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Second Contribution to the Herpetology of San Luis Potosí

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ABSTRACT: A report is made on a small herpetological collection from the Mexican State, San Luis Potosí. One new species, *Adelphicos newmanorum*, is described, and the known ranges of several species are extended to the State.

In a recent issue of this journal,* thanks to the kindness of Prof. George H. Lowery of Louisiana State University, I reported on a large herpetological collection made in the state of San Luis Potosí, Mexico, by a collecting party from the Louisiana State University, consisting of Mr. and Mrs. Robert Newman and Mr. Charles Shaw. The bulk of the collection, however, was acquired by Mrs. Newman. Most of the specimens were taken in the region of Xilitla, in the southeastern portion of the state; a few, however, were obtained in other localities.

One group of specimens from the collection was described by Dr. J. A. Tihen as a new subspecies, *Gerrhonotus leiocephalus loweryi*.†

On July 2, 1948, a second collection was forwarded to me from Louisiana State University. This material was likewise acquired in San Luis Potosí, largely in the Xilitla region, by a collecting party consisting of Mr. and Mrs. Robert Newman, Mr. Herbert Stern, Mr. Prentiss D. Lewis, and Mr. George Lowery. The material, while not so extensive as the preceding collection, does contain material of importance, including certain new state records. One of these is a very rare Mexican rattlesnake, *Crotalus basiliscus totonacus*.

* Univ. Kansas Sci. Bull., vol. 33, pt. 1, pp. 169-215.

† Trans. Kansas Acad. Sci., vol. 51, 1948, pp. 302-305.

Altogether there are 55 specimens representing 23 species. I am again obligated to Professor Lowery for the privilege of examining this second collection.

The following species, one of which is described as new, are here recorded from San Luis Potosí for the first time:

Adelphicos newmanorum sp. nov.
Thamnophis subcarinatus subcarinatus (Gray)
Drymobius chloroticus (Cope)
Micrurus fulvius tenere (Baird and Girard)
Crotalus basiliscus totonacus Gloyd and Kauffeld.

The entire known herpetological fauna of San Luis Potosí totals 140 species. This is divided as follows: salamanders, 5; Salientia, 25; lizards, 33; snakes, 78; turtles, 3.

The map showing collecting localities in San Luis Potosí, as well as the data on the localities included in the text, has been prepared by Dr. George H. Lowery to whom I offer my sincere thanks.

AMPHIBIANS

Bufo valliceps Wiegmann

A single specimen having the typical light coloration is in the collection.

Smilisca baudinii Duméril and Bibron

A single medium-sized female specimen was taken.

LIZARDS

Sceloporus variabilis variabilis Wiegmann

A series of eight specimens was taken at Hda. Limón, 10 mi. W of Ébano, San Luis Potosí between March 30 and April 24, 1948.

Sceloporus serrifer plioporus Smith

A single specimen was taken at Hda. Limón, 10 mi. W. of Ébano. The femoral pores are 20; the dorsal scales, 31. The color, and much of the pattern, has disappeared due to preservation.

Sceloporus grammicus disparilis Stejneger

A single specimen taken on the Llano de Coneja at 7,000 ft., is referred to this subspecies. The dorsal scales number 70 from occiput to a line joining the posterior surface of the thighs. This locality is near the area of intergradation between *g. disparilis* and *g. microlepidotus*.

Corythophanes hernandesii (Gray)

Seven specimens, Nos. 615 to 621, are in the collection, all from the Xilitla region. These were obtained by Marcella Newman.

Gerrhonotus leiocephalus loweryi Tihen

Three topotypic specimens from Xilitla are in the collection. Two (Nos. 612 and 614) have the granular area in the lateral fold definitely marked with vertical dark lines. The smallest specimen (No. 613) shows no such markings. Otherwise they agree in significant characters.

Ameiva undulata podarga Smith

Five specimens (Nos. 623-627) are in the collection, four from Xilitla and one (No. 627) from Tamuzunchale.

SNAKES

Ninia diademata plorator Smith

A portion of a badly preserved specimen from Xilitla is included in the collection (No. 609).

Adelphicos newmanorum, sp. nov.

