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A CONTRIBUTION TO THE HERPETOLOGY OF THE  
ISTHMUS OF TEHUANTEPEC

## I. THE SCELOPORI OF THE PACIFIC SLOPE

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IN the collection of amphibians and reptiles assembled by us in the vicinity of the town of Tehuantepec, Oaxaca, Mexico, during the summer of 1936 there is a series of 168 specimens of the genus *Sceloporus* representing four species. In this series there are 41 specimens of the *Sceloporus variabilis* group which differ distinctly and consistently enough to warrant taxonomic recognition; in addition to these specimens the writers have seen various others, similarly distinguished, which are listed below. It is fitting to name this hitherto unrecognized form in honor of Dr. Hobart Smith, who has done much in furthering our knowledge of the genus *Sceloporus* in Mexico.

*Sceloporus variabilis* smithi, n. subsp.

*Sceloporus variabilis*, Cope, 1869: 161; 1885: 397 (part); 1887: 36 (part); Sumichrast, 1880a: 280; 1880b: 163; Boulenger, 1885: 236-237 (part); 1897: 516-518 (part); Günther, 1890: 75 (part).

HOLOTYPE.—UMMZ.<sup>1</sup> No. 81777, ♂, collected by Norman  
<sup>1</sup> UMMZ., University of Michigan, Museum of Zoology; USNM., United States National Museum; AMNH., American Museum of Natural History; FMNH., Field Museum of Natural History; EHT., Private collection of Dr. Edward H. Taylor.

Hartweg and James A. Oliver on Quiengola Mountain, July 4, 1936.

PARATYPES.—UMMZ. Nos. 81778–81815; USNM. Nos. 30332–30337, 46994; AMNH. Nos. 18044–18045, 18371–18374, 18504, 19362–19365; FMNH. No. 1472 (7); EHT. Nos. 7875–7877.

DIAGNOSIS.—A *Sceloporus* of moderate size (maximum snout to vent 70 mm.); dorsal scales, 58–69 from occiput to base of tail; lateral scales in oblique rows; ventral scales, 71–92 from behind gular fold region to anal opening; scales around middle of body, 71–91; femoral pores, 11–15; lamellae under fourth toe of hind leg, 20–24; a post-femoral dermal pocket; males with enlarged post-anal scales; head scales essentially as in *Sceloporus variabilis variabilis*. Color in alcohol, dorsally a blackish brown with a broad, white, dorso-lateral stripe on each side extending from rear border of eye to tail; belly patches present in adults of both sexes, absent in immatures; females with sides of neck tinged with red, this color sometimes extending through labial region.

DESCRIPTION OF HOLOTYPE.—Head scales rugose; single parietal on each side; interparietal subtriangular; frontoparietals in contact medially, divided on each side; posterior part of frontal entire, anterior part divided longitudinally; supraoculars, 5–5; an incomplete row of small scales separating supraoculars from median head scales; 7 superciliaries; prefrontals separated by an azygous scale; median frontonasal separated from laterals; internasals irregular in shape; nasal elongate; 3 postrostrals; subnasal small; first and second canthals subequal in size; loreals irregular, 3–4; preocular divided; subocular elongate; postoculars, 2–3; lorilabials in a single row.

Mental pentagonal; 4 post mentals on each side, the first of each row in contact medially; posterior gular scales with an apical notch; scales directly below ear opening very small.

Four auricular lobules on each side, the longest extending about two-thirds the distance across tympanum; a fold extending from middle of lateral nuchal pocket to lower edge of auricular opening.

Dorsal scales very strongly keeled, 62 from occiput to base of tail; lateral scales keeled, arranged in oblique rows; ventrals smooth, arranged in very strongly diverging rows, 75 scales from behind gular fold region to anal opening; preanals small; postanals greatly enlarged; 76 scales around middle of body.

Scales on dorsal surface of foreleg keeled, somewhat smaller than dorsal scales of back; ventral scales of foreleg much smaller; lamellar formula for toes of foreleg, 8-12-18-17-11 (8-12-16-17-10); scales on dorsal surface of hind leg keeled, those on shank somewhat larger than, and those on thigh subequal to those on back; scales on ventral surface of thigh smooth, smallest in femoral pore region; femoral pores, 12-13; scales on ventral surface of shank smooth, slightly smaller than dorsals of same member; lamellar formula for toes of hind legs, 9-11-18-22-16 (7-11-18-22-16).

Scales on dorsal surface of tail strongly keeled; subcaudals smooth except at extreme tip of tail; a postfemoral dermal pocket.

