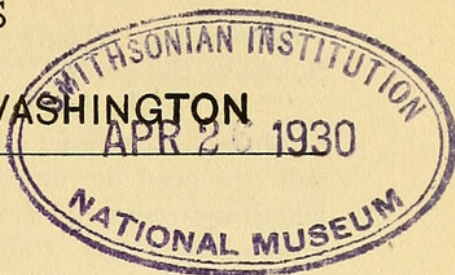


PROCEEDINGS
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BIOLOGICAL SOCIETY OF WASHINGTON



NOTES ON SCELOPORUS MERRIAMI STEJNEGER.¹

BY A. H. WRIGHT AND A. A. WRIGHT.

In 1904 (Feb. 5) Dr. Leonhard Stejneger described *Sceloporus merriami*, "A New Lizard from the Rio Grande Valley, Texas" (Proc. Biol. Soc. Wash., Vol. XVII, 1904, pp. 17-20). As a preface to our studies of this species, we can not do better than to quote the introductory remarks of its describer.

"During the various collecting trips made by the field naturalists of the Biological Survey into western Texas, a series of lizards belonging to the genus *Sceloporus* were collected, which clearly belong to an undescribed species. It forms part of the small section of the genus characterized by the minuteness of the lateral scales, of which, thus far, only two species have been taken within the United States, viz., *S. variabilis* and *S. couchii*. I wish to associate with this very distinct species the name of the originator and chief of the Biological Survey, who has done such an immense work in increasing our knowledge of our vertebrate fauna. * * *

"*Habitat*.—Rio Grande Valley, western Texas. Type. United States National Museum, No. 33,039; East Painted Cave, near mouth of Pecos River, Texas, September 2, 1890; W. Lloyd, collector, U. S. Biological Survey (pp. 17-18).

"*Habitat*.—Thus far only found in the Rio Grande Valley from the mouth of Pecos River to Boquillas. This species, therefore, seems restricted to the Rio Grande Canon." (—p. 19.)

Habitat and habits.—Our experiences with the habits and habitat of this form in 1925 (July 1-3) can best be given by quoting our journal notes verbatim:

"July 1, 9 A. M. Devil's R. crossing. Went over to hill on east side of crossing. On vertical walls, west exposure, now in shade, from 2-8 or 10 ft. from ground saw several lizards. Small ones running along. One male looked on belly somewhat like *S. variabilis* but on back had spotting like a *Holbrookia texana* or *H. propinqua*, not quite so prominent. Ran one in a small crack but it escaped me. Shot two, was after two amongst rocks at

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level of ground when I espied on a shady ledge a *Crotalus lepidus* about 3 ft. above the ground.

"* * * The lizards will pump up and down like a *Holbrookia*. * * *

"July 2.—On same cliff east of camp, now shady. *Sceloporus merriami* will rest head downward on a knob projecting out. Often about arm's length up from ground or 6 ft. Caught tail of a ♂. It ran higher under a projecting ledge. Caught a ♀. It is battered. Few lizards with original tail, toes, etc. Sensed a movement behind a ledge. Reached up with gun barrel, frightened out a ♀ which I caught. Arm's length up.

"July 2.—Devil's R. About 2:45 started on our way from camp. Stopped at the cave at Castle canyon. All around the mouth on the vertical rocks were *S. merriami* in considerable numbers.

"July 3.—Last night about 7:30 saw 1 *S. merriami* in east wall of canyon of Pecos beside the road as you approach the bridge. It was on the light colored rock. This morning * * * shot 3 *S. merriami*. Little farther on on the vertical wall usually where more or less shady were 4 or 5 little *S. merriami*—shot 1, caught 2. Went to the bridge, beautiful view. * * * Perched in the corner of a road culvert was a *S. merriami*. Shot at it—missed it—chased it through culvert—got it—Ate our lunch about 4 miles west of Comstock at a rocky ravine. On rocky walls were *S. merriami*. It is the common rock wall lizard of Devil's R. and Pecos R. Canyons (and small canyon between)."