PL. IV

Holotype: Louisiana State University No. 204, ♂, Xilitla region, San Luis Potosí, May 7, 1947; Marcella Newman, collector.

Diagnosis: A species of average size for the genus having the third labial replaced on edge of lower lip by the enlarged first chinshields; no lateral stripes present on the body; venter immaculate white; subcaudal region with a slight median peppering of pigment; above brownish gray, the scales faintly outlined with heavier pigment.

Description of type: Rostral at least one third wider than high, the part visible above triangular, as long as the suture between the internasals; latter scales small, wider than long, their length about one third the length of prefrontals, their area between one fourth and one fifth of the prefrontals; prefrontals as broad as long, entering the orbit; frontal triangular, as long as wide, about one fifth longer than the prefrontal; parietals elongate, about one fifth longer than their distance from the end of the snout, their common suture, however, being about two thirds the length of the frontal; nasal divided, the anterior part less than half the area of the posterior, the nostril pierced between the two parts very close to the rostral; loreal slender, elongate, entering orbit on right side, while on left

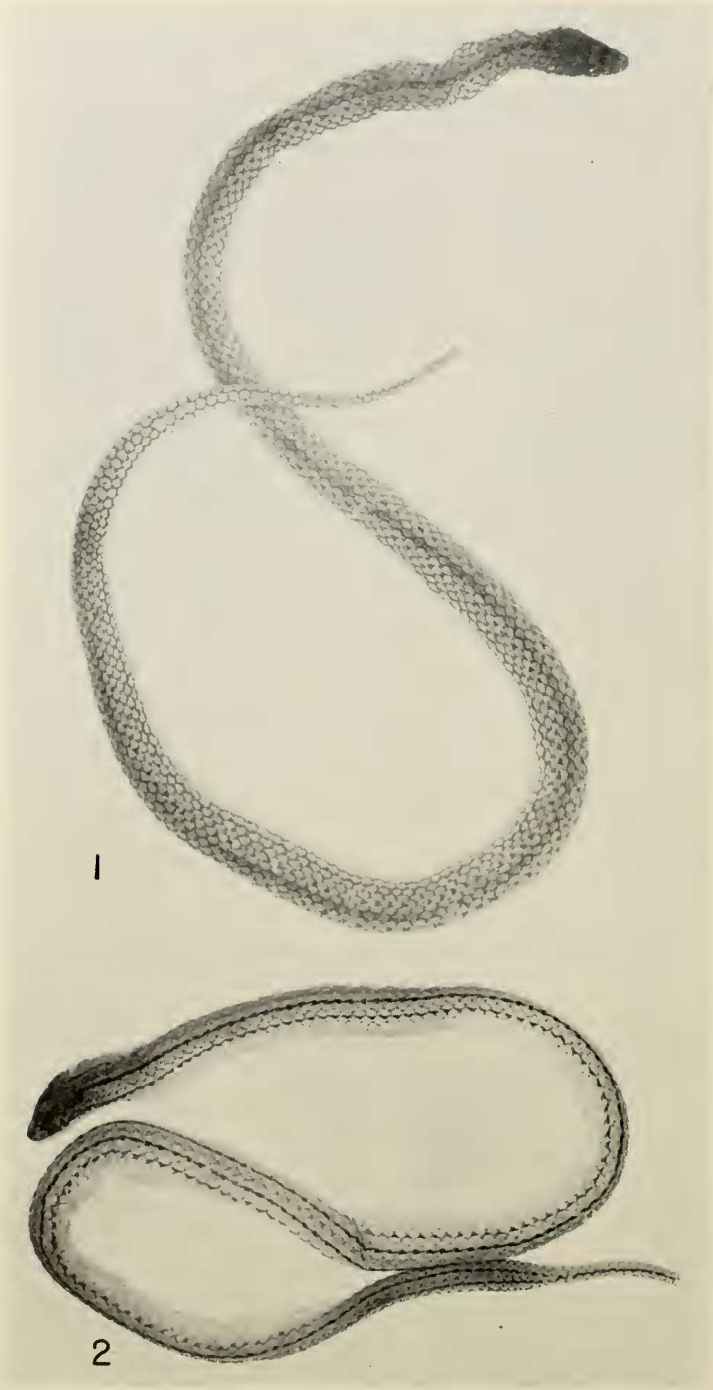


PLATE IV. Fig. 1. *Adelphicos newmanorum* sp. nov. Louisiana State University No. 204, Type. Xilitla region, San Luis Potosí, Mexico (total length, 310 mm.). Fig. 2. *Adelphicos quadrivirgatus quadrivirgatus* Jan. Louisiana State University No. 206, Xilitla, San Luis Potosí, Mexico (total length, approx. 360 mm.).