Head brown above, lighter than body; body blackish brown dorsally, bordered on each side by a brilliant white stripe which extends from posterior border of eye to base of tail; this stripe covers in its widest part 2 complete rows of scales and one-half of the adjoining row on each side; laterally below stripe body somewhat darker than dorsally; another stripe extends from labial region below eye across median 2 auricular lobules; a short vertical bar above insertion of upper foreleg; fore and hind legs bluish, more or less distinctly banded with black on upper surfaces; body ventrally a dirty light blue on chin, neck, and chest; this color continues posteriorly as a thin line across the ventrals, separating the abdominal patches; abdominal patches pinkish, washed with faint pale blue, bordered with deep dark blue; under surface of hind legs black in femoral pore region; under surface of tail light blue with a gray tinge.

REMARKS.—The other males in the type series show little variance from the holotype. The females are colored essen-

tially the same except that the colors are in general less intense; the abdominal patches are not so distinctly bordered, and they exhibit very little of the pinkish hue. In addition the sides of the neck and the head in the auricular and labial regions are red, varying from brick red in some to a very dilute pink-red in others. This color is found in none of the males and in none of the immatures of either sex. The black color of the femoral pore region in the males is lacking in the females and juveniles.

The summary of measurements given below is from the complete type series.

TABLE I  
SUMMARY OF MEASUREMENTS OF SIXTY-NINE SPECIMENS OF  
*SCELOPORUS VARIABILIS SMITHI*

CHARACTERS	WHOLE RANGE	RANGE OF MEDIAN 90 PER CENT	RANGE OF MEDIAN 75 PER CENT	RANGE OF MEDIAN 50 PER CENT	AVERAGE
Scales around body.	71-91	73-85	74-83	74-80	78
Ventral scales from gular region to anus .....	71-92	72-87	74-83	75-81	79
Dorsal scales from occiput to base of tail .....	58-69	59-68	60-66	60-64	63
Lamellae under fourth toe of hind leg .....	20-24	21-24	21-24	22-24	22
Femoral pores .....	11-15	12-14	12-14	12-13	13
Snout to anus (mm.)	28				
	70 ♂				
	60 ♀				

*Sceloporus variabilis smithi* appears to be most closely related to *S. v. variabilis*. There is a specimen from Tapanatepec, Oaxaca (UMMZ. No. 78852), which appears to be an intergrade between the two subspecies; it retains the coloration of *smithi* but exhibits the scale formulae of *variabilis*. Dr.

Smith informs us that specimens from near Tonalá, Chiapas, are more like *variabilis* than *smithi*. The dorsal scale counts of 102 specimens of *variabilis* from various localities, supplied by Smith, summarized and arranged in the same order as in Table I, are as follows: 49-65; 50-60; 51-58; 53-57; 55.

The specimens collected by us were all found on Quiengola Mountain, a very rugged, rocky mountain about 2000 feet high (estimate). Most specimens were seen and procured when we were either ascending or descending the exceedingly steep, rough trail on the mountain side. They were striking creatures to behold as they clung to the sides of jagged rocks, their brilliant, wide, yellowish white, dorso-lateral stripes causing them to be startlingly conspicuous. None were ever found on the plains; the absence of rocky habitats rather than the lack of elevation is probably the reason for this.

Sumichrast (1880) pointed out that the individuals of *Sceloporus variabilis* which occur on the Pacific coast of the Isthmus of Tehuantepec are more vividly colored than those of the opposite coast. Günther (1890) said that in the specimens from the mountains of Huamelula, Tehuantepec, "the dorsal bands are bright yellow in life, and sharply defined."

Localities of the type series:

UMMZ., Nos. 81777-81810, Quiengola Mountain, about 5 miles northwest of the city of Tehuantepec.

UMMZ., Nos. 81811-81813, San Pedro Mountain, about 15 miles west of the city of Tehuantepec.

UMMZ., Nos. 81814-81815, Mixtequilla Mountain, a mountain extending northward of the town of Mixtequilla.

USNM., Nos. 30332-37; 46994, Tehuantepec. (Indefinite, but surely from the Pacific slope of the Isthmus.)

AMNH., Nos. 18044-45; 19362-64, near Mixtequilla, about 3 miles north of the city of Tehuantepec.

AMNH., Nos. 18371-74, Chacalapa, Oaxaca.

AMNH., No. 18504, Coyol, about midway between Astata and Chacalapa, Oaxaca.

AMNH., Nos. 19365-67, Quiengola Mountain.

FMNH., No. 1472 (7), San Jerónimo, (Ixtepec) Oaxaca.

EHT., Nos. 7875-77, Totolapan, Oaxaca.

