mexicana, 1834, pl. 10 (type locality, Mexico by inference, here restricted to San Martín, México; Zool. Mus. Berl.; F. Deppe collector).
Gerrhonotus olivaceus Baird, Proc. Acad. Nat. Sci. Philadelphia, 1858, p. 255 (type locality, "near San Diego;" U.S.N.M. No. 3096, two cotypes).

Type.—Zool. Mus. Berlin, two cotypes; F. Deppe collector.

Type locality.—Mexico, here restricted to México, D. F.

Range.—The periphery and southern part of the central Mexican Plateau, from Veracruz to Jalisco. Reported from numerous localities in the states of Jalisco, Michoacán, México, Morelos, Puebla, Oaxaca, Veracruz, Hidalgo, and Guanajuato, and from Distrito Federal.

BARISIA IMBRICATA PLANIFRONS (Bocourt)

Gerrhonotus (Barissia) planifrons Bocourt, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 5, 1878, pl. 21C, figs. 1, 1a; livr. 6, 1879, pp. 361–363 (pl. 21C was published with the name, in livr. 5, 1878; this constitutes the "type description").
Barisia imbricata planifrons, Tihen, Amer. Midl. Nat., vol. 41, 1949, pp. 246–247.

Type.—Mus. Hist. Nat. Paris; Adolphe Boucard collector.

Type locality.—"Oaxaca."

Range.—Oaxaca, mountainous areas; not known from a definite locality.

BARISIA IMBRICATA CILIARIS (Smith)

Gerrhonotus levicollis ciliaris SMITH, Proc. U. S. Nat. Mus., vol. 92, 1942, pp. 365–367.

Barisia imbricata ciliaris, TIHEN, Amer. Midl. Nat., vol. 41, 1949, pp. 244–245.

Type.—U.S.N.M. No. 47496; E. W. Nelson and E. A. Goldman collectors.

Type locality.—Sierra Guadelupe, Coahuila.

Range.—The northern portion of the plateau from extreme southern Coahuila to Guanajuato, east to San Luis Potosí and west to Sinaloa. Reported from *Coahuila:* Sierra Guadelupe; *Zacatecas:* Sierra Madre; *Durango:* Coyotes, Inde; *San Luis Potosí:* mountains near San Luis Potosí (city), near Xilitla, near Jesús María; *Guanajuato:* San Felipe, Sierra de Santa Rosa; *Hidalgo:* Durango; *Nuevo León:* Pablillo, Galeana; *Sinaloa:* Escuinapa.

BARISIA LEVICOLLIS Stejneger

Barissia levicollis STEJNEGER, Proc. U. S. Nat. Mus., vol. 13, 1890, pp. 184–185.—COPE, Ann. Rep. U. S. Nat. Mus., 1898 (1900), pp. 535–536, fig. 96.

[*Gerrhonotus*] *levicollis levicollis*, SMITH, Proc. U. S. Nat. Mus., vol. 92, 1942, p. 368.

Barisia levicollis, TIHEN, Amer. Midl. Nat., vol. 41, 1949, pp. 247–248; Univ. Kansas Sci. Bull., vol. 33, 1949, pp. 247–248.

Type.—U.S.N.M. No. 9362; "evidently obtained by one of the surveying parties of the United States and Mexican Boundary Survey," *fide* Stejneger.

Type locality.—"Mexican boundary." Probably Chihuahua, *fide* Tihen, *loc. cit.*

Range.—Chihuahua and probably adjacent areas in Sonora. Reported from *Chihuahua:* north Chihuahua, Colonia García, Meadow Valley, 65 miles east of Batopilas, Samachique.

BARISIA RUDICOLLIS (Wiegmann)

Gerrhonotus rudicollis WIEGMANN, Isis von Oken, vol. 21, 1828, p. 379; Herpetologia Mexicana, 1834, pp. 33–34, pl. 10, figs. 1, 4.—MARTÍN DEL CAMPO, Anal. Inst. Biol., vol. 10, No. 3–4, 1939, p. 360, fig. 4.

Barissia rudicollis, GRAY, Catalogue of the lizards in the collection of the British Museum, London, 1845, p. 55.

Gerrhonotus (*Barissia*) *rudicollis*, BOCOURT, Mission scientifique au Mexique . . . , Études sur les reptiles, livr. 5, 1878, pl. 21B, figs. 3, 3a; and livr. 6, 1879, pp. 367–369.

Barisia rudicollis, TIHEN, Amer. Midl. Nat., vol. 41, 1949, pp. 238–240, pl. 1.

Type.—Zool. Mus. Berlin; F. Deppe collector.

Type locality.—Mexico. Here restricted to Hacienda de le Gavía, México (state).

Range.—Western México and perhaps adjoining parts of Michoacán. Reported from *México:* Hacienda de la Gavía.

Genus GERRHONOTUS Wiegmann

Gerrhonotus WIEGMANN, Isis von Oken, vol. 21, 1828, No. 3, p. 379.—TIHEN, Amer. Midl. Nat., vol. 41, 1949, pp. 591–593.

Pterogastenes PEALE and GREEN, Journ. Acad. Nat. Sci. Philadelphia, vol. 6, 1830, p. 234 (type, *Scincus ventralis* Peale and Green).

Genotype.—*Gerrhonotus tessellatus* Wiegmann [=*Gerrhonotus liocephalus* Wiegmann].

Range.—Central Texas southward through the plateaux of Mexico to southwestern Chiapas.

Species.—One. Five forms recognized, all occurring in Mexico.

KEY TO SPECIES OF GERRHONOTUS

1. Three loreals (loreocanthals) on each side 2
   Four or more loreocanthals on each side 3
2. Supranasals absent; azygous prefrontal much longer than broad; frontal widely separated from interparietal; all except lowermost anterior temporal touch fifth medial supraocular ..... **liocephalus austrinus** (p. 204)
   Supranasals present; azygous prefrontal as broad as or broader than long; frontal in contact with or very narrowly separated from interparietal; only 2 uppermost anterior temporals in contact with fifth supraocular. **liocephalus liocephalus** (p. 203)
3. Dorsal bands obsolete; venter nearly without marking; 52–60 dorsal scales (average 55. 6); tail to body ratio, 2. 5–2. 6; caudals 157–163; second primary temporal touches the fifth medial supraocular. **liocephalus loweryi** (p. 204)
   Dorsal bands distinct; venter mottled and flecked 4
4. Dorsal scales 45–54 (average 49); tail-body ratio, 1. 75–2. 1; caudals, 116–137. **liocephalus infernalis** (p. 204)
   Dorsal scales 49–52 (average 51); tail-body ratio 2. 3; caudals (approx.) 140. **liocephalus ophiurus** (p. 204)

GERRHONOTUS LIOCEPHALUS LIOCEPHALUS Wiegmann

G[errhonotus] liocephalus WIEGMANN, Isis von Oken, vol. 21, 1828, p. 381.

Gerrhonotus liocephalus, BOCOURT, Mission scientifique au Mexique . . . , Études sur les reptiles, livr. 5, 1878, pp. 342–346, pl. 21A, figs. 1, 2, 2a.

Gerrhonotus liocephalus liocephalus, COPE, Ann. Rep. U. S. Nat. Mus. 1898 (1900), pp. 516–517.—SMITH, Proc. U. S. Nat. Mus., vol. 92, 1942, p. 369.

G[errhonotus] tessellatus WIEGMANN, Herpetologia Mexicana, pt. 1, 1834, pp. 32–33, pl. 10, fig. 3 (substitute name for preceding).

Scincus ventralis PEALE and GREEN, Journ. Acad. Nat. Sci. Philadelphia, 1838, pt. 4, p. 233 (type locality, "Mining Districts of Mexico"="Valley of Mexico" *fide* Cope, here restricted to Magdalena, D. F.; type in Acad. Nat. Sci. Philadelphia, two cotypes).

Type.—Zool. Mus. Berlin; F. Deppe collector.

Type locality.—Mexico (Oaxaca, *fide* Bocourt *loc. cit.*, p. 344, here restricted to Tlapancingo).

Range.—Central plateau region, from Guanajuato to Guerrero and Oaxaca. Reported from *Distrito Federal:* Magdalena, Mixiuhca; *Guerrero:* Omilteme; *México:* Temascaltepec; *Oaxaca:* Llano Ocotal,

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La Concepción, Tlapancingo, Tres Cruces; *Puebla:* Cacaloapam; *Morelos:* Cuernavaca; *Guanajuato:* Silao.

GERRHONOTUS LIOCEPHALUS LOWERYI Tihen

Gerrhonotus liocephalus loweryi TIHEN, Trans. Kansas Acad. Sci., vol. 51, 1948, pp. 302–305.

Type.—La. State Univ. Mus. No. 480; Marcella Newman collector.

Type locality.—"Xilitla region" (neighborhood of Xilitla, San Luis Potosí).

Range.—Known only from the type locality and possibly also from Ciudad del Maíz, San Luis Potosí.

GERRHONOTUS LIOCEPHALUS OPHIURUS Cope

Gerrhonotus ophiurus COPE, Proc. Acad. Nat. Sci. Philadelphia, 1866, pp. 321–322.
Pterogasterus ophiurus, COPE, Proc. Amer. Philos. Soc., vol. 17, 1877, p. 96.
Gerrhonotus liocephalus ophiurus, COPE, Ann. Rep. U. S. Nat. Mus., 1898 (1900), pp. 516–517.
Gerrhonotus lemniscatus BOCOURT, Nouv. Arch. Mus. Hist. Nat. Paris, vol. 7, 1872, pp. 105–107 (Mus. Hist. Nat. Paris; Veracruz).

Type.—U.S.N.M. No. 30206; François E. Sumichrast collector.

Type locality.—Orizaba, Veracruz, Mexico.

Range.—Eastern foothills of the plateau. Known only from *Veracruz:* Orizaba, Jicaltepec, Córdoba, Cerro Gordo; *Puebla:* Hueytamalco (Teziutlán).

GERRHONOTUS LIOCEPHALUS INFERNALIS Baird

Gerrhonotus infernalis BAIRD, Proc. Acad. Nat. Sci. Philadelphia, 1858, p. 255.
Gerrhonotus liocephalus infernalis, COPE, Ann. Rept. U. S. Nat. Mus., 1898 (1900), pp. 517–519, fig. 9.—SMITH, Handbook of lizards, 1946, pp. 463–464, pl. 131.—TIHEN, Amer. Midl. Nat., vol. 41, 1949, p. 593.