side, shorter, triangular, excluded from eye by contact of third labial and prefrontal; no preocular; two postoculars, the upper double size of lower; temporals large, one behind the other, the posterior as large or slightly larger than anterior.

Supralabials, 7-6, in the following ascending order of size: left—1, 2, 3, 6, 4, 5, 7, the third and fourth entering the orbit; on right side the second and third are fused, and only the fourth enters the the orbit; infralabials presumably 6, the third being replaced by the much widened first chinshield, first pair of chinshields followed by an azygous pregular; second pair of chinshields not or scarcely differentiated, and separated by a second median gular a little larger than the first. Diameter of eye about 2½ times in length of snout.

Scale formula: 15-15-15; ventrals, 139; caudals, 49; anal divided; total length, 310 mm.; tail 61 mm.; head length, 7.5 mm.; head width, 5.9 mm.

Color in formalin: Above light grayish brown, the edges of all scales somewhat more heavily pigmented than centers; a very faint median grayish line; venter and outer scale row white; second scale row light but with some scattered pigment; an indistinct gray subcaudal line; head dark reddish brown; labials, save for their upper edges, cream.

Relationship: This form is related to *quadrivirgatus quadrivirgatus* (Pl. IV, fig. 2) in having the anterior chinshield form a part of the labial border and in having the chinshield followed by two median gulars, one following the other, separating the poorly differentiated second pair of chinshields.

The head, however, is somewhat more slender than in that species, the frontal being longer than its distance from the tip of the snout (in *quadrivirgatus* less than this same distance). The top of the head is more reddish brown, and the labials are somewhat lower. The typical quadrilinear markings of *q. quadrivittatus* are lacking.

Remarks: On one side the lower jaw, and an area on the neck has been injured by ants.

Bocourt* has described a slender-headed variety of *Adelphicos quadrivirgatum* as *acutirostrum* (type locality, "Mexique"). His form was striped. The subcaudal count was 32, the ventrals, 135. Smith and Taylor (Bull. 187, U. S. Nat. Mus., p. 30) regard this form as a synonym of *Adelphicos q. quadrivirgatus* Jan.

* Mission Scientifique au Mexique . . ., Études sur les Reptiles, livr. 9, 1883, pl. 32, figs. 11b, 11c, 12b, 12c.

