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Alfredo Duges' Types of Mexican Reptiles and Amphibians

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Alfredo Dugès’ Types of Mexican Reptiles and Amphibians

by

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Alfredo Dugès came to Mexico in 1853 and joined the faculty of the Colegio del Estado de Guanajuato where, until his death in 1910, he studied and described much of the fauna and flora of his adopted country. He, above all others, deserves to be known as the founder of Mexican zoology, not only for his own work, which was extensive enough to warrant that title, but also for his transmittal of specimens to many specialists in Europe and the United States to aid in the description and elucidation of the Mexican fauna.

It has long been apparent that a re-study of Dugès’ types, many of them very inadequately described, would be fundamentally necessary to arrive at a satisfactory understanding of the species described by him. Because of the recently increased growth of interest in Mexican herpetology, re-examination of these types has become almost imperative.

One of Necker’s desires, when a trip to Mexico was made possible by the Carnegie Grants-in-aid for foreign travel to the American Association of Museums was to locate and photograph these very interesting specimens. Inquiry in Mexico City and elsewhere ended very discouragingly until he had the pleasure of meeting Dr. Alfonso Dampf of the Escuela Nacional de Ciencias Biológicas, who shared his interest in Dr. Dugès and his collections, and very obligingly immediately suggested that they make a joint trip to Guanajuato to investigate the collections which might remain.

Arriving in Guanajuato, the Colegio del Estado de Guanajuato was found flourishing and active, full of treasures of art, mineralogy and natural history, and still keeping alive the memory of Dr. Alfredo Dugès. Lic. Manuel Cortes, Director of the Colegio, and Ing. Manuel G. Aranda, Professor of Zoology and Botany, extended their charming hospitality and literally gave their visitors the keys to the Alfredo Dugès Museum, which had been left essentially as it was when Dugès died. These men assisted most cordially in the attempt to find types, and permitted removal to Mexico City for study those which were found.

A return trip to Guanajuato to search for the remaining types had to be postponed, as the time for Necker’s return to the United States was near. Smith fortunately returned to Mexico City at this time, during his tenure as Walter Rathbone Bacon Travelling Scholar, and offered to finish the job, which was really just begun. He went to Guanajuato, also in company with Dr. Dampf, searched out all specimens which might have been types, compared them with the original descriptions and supervised the photographing.
Our thanks go first and foremost to Dr. Alfonso Dampf, without whose wholehearted cooperation we most likely would not have succeeded in our project; to Sr. Ing. Aranda, who allowed us to borrow and study the specimens in the Colegio; to Sr. Don Luis Anaya of the Polytechnic Institute, for photographing the types; to Rozella Smith for making the prints; to Oscar Boll for retouching them; and to Dr. E. H. Taylor for some identifications. We are grateful to the Walter Rathbone Bacon Travelling Scholarships of the Smithsonian Institution and the Carnegie Grants-in-aid for their respective parts in making our trips to Mexico possible.

The present study has two objects: first, to redescribe in detail the types now extant in the Alfredo Dugès Museum; and second, to determine the status of all names proposed by Dugès for Mexican species.

So far as we can determine, twenty five names for Mexican species were proposed by Dugès:

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Fifteen of these species are represented by holotypes or cotypes in the Dugès Museum of the Colegio del Estado de Guanajuato in the city of Guanajuato.¹ Cotypes of two species (Crotalus jimenezii, Siredon dumerilii) are present in United States collections, although lacking in the Dugès Museum. Since these cotypes are easily available they are not redescribed here.

¹ The collection also contains the type of Triton asper Duges, described from France.
In the case of *Liophis janii*, the single type is missing, and no other specimens of the form appear in the collection. A topotypic specimen in the U. S. National Museum, collected by Dugès, is designated neotype. Types are missing for three other species, but are replaced by specimens sufficiently similar that we have designated them as neotypes.

In the case of *Contia microacanensis*, the type is missing, and there is another specimen which might be substituted. Unfortunately, however, the scutellation of the substitute specimen is so different from that described for the type that it cannot be considered as a neotype. The species is so poorly known, and its variation is apparently so great, that choice of lectotype is difficult. Since the genus is now undergoing revision, we leave this matter to the reviser.

Finally, three other names have been proposed by Dugès as substitutes for other names, or inadvertently proposed more or less casually. *Sceloporus westphalii* was made available for *Sceloporus intermedius*, as this is what he really wanted to name it (see p. 212). The name *Amblystoma Velasci* was proposed for *Siredon Tigrina* Velasco, preoccupied. The type of this is Velasco's description. Lastly, the name *Siredon edule* was resurrected from Hernández' pre-Linnaean "Rerum Medicarum Novaie Hispaniae Thesaurus, seu Plantarum, Animalium et Mineralium Mexicanorum Historia", of 1651.