Type.—? U.S.N.M. No. 3090; C. B. R. Kennerly collector.

Type locality.—Devils River, Tex.

Range.—San Luis Potosí, Coahuila and probably adjoining states of Chihuahua and Nuevo León, northward to central Texas across the Rio Grande valley from Rio Grande City to mouth of Devil's River. Reported from *Coahuila:* Carmen Mountains, Cerro Encarnación, Sierra Guadelupe south of La Cuchilla, Monclova; *San Luis Potosí:* Alvarez.

GERRHONOTUS LIOCEPHALUS AUSTRINUS Hartweg and Tihen

Gerrhonotus liocephalus austrinus HARTWEG and TIHEN, Occ. Pap. Mus. Zool. Univ. Michigan, No. 497, 1946, pp. 6, 7.

Type.—Univ. Michigan Mus. Zool. No. 94921; Eizi Matuda collector.

Type locality.—3,200 meters elevation on Cerro Malé, Porvenir, Chiapas.

Range.—Known only from the type locality.

Genus ELGARIA Gray

Elgaria Gray, Ann. Mag. Nat. Hist., ser. 1, vol. 1, 1838, p. 390.—Tihen, Amer. Midl. Nat., vol. 41, 1949, pp. 593–596, figs. 8–9.

Tropidolepis Skilton (*nec* Cuvier), Amer. Journ. Sci., ser. 2, vol. 7, 1849, p. 202 (type, *T. scincicauda* Skilton).

Genotype.—*Cordylus* (*Gerrhonotus*) *multicarinatus* Blainville = *Elgaria multicarinata multicarinata.*

Range.—Chihuahua and Baja California, northward through California to British Columbia, Utah, and Montana.

Species.—Six species and 13 forms. Six forms occur in Mexco.

KEY TO MEXICAN SPECIES OF ELGARIA

1. Alternate black and white marks on labials (white spots somewhat ocellate). **kingii** group 4
   No alternate black and white marks on labials **multicarinata** group 2
2. Temporal scales all or partly keeled 3
   Temporal scales smooth; granular area of lateral fold white with gray or black reticulations; scales on arm smooth; 2 rows of scales keeled on thigh; lateral body scales smooth **cedrosensis** (p. 206)
3. Large (130 mm. maximum); dorsals all heavily keeled; two upper temporal rows sharply keeled, others weakly keeled or nearly smooth; three rows of keeled scales on arm; dark transverse bands indented with white markings 5 scale rows above lateral fold and on back; ventral longitudinal lines faint or obsolete **multicarinata webbii** (p. 207)
   Smaller (114 mm. maximum); dorsals less strongly keeled; two upper temporals strongly keeled; 1 to 3 keeled rows on arm; dark ventral longitudinal lines; wide brown band on temporal region from eye to ear. **multicarinata nana** (p. 207)
4. Granular area of lateral fold white crossed by black bands usually continuous with dark body bands; eight dorsal scale rows keeled moderately, lateral rows faintly keeled; 4 internasals of about same size; arm scales smooth; thigh scales with 2 rows keeled **paucicarinatus** (p. 206)
   Granular area of lateral fold dull gray; heavy broad dorsal bands on neck, body, tail, the latter almost encircling tail; usually 6 or 8 weakly keeled dorsal scale rows; scales on arm and thigh smooth 5
5. Dorsal longitudinal scale rows usually 16; scales from occiput to posterior part of thigh in 51 to 56 transverse rows (average, 52.9); transverse row of four anterior temporals, uppermost always in contact with uppermost secondary temporal; granular area in fold usually black **kingii kingii** (p. 205)
   Dorsal longitudinal scale rows usually 14; scales from occiput to posterior part of thigh 55 to 60 (average 57.3); four anterior temporals, uppermost separated from uppermost secondary temporal (60 percent); granular area in fold usually gray **kingii nobilis** (p. 206)

ELGARIA KINGII KINGII Gray

Elgaria kingii Gray, Ann. Mag. Nat. Hist., vol. 1, 1838, p. 390.

Elgaria kingii kingii, Tihen, Trans. Kansas Acad. Sci., vol. 51, 1948, pp. 299-300.

Gerrhonotus kingii, Bocourt, Nouv. Arch. Mus. Hist. Nat. Paris, vol. 7, p. 106; Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 5, 1878, pp. 339–342, pl. 21C, figs. 2, 2a (name attributed to Bell, his manuscript published by Gray).

Gerrhonotus multifasciatus DUMÉRIL and BOCOURT, Erpétologie générale, vol. 5, 1839, p. 401 (type locality, "Mexico", here restricted to Mojárachic, Chihuahua; Mus. Hist. Nat. Paris).

Type.—Brit. Mus. Nat. Hist., adult (in bad state); from the T. Bell collection, collector unknown.

Type locality.—Mexico [so stated by Boulenger, Catalogue of Lizards . . ., vol. 2, 1885, p. 275]. Tihen suggests "presumably Chihuahua." Here restricted to Mojárachic.

Range.—Eastern Sonora and western Chihuahua, probably southward into Durango and Sinaloa. Reported from *Chihuahua:* Madera, Mojárachic, Chiricahui, Colonia García (possibly intergrades with with *nobilis*); *Sonora:* (no specific locality).

ELGARIA KINGII NOBILIS Baird and Girard

Elgaria nobilis BAIRD and GIRARD, Proc. Acad. Nat. Sci. Philadelphia, vol. 6, 1852, p. 129.
Gerrhonotus nobilis, BAIRD, United States and Mexican boundary survey, vol. 2, Reptiles, 1859, p. 11, pl. 25, fig. 108.
Elgaria kingii nobilis, TIHEN, Amer. Midl. Nat., vol. 41, 1949, p. 596.
Gerrhonotus kingii, SMITH, Handbook of lizards, 1946, pp. 452–454, pl. 127.

Type.—Possibly in Acad. Nat. Sci. Philadelphia.

Type locality.—Fort Webster Copper Mines of the Gila [Santa Rita del Cobre], N. Mex.

Range.—Southwestern New Mexico and southeastern Arizona. While no records are available from Mexico, specimens have been taken within a few hundred yards of the border, and the form must occur in Mexico (Sonora).

ELGARIA PAUCICARINATUS (Fitch)

Gerrhonotus paucicarinatus FITCH, Copeia, 1934, No. 4, 1935, pp. 172–173.
Elgaria paucicarinata, TIHEN, Amer. Midl. Nat., vol. 41, 1949, p. 595.

Type.—Mus. Vert. Zool. Univ. California No. 11768, male; C. C. Lamb collector.

Type locality.—Todos Santos, Baja California.

Range.—Southern end of Baja California in the vicinity of the type locality.

ELGARIA CEDROSENSIS (Fitch)

Gerrhonotus cedrosensis FITCH, Copeia, 1934, No. 1, pp. 6–7.
Elgaria cedrosensis, TIHEN, Amer. Midl. Nat., vol. 41, 1949, p. 595.

Type.—California Acad. Sci. No. 56187; J. R. Slevin collector.

Type locality.—"Cañon on southeast side of Cedros Island," Baja California.

Range.—Cedros Island, Baja California.

ELGARIA MULTICARINATA NANA (Fitch)

Gerrhonotus scincicauda nanus FITCH, Copeia, 1934, p. 7.
Gerrhonotus multi-carinatus nanus, FITCH, Amer. Midl. Nat., vol. 20, 1938, pp. 397–399, fig. 2.
Elgaria multicarinata nana, TIHEN, Amer. Midl. Nat., vol. 41, 1949, p. 596.

Type.—Mus. Vert. Zool. Univ. California No. 5402; A. B. Howell collector.

Type locality.—South Island, Los Coronados Islands, Baja California.

Range.—Los Coronados Islands, Baja California.

ELGARIA MULTICARINATA WEBBII (Baird)

Gerrhonotus webbii BAIRD, Proc. Acad. Nat. Sci. Philadelphia, 1858, p. 225.
Gerrhonotus scincicauda webbii, GRINNELL and CAMP, Univ. California Publ. Zool., vol. 17, 1917, p. 168.
Gerrhonotus multi-carinatus webbii, FITCH, Amer. Midl. Nat., vol. 20, 1938, pp. 395–397.—SMITH, Handbook of lizards, 1946, pp. 460–462, pl. 130.
Elgaria multicarinatus webbii, TIHEN, Amer. Midl. Nat., vol. 41, 1949, p. 596.
Gerrhonotus scincicauda ignavus VAN DENBURGH, Proc. California Acad. Sci., ser. 3, vol. 4, 1905, p. 19, pl. 7, figs. 1–2 (type locality, San Martín Island, Baja California).

Type.—U.S.N.M. No. 3078; T. H. Webb collector.

Type locality.—"San Diego to El Paso," "probably from near vicinity of San Diego, San Diego Co. California [?]" (Fitch, *loc. cit.*). Here restricted to San Diego, Calif.

Range.—Southern California and extreme northern Baja California. Reported in Baja California from San Pedro Mártir Mountains, Alcatraz.

Family XENOSAURIDAE Cope

Xenosauridae COPE, Proc. Acad. Nat. Sci. Philadelphia, vol. 18, 1866 (1867), p. 322.

Genera.—A single genus, *Xenosaurus* Peters, is known.

Range.—San Luis Potosí to Guatemala.

Genus XENOSAURUS Peters

Xenosaurus PETERS, Monatsb. Acad. Wiss. Berlin, 1861, p. 453.

Genotype.—*Xenosaurus fasciatus* Peters=*Xenosaurus grandis* (Gray).

Range.—San Luis Potosí to Guatemala.

Species.—Three.

KEY TO SPECIES OF XENOSAURUS

1. Arm with widely spaced tubercles on its dorsal surface; a row of supraoculars each 1½ to 2 times as long as wide; cream, black spotted on venter_____ 2
   Arm regularly covered with tubercles on dorsal surface; supraoculars not forming a series of more or less regular enlarged scales; venter uniformly gray or gray-white without spots or flecks_____**newmanorum** (p. 208)

2. Scales bordering posterior gular fold small, rather widely separated from each other, considerably smaller than median chest scales------**grandis** (p. 208)
Scales bordering posterior gular fold larger, in contact with each other or narrowly separated, about as large as median chest scales--**rackhami** (p. 208)

XENOSAURUS NEWMANORUM Taylor

Xenosaurus newmanorum TAYLOR, Univ. Kansas Sci. Bull., vol. 33, 1949, pp. 183–187.