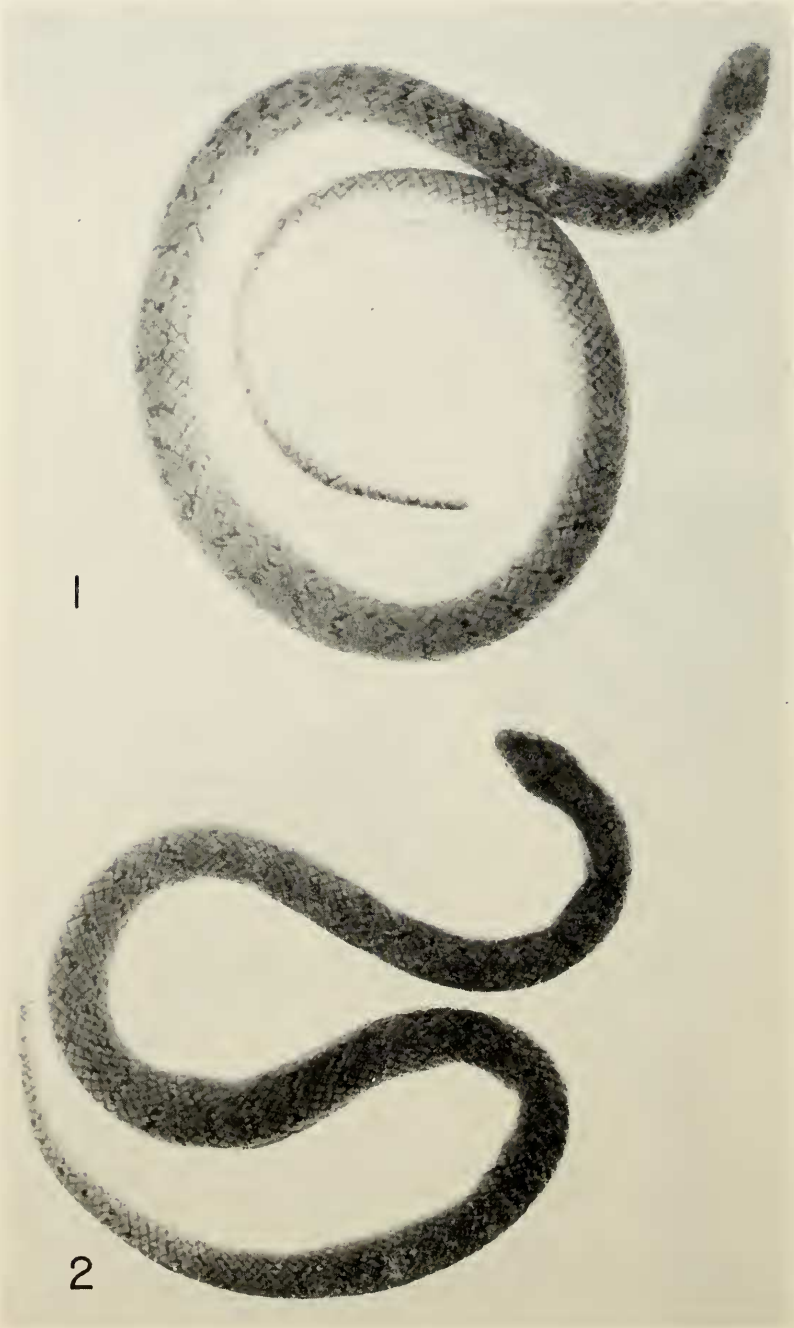


PLATE V. Fig. 1. *Ficimia streckeri* Taylor; Louisiana State University No. 214 ♂, Xilitla, San Luis Potosí, Mexico (total length, 426 mm.). Fig. 2. *Ficimia streckeri;* Louisiana State University No 208 ♂, Xilitla, San Luis Potosí, Mexico (total length, 383 mm.).

PLATE VI. Fig. 1. *Rhadinaea forbesi* Smith; paratype. Fig. 2. *Rhadinaea marcellae* Taylor. Louisiana State University No. 270. Type, Xilitla region, San Luis Potosí, Mexico (total length, 290 mm.).

Ficimia streckeri Taylor

Pl. V, figs. 1 and 2

Three specimens in the collection from Xilitla, Nos. 605 ♂, 606 ♂, and 607 ♀, respectively, yield the following scale data: postoculars, 2-1, 2-2, 1-1; scale formulae, 19-17-17, 19-17-17, 19-17-17 (the number 19 occurs only on the anterior part of the neck); ventrals 156, 153, 142; caudals, 34, 34, 33; totals, 190, 186, 175. Most of the scales on the anterior part of the body in the two younger specimens have single median terminal pits instead of the typical pair. In the older specimen, No. 607, however, the pits are scarcely discernible. If the epidermis has been shed they cannot be seen.

The narrow bars, present in Nos. 606 and 607, to the number of 41 and 43 respectively, are, in No. 605, replaced by a median series of spots, two or two and one half scales long and about as wide. There are but thirty such marks. On the sides are two rows of elongate spots below which are some smaller indefinite spots reaching the ventrals.

Rhadinaea marcellae Taylor

Pl. VI, fig. 2

Rhadinaea marcellae Taylor, Univ. Kansas. Sci. Bull., vol. 33, pt. 1, 1949, pp. 197-198.