Range.—Eleven years after the original description, Prof. John K. Strecker in his "Reptiles and Amphibians of Texas" (1915, p. 21) paraphrases Dr. Stejneger's range as follows: "This species is known from only a few localities in western Texas, from the Pecos River Canyon, 55 miles northwest of Comstock, Val Verde County, south to the mouth of the Pecos River and west along the Rio Grande River to Boquillas, near the Big Bend." No doubt, as this implies, the species is in the intervening county of Terrell, which is between Val Verde (East Painted Cave) on the east and Brewster (Boquillas) on the west. So far as we can determine, no records of this species have been made since 1904, and no positive record of it secured for Terrell County. Our collections made at Devil's River Crossing and in Devil's River Canon extends its range somewhat eastward. We firmly believe that this species extends some distance up the Devil's River from Rio Grande at Painted Cave and likewise up the Pecos River considerable distance from Rio Grande at the Painted Cave of this river. The people at Del Rio assert that there are two Painted Caves, one at the mouth of each of these two rivers. This species is also a common cave, canon wall, or rocky cliff form in the intervening areas between these two canons, Devil's and Pecos. All of our observations were made along the Del Rio-Comstock-Langtry-Alpine road. We found it between Del Rio and Langtry.

Our material is as follows:

Field No. 432, 16 adults, July 1, 1925. Devil's River Crossing west of Del Rio, Texas. Taken on east wall in shade.

No. 441. Castle Canyon west of Devil's River Crossing, July 2, 1925.

1 adult. "Species at mouth of cave, within it and on vertical walls outside."

No. 454. 3 adults. East wall of canyon in shade. July 3, 1925, Pecos River at Bridge between Comstock and Langtry. No. 451. 3 young, same place, July 3, 1925. Running in shade on east vertical wall.

No. 455. 2 adults. Rocky ravine 4 miles west of Comstock, Texas, July 3, 1925.

No. 438. Two eggs (ovarian) from one of the ♀s of No. 432 (12x7 mm., 11x6 mm.). (Plate II, Fig. 4.)

Color descriptions from life.—Adult ♂ No. 432. July 1, 1925. Devil's River Crossing (Plate I, figs. 1 and 2. Plate II, figs. 1, 2, 5). Upper parts: Either side of middle of back is a row of 10–12 small round or elliptical black spots. Under the lens, these are dark grayish olive or dusky slate violet. On each side are 7–8 irregular rows of spots, deep tiller buff or pale cinnamon pink or pale vinaceous pink. Under the lens, these areas look light grayish olive or light olive gray. These spots remind me of those of a male *Holbrookia* when I see the lizard on the rocks. These spots are outlined by deep grayish olive or black. Top of the head is wood brown. Tail not spotted, but with cross bands of black or dark grayish brown, under lens dusky slate-violet. Interspaces are pale olive gray or light olive-gray, under the lens light grayish olive.

Underparts: Lower throat with two indigo blue or dull blue-green black spots. Often they meet posteriorly. Sometimes there is a smaller spot ahead of each throat spot or large and smaller unite or throat may have several indistinct bluish spots forward. Amongst these may be a little pale yellow orange or pale ochraceous-salmon. Other throat-scales white, usually with a dark spot below the eye and a short vitta back of the eye. Iris green yellow or viridine yellow pupil rim. In front of this yellow is a narrow band of orange pink or brownish vinaceous; ahead of it an area of green yellow to sulphur yellow; rest of iris black. Breast white. Vertical shoulder bar black or dull blue green black. Sometimes males have a few irregular black or dull blue-green black spots on the ventral side of femur. Some have white area down middle of belly with dark inner edge of berlin blue or azurite blue which also bounds the lateral ellipse behind and a short distance forward on dorsal edge of the ellipse. The ellipse is deep chrysolite green, absinthe green or asphodel green. This on outer and upper edge becomes pale grayish vinaceous or light grayish vinaceous. In some the middle white area is lost, being suffused with the dark blue. (Plate II, fig. 2.) Underneath tail, the dark cross bands of the upper surface become paris blue, and the light intervals persian blue. Sometimes underside of tail is merely elain blue over entire under side or entirely persian blue.