Type.—Louisiana State Univ. No. 85; Marcella Newman collector.
Type locality.—"Xilitla Region" (near Xilitla, San Luis Potosí).
Range.—Known only from the type locality.

XENOSAURUS GRANDIS (Gray)

Cubina grandis GRAY, Ann. Mag. Nat. Hist., ser. 2, vol. 18, 1856, p. 270.
Xenosaurus grandis, COPE, Proc. Acad. Nat. Sci. Philadelphia, 1866, p. 322.—BOCOURT, Mission scientifique au Mexique . . . , Études sur les reptiles, livr. 5, 1878, pp. 303–306, pl. 20F, figs. 1a–d, 1f, 1g.—Cope, Ann. Rep. U. S. Nat. Mus., 1898 (1900), pp. 538–539.—BARROWS and SMITH, Univ. Kansas Sci. Bull., vol. 31, 1947, pp. 227–281, pls. 11–16.
Xenosaurus fasciatus PETERS, Monatsb. Acad. Wiss. Berlin, 1861, p. 453 (type locality, Huanusco [=Huatusco], Veracruz; Berl. Mus.).

Type.—Brit. Mus. Nat. Hist.; A. Sallé collector.
Type locality.—Córdoba, Veracruz (probably from nearby mountains).
Range.—Foothills of central Veracruz southward to the Isthmus. Reported from *Veracruz:* Huanusco [=Huatusco], Córdoba, Orizaba; *Oaxaca:* "Oaxaca," Tehuantepec.[4]

XENOSAURUS RACKHAMI Stuart

Xenosaurus rackhami STUART, Proc. Biol. Soc. Washington, vol. 54, 1941, pp. 47–48.—SMITH, Journ. Washington Acad. Sci., vol. 39, 1949, p. 43.

Type.—Mus. Zool. Univ. Michigan No. 89072.
Type locality.—Finca Volcán, 49 km. east of Cobán, Alta Verapaz, Guatemala, 4,000 feet.
Range.—The highlands of central eastern Chiapas and adjacent Guatemala. Recorded in Mexico only from *Chiapas:* Santa Rosa (near Comitán).

Family ANNIELLIDAE Boulenger

Aniellidae COPE, Proc. Acad. Nat. Sci. Philadelphia, 1864, p. 230.
Anniellidae BOULENGER, Catalogue of the lizards in the British Museum, vol. 2, 1885, p. 299.

Genera.—Only a single genus, *Anniella* Gray, is known.
Range.—Southwestern California and northwestern Baja California.

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[4] *Fide* Cope, U. S. Nat. Mus. Bull. 32, 1887, p. 39. A sight record cited by Martín del Campo, Folleto Div. Cient. Inst. Biol., No. 2, 1934, p. 7, of "*Heloderma horridum*" from Sierra de Zangolica, Veracruz, may belong with this species; it is very unlikely that *Heloderma* actually occurs on the Atlantic coast.

Genus ANNIELLA Gray

Anniella Gray, Ann. Mag. Nat. Hist., ser. 2, vol. 10, 1852, p. 440.

Genotype.—*Anniella pulchra* Gray.

Range.—Southern California and northern Baja California.

Species.—Two, one with two subspecies.

KEY TO MEXICAN SPECIES OF ANNIELLA

1. Rostral sharply pointed in profile; fourth supralabial largest.
geronimensis (p. 209)

Rostral rounded in profile; second supralabial largest.
pulchra pulchra (p. 209)

ANNIELLA GERONIMENSIS Shaw

Anniella geronimensis Shaw, Trans. San Diego Soc. Nat. Hist., vol. 9, 1940, pp. 225–228, 2 figs.

Type.—L. M. Klauber No. 7543.

Type locality.—Isla San Gerónimo, Baja California.

Range.—Known only from the type locality.

ANNIELLA PULCHRA PULCHRA Gray

Anniella pulchra Gray, Ann. Mag. Nat. Hist., ser. 2, vol. 10, 1852, p. 440.—Van Denburgh, Occ. Pap. California Acad. Sci., No. 10, 1922, pp. 465–467, pl. 42.

Anniella pulchra pulchra, Grinnell and Camp, Univ. California Publ. Zool., vol. 17, 1917, p. 170.—Miller, Copeia, 1943, p. 2.

Anniella texana Boulenger, Ann. Mag. Nat. Hist., ser. 5, vol. 20, 1887, p. 50 (Brit. Mus. Nat. Hist.; El Paso, Tex., in error, here restricted to San Diego, California).

Type.—Brit. Mus. Nat. Hist.; Sir John Richardson collector.

Type locality.—California, here restricted to San Diego.

Range.—Pacific slopes of central and southern California, and extreme northern Baja California, west of the desert and the Sierra San Pedro Mártir. Recorded in *Baja California:* San Salado Cañon, San José, San Quintín, Los Coronados Islands.

Subclass ARCHOSAURIA

Archosauria Romer, Vertebrate paleontology, 1945, p. 597.

Orders.—A single living order, the Loricata, exists.

Order LORICATA

Loricata Merrem, Tentamen systematis amphibiorum, 1820, p. 34.

Families.—Three families exist at the present time, two of which occur in Mexico.

KEY TO LIVING FAMILIES OF LORICATA

1. Dentary teeth 25–26, none received by sockets in upper jaw; maxillary bones broadly in contact with each other on dorsal surface of skull; mandibular symphysis extraordinarily long, only 2 or 3 teeth at rear of mandible not opposite the symphysis ..... **Gavialidae** [5]

   Dentary teeth 20 or fewer, all or nearly all received by sockets in upper jaw; maxillary bones never in contact with each other on dorsal surface of skull; mandibular symphysis shorter, 4 or more teeth at rear of mandible not opposite the symphysis 2

2. Fourth mandibular tooth fitting into a pit in upper jaw, *and* 17 to 22 dentary teeth ..... **Alligatoridae** (p. 211)

   Fourth mandibular tooth fitting into a notch in upper jaw *or*, if into a pit, dentary teeth 16 or fewer ..... **Crocodylidae** (p. 210)

Family CROCODYLIDAE Gray

Crocodilidae Gray, Ann. Philos., ser. 2, vol. 10, 1825, p. 195.—Mertens, Senckenbergiana, vol. 26, 1943, pp. 252–312.

Genera.—Four genera and 17 species and subspecies are recognized at the present time; one genus occurs in the Americas.

Range.—World wide in tropical lands.

Genus CROCODYLUS Laurenti

Crocodylus Laurenti, Specimen medicum exhibens synopsin reptilium, 1768, p. 53.
Molinia Gray, Catalogue of the tortoises, crocodiles and amphisbaenians in the collection of the British Museum, 1844, pp. 60, 272 (type, *Crocodylus americanus* Laurenti=? *Crocodylus acutus* Cuvier).

Genotype.—*Crocodylus niloticus* Laurenti.

Species.—Twelve species, two with two subspecies, are recognized; only four species, one with two subspecies, occur in the New World, and two in Mexico.

Range.—Northern Australia, New Guinea, East Indies, Siam, Ceylon, tropical Africa and India, Madagascar; southern Florida, Greater Antilles, northern Mexico south to Ecuador and Venezuela.

KEY TO MEXICAN SPECIES OF CROCODYLUS

1. Premaxillo-maxillary suture transverse ..... **moreletii** (p. 211)

   Premaxillo-maxillary suture extending posteriorly in an arc to level of posterior border of seventh tooth ..... **acutus** (p. 210)

CROCODYLUS ACUTUS ACUTUS Cuvier [6]

Crocodilus acutus Cuvier, Ann. Mus. Hist. Nat. Paris, vol. 10, 1807, p. 55, pl. 1, fig. 3, pl. 2, fig. 3.
Crocodylus acutus acutus, Müller and Hellmich, Ibero-Amerik. Stud., vol. 13, 1940, pp. 128–130.

[5] Not in Mexico; restricted to India.

[6] Allocation of the Mexican and, for that matter, Central American specimens is at present very uncertain. South American (Colombia, Ecuador) specimens are referrable to the race *C. a. lewyanus*, and Santo Domingo specimens to *C. a. acutus*, but no study has been made of material from elsewhere.

? *Crocodilus americanus* LAURENTI, Specimen medicum exhibens synopsin reptilium, 1768, p. 54 (type, pl. 106 in Seba's "Locupletissimi Rerum Naturalium Thesauri Occurata Descriptio," vol. 1, 1734; type locality, America, here restricted to Veracruz, Veracruz; unidentifiable).—BOCOURT, Mission scientifique au Mexique . . . , Études sur les reptiles, livr. 1, 1870, pp. 30–31, pl. 8, fig. 1, pl. 9, fig. 1.

Crocodilus biscutatus CUVIER, Ann. Mus. Hist. Nat. Paris, vol. 10, 1807, p. 53, pl. 2, fig. 6 (type presumably in Mus. Hist. Nat. Paris; type locality, "Senegal", in error; here restricted to Tampico, Tamaulipas).

Crocodilus mexicanus BOCOURT, Nouv. Arch. Mus. Hist. Nat. Paris, 1869, pp. 20–21 (type presumably in Mus. Hist. Nat. Paris; type locality, Tampico, Tamaulipas); Mission scientifique au Mexique . . . , Études sur les reptiles, livr. 1, 1870, pp. 34–35, pl. 8, fig. 3.

Crocodilus pacificus DUMÉRIL and BOCOURT, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 1, 1870, pp. 31–33, pl. 9, fig. 5 (type presumably in Mus. Hist. Nat. Paris; type locality, Río Nagualate, Guatemala).

Type.—Mus. Hist. Nat. Paris, presumably.

Type locality.—Santo Domingo (Republic).

Range.—Greater Antilles, Central America north to Tamaulipas and Sinaloa. Reported from various localities in the states of Quintana Roo (Isla de Mujeres), Campeche, Colima, Guerrero, Michoacán, Oaxaca, Tabasco, Tamaulipas, Veracruz, and María Magdalena Island, Nayarit.