Regardless of Hernández references to this animal (now known as *Siredon mexicanum*), since his name (said by Dugès actually to have been *Gyrinus edule*) was proposed long before 1758, it has no standing. In effect, then, the name stands as *Siredon edule* Dugès. A fairly good description was given, but of course no types are known, since Dugès did not intend to describe a new species. As this name appears to have no possible significance or use, we do not believe it necessary or wise to designate a type specimen, but suggest that Dugès' description constitute the type.

Dugès erected a surprising number of genera, as can be seen in the following list:

- *Adelophis*, type *copei* (p. 181).
- *Chalinocnemis*, type *Hemidactylus navarri* (p. 197).
- *Geatracus*, type *tectanecus* (p. 194).
- *Hemichirotes*, type *tiridactylus* (p. 196).
- *Hemigenius*, type *variabilis* (p. 199).
- *Morenoa*, type *orizabensis* (p. 205).
- *Oreophis*, type *boulengeri* (p. 206).
- *Platypholis*, type *Eumecees altamirani* (p. 190).
- *Spasmocnemis*, type *Hemidactylus navarri* (p. 197).

**Adelophis coupei** Dugès

Lam. VI, fig. 3; lám. VII, figs. 1-2.


*Type locality.* Guadalajara.

*Status.* Valid as described.
Scales rows 17-17-15, the fourth row dropping at the 135th ventral; scales smooth, without apical pits; ventrals 199; anal entire (apparently); caudals 78, divided; spine present; male.

**Color.** General color dark gray anteriorly, lighter in middle of body, darker posteriorly and on tail; top of head brownish gray, becoming cream color on snout; a broad dark streak on the posterior edge of each subocular labial and on the antepenultimate (fifth, sixth) supralabial; these dark streaks terminate on the posterior edges of the fourth, fifth and sixth infralabials; a similar dark streak, but not so intensely dark (brown) is present in the posterior edge of next to the last supralabial; remainder of sides of head light grayish brown, becoming cream color on lower part of supralabials; a distinct, dark brown lateral nuchal streak, covering about seven scales rows throughout its diagonal length, and about three scales long; this streak encroaches slightly onto the edges of the ninth and tenth ventral scautes. A series of small, indistinct, poorly outlined, rectangular dark spots on the middorsal region, becoming entirely indistinguishable posteriorly. From these spots diverge indistinct dark lines extending diagonally both anteriorly and posteriorly toward the ventral surface, producing a vague, criss-crossed pattern. This pattern becomes less distinct posteriorly and the tail is uniform brownish gray above and below. On the anterior two thirds of the body, every second, third or fourth ventral has a dark streak along all or a part of its posterior edge; on the posterior third of the body the ventrals are uniform grayish-brown.

**Measurements.** Length of head, parietal to snout, 15.8 mm.; total length, 429 mm.; tail 81 mm.

**Condition.** The specimen is well preserved, except that it is rather strongly shriveled. The color is faded somewhat.

**Remarks.** This specimen is apparently one of two cotypes, the other of which is missing. The present specimen may be designated lectotype.

*Oreophis boulengeri* Dugès

Lám. V, fig. 3.


**Type locality.** Sierra de Santa Rosa, 2000 meters, Guanajuato.

**Status.** Synonym of *Lampropeltis mexicana* (Garman).

**Type.** Present in Guanajuato. The original description gives the ventrals as 185, the caudals as 44; I count them 191 and 51, respectively. The total length cited (387 mm.) compares well with my measurement (380 mm.). The specimen is marked “type” by Dugès.

**Description.** Head very slightly flattened, very slightly wider than neck; rostral normal, about twice as broad as high; two frontonasals, their greatest length nearly twice length of portion of rostral visible from above; two prefrontals, their median suture about twice that of frontonasals; prefrontals extending onto
sides of head, the lateral edge straight and on a line between middle of eye and middle of naris; frontal pentagonal, the anterior edge slightly curved, the lateral edges somewhat convergent posteriorly, the posterior edges forming nearly a right angle; length of frontal (4.8 mm.) greater than its width (3.8 mm.), greater than its distance from tip of snout (3.9 mm.), subequal to greatest length of a parietal (in a straight line parallel to cranial axis, 5 mm.), greater than length of median suture of parietal (3.9 mm.); length of supraocular (4 mm.) more than twice its greatest (posterior) width (1.8 mm.).

Nasal completely divided, posterior section higher than anterior, subequal in size; loreal single, nearly twice as long as broad; one preocular, its upper edge slightly visible from above and widely separated from frontal; greatest diameter of orbit (2.9 mm.) equal to distance from orbit to posterior edge of naris; pupil round; two postoculaires, upper somewhat the smaller; two labials (third and fourth) entering orbit; temporals 2+3+4, the scales of the anterior pair nearly twice as long as the secondary temporals; seven normal supralabials, sixth highest and largest, second smallest; in addition, two very small, superimposed scales inserted between first labial and rostral (anomalous?).