Adult ♀, No. 432, July 1, 1925. Devil's River Crossing. (Plate I, fig. 3, 4.) Upper parts: Dorsal color pale olive gray or light olive-gray or pallid mouse gray or pale mouse gray. Either side of middle line of back is a row of 10–12 spots on the body as in males. There are two parallel rows to these on the sides. These spots are smaller. All over the body are round white spots most prominent above the grenadine of the lateral

belly. The dark spots unite to form cross bands on the tail. These bands are dark olive gray. The top of the head is avellaneous or light drab or drab gray. The iris is black with narrow viridine-yellow rim. In front of the pupil this forms a forward triangle.

Underparts: Ventral parts white. In the groin is an oblique irregular spot of black, larger behind. This corresponds to the bluish rear or rear dorsal border of the ellipse of male. Forward from this black border is strawberry pink or peach red or grenadine. This makes a beautiful creature of this female. This coloration reminds me of *Holbrookia propinqua* females. There is a prominent vertical black bar across the arm insertion on to the shoulder. Most females have two black or dusky separated spots on the lower throat; these spots not indigo blue as in males. The rest of the throat is white. Rarely a high colored female will have 6-7 blackish or dusky spots in front of the two large throat spots; these two more or less separated on the middle line.

Young.—No. 451. July 4, 1925. Pecos River Bridge. (Plate II, fig. 6.) Entire belly pale king's blue or pale neropolin blue. Throat same color spotted with white areas. Sides of belly vinaceous pink or buff-pink. Vitta behind eye more prominent than in adults, so also the black bar in front of shoulder. Bands on forelegs prominent and less so on the hind legs.

Scutellation.—Plate III, fig. 1. The central axial series of scales on the top of the head are interparietal (occipital) with two of parietals on either side, the anterior pair normally meeting ahead of interparietal and between it and the posterior frontal to form frontoparietals. The frontal is transversely divided into two plates. Ahead of the frontal are a cross series of three prefrontals, these are succeeded by three cross plates, the frontonasals (prefrontals in Dr. Stejneger's terminology). Between the frontonasals and the rostral are three pairs of internasals. The nasal ring has three elements, prenasal, supranasal and postnasal portions. Below the last is a subnasal which also might be termed a third canthal scale. Strictly there are only two canthal scales. Back of the postnasal element are usually no postnasals. Above the six supralabials are two rows of scales which become one row near the rear of the subocular.

Variations in head scutellation.—Plate III, figs. 2, 3, 4. In 25 specimens, four had the parietals not meeting to form frontoparietals (fig. 2). In one specimen the parietals just meet at one point, in another the frontoparietal almost obliterated the posterior frontal. The latter in one case unites with the anterior right parietal (fig. 3). The frontal is semi-divided longitudinally in one specimen (see Stejneger). The lateral prefrontals of either side in three young were transversely divided and in one adult (fig. 4). In three adults this division was on the left side solely. Rarely the rear 3d pair of internasals is pushed from the median line. The postnasal plates are normally absent but may be from one to three.

Males have a maximum of 5 elongate pointed scales on the anterior edge of the ear opening, many of them have less, down to one or none, but accidents must have entered in these cases. The females generally have 1-3 pointed scales or merely 1-4 stubs or hardly any at all. The scales

from occiput to tail varied from 56–70. A longitudinal fold runs along above shoulder until it meets the post-auricular longitudinal fold. At their junction an oblique fold goes down on either side of neck. Very seldom do these folds meet on the mid-ventral line as in Cope's *Lysophychus* (See Dr. Stejneger's remarks.) In females the folds are not as well developed.