CROCODYLUS MORELETII Duméril and Duméril

Crocodilus moreletii DUMÉRIL and DUMÉRIL, Catalogue méthodique de la collection des reptiles, 1851, p. 28.—BOCOURT, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 1, 1870, pp. 37–38, pl. 9, fig. 2.—SCHMIDT, Publ. Field Mus. Nat. Hist., zool. ser., vol. 12, 1924, pp. 79–84, pl. 6, figs. 2, 7, 8.

Alligator lacordairei PREUDHOMME DE BORRE, Bull. Acad. Roy. Sci. Lett. Beaux-Arts Belgique, ser. 2, vol. 28, 1869, p. 110, pl. (type presumably in Brussels; M. Levy collector; type locality, Belize, British Honduras).

Type.—Mus. Hist. Nat. Paris, presumably.

Type locality.—Lake Petén, Guatemala.

Range.—Atlantic slopes from Guatemala to Tamaulipas. Reported in Mexico from the states of Campeche, Chiapas (Palenque), Colima, Tabasco, Tamaulipas, Veracruz; records from Colima (by Dugès) and the Pacific side of Chiapas (Tapachula, by Sumichrast) are to be considered erroneous until corroborated.

Family ALLIGATORIDAE Gray

Alligatoridae GRAY, Catalogue of tortoises, crocodiles and amphisbaenians in the British Museum, 1844, p. 56.—MERTENS, Senckenbergiana, vol. 26, 1943, pp. 252–312.

Genera.—Four, of which only one occurs in Mexico.[7]

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[7] *Alligator mississippiensis* is recorded from "Mexico" by Garman (Bull. Essex Inst., vol. 16, 1884, p. 11) and Boettger (Kat. Rept. Senckenb. Mus., pt. 1, 1893, p. 19), but we regard the records as erroneous until verified.

Genus CAIMAN Spix

Caiman Spix, Animalia nova sive species lacertarum . . . Brasiliam . . ., 1825, p. 3.
Perosuchus Cope, Proc. Acad. Nat. Sci. Philadelphia, 1868, p. 203 (genotype, *Perosuchus fuscus* Cope).

Genotype.—*Caiman fissipes* Spix (=*Crocodilus latirostris* Daudin).

Species.—Two species, one with three subspecies, are recognized; one occurs in Mexico.

Range.—The Isthmus of Tehuantepec to Argentina.

CAIMAN CROCODILUS FUSCUS (Cope)

Perosuchus fuscus Cope, Proc. Acad. Nat. Sci. Philadelphia, 1868, p. 203.
Caiman crocodilus fuscus, Mertens, Senckenbergiana, vol. 26, 1943, p. 275.
All[igator] (Jacare) Chiaparius Bocourt, Ann. Sci. Nat., ser. 6, vol. 3, No. 12, 1876, pp. 1–2 (type probably in Mus. Hist. Nat. Paris; type locality, Tonalá, Chiapas).
All[igator] Chiapasius Bocourt, Journ. Zool., vol. 5, 1876, pp. 400–401 (equivalent to preceding).

Type.—Unknown.

Type locality.—Río Magdalena, Colombia.

Range.—Oaxaca and perhaps Michoacán to Colombia. Reported from the states of *Oaxaca:* Tapanatepec, Agua Fría; and *Chiapas:* Tonalá, Belén, Colonia Soconusco. A record from the Balsas Valley in Michoacán (by Gadow) may be correct, but one from Yucatán (Tozzer) is, we believe, certainly incorrect.

SPECIES INQUIRENDAE

A few species whose natural ranges remain unknown have been included in their appropriate systematic place in the preceding pages. A few others, described from "Mexico," have since been found to occur elsewhere. Among these are the following:

HERPETOCHALCIS HETEROPUS Boettger

Herpetochalcis heteropus Boettger, Bericht. Offenb. Ver. Nat., vols. 22–23, 1883, pp. 150–151.

The type locality was stated to be perhaps California, or Mexico, or Central America. The name is apparently a synonym of *Chalcides heteropus* Lichtenstein, Nomencl. Mus. Zool. Berol., 1856, p. 17 (=*Bachia heteropa*) described from La Guaira, Venezuela, and restricted in range to that country.

LEIOSAURUS BELLI Duméril and Bibron

Leiosaurus belli Duméril and Bibron, Erpétologie générale, vol. 4, 1837, p. 242.

The type locality was stated to be "Mexico," but the species (and genus) has since been discovered to be restricted to Argentina.

ANEUPORUS OCCIPITALIS Bocourt

Aneuporus occipitalis Bocourt, Mission scientifique au Mexique . . ., Études sur les reptiles, livr. 4, 1874, pp. 215–217, pl. 18, fig. 1.

This has since been renamed *Tropidurus bocourti* by Boulenger, since Bocourt's name is suppressed as a homonym of *Tropidurus occipitalis* (Peters). The species occurs in Peru.

SPHAERODACTYLUS ANTHRACINUS Cope

Sphaerodactylus anthracinus Cope, Proc. Acad. Nat. Sci. Philadelphia, 1861, p. 500 (type locality, "Mexico" [Jalapa]).

Barbour (Mem. Mus. Comp. Zool. Harvard, vol. 47, 1921, pp. 258–259) associates this name with a species from Andros Island, but Boulenger (Catalogue of the lizards in the British Museum, vol. 1, 1885, p. 225) records a specimen from "San Domingo," and Peters (Monatsb. Akad. Wiss. Berlin, 1869, p. 874) records one from the state of Puebla (possibly in the vicinity of Izúcar de Matamoros). The final word has not yet been said. For a discussion see Taylor, Univ. Kansas Sci. Bull., vol. 31, 1947, pp. 300–301.

Three other species recorded from "Mexico," but with a type locality elsewhere, are known to be restricted to extralimital areas:

BACHIA DORBIGNYI (Duméril and Bibron)

Bachia dorbignyi (Duméril and Bibron), Müller, Reisen in den Vereinigten Staaten, Canada und Mexico, vol. 3, pt. 3, 1865, p. 604.

This species, still recognized by this name, occurs in Bolivia and Chile.

ECPHYMOTES OBTUSIROSTRIS (Wiegmann)

Ecphymotes obtusirostris (Wiegmann), Müller, *op. cit.*, p. 600.

This name is a synonym of *Anisolepis undulatus* (Wiegmann), which species occurs in Brasil.

TROPIDURUS PTYCHOPLEURUS Lichtenstein

Tropidurus ptychopleurus Lichtenstein, Müller, *op. cit.*, p. 602.

This name is a synonym of *Liolaemus tenuis* (Duméril and Bibron), which species occurs in Chile.

One other name, supposedly based upon a Mexican specimen, has been impossible to place:

DASIA MICROCEPHALUS (Hallowell)

Euprepis microcephalus HALLOWELL, Proc. Acad. Nat. Sci. Philadelphia, vol. 8, 1856, p. 155; Trans. Amer. Philos. Soc., ser. 2, vol. 11, 1857, pp. 79–80.

Diploglossus microcephalus, BOULENGER, Catalogue of the lizards in the British Museum, vol. 3, 1887, p. 504.

[*Dasia*] *microcephalus*, SMITH, Proc. U. S. Nat. Mus., vol. 92, 1942, pp. 369–370.

Type.—Acad. Nat. Sci. Philadelphia; W. H. Keating collector.

Type locality.—Mexico.

Remarks.—The first words in Hallowell's original description are "Syn. Scincus ventralis, Peale and Green." Then follows the description. We believe the citation of Peale and Green's name as a synonym (an earlier one at that) of Hallowell's own name could be construed to make his name unavailable, that is, actually a synonym of *Scincus ventralis* and thus a part of the synonymy of *Gerrhonotus l. liocephalus*. The fact remains that the animal described by Hallowell, and presumably the type of his name, is far different from *Gerrhonotus*. We recommend association of the name with the species represented by the animal described and not assignment to the synonomy of *Scincus ventralis*.

The type is not in good condition (portions of the head mutilated), but appears to belong to a non-American genus, probably *Dasia*.[8] It may possibly be one of the original series of three specimens of Peale and Green's *Scincus ventralis*, since only two of them are now present in the series labeled as cotypes, and thus would be explained Hallowell's citation of *Scincus ventralis* as a synonym of his species. It is also possible that a confusion of specimens occurred, the original *Gerrhonotus* being exchanged for the present type of *microcephalus*, which Hallowell erroneously thought was one of Peale and Green's cotypes. One of these alternatives must be true: Either a peculiar skink, unknown except by the type of *microcephalus*, occurs in Mexico, or else some shift of specimens occurred in the Philadelphia Academy collections between 1830 and 1856. We favor the latter alternative.

Still another species is represented by a specimen questionably secured in Mexico, while the range of the species is suspected of being entirely extralimital.

DIPLOGLOSSUS MONOTROPIS (Kuhl)

Diploglossus monotropis (KUHL), Beiträge zur Zoologie und vergleichende Anatomie, 1820, p. 128.

The species is known to occur from Costa Rica to Ecuador. The U. S. National Museum has one specimen questionably from "Colima." Occurrence in Mexico is highly questionable.

[8] We are indebted to Dr. E. R. Dunn for this information.

STATE LISTS

The accompanying lists have been constructed in the same way as those for the snakes (U. S. Nat. Mus. Bull. 187, 1945, pp. 202–203) and amphibians (U. S. Nat. Mus. Bull. 194, 1948, pp. 100–101). Table 2 shows for each state and each of the indicated groups, first, the number of forms recorded; second, the number of genera represented (these two numbers separated by a diagonal line); and third, the relative position of the state (so far as number of forms is concerned) as compared with other states (this number in parentheses). The lists of snakes and amphibians have been brought more or less up to date by inclusion of the additional forms defined and recorded by various authors such as Blair, Bogert, Burger, Conant, Klauber, Smith, Tanner, and Taylor (see Univ. Kansas Sci. Bull., vol. 33, 1950, pp. 313–380, for references).