*Sceloporus siniferus* Cope

Seventy-three topotypes; UMMZ. Nos. 81840-81859.

This species is common on the Pacific slope. It appears to prefer a dry habitat, seldom if ever occurring along ponds or irrigation ditches or even at the edges of the dense banana and sugar plantations unless one exposure at least is fronted by arid conditions. It is usually found along the dry brush fences bordering paths, roads, and fields. If surprised on the ground, which seldom occurs, it immediately climbs into and up the limbs of the bushes to a height of 1 to 6 feet, seldom higher; usually it is discovered in the fences resting on a limb several feet above the ground. One notices on ascending Quiengola Mountain that this species becomes more and more rare until it is apparently completely replaced by *Sceloporus variabilis smithi*.

The specimens agree well with Cope's (1869) description. There are, however, a considerable number of variations in the

TABLE II  
SUMMARY OF MEASUREMENTS OF SEVENTY-THREE SPECIMENS OF  
*SCELOPORUS SINIFERUS*

CHARACTERS	WHOLE RANGE	RANGE OF MEDIAN 90 PER CENT	RANGE OF MEDIAN 75 PER CENT	RANGE OF MEDIAN 50 PER CENT	AVERAGE
Scales around body.	38-53	40-49	42-48	44-46	45
Ventral scales from gular region to anus .....	34-46	36-43	37-42	38-41	40
Dorsal scales from occiput to base of tail .....	35-52	39-49	40-46	41-45	43
Canthal scales .....	2	2	2	2	2
Femoral pores .....	3-7	4-6	4-6	5-6	5
Snout to anus (mm.)	20				
	71 ♂				
	56 ♀				

scutellation of these forms some of which are indicative of sexual dimorphism; from our data it appears that the males have slightly higher scale counts.

Examples of this species were collected in the vicinities of Tehuantepec, San Blas,<sup>2</sup> Huilotepec, Santa Rosa,<sup>3</sup> San Pedro Mountain, Tres Cruces Mountain,<sup>4</sup> and Quiengola Mountain.

*Sceloporus edwardtaylori* Smith

Fifty-one specimens; UMMZ. Nos. 81819-81839.

This species is found in the same localities as *S. siniferus* but it occupies a different habitat. *S. siniferus* seems to prefer fence rows, bushes, and small trees; *S. edwardtaylori* was most common in very large, high trees, scampering up tree trunks

TABLE III  
SUMMARY OF MEASUREMENTS OF FIFTY-ONE SPECIMENS OF  
*SCELOPORUS EDWARDTAYLORI*

CHARACTERS	WHOLE RANGE	RANGE OF MEDIAN 90 PER CENT	RANGE OF MEDIAN 75 PER CENT	RANGE OF MEDIAN 50 PER CENT	AVERAGE
Scales around body.	30-36	30-35	31-34	32-33	32
Ventral scales from gular region to anus .....	36-43	37-42	37-41	38-40	39
Dorsal scales from occiput to base of tail .....	28-33	29-32	29-32	29-31	30
Lamellae under fourth toe of hind leg .....	15-20	17-20	18-20	18-19	18
Femoral pores ....	9-12	9-12	10-12	10-12	11
Snout to anus (mm.)	45	108 ♂			106 ♀

<sup>2</sup> On immediate southeastern outskirts of Tehuantepec.

<sup>3</sup> About 10 miles southeast of Tehuantepec.

<sup>4</sup> About 20 miles southwest of Tehuantepec.

to a height of 10 to 60 feet when alarmed. There are no essential variations exhibited in these specimens, which are not mentioned in Smith's (1936) type description.

Specimens were taken in the vicinities of Tehuantepec, San Blas, Huilotepec, Santa Rosa, and Mixtequilla.

*Sceloporus melanorhinus* Bocourt

Three topotypes; UMMZ. Nos. 81816-81818.

These specimens are in accordance with the type description of Bocourt (1876) except that the femoral pores in his specimens ranged from 18 to 20. The measurements made on our examples are given in Table IV.

TABLE IV

SEX	DORSAL SCALES FROM OCCIPUT TO BASE OF TAIL	VENTRAL SCALES FROM GULAR RE- GION TO ANUS	SCALES AROUND BODY	LAMELLAE UNDER FOURTH TOE OF HIND LEG	FEMORAL PORES	SNOUT TO ANUS (MM.)
♂ . . .	27	48	34	20-20	23-25	95
♀ . . .	28	54	33	20-20	22-22	106
♀ . . .	28	55	35	18-20	22-22	100

We collected 2 specimens high up in trees on Quiengola Mountain; the third was collected on Tres Cruces Mountain by a native.

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