

Catalogue of American Amphibians and Reptiles.

MATHER, CHARLES M., AND JACK W. SITES, JR. 1985.
Sceloporus variabilis.

Sceloporus variabilis Wiegmann
Rose-bellied Lizard

Sceloporus variabilis Wiegmann, 1834:51. Type-locality, "Mexico," restricted to Veracruz, Veracruz, Mexico by Smith and Taylor (1950b). Syntypes, Zool. Mus. Berlin 650-653 (7 specimens), according to Taylor (1969). Not examined by authors. *Tropidolepis variabilis*: Duméril and Bibron, 1837:308. *Sceloporus scalaris*: Cope, 1880:17 (not of Wiegmann, 1828:370).

• CONTENT. Four subspecies are recognized: *variabilis*, *marmoratus*, *smithi*, and *teapensis*.

• DEFINITION AND DIAGNOSIS. *Sceloporus variabilis* is a moderate sized (maximum snout-vent length 74 mm) species of the *variabilis* group (*sensu* Smith, 1939). It can be distinguished from all other species of *Sceloporus* by the following combination of characters: post-femoral dermal pocket present, head scales rugose, post-rostral scales present, tail rounded in both sexes, femoral pores (total) fewer than 35, and lateral abdominal patches of males pink or lavender. Dorsal scales (occiput to rump) range from 36 to 72, femoral pores range from 12 to 35. Both dorsal and ventral color patterns are sexually dimorphic. Light colored dorsolateral stripes, of variable width, extend from behind the eyes to or onto the tail. In most populations these stripes are bolder and more contrasting in males. Dorsal ground color is olive brown to gray, with paravertebral series of dark spots and a faint middorsal stripe. The lateral abdominal patches of adult males are pink or lavender, with dark blue borders. Females are unmarked cream color ventrally, or may have faint pinkish traces of the lateral abdominal patches. In some populations the lips and sides of the head are bright red in adult females.

• DESCRIPTIONS. The original description is in Wiegmann (1834). Other descriptions are in Hallowell (1852), Günther (1890), Stejneger (1891), Boulenger (1897), Cope (1900), Smith (1934, 1937,

1939, 1946), Hartweg and Oliver (1937), and Sites and Dixon (1982). Cole (1978) described the karyotype ($2n = 34$).

• ILLUSTRATIONS. Smith (1939) illustrated the post-femoral pocket. Line drawings of scutellation are in Cope (1900). Black and white photos are in Smith (1939, 1946), Taylor (1956), and Alvarez del Toro (1982). Color illustrations are in Conant (1975), and Behler and King (1979).

• DISTRIBUTION. *Sceloporus variabilis* ranges from southern Texas (Bexar and San Patricio counties) southward through eastern Mexico, except for the Yucatan Peninsula, to Costa Rica. Literature records for Dallas and El Paso, Texas are erroneous (Brown, 1950; Raun and Gehlbach, 1972). Erroneous records from "San Diego" and Utah are discussed by Stejneger (1891). Reviews of distribution for various geographic areas are Smith (1939; United States, Mexico, Central America), Taylor (1956; Costa Rica), Stuart (1963; Guatemala), Peters and Donoso-Barros (1970; Central America), Meyer and Wilson (1973; Honduras), and Henderson and Hoervers (1975; Belize).

• FOSSIL RECORD. *Sceloporus variabilis* is known from Pleistocene deposits in Kendall County, Texas (Holman, 1968), and extreme southern Tamaulipas, Mexico (Holman, 1970).