TABLE 2.—*Forms and genera recorded and their relative position in the states of Mexico*

State	Serpentes	Amphibia	Testudines	Sauria, Amphisbaenia	Loricata	Total
Aguascalientes	1/1 (23)	4/3 (23)	1/1 (12)	3/2 (22)	0/0 (3)	9/7 (27)
Baja California	65/20 (5)	15/8 (17)	7/7 (6)	87/21 (1)	0/0 (3)	174/56 (3)
Campeche	25/21 (17)	16/11 (16)	9/7 (4)	27/15 (15)	2/1 (1)	79/55 (19)
Chiapas	71/41 (3)	47/21 (3)	6/4 (7)	48/22 (6)	2/2 (1)	174/90 (3)
Chihuahua	43/18 (10)	17/7 (15)	5/4 (8)	37/14 (8)	0/0 (3)	102/43 (10)
Coahuila	39/17 (11)	13/7 (19)	7/5 (6)	37/13 (8)	0/0 (3)	96/42 (12)
Colima	36/30 (12)	17/13 (15)	5/3 (8)	29/16 (11)	2/1 (1)	89/63 (13)
Distrito Federal	21/15 (18)	14/11 (18)	2/1 (11)	10/6 (20)	0/0 (3)	47/33 (22)
Durango	28/15 (16)	13/6 (19)	3/2 (10)	31/12 (10)	0/0 (3)	75/35 (20)
Guanajuato	25/17 (17)	12/8 (20)	2/1 (11)	20/8 (16)	0/0 (3)	59/34 (21)
Guerrero	71/41 (3)	42/18 (4)	5/4 (8)	49/20 (5)	1/1 (2)	168/84 (4)
Hidalgo	31/20 (14)	29/10 (7)	1/1 (12)	23/9 (16)	0/0 (3)	84/40 (15)
Jalisco	54/34 (7)	22/12 (11)	2/2 (11)	35/15 (9)	0/0 (3)	113/63 (9)
México	14/9 (20)	28/12 (8)	1/1 (12)	16/6 (18)	0/0 (3)	59/28 (21)
Michoacán	67/34 (4)	24/12 (10)	3/2 (10)	38/16 (7)	1/1 (2)	133/65 (7)
Morelos	36/26 (12)	25/12 (9)	1/1 (12)	20/12 (16)	0/0 (3)	82/51 (16)
Nayarit	39/26 (11)	19/12 (13)	5/4 (8)	18/9 (17)	1/1 (2)	82/52 (17)
Nuevo León	39/23 (11)	16/8 (16)	4/3 (9)	26/9 (16)	0/0 (3)	85/43 (15)
Oaxaca	99/47 (1)	52/23 (2)	11/8 (2)	73/26 (2)	2/2 (1)	237/106 (2)
Puebla	52/24 (8)	33/15 (5)	2/1 (11)	37/13 (8)	0/0 (3)	124/53 (8)
Querétaro	5/4 (21)	3/2 (24)	0/0 (13)	7/5 (21)	0/0 (3)	15/11 (25)
Quintana Roo	16/13 (19)	3/3 (24)	8/7 (5)	16/12 (18)	1/1 (2)	44/36 (23)
San Luis Potosí	75/37 (2)	30/15 (6)	3/2 (10)	35/17 (9)	0/0 (3)	143/71 (6)
Sinaloa	29/25 (15)	21/13 (12)	5/4 (8)	26/17 (13)	0/0 (3)	81/59 (18)
Sonora	62/31 (6)	21/11 (12)	12/9 (1)	54/19 (4)	0/0 (3)	149/70 (5)
Tabasco	34/27 (13)	18/12 (14)	8/6 (5)	22/14 (15)	2/1 (1)	84/60 (16)
Tamaulipas	39/26 (11)	19/13 (13)	5/4 (8)	23/13 (14)	2/1 (1)	88/57 (14)
Tlaxcala	4/4 (22)	5/4 (22)	0/0 (13)	3/2 (25)	0/0 (3)	12/10 (26)
Veracruz	99/46 (1)	71/25 (1)	10/8 (3)	58/22 (3)	2/1 (1)	240/102 (1)
Yucatán	47/32 (9)	16/13 (16)	8/7 (5)	27/16 (12)	0/0 (3)	98/68 (11)
Zacatecas	16/11 (19)	10/5 (21)	0/0 (13)	13/6 (19)	0/0 (3)	39/22 (24)

AGUASCALIENTES

Kinosternon integrum
Cnemidophorus sackii communis
Sceloporus spinosus spinosus
Sceloporus torquatus melanogaster

BAJA CALIFORNIA

Amyda emoryi
Caretta caretta gigas
Clemmys marmorata pallida
Dermochelys coriacea
Eretmochelys imbricata
Gopherus agassizii
Pseudemys scripta nebulosa
Bipes biporus
Anniella geronimensis
Anniella pulchra pulchra
Callisaurus draconoides draconoides
Callisaurus draconoides carmenensis
Callisaurus draconoides crinitus
Callisaurus draconoides gabbii
Callisaurus draconoides splendidus
Cnemidophorus catalinensis
Cnemidophorus ceralbensis
Cnemidophorus hyperythrus beldingi
Cnemidophorus hyperythrus caeruleus
Cnemidophorus hyperythrus danheimae
Cnemidophorus hyperythrus hyperythrus
Cnemidophorus hyperythrus pictus
Cnemidophorus hyperythrus schmidti
Cnemidophorus labialis
Cnemidophorus maximus
Cnemidophorus tigris canus
Cnemidophorus tigris celeripes
Cnemidophorus tigris multiscutatus
Cnemidophorus tigris rubidus
Cnemidophorus tigris tigris
Coleonyx variegatus variegatus
Coleonyx variegatus abbotti
Coleonyx variegatus peninsularis
Coleonyx variegatus slevini
Crotaphytus collaris baileyi
Crotaphytus insularis
Ctenosaura hemilopha
Dipsosaurus carmenensis
Dipsosaurus catalinensis
Dipsosaurus dorsalis dorsalis
Dipsosaurus dorsalis lucasensis
Elgaria cedrosensis
Elgaria multicarinata nana
Elgaria multicarinata webbii
Elgaria paucicarinata
Eumeces gilberti rubricaudatus
Eumeces lagunensis
Eumeces skiltonianus skiltonianus
Gambelia wislizenii wislizenii
Petrosaurus repens
Petrosaurus thalassinus
Phrynosoma cerroense
Phrynosoma coronatum coronatum
Phrynosoma coronatum blainvillii
Phrynosoma coronatum frontale
Phrynosoma coronatum jamesi
Phrynosoma m'callii
Phrynosoma platyrhinos platyrhinos
Phrynosoma solare
?Phyllodactylus tuberculosus
Phyllodactylus unctus
Sator angustus
Sator grandaevus
Sauromalus ater
Sauromalus australis
Sauromalus hispidus
Sauromalus klauberi
Sauromalus slevini
Sceloporus graciosus vandenburgianus
Sceloporus magister lineatulus
Sceloporus magister magister
Sceloporus magister monserratensis
Sceloporus magister rufidorsum
Sceloporus magister zosteromus
Sceloporus occidentalis biseriatus
Sceloporus orcutti licki
Sceloporus orcutti orcutti
Streptosaurus mearnsi
Streptosaurus slevini
Uma notata notata
Urosaurus graciosus
Urosaurus microscutatus
Urosaurus nigricaudus
Urosaurus ornatus symmetricus
Uta concinna
Uta mannophorus
Uta martinensis
Uta squamata
Uta stansburiana elegans
Uta stansburiana hesperis
Uta stansburiana stejnegeri
Uta stellata
Xantusia gilberti
Xantusia henshawi
Xantusia vigilis

CAMPECHE

Chelydra serpentina
Claudius angustatus
Dermatemys mawii
Eretmochelys imbricata
Geoemyda areolata
Kinosternon acutum
Kinosternon cruentatum cruentatum
Kinosternon leucostomum
Pseudemys scripta ornata
Ameiva undulata gaigeae
Ameiva undulata stuarti
Anolis kidderi
Anolis lemurinus bourgeaei
Anolis limifrons rodriguezii
Anolis sagrei mayensis
Anolis tropidonotus
Anolis ustus
Basiliscus vittatus
Cnemidophorus deppii oligoporus
Cnemidophorus sackii angusticeps
Coleonyx elegans elegans
Corythophanes cristatus
Ctenosaura similis similis
Enyaliosaurus erythromelas
Eumeces schwartzei
Hemidactylus turcicus turcicus
Iguana iguana rhinolopha
Laemanctus serratus
Scincella cherriei ixbaac
Mabuya mabouya mabouya
Sceloporus chrysostictus
Sceloporus lundelli lundelli
Sceloporus serrifer serrifer
Sceloporus serrifer plioporus
Sceloporus teapensis
Sphaerodactylus glaucus glaucus
Crocodylus acutus acutus
Crocodylus moreletii

CHIAPAS

Geoemyda pulcherrima incisa
Kinosternon abaxillare
Kinosternon cruentatum cruentatum
Kinosternon leucostomum
Lepidochelys olivacea
Pseudemys scripta ornata
Abronia matudai
Abronia ochoterenai
Ameiva festiva edwardsi
Ameiva undulata hartwegi
Ameiva undulata parva
Ameiva undulata stuarti
Ameiva undulata thomasi
Anolis biporcatus
Anolis humilis uniformis
Anolis limifrons rodriguezii
Anolis pentaprion
Anolis sericeus
Barisia moreleti rafaeli
Barisia moreleti temporalis
Basiliscus vittatus
Celestus rozellae
Cnemidophorus deppii deppii
Cnemidophorus guttatus immutabilis
Cnemidophorus sackii bocourti
Coleonyx elegans elegans
Corythophanes cristatus
Corythophanes hernandezii
Corythophanes percarinatus
Ctenosaura similis similis
Eumeces sumichrasti
Gerrhonotus liocephalus austrinus
Gonatodes fuscus
Heloderma horridum
Iguana iguana rhinolopha
Scincella assata assata
Scincella assata taylori
Scincella cherriei cherriei
Lepidophyma flavimaculata flavimaculata
Lepidophyma smithii smithii
?Lepidophyma smithii tehuanae
Mabuya mabouya mabouya
Phrynosoma asio
Phyllodactylus magnus
Sceloporus carinatus
Sceloporus malachiticus acanthinus
Sceloporus malachiticus taeniocnemis
Sceloporus melanorhinus stuarti
Sceloporus prezygus
Sceloporus siniferus siniferus
Sceloporus squamosus
Sceloporus teapensis
Sceloporus variabilis variabilis
Urosaurus bicarinatus anonymorphus
Xenosaurus rackhami
Caiman crocodilus fuscus
Crocodylus morcletii