The type specimen of this species is figured. A figure of *Rhadinaea forbesi* Smith is also included for comparison. (Pl. VI, fig. 1.)

Rhadinaea crassa Smith

Three specimens, Nos. 601-603, of this species, two from Xilitla, and one from Cueva Salitre, near Xilitla, are in the collection. The tails of Nos. 601 and 603 are broken, while the body of No. 602 is badly crushed.

Elaphe flavirufa flavirufa (Cope)

A very large male specimen, No. 585, was collected at Hda. Limón, 10 mi. W of Ébano, San Luis Potosí, by Prentiss D. Lewis. The specimen measures 1525 mm. in total length, the tail 286 mm.

This specimen differs from younger specimens in having scattered ventral black flecks (of a size equal to the surface area of one or two dorsal scales) that grow more numerous on the posterior part of the body, so that the dark color rather than the light is predominant. The subcaudals are dark over most of their surface, only a small anterior portion of each being white.

There are 34 dorsal body spots and 15 caudal spots; the ventrals are 247; anal divided; caudals, 106.

PLATE VII. *Pliocercus laticollaris* Smith, Louisiana State University No. 559. Xilitla, San Luis Potosí, Mexico (total length, 541 mm.).

Pliocercus laticollaris Smith

PL. VII

A specimen of this species was reported from Xilitla in my first paper on the San Luis Potosí fauna. A figure based on a photograph of the preserved specimen is included here.

Drymobius chloroticus (Cope)

Dendrophidium chloroticum Cope, Proc. Amer. Phil. Soc., vol. 23, 1886, p. 278.
Drymobius chloroticus Cope, U. S. Nat. Mus. Bull., no 32, 1887, p. 69.

This species, with a type locality at Cobán, Guatemala, has heretofore been reported in Mexico only in southern Veracruz and in Chiapas. The collection contains one specimen, No. 591, young ♀, collected at Xilitla, San Luis Potosí, by Mr. Herbert Stern, Jr. This is the most northern record, extending the known range about 280 miles to the northwest.

The ventrals are 164; anal divided; subcaudals, 116 + 1.

The original green coloration has disappeared and a dim pattern of transverse darker marks, narrowly edged with white, is evident; the whitish edges of the bands are separated by three scales. Anteriorly, the skin between the scales is light. The head is black but most of the rostral and the supralabials are cream except on their upper edges. The infralabials and chin are cream white. The coloration of the sides extends onto the ventrals. There are 38 maxillary teeth, the posterior approximately a half larger than anterior. The scale formula is 17-17-15, the eleven middle scale rows with keels.

Drymobius margaritiferus margaritiferus (Schlegel)

A single specimen, No. 587, was collected at Hda. Limón, ten mi. W of Ébano.

Dryadophis melanolomus veraecrucis Stuart

Six specimens, Nos. 593-598, are in the collection; two are from Apetsco, four from Xilitla. A young specimen, No. 598, has the body uniform dark brown. A white line beginning on the labials below the eye can be traced along the side of the neck and body where it appears so dim that it can scarcely be traced. I cannot discern any transverse markings in this specimen.

Spilotes pullatus mexicanus (Laurenti)

A young specimen, No. 586, is in the collection from Xilitla. The head has the reduced pattern of black. The dark bars on the body, after the first eleven, are nearly transverse losing the strong diagonal

trend of the anterior bars. There are 21 bars on the body posterior to the nuchal band, and 12 caudal bands. Ventrals, 200; anal single; caudals 118 + 1.

Lampropeltis triangulum polyzona Cope

Two female specimens, one from Apetsco, Xilitla Region (No. 588), and one from Xilitla (No. 589), are referred to this subspecies. One of the specimens has the black bands widened dorsally so that in many cases the bands are separated on the middorsal line by a single row of red scales. This specimen might be regarded as an intergrade with the subspecies *arcifera* known also from the Xilitla region. In this specimen the red scales are shaded with dark pigment but there are no distinct black spots.

No. 588 from Apetsco is a typical *polyzona*, the red interspaces being as wide as the black bars. Each red scale has a discrete black spot.