Measurements.—We measured 10 ♂♂ and 12 ♀♀. Although the largest and the smallest both in total length and measurement of snout to vent were females, the males averaged a little larger in both respects, the males 127 mm., total length, 50 mm., snout to vent; the females 116 mm., 49 mm. The leg and toe measurements averaged greater in the males and also the femoral pores were more numerous in that sex. The other measurements of head width, shield part of head, snout to ear opening, scales in head length, scales occiput to tail and scales around the middle are very close together in both males and females. With one exception, the tibia is in each case equal to or a little greater than the distance from tip of snout to the ear-opening. In only two respects does our material differ from Dr. Stejneger's specimens. Our specimens have femoral pores from 39–53 (44–53 in ♂♂, 33–46 in ♀♀), average 45.5., while his material ranged from 50–58, average 53. Our counts of scales around the middle range from 87–108; his specimens 106–120. Like Dr. Stejneger we experience difficulty in marking these counts and the probability of errors is great. For details of measurements see accompanying tables.

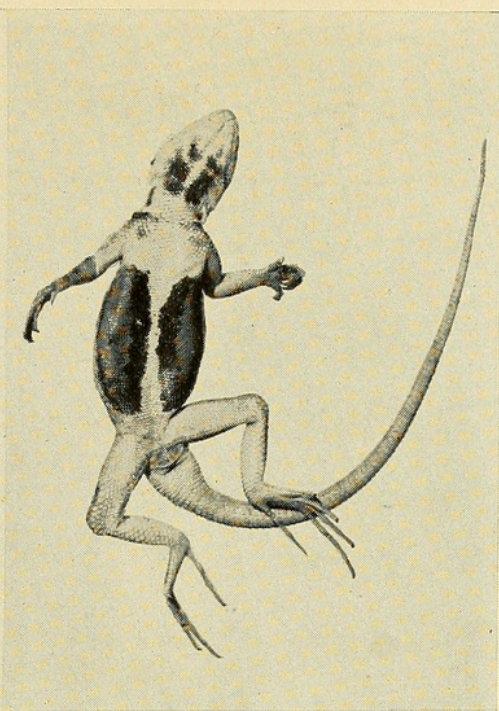
	<i>Species</i> <i>range.</i>	♂ <i>Range.</i>	♀ <i>Range.</i>	<i>Species</i> <i>average.</i>	<i>Spec.</i> <i>mode.</i>
Total length.....	100–142	118–140	100–142	124	120
Snout to vent.....	41– 58	45– 56	41– 58	47.5	46
Foreleg.....	19– 28	21– 28	19– 26	23.36	24–25
Hind leg.....	32– 50	33– 50	32– 47	39	39–40
Tibia.....	11– 15	13– 15	11– 12.5	12.8	12
4th toe to base 5th.....	13– 17	14.5– 17	13– 15	15	15
Head width.....	9– 12	9.5– 12	9– 11	10.6	11
Shield part of head.....	10– 12.5	10– 12.5	10– 12	11	11
Snout to ear opening.....	11– 13.5	11– 13.5	11– 12.5	11.8	12
Scales in head length.....	14– 19	15– 19	14– 17	16.5	16
Scales occ. to tail.....	56– 70	60– 69	56– 70	61.9	62
Scales around middle.....	87–102	88–102	87– 99	93.5	91
Femoral pores.....	33– 53	44– 53	33– 46	45.5	46

MEASUREMENTS OF SCELOPORUS MERRIAM.