CHIHUAHUA

Chrysemys picta bellii
?Gopherus berlandieri
Kinosternon hirtipes
Kinosternon sonoriense
Terrapene ornata
Anolis nebuloides
Barisia levicollis
Cnemidophorus inornatus
Cnemidophorus sackii communis
Cnemidophorus sackii stictogrammus
Cnemidophorus sackii scalaris
Cnemidophorus tigris marmoratus
Crotaphytus collaris baileyi
Ctenosaura hemilopha
Elgaria kingii kingii
Eumeces callicephalus
Eumeces multivirgatus
Eumeces obsoletus
Eumeces parviauriculatus
Gambelia wislizenii wislizenii
Holbrookia bunkeri
Holbrookia maculata approximans
Holbrookia texana
Phrynosoma cornutum
Phrynosoma douglassii hernandesi
Phrynosoma modestum
Phrynosoma orbiculare orbiculare
Phyllodactylus homolepidurus
Sceloporus clarkii clarkii
Sceloporus grammicus disparilis
Sceloporus jarrovii jarrovii
Sceloporus magister magister
Sceloporus nelsoni
Sceloporus poinsettii
Sceloporus scalaris slevini
Sceloporus undulatus consobrinus
Sceloporus undulatus virgatus
Urosaurus ornatus caeruleus
Urosaurus ornatus linearis
Urosaurus ornatus schmidti
Urosaurus unicus
Uta stansburiana stejnegeri

COAHUILA

Amyda emoryi
Gopherus berlandieri
Kinosternon flavescens flavescens
Kinosternon flavescens stejnegeri
Pseudemys scripta elegans
Pseudemys scripta gaigeae
Terrapene coahuila
Barisia imbricata ciliaris
Cnemidophorus inornatus
Cnemidophorus sackii communis
Cnemidophorus sackii semifasciatus
Cnemidophorus sackii scalaris
Cnemidophorus tigris marmoratus
Coleonyx brevis
Crotaphytus collaris baileyi
Crotaphytus reticulatus
Eumeces obsoletus
Gambelia wislizenii wislizenii
Gerrhonotus liocephalus infernalis
Holbrookia maculata approximans
Holbrookia maculata dickersonae
Holbrookia maculata lacerata
Holbrookia texana
Scincella laterale
Phrynosoma cornutum
Phrynosoma modestum
Sceloporus cautus
Sceloporus couchii
Sceloporus goldmani
Sceloporus grammicus disparilis
Sceloporus jarrovii oberon
Sceloporus magister magister
Sceloporus merriami annulatus
Sceloporus olivaceus
Sceloporus ornatus caeruleus
Sceloporus ornatus ornatus
Sceloporus parvus parvus
Sceloporus poinsettii
Sceloporus scalaris slevini
Sceloporus undulatus consobrinus
Sceloporus variabilis marmoratus
Uma exsul
Uta stansburiana stejnegeri

861316—50——15

COLIMA

Geoemyda rubida
Geoemyda pulcherrima pulcherrima
Kinosternon hirtipes
Kinosternon integrum
Lepidochelys olivacea
Ameiva undulata sinistra
Anolis nebuloides
Anolis nebulosus
Anolis schmidti
Basiliscus vittatus
Cnemidophorus deppii lineatissimus
Cnemidophorus guttatus immutabilis
Cnemidophorus sackii communis
Colconyx elegans nemoralis
Ctenosaura pectinata
Eumeces colimensis
Eumeces parvulus
Heloderma horridum
Iguana iguana rhinolopha
?Laemanctus longipes
Scincella assata taylori
Mabuya mabouya mabouya
Phrynosoma asio
Phrynosoma orbiculare dugesii
Phyllodactylus lanei
Sceloporus dugesii dugesii
Sceloporus grammicus microlepidotus
Sceloporus horridus oligoporus
Sceloporus melanorhinus calligaster
Sceloporus pyrocephalus
Sceloporus utiformis
Urosaurus auriculatus
Urosaurus bicarinatus tuberculatus
Urosaurus clarionensis
Crocodylus acutus acutus
Crocodylus moreletii

DISTRITO FEDERAL

Kinosternon hirtipes
Barisia imbricata imbricata
Cnemidophorus sackii communis
Eumeces copei
Gerrhonotus liocephalus liocephalus
Phrynosoma orbiculare orbiculare
Sceloporus aeneus aeneus
Sceloporus grammicus microlepidotus
Sceloporus scalaris scalaris
Sceloporus spinosus spinosus
Sceloporus torquatus torquatus

DURANGO

Kinosternon flavescens stejnegeri
Kinosternon sonoriense
Pseudemys scripta gaigeae
Anolis nebulosus
Barisia imbricata ciliaris
Cnemidophorus sackii communis
Cnemidophorus sackii scalaris
Cnemidophorus tigris marmoratus
Coleonyx brevis
Coleonyx fasciatus
Crotaphytus collaris baileyi
Ctenosaura pectinata
Eumeces brevirostris
Eumeces callicephalus
Holbrookia maculata approximans
Holbrookia maculata dickersonae
Holbrookia texana
Phrynosoma cornutum
Phrynosoma douglassii brachycercum
Phrynosoma modestum
Phrynosoma orbiculare orbiculare
?Phyllodactylus lanei
Sceloporus grammicus disparilis
Sceloporus horridus oligoporus
Sceloporus jarrovii jarrovii
Sceloporus lineolateralis
Sceloporus maculosus
Sceloporus magister magister
Sceloporus poinsettii
Sceloporus scalaris scalaris
Sceloporus scalaris slevini
Sceloporus spinosus spinosus
Sceloporus undulatus consobrinus
Uta stansburiana stejnegeri

GUANAJUATO

Kinosternon hirtipes
Kinosternon integrum
Barisia imbricata ciliaris
Barisia imbricata imbricata
Cnemidophorus sackii communis
Eumeces callicephalus
Eumeces dugesii
Gerrhonotus liocephalus liocephalus
Holbrookia maculata dickersonae
Laemanctus serratus
Phrynosoma boucardi
Phrynosoma orbiculare orbiculare
Sceloporus aeneus aeneus
Sceloporus dugesii intermedius
Sceloporus grammicus disparilis
Sceloporus grammicus microlepidotus
Sceloporus jarrovii minor
Sceloporus scalaris scalaris
Sceloporus spinosus spinosus
Sceloporus torquatus melanogaster
Sceloporus torquatus torquatus
Sceloporus variabilis variabilis

GUERRERO

Chelonia mydas
Geoemyda pulcherrima pulcherrima
Geoemyda rubida
Kinosternon integrum
Lepidochelys olivacea
Abronia deppii
Ameiva undulata dextra
Anolis dunni
Anolis gadovii
Anolis liogaster
Anolis megapholidotus
Anolis nebuloides
Anolis nebulosus
Anolis taylori
Barisia gadovii gadovii
Basiliscus vittatus
Bipes canaliculatus
Bipes tridactylus
Cnemidophorus deppii deppii
Cnemidophorus deppii lineatissimus
Cnemidophorus guttatus immutabilis
Cnemidophorus sackii sackii
Coleonyx elegans nemoralis
Ctenosaura pectinata
Eumeces brevirostris
Eumeces ochoterenai
Gerrhonotus liocephalus liocephalus
Heloderma horridum
Hemidactylus frenatus
Iguana iguana rhinolopha
Scincella assata taylori
Mabuya mabouya mabouya
Phrynosoma asio
Phrynosoma taurus
Phyllodactylus bordai
Phyllodactylus delcampi
Phyllodactylus lanei
Phyllodactylus magnatuberculatus
Phyllodactylus magnus
?Sceloporus asper
Sceloporus formosus scitulus
Sceloporus gadoviae
Sceloporus grammicus grammicus
Sceloporus horridus horridus
Sceloporus horridus oligoporus
Sceloporus melanorhinus calligaster
Sceloporus mucronatus omiltemanus
Sceloporus ochoterenai
Sceloporus pyrocephalus
Sceloporus siniferus siniferus
Sceloporus stejnegeri
Sceloporus utiformis
Urosaurus bicarinatus bicarinatus
Urosaurus bicarinatus anonymorphus
Crocodylus acutus acutus

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HIDALGO

Kinosternon hirtipes
Abronia taeniata taeniata
Barisia imbricata imbricata
Barisia imbricata ciliaris
Cnemidophorus sackii communis
Eumeces lynxe furcirostris
Eumeces lynxe lynxe
Gaigeia gaigeae
Gaigeia sylvatica
Laemanctus serratus
Scincella gemmingeri gemmingeri
Scincella gemmingeri forbesorum
Phrynosoma boucardi
Phrynosoma orbiculare orbiculare
Sceloporus aeneus bicanthalis
Sceloporus grammicus disparilis
Sceloporus grammicus microlepidotus
Sceloporus jarrovii immucronatus
Sceloporus mucronatus mucronatus
Sceloporus parvus scutulatus
Sceloporus scalaris scalaris
Sceloporus spinosus spinosus
Sceloporus torquatus torquatus
Sceloporus variabilis variabilis

JALISCO

Kinosternon integrum
Pseudemys scripta ornata
Ameiva undulata sinistra
Anolis nebulosus
Barisia imbricata imbricata
Basiliscus vittatus
Cnemidophorus deppii lineatissimus
Cnemidophorus sackii communis
Ctenosaura pectinata
Eumeces brevirostris
Eumeces callicephalus
Eumeces dugesii
Heloderma horridum
Holbrookia maculata approximans
Iguana iguana rhinolopha
Scincella assata taylori
Phrynosoma orbiculare orbiculare
?Phyllodactylus lanei
?Sceloporus aeneus aeneus
Sceloporus asper
Sceloporus bulleri
Sceloporus clarkii boulengeri
Sceloporus dugesii dugesii
Sceloporus grammicus microlepidotus
Sceloporus heterolepis
Sceloporus horridus albiventris
Sceloporus horridus oligoporus
Sceloporus melanorhinus calligaster
Sceloporus nelsoni
Sceloporus pyrocephalus
Sceloporus scalaris scalaris
Sceloporus scalaris unicanthalis
Sceloporus spinosus spinosus
Sceloporus torquatus melanogaster
Sceloporus utiformis
Urosaurus bicarinatus tuberculatus
Urosaurus gadovi