Ten infralabials, fifth largest, first in contact with its fellow on midventral line, four in contact with anterior chinshields, two (fourth and fifth) with posterior; mental triangular, its labial border (2.5 mm.) slightly greater than that of rostral, more than twice its length (1.1 mm.); length of anterior chinshields on midventral line (4.3 mm.) much greater than greatest length of posterior chinshields (2.5 mm.); posterior chinshields separated anteriorly by one scale, posteriorly by two; three rows of small gulars following posterior chinshields, followed in turn by two larger, much wider scales immediately preceding the first full width ventral.

Scale rows 21-23-19, position of increase (between the fifth and sixth rows) anteriorly at the 38th and 39th ventrals, the position of decrease from 23 to 21 (sixth row) at the 114th and (seventh row) 117th ventral; position of decrease from 21 to 19 rows (fifth row) at the 131st and 136th ventrals; scales smooth, with two apical pits (scales near anus with one pit); ventrals 191; anal entire; caudals 51, divided; female.

No hypapophyses posteriorly; 14 maxillary teeth (as best as can be counted without damaging or removing maxilla), subequal.

Color. The colors are much faded, and there remain distinguishable only darker and lighter colors which form the pattern. General ground color very light brownish, the color formed by scattered grains of pigment; sides of head and top of snout anterior to middle of prefrontals with scattered grains of pigment; top of head without scattered pigment, but with a large, dark, irregular, sharply defined, brown mark, light-centered, covering most of the parietals and entering the orbit postero-dorsally, strongly constricted on the posterior part of the frontal bifurcating at the center of the frontal and extending forward nearly to the middle of each prefrontal as two oblong dark areas; two small, juxtaposed, white (or cream colored) pineal spots; a dark brown spot
in the center of the two posterior labials and of the lower primary temporal; a similar aggregate of pigment toward the sides of the frontonasals.

Thirty-three dark-edged spots with unpigmented centers on the body, eight (excluding dark brown tip of tail) on tail. The nuchal spot is nearly twice as large as any of the others, extends nearly to the parietals, covers nine and one half scale rows in the middorsal line, eleven and one half rows anteriorly; nuchal spot with a central, oval, pigmented area (all other spots with centers unpigmented [red ?]), three and two half scale rows long; the anterior spots are slightly constricted on the middorsal line, but the median and posterior spots have straight anterior and posterior edges; the spots are three and one half to six scale rows long, and are separated from each other by lighter areas one and one half to three scale rows long; the sides of the dorsal blotches are frequently open (i.e., the dark borders do not meet); on about the third and fourth rows of scales is a very irregular series of small dark spots which are frequently (especially posteriorly) connected with the dorsal blotches by means of narrow median extensions of the dark borders of the blotches; the lateral markings are very irregular, but in some cases there is an irregular extension of the dark borders of the dorsal blotches to the dark pigment of the ventral surface. The light centers (red ?) of the dorsal blotches extend laterally to the seventh or even to the fourth scale row in some cases; the blotches extend farther laterally in the posterior part of the body than anteriorly. All dorsal blotches on tail open laterally; no lateral dark markings on tail.

Infraoral and chinshield area covered with scattered pigment grains; belly mostly dark, with irregularly placed, quadrangular dark patches covering parts of one or several ventral scales; all of the ventrals have some dark marking. Ventral surface of tail with eight dark, irregularly outlined dark spots, the areas intervening between these with very fine darker markings.

*Condition.* Very good. A spot in the posterior part of body is soft. Colors have faded badly. Maxilla has been removed from one side.

**Phrynosoma taurus** Dugès

Lám. IIII, figs. 1-2.

*Original description.* La Naturaleza, 1873, 2: 302-305, figs. 1-4.

*Type locality.* Coxcatlán, Puebla (near Tehuacán).

*Status.* Valid as named.

*Type*. Two cotypes formed the basis of the description. One was from "Puebla", the other from Coxcatlá (Cozcatalón). Only the latter is now present in the Dugès Museum. It is designated lectotype.

*Description.* Temporal region strongly produced, terminating with a large spine with two much smaller detached spines on inner side; a pair of small occipitals, smaller than either temporals or postorbital spines; dorsal edge of temporal spine nearly horizontal; posterior edge of postorbital spine nearly
Fig. 1.—Contia michoacanensis Dugès = Sonora michoacensis (Dugès).
Fig. 2.—Rhinochelitis antonii (Dugès).
Fig. 3.—Oreophis bouleni Dugès = Lampropeltis mexicana Garman.