The ventral and subcaudal counts for Nos. 588 and 589 respectively are: 211, 216, 46 + 1, 49 + 1.

Leptodeira annulata septentrionalis (Kennicott)

This species is represented by a single specimen (No. 592) from Xilitla, taken April 25 by Marcella Newman.

The specimen yields the following scale data: Preoculars, 3-3, the upper touching the frontal on each side; postoculars, 2-2; supralabials, 8-8; infralabials, 10-10; temporals, 1 + 2; scale formula 21-23-23-17; ventrals, 195; caudals, 73; anal divided. Thirty bands on body; 16+ on tail.

The minute grayish pigment flecks on the venter are fewer than those usually present. The bands are a little narrower than those on specimens from farther north.

Thamnophis subcarinatus subcarinatus (Gray)

Coluber (*Natrix*) *subcarinata* Gray, Zoology of Beechey's Voyage, 1839, p. 96, pl. 32 (type locality "the hedges of Xalisco" Mexico.)

Thamnophis subcarinata subcarinata Smith, Herpetologica, 1949, vol. 5, pp. 63-64. (Type locality restricted to Guadalajara, Jalisco.)

This species is represented by a male specimen (No. 590) collected at Laguna de las Rusias, Villa de Reyes region, San Luis Potosí. The ventrals are 163, the caudals 64 + 1.

The reduced caudals in the male separates this subspecies from *subcarinatus megalops* that has 79 or more subcaudals. The latter, a more western subspecies, has also been found within the limits of the state.

Storeria dekayi texana Trapido

A specimen from Xilitla (No. 608), with 17 scale rows in the middle of the body, two pairs of chinshields present, lacking both a loreal and a horizontal dark mark on the anterior temporal, is referred to this species. The ventrals in this specimen are 139; anal divided; and caudals 55. The scale formula is 17-17-17.

PLATE VIII. *Micrurus fulvius tenere* (Baird and Girard.) Louisiana State University No. 310. Ébano, San Luis Potosí, Mexico (total length, 703 mm.).

The dorsal coloration in preservative is nearly uniform brownish gray with some few small blackish spots anteriorly. The venter is lighter with two or more black dots on the end of each ventral. On the underside of the tail the caudals are edged with gray and are without dots.

Micrurus fulvius tenere (Baird and Girard)

Pl. VIII

This species is represented by a single specimen, L.S.U. No. 310. I originally reluctantly referred* this specimen to *Micrurus fitzingeri microgalbineus* Brown and Smith. I pointed out the characteristics by which the specimen differed from typical *M. f. microgalbineus*, and gave scale data. The colors are badly faded. A figure of the specimen is included.

Micrurus fitzingeri microgalbineus Brown and Smith

Pl. IX

A figure of L.S.U. No. 308, Xilitla, San Luis Potosí, is given.

Crotalus basiliscus totonacus Gloyd and Kauffeld

Crotalus totonacus Gloyd and Kauffeld, Bull. Chicago Acad. Sci., vol. 6, no. 2, p. 12, fig. 1-2 (type, Chicago Academy of Science no. 4469, Panaco Island [about 75 mi. S of Tampico], Veracruz, 12 mi. inland from Cabo Rojo).

Since only one specimen besides the type and paratype of this species is known, and only the type has a definite locality, it is with very considerable interest that I report the discovery of this rare species on the mainland of Mexico at Hacienda Limón, 10 mi. W of Ébano, San Luis Potosí. These specimens, Nos. 583 and 584, were collected respectively by Mr. Herbert Stern, Jr., and Mr. Prentiss D. Lewis.

The smaller complete specimen, No. 583, measures 813 mm. in total length, the tail, 68 mm. The rattle is short, being only 16 mm. The head measurements are: width, 26.6 mm.; length, 33 mm. The ventrals are 194, the caudals 26. The anal is single. The nostril is higher than wide, and broadly in contact with the prenasal. A pair of internasals are present, followed by a pair of prefrontals (one prefrontal and one internasal being partially fused). The supraoculars are large, flat, and separated anteriorly by a single frontal that is divided transversely near the middle, and with the posterior portion of the frontal apparently segmented longitudinally. In contact with the posterior frontal and the supraoculars, is a some-

* Univ. Kansas Sci. Bull. vol. 33, pt. 1, 1949, p. 213.