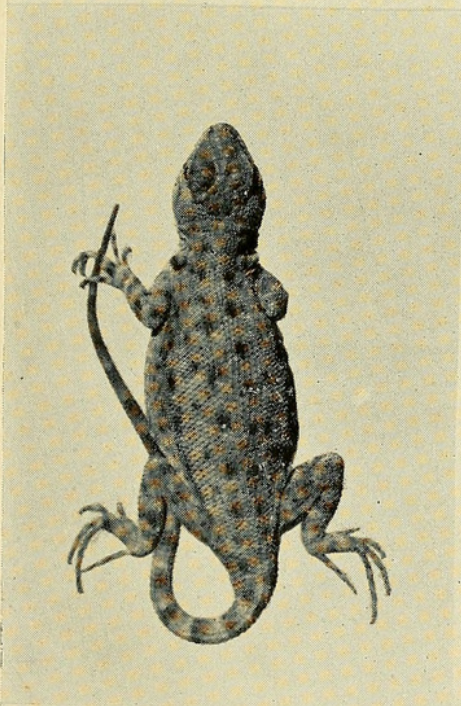
Sp. No.	Sex	Total length.	Head width.	Length foreleg.	Length hindleg.	Snout to vent.	Shield of head.	Sn. to ear op.	Tibia.	4th toe from base 5th. oc. to tail.	Scales in head length.	Scales around middle.	Fem. pores.	Remarks.
432	♀	97	11	20	38	57	10.5	11.5	12.5	14	17	100	23-20	Specimens twisted difficult to measure.
432	♂	-----	11	25	44									
432	♀	142	11	26	46	58	11	12	12	15.5	---	---	22-24	to measure.
432	♂	131	11	24	40	52	12	12.5	14	17	19	99	24-23	
432	♂	66	11.5	25	39	54	11.5	12.5	14.5	16.5	18	94	23-24	Tail lost.
432	♀	132	11	19	47	50	12	12.5	12	14	15	99	20-19	
432	♂	66	11	25	45	52	11	12	14	15.5	16	102	23-27	Tail lost.
432	♀	120	11	24	36	49	11	11.5	12.5	14.5	17	90	22-20	
432	♀	118	10.5	22	34	47	10.5	11.5	11.5	14.5	17	92	22-20	
432	♂	115	9.5	22	35	45	10	11.5	13	15	15	94	24-27	
432	♀	115	9	21	32	41	10.5	11	11	13	16	87	18-23	
432	♂	67	10.5	26	50	55.5	12.5	12.5	14	16	15	88	25-25	Tail lost.
432	♀	112	9.5	22.5	32	47	10.5	11	12	14	15	99	20-13	
432	♀	100	9.5	24	33	46	10	11	11	13	16	91	---23	
432	♀	120	10.5	21	41	45	11	11.5	12	14	16	88	23-23	
432	♂	101	12	21	40	56	12.5	13.5	15	16	15	91	26-24	Tail inj.
441	♂	133	11	22.5	42	49.5	11	12	13	16	16	97	22-24	
454	♂	-----	11	24.5	33	46	11	11	13	15.5	19	96	53	Tail broken.
454	♂	-----	10.5	23	33	45	10	11.5	13	14.5	19	94	47	Tail broken.
454	♂	118	10	25	40	46	11.5	11.5	13	15	18	92	46	
455	♂	140	12	28	39	52	12	12	14	16.5	17	91	25-19	
455	♀	105	10	23.5	39	46	10	11	12	15	15	91	---21	
451	yg.	53	5	10	17	20	6.5	6	6	8	19	94	---15	
451	yg.	---	5	12	17	22	6.5	6.5	6.5	8	20	108	-----	Tail lost.
451	yg.	---	5	11	18	22	6.5	6	6	7.5	22	102	-----	Tail lost.



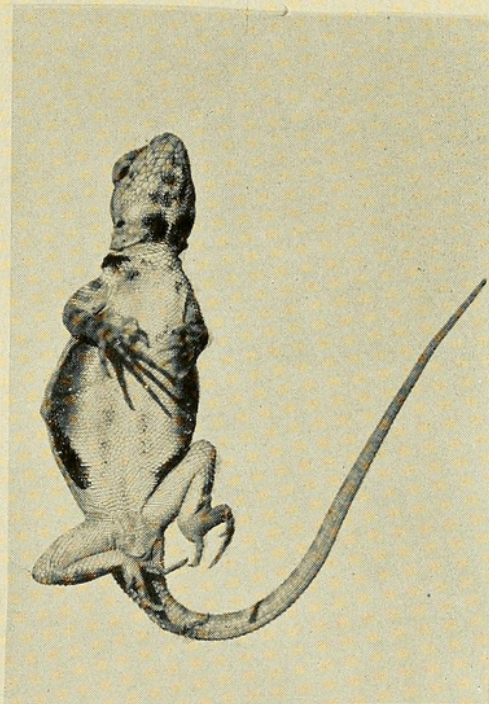
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3



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Sceloporus merriami Stejneger.



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