MÉXICO

Kinosternon hirtipes
Barisia imbricata imbricata
Barisia rudicollis
Cnemidophorus sackii communis
Eumeces copei
Eumeces indubitus
Gerrhonotus liocephalus liocephalus
Phrynosoma orbiculare orbiculare
Sceloporus aeneus aeneus
Sceloporus aeneus bicanthalis
Sceloporus grammicus microlepidotus
Sceloporus jarrovii sugillatus
Sceloporus jarrovii minor
Sceloporus mucronatus mucronatus
Sceloporus scalaris scalaris
Sceloporus spinosus spinosus
Sceloporus torquatus torquatus

MICHOACÁN

Geoemyda rubida
Kinosternon hirtipes
Kinosternon integrum
Ameiva undulata sinistra
Anolis nebulosis
Barisia imbricata imbricata
Basiliscus vittatus
Cnemidophorus deppii lineatissimus
Cnemidophorus guttatus immutabilis
Cnemidophorus sackii communis
Cnemidophorus sackii sackii
?Colconyx elegans nemoralis
Ctenosaura pectinata
Enyaliosaurus clarki
Eumeces altamirani
Eumeces brevirostris
Eumeces callicephalus
Eumeces copei
Eumeces dugesii
Eumeces indubitus
Heloderma horridum
Iguana iguana rhinolopha
Mabuya mabouya mabouya
Phrynosoma asio
Phrynosoma orbiculare orbiculare
Phyllodactylus lanei
Sceloporus aeneus aeneus
Sceloporus asper
Sceloporus dugesii intermedius
Sceloporus gadoviae
Sceloporus grammicus microlepidotus
Sceloporus horridus oligoporus
Sceloporus melanorhinus calligaster
Sceloporus pyrocephalus
Sceloporus scalaris scalaris
Sceloporus spinosus spinosus
Sceloporus torquatus torquatus
Sceloporus torquatus melanogaster
Sceloporus utiformis
Urosaurus bicarinatus bicarinatus
Urosaurus gadovi
Crocodylus acutus acutus

MORELOS

Kinosternon integrum
Ameiva undulata sinistra
Anolis nebulosus
Barisia imbricata imbricata
Cnemidophorus guttatus immutabilis
Cnemidophorus sackii sackii
Ctenosaura pectinata
?Enyaliosaurus clarki
Eumeces copei
Eumeces indubitus
Gerrhonotus liocephalus liocephalus
Heloderma horridum
Phrynosoma orbiculare orbiculare
Sceloporus aeneus aeneus
Sceloporus gadoviae
Sceloporus grammicus microlepidotus
Sceloporus horridus horridus
Sceloporus ochoterenai
Sceloporus siniferus siniferus
Sceloporus torquatus torquatus
Urosaurus bicarinatus bicarinatus

NAYARIT

Chelonia mydas
Geoemyda pulcherrima pulcherrima
Kinosternon hirtipes
Kinosternon integrum
Terrapene nelsoni
Anolis nebulosus
Cnemidophorus deppii lineatissimus
Cnemidophorus sackii communis
Cnemidophorus sackii mariarum
Ctenosaura pectinata
Eumeces callicephalus
Eumeces parvulus
Iguana iguana rhinolopha
Peropus mutilatus
Phyllodactylus lanei
Sceloporus asper
Sceloporus clarkii boulengeri
Sceloporus dugesii dugesii
Sceloporus horridus albiventris
Sceloporus melanorhinus calligaster
Sceloporus nelsoni
Sceloporus utiformis
Urosaurus ornatus schottii
Crocodylus acutus acutus

NUEVO LEÓN

Amyda emoryi
Gopherus berlandieri
Pseudemys floridana texana
Pseudemys scripta elegans
Barisia imbricata ciliaris
Cnemidophorus inornatus
Cnemidophorus sackii gularis
Coleonyx brevis
Crotaphytus collaris baileyi
Crotaphytus reticulatus
Eumeces brevilineatus
Eumeces dicei
Eumeces obsoletus
Holbrookia texana
Scincella caudaequinae
Phrynosoma cornutum
Phrynosoma modestum
Phrynosoma orbiculare orbiculare
Sceloporus couchii
Sceloporus cyanogenys
Sceloporus grammicus disparilis
Sceloporus jarrovii minor
Sceloporus olivaceus
Sceloporus parvus parvus
Sceloporus poinsettii
Sceloporus scalaris slevini
Sceloporus torquatus binocularis
Sceloporus undulatus consobrinus
Sceloporus variabilis marmoratus

OAXACA

Chelonia mydas
Dermatemys mawii
Eretmochelys imbricata
Geoemyda pulcherrima incisa
Geoemyda rubida
Kinosternon cruentatum cruentatum
Kinosternon integrum
Lepidochelys olivacea
Pseudemys scripta ornata
Pseudemys umbra
Staurotypus salvinii
Abronia fuscolabialis
Abronia oaxacae
Ameiva undulata amphigramma
Ameiva undulata dextra
Ameiva undulata parva
Ameiva undulata stuarti
Ameiva undulata undulata
Anolis heliactin
Anolis limifrons rodriguezii
Anolis milleri
Anolis nebuloides
Anolis nebulosus
Anolis sericeus
Anolis tropidonotus
Barisia gadovii levigata
Barisia imbricata imbricata
Barisia imbricata planifrons
Barisia viridiflava
Basiliscus vittatus
Celestus enneagrammus
Cnemidophorus deppii deppii
Cnemidophorus guttatus guttatus
Cnemidophorus guttatus immutabilis
Cnemidophorus sackii australis
Cnemidophorus sackii bocourti
Coleonyx elegans elegans
Coleonyx elegans nemoralis
Corythophanes hernandezii
Ctenosaura acanthura
Ctenosaura pectinata
Ctenosaura similis similis
Enyaliosaurus quinquecarinatus
Eumeces brevirostris
Gaigeia dontomasi
Gaigeia radula
Gerrhonotus liocephalus liocephalus
Gymnophthalmus sumichrasti
Heloderma horridum
Iguana iguana rhinolopha
Laemanctus deborrei
Laemanctus longipes
Laemanctus serratus
Scincella assata taylori
Scincella cherriei stuarti
Scincella gemmingeri gemmingeri
Scincella silvicola
Lepidophyma smithii tehuanae
Mabuya mabouya mabouya
Phrynosoma asio
Phrynosoma braconnieri
Phyllodactylus magnus
Phyllodactylus muralis
Sceloporus aeneus bicanthalis
Sceloporus edwardtaylori
Sceloporus formosus formosus
Sceloporus gadoviae
Sceloporus grammicus grammicus

Sceloporus grammicus microlepidotus
Sceloporus horridus horridus
Sceloporus jalapae
Sceloporus malachiticus salvini
Sceloporus melanorhinus melanorhinus
Sceloporus mucronatus omiltemanus
Sceloporus siniferus cupreus
Sceloporus siniferus siniferus
Sceloporus spinosus caeruleopunctatus
Sceloporus teapensis
Sceloporus variabilis smithi
Sceloporus variabilis variabilis
Sphaerodactylus glaucus glaucus
Sphaerodactylus glaucus torquatus
Urosaurus bicarinatus anonymorphus
Urosaurus bicarinatus nelsoni
Xenosaurus grandis
Caiman crocodilus fuscus
Crocodylus acutus acutus

PUEBLA

Kinosternon integrum
Kinosternon leucostomum
Abronia taeniata taeniata
Abronia taeniata graminea
Ameiva undulata amphigramma
Ameiva undulata sinistra
?Anolis cumingii
Anolis nebuloides
Anolis nebulosus
Barisia imbricata imbricata
Cnemidophorus deppii lineatissimus
Cnemidophorus sackii sackii
Cnemidophorus sackii communis
Ctenosaura pectinata
Eumeces brevirostris
Eumeces copei
Eumeces lynxe furcirostris
Eumeces lynxe lynxe
Gerrhonotus liocephalus liocephalus
Gerrhonotus liocephalus ophiurus
Iguana iguana rhinolopha
Phrynosoma braconnieri
Phrynosoma orbiculare orbiculare
Phrynosoma orbiculare cortezii
Phrynosoma taurus
Sceloporus aeneus aeneus
Sceloporus aeneus bicanthalis
Sceloporus formosus formosus
Sceloporus gadoviae
Sceloporus grammicus microlepidotus
Sceloporus jalapae
Sceloporus megalepidurus
Sceloporus mucronatus aureolus
Sceloporus mucronatus mucronatus
Sceloporus pictus
Sceloporus scalaris scalaris
Sceloporus spinosus spinosus
Sceloporus torquatus torquatus
Sceloporus variabilis variabilis
Urosaurus bicarinatus bicarinatus

QUERÉTARO

Cnemidophorus sackii communis
Eumeces callicephalus
Lepidophyma smithii occulor
Phrynosoma orbiculare orbiculare
Sceloporus jarrovii immucronatus
Sceloporus jarrovii minor
Sceloporus variabilis variabilis

QUINTANA ROO [9]

Chelonia mydas
Eretmochelys imbricata
Geoemyda areolata
Kinosternon creaseri
Kinosternon cruentatum consors
Lepidochelys kempii
Pseudemys scripta ornata
Terrapene mexicana yucatana
Ameiva undulata gaigeae
Anolis cozumelae
Anolis limifrons rodriguezii
Anolis tropidonotus
Aristelliger georgeensis
Basiliscus vittatus

[9] Morfín (Informe rendido por la comision geográfico-exploradora de Quintana Roo al C. Secretario de Fomento, 1918, pp. 1-57, pls. 1-10) records, in a previously overlooked paper, a number of snakes from Quintana Roo. They are *Boa imperator* (=*Constrictor constrictor imperator*), *Bothrops atrix* (*sic*,=*B. atrox asper*), *Crotalus basiliscus* (=*C. d. durissus*), and *Elaps fulvius* (=*Micrurus affinis mayensis*), all from "between Payo Obispo and Champoton."