PLATE IX. *Micrurus fitzingeri microgalbineus* Brown and Smith, Louisiana State University No. 308, Xilitla, San Luis Potosí, Mexico.

what enlarged parietal separated from its fellow by a pair of scales. The supralabials are 12-12, the infralabials 13-13. The nostril is represented by a vertical slit between the nasals and the second nasal is followed by a pair of superimposed loreals. Two large preoculars follow these scales, both entering the orbit. A series of four

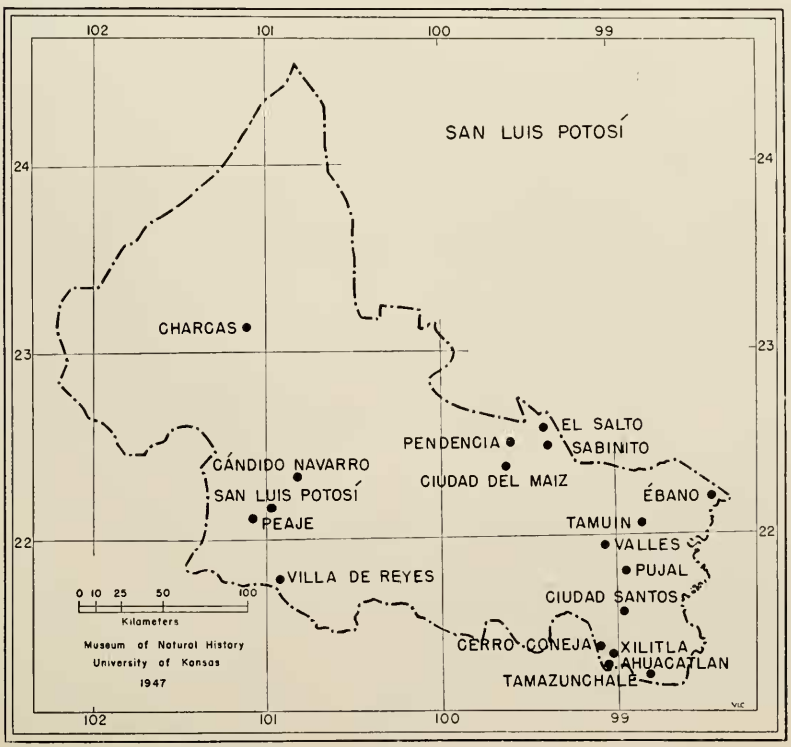
diminutive scales are present anterior to the large scale bordering the pit. The pit is surrounded by four scales, including the lower preocular. The two lower scales are in contact with the labials. There are two or three scale rows between the labials and the eye. The three lower rows of temporals are unkeeled, the upper rows slightly keeled. Three labials touch the anterior chinshields.

The color pattern of this specimen resembles closely the figure of the type given by Gloyd (1940), even to the smaller detail of the head pattern.

The second specimen is a large male, but the head, with a portion of the neck, is missing. The preserved portion measures 1360 mm. of which tail and rattle measure 150 mm., the rattle alone, 35 mm. The scale formula is 25-25-23-21.

Bothrops atrox asper (Garman)

Three specimens of this large species are in the collection (Nos. 599 to 601). Two large specimens are from Xilitla, a small one from Hda. Limón, 10 mi. W of Ébano.



Map showing collecting localities in San Luis Potosí

The three specimens present the following scale data:

Data on *Bothrops atrox asper* (Garman)

No.	*Sex*	*Ventrals*	*Sub-caudals*	*Labials*	*Infra-labials*	*Scale formula*	*Total length*	*Tail length*
599	♂	205	63+1	7-7	10-10	27-29-21-20	1,535	184
600	♂	209	65+1	7-7	11-10	26-25-21-19	1,560	197
601	♀	211	61+1	7-7	10-10	28-26-21-20	1,015	132

LIST OF LOCALITIES

AHUACATLAN: a small village at 3,800 feet situated among mountains rising to over 5,000 feet.

APETSCO: a locality approximately 1.5 miles NW of Xilitla; elevation *ca.* 2,600 feet.

AXTLA FERRY ON ROAD TO XILITLA: a ferry crossing on that part of the Río Axtla locally known as the Río Huichihuayan; elevation *ca.* 300 feet.

CÁNDIDO NAVARRO: a village on Ciudad San Luis Potosí-Antiguo Morelos Highway approximately 15 miles northeast of the city of San Luis Potosí.

CERRO CONEJA: the highest measured peak in the Sierra Madre Oriental proper of San Luis Potosí; elevation 8,699 feet. Specimens with this locality designation were taken at elevations ranging between 6,200 and 7,400 feet.

CIUDAD DEL MAIZ: a town on Ciudad San Luis Potosí-Antiguo Morelos Highway; elevation 4,000 feet.

CIUDAD SANTOS: current name for village formerly known as Tancanhuitz; elevation 770 feet.

CHARCAS: a town 68 miles north of Ciudad San Luis Potosí; elevation 6,580 feet.

CUEVA SALITRE: a cave located on the outskirts of village of Xilitla.

ÉBANO: a town near estern border of state; elevation *ca.* 100 feet.

EL SALTO: a waterfall about 5 miles N of Ciudad del Maiz-Antiguo Morelos Highway; elevation 2,000 feet. Specimens were taken at an elevation of about 1,500 feet. This is Salto del Agua of some maps.

HACIENDA LIMÓN: a general collecting site about 10 miles W of Ébano; elevation 45 feet.

JOYA DE LA SILLETA: a locality adjacent to Llano de Garzas; elevation *ca.* 6,200 feet. The spelling of this place name was erroneously transliterated in the early stages of the field work as "Joya de Asietta."

LAGUNA DE LAS RUSIAS: an artificially empounded body of water, with dense stands of rushes and other aquatics, located 3 miles SW of Villa de Reyes; elevation 6,000 feet.

LLANO DE GARZAS: one of several mountain meadows in neighborhood of Cerro Coneja; elevation *ca.* 6,800 feet.

LLANO DE CONEJA: a mountain meadow in neighborhood of Cerro Coneja; elevation *ca.* 7,000 feet.

MIRAMAR: this locality designation refers to Cerro Miramar, a mountain overlooking the village of Xilitla; elevation *ca.* 4,500 feet.

PEAJE: a village approximately 8 miles SW of the city of San Luis Potosí on highway to Guadalajara; elevation *ca.* 6,400 feet.

PENDENCIA: a village 2.5 miles N of San Luis Potosí-Antiguo Morelos Highway; elevation *ca.* 4,500 feet.

PRESA DE GUADALUPE: a village on Ciudad San Luis Potosí-Antiguo Morelos Highway; elevation *ca.* 4,000 feet.

PUERTO DE LOBOS: a point on Ciudad San Luis Potosí-Antiguo Morelos Highway 2.5 miles S of Pendencia; elevation 4,300 feet.

PUJAL: a town on Pan-American Highway; elevation *ca.* 300 feet.

RANCHO MIRAMAR GRANDE: a locality about halfway along trail between Cerro Miramar and Cerro Coneja, including collecting points from 4,500 to 5,000 feet.

SABINITO: a village on Ciudad del Maiz-Antiguo Morelos Highway; elevation 1,300 feet.

SAN LUIS POTOSÍ RESERVOIR: an impounded body of water on the southwestern outskirts of the city of San Luis Potosí; elevation 6,300 feet.

TAMAZUNCHALE: a town on Pan-American Highway in the southeastern part of the State; elevation *ca.* 400 feet.

TAMUIN: the present name for a village formerly known as Guerrero, located on Valles-Tampico Highway; elevation 150 feet.

VALLES: a town on Pan-American Highway; elevation 250 feet.

VILLA DE REYES: a town 25 miles S of the city of San Luis Potosí; elevation 6,000 feet.

UPPER LLANO DE CONEJA: a meadow on shoulder of Cerro Coneja; elevation 7,200 feet.

XILITLA: a town in southeastern part of State, 14 miles by road west of Pan-American Highway; elevation *ca.* 2,200 feet.

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