Cnemidophorus deppii cozumelus
Cnemidophorus sackii angusticeps
Colconyx elegans elegans
Corythophanes hernandezii
Ctenosaura similis similis
Iguana iguana rhinolopha
Mabuya mabouya mabouya
Sceloporus chrysostictus
Sceloporus cozumelae
Crocodylus acutus acutus

SAN LUIS POTOSÍ

Kinosternon hirtipes
Kinosternon integrum
Terrapene mexicana mexicana
Ameiva undulata podarga
Anolis petersi
Anolis sericeus
Anelytropsis papillosus
Barisia imbricata ciliaris
Corythophanes hernandezii
Cnemidophorus sackii communis
Cnemidophorus sackii gularis
Crotaphytus collaris baileyi
Ctenosaura acanthura
Eumeces lynxe lynxe
Eumeces tetragrammus
Gerrhonotus liocephalus infernalis
Gerrhonotus liocephalus loweryi
Holbrookia maculata approximans
Holbrookia maculata dickersonae
Holbrookia texana
Laemanctus serratus
Scincella caudaequinae
Lepidophyma smithii occulor
Phrynosoma cornutum
Phrynosoma modestum
Phrynosoma orbiculare orbiculare
Sceloporus cautus
Sceloporus goldmani
Sceloporus grammicus disparilis
Sceloporus jarrovii minor
Sceloporus jarrovii immucronatus
Sceloporus olivaceus
Sceloporus parvus parvus
Sceloporus parvus scutulatus
Sceloporus serrifer plioporus
Sceloporus spinosus spinosus
Sceloporus torquatus melanogaster
Sceloporus variabilis variabilis
Xenosaurus newmanorum

SINALOA

Caretta caretta gigas
Geoemyda pulcherrima pulcherrima
Kinosternon hirtipes
Kinosternon integrum
Pseudemys scripta ornata
Anolis nebulosus
Anolis utowanae
Barisia imbricata ciliaris
Callisaurus draconoides bogerti
Callisaurus draconoides brevipes
Cnemidophorus sackii communis
Colconyx fasciatus
Ctenosaura hemilopha
Ctenosaura pectinata
Dipsosaurus dorsalis sonoriensis
Eumeces humilis
Eumeces parvulus
Heloderma horridum
Holbrookia maculata elegans
Holbrookia maculata thermophila
Iguana iguana rhinolopha
Peropus mutilatus
Phrynosoma solare
Phyllodactylus lanei
Sceloporus clarkii boulengeri
Sceloporus horridus albiventris
Sceloporus nelsoni
Sceloporus utiformis
?Sphaerodactylus glaucus torquatus
Urosaurus bicarinatus tuberculatus
Urosaurus ornatus schottii

SONORA

Chelonia mydas
Dermochelys coriacea
Eretmochelys imbricata
Geoemyda pulcherrima pulcherrima
Gopherus agassizii
Kinosternon flavescens stejnegeri
Kinosternon integrum
Kinosternon sonoriense
Lepidochelys olivacea
Pseudemys scripta hiltoni

Terrapene klauberi
Terrapene ornata
Anolis nebuloides
Callisaurus draconoides brevipes
Callisaurus draconoides gabbii
Callisaurus draconoides inusitatus
Callisaurus draconoides ventralis
Cnemidophorus bacatus
Cnemidophorus burti
Cnemidophorus gadovi
Cnemidophorus sackii communis
Cnemidophorus sackii stictogrammus
Cnemidophorus tigris aethiops
Cnemidophorus tigris gracilis
Cnemidophorus tigris martyris
Cnemidophorus tigris tigris
Coleonyx variegatus variegatus
Coleonyx variegatus sonoriensis
Crotaphytus dickersonae
Crotaphytus collaris baileyi
Ctenosaura hemilopha
Dipsosaurus dorsalis dorsalis
Dipsosaurus dorsalis sonoriensis
Elgaria kingii kingii
Eumeces callicephalus
Eumeces parviauriculatus
Gambelia wislizenii wislizenii
Heloderma horridum
Heloderma suspectum
Holbrookia maculata approximans
Holbrookia maculata thermophila
Holbrookia texana
Phrynosoma cornutum
Phrynosoma ditmarsi
Phrynosoma douglassii hernandesi
Phrynosoma m'callii
Phrynosoma modestum
Phrynosoma platyrhinos goodei
Phrynosoma solare
Phyllodactylus homolepidurus
Sauromalus obesus townsendi
Sauromalus varius
Sceloporus clarkii clarkii
Sceloporus clarkii boulengeri
Sceloporus jarrovii jarrovii
Sceloporus magister magister
Sceloporus nelsoni
Sceloporus scalaris slevini
Sceloporus undulatus virgatus
Uma notata cowlesi
Urosaurus bicarinatus tuberculatus
Urosaurus ornatus linearis
Urosaurus ornatus schottii
Urosaurus ornatus symmetricus
Uta nolascensis
Uta palmeri
Uta stansburiana stejnegeri
Uta taylori

TABASCO

Claudius angustatus
Dermatemys mawii
Geoemyda areolata
Kinosternon acutum
Kinosternon cruentatum cruentatum
Kinosternon leucostomum
Pseudemys scripta ornata
Staurotypus triporcatus
Ameiva undulata amphigramma
Ameiva undulata stuarti
Anolis capito
Anolis humilis uniformis
Anolis laeviventris
Anolis lemurinus bourgeaei
Anolis sagrei mayensis
Anolis sericeus
Anolis tropidonotus
Basiliscus vittatus
Coleonyx elegans elegans
Ctenosaura similis similis
Eumeces schwartzei
Hemidactylus turcicus turcicus
Iguana iguana rhinolopha
Laemanctus deborrei
Scincella cherriei cherriei
Lepidophyma flavimaculata flavimaculata
Mabuya mabouya mabouya
Sceloporus serrifer plioporus
Sceloporus teapensis
Sphaerodactylus glaucus glaucus
Crocodylus acutus acutus
Crocodylus moreletii

TAMAULIPAS

Amyda emoryi
Gopherus berlandieri
Pseudemys scripta cataspila
Pseudemys scripta elegans
Terrapene mexicana mexicana
Ameiva undulata podarga
Anolis sericeus
Basiliscus vittatus
Cnemidophorus sackii communis
Cnemidophorus sackii gularis
Coleonyx brevis
Crotaphytus reticulatus
Ctenosaura acanthura
Eumeces brevilineatus
Eumeces dicei
Eumeces obsoletus
Eumeces tetragrammus
Hemidactylus turcicus turcicus
Holbrookia texana
Laemanctus serratus
Phrynosoma cornutum
Sceloporus cyanogenys
Sceloporus grammicus disparilis
Sceloporus olivaceus
Sceloporus serrifer plioporus
Sceloporus spinosus spinosus
Sceleporus variabilis marmoratus
Sceloporus variabilis variabilis
Crocodylus acutus acutus
Crocodylus moreletii

TLAXCALA

Phrynosoma orbiculare orbiculare
Sceloporus grammicus microlepidotus
Sceloporus megalepidurus

VERACRUZ

Chelonia mydas
Chelydra serpentina
Claudius angustatus
Dermatemys mawii
Geomyda areolata
Kinosternon acutum
Kinosternon herrerai
Kinosternon integrum
Kinosternon leucostomum
Pseudemys scripta cataspila
Staurotypus triporcatus
Terrapene mexicana mexicana
Abronia taeniata graminea
Abronia taeniata taeniata
Ameiva undulata amphigramma
Anelytropsis papillosus
Anolis barkeri
Anolis cymbops
Anolis laeviventris
Anolis lemurinus bourgeaei
Anolis petersii
Anolis sericeus
Anolis tropidonotus
Barisia antauges
Barisia imbricata imbricata
Barisia modesta
Basiliscus vittatus
Celestus enneagrammus
Cnemidophorus deppii oligoporus
Cnemidophorus guttatus guttatus
Cnemidophorus sackii communis
Cnemidophorus sackii gularis
Coleonyx elegans elegans
Corythophanes cristatus
Corythophanes hernandezii
Ctenosaura acanthura
Ctenosaura similis similis
Eumeces brevirostris
Eumeces lynxe furcirostris
Eumeces lynxe lynxe
Eumeces sumichrasti
Eumeces tetragrammus
Gerrhonotus liocephalus ophiurus
Hemidactylus mabouia
Hemidactylus turcicus turcicus
Holbrookia propinqua piperata
Iguana iguana rhinolopha
Laemanctus longipes
Laemanctus serratus
Scincella cherriei stuarti
Scincella gemmingeri gemmingeri
Scincella silvicola
Lepidophyma flavimaculata flavimaculata
Mabuya mabouya mabouya
Phrynosoma orbiculare cortezii
Sceloporus aeneus bicanthalis
Sceloporus formosus formosus

Sceloporus grammicus microlepidotus
Sceloporus jalapae
Sceloporus jarrovii immucronatus
Sceloporus malachiticus salvini
Sceloporus megalepidurus
Sceloporus mucronatus mucronatus
Sceloporus mucronatus aureolus
Sceloporus pictus
Sceloporus serrifer plioporus
Sceloporus spinosus spinosus
Sceloporus teapensis
Sceloporus torquatus torquatus
Sceloporus variabilis variabilis
Sphaerodactylus glaucus glaucus
Xenosaurus grandis
Crocodylus acutus acutus
Crocodylus moreletii

YUCATÁN

Caretta caretta caretta
Chelonia mydas
Dermatemys mawii
Geoemyda areolata
Kinosternon creaseri
Kinosternon cruentatum consors
Pseudemys scripta ornata
Terrapene mexicana yucatana
Ameiva undulata gaigeae
Anolis beckeri
Anolis kidderi
Anolis lemurinus bourgeaei
Anolis limifrons rodriguezii
Anolis sagrei mayensis
Anolis tropidonotus
Anolis ustus
Basiliscus vittatus
Cnemidophorus sackii angusticeps
Coleonyx elegans elegans
Corythophanes cristatus
Corythophanes hernandezii
Ctenosaura similis similis
Enyaliosaurus defensor
Eumeces schwartzei
Hemidactylus turcicus turcicus
Laemanctus alticoronatus
Laemanctus serratus
Scincella cherriei ixbaac
Mabuya mabouya mabouya
Sceloporus chrysostictus
Sceloporus cozumelae
Sceloporus lundelli gaigeae
Sceloporus serrifer serrifer
Sphaerodactylus glaucus glaucus
Thecadactylus rapicaudus

ZACATECAS

Barisia imbricata ciliaris
Cnemidophorus sackii communis
Eumeces callicephalus
Holbrookia maculata dickersonae
Phrynosoma modestum
Phrynosoma orbiculare orbiculare
Sceloporus cautus
Sceloporus grammicus disparilis
Sceloporus jarrovii minor
Sceloporus scalaris scalaris
Sceloporus spinosus spinosus
Sceloporus torquatus melanogaster
Sceloporus undulatus consobrinus

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