• PERTINENT LITERATURE. Smith (1939) and Sites and Dixon (1982) give the most complete accounts of distribution and variation. Locality records are in Cope (1888), Boulenger (1890), Strecker (1915, 1933), Strecker and Williams (1927), Burt (1937), Stuart (1937, 1948), Smith (1938, 1960), Smith and Buechner (1947), Brown (1950), Blair (1950), Smith and Taylor (1950a), Werler and Smith (1952), Darling and Smith (1954), Chrapliwy and Fugler (1955), Axtell (1958), Booth (1959), McCoy and Van Horn (1962), Neill and Allen (1962), Holman and Birkenholz (1963), McCoy (1966), Smith and Brandon (1968), Milstead (1969), Hahn (1971), Raun and Gehlbach (1972), Lewis (1974), Mather and Dixon (1976), Karges (1978), and Lee (1980). Meristic data and descriptions are in Cope (1900), Smith and Smith (1952), Werler and Smith (1952), Burstein, Larsen and Smith (1974), and Sites and Dixon (1982). Behavioral information is presented by Carpenter (1978), and Purdue and Carpenter (1972a, 1972b). Sexual size differences are discussed by Fitch (1978). Fitch (1973a, 1973b) and Milstead (1969) published data on ecology. Data on reproduction are in Strecker and Johnson (1935), Werler (1951), Brattstrom and Howell (1954), Fitch (1970) and Alvarez del Toro (1982). Pelaez and Streber (1955), Pelaez (1960), Neill and Allen (1959), Telford (1977), and Mather (1979) report on parasites. Larsen and Tanner (1974) studied cranial osteology and relationships, and evolution and zoogeography (Larsen and Tanner, 1975). Data on food are presented by Axtell (1958), and on egg size by Darling and Smith (1954). Habitat descriptions are in Strecker (1915, 1922), Stuart (1943, 1950), Goodnight and Goodnight (1956), Campbell and Howell (1965), and Webb, Baker and Dalby (1967). Other pertinent literature includes: Stuart (1957; dispersal), Mather (1978; limb regeneration), and Lowe, Lardner and Halpern (1971; supercooling). Smith and Smith (1976) review the Mexican literature.

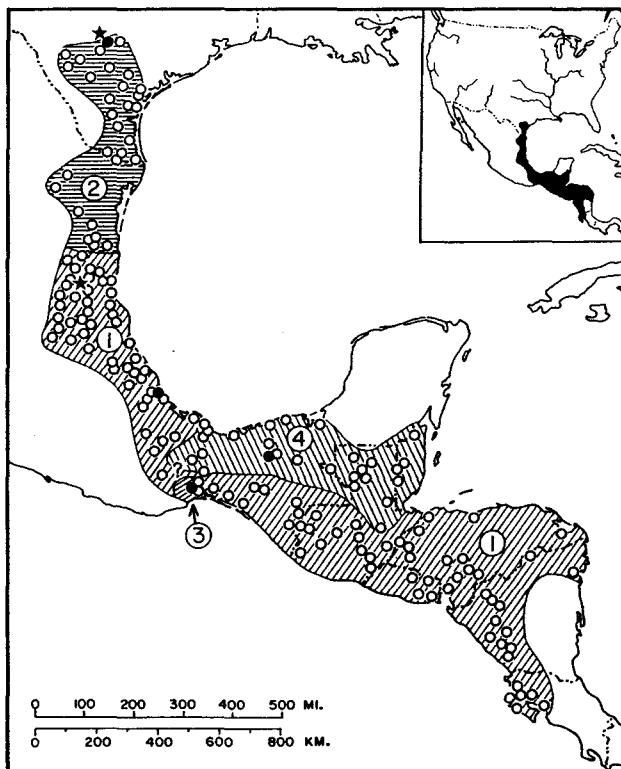
• ETYMOLOGY. The name *variabilis* (L., "variable") was used "probably . . . because of the wide difference in color between the males and females" (Cope, 1900). The name *marmoratus* (L.) means marbled; *teapensis* refers to Teapa, Tabasco, Mexico; and *smithi* honors Hobart M. Smith.

1. *Sceloporus variabilis variabilis*
Wiegmann

Sceloporus variabilis Wiegmann, 1834:51. See species account. *Sceloporus variabilis variabilis*: Smith, 1934:128. First use of combination.

Sceloporus variabilis olloporus Smith, 1937:11. Type-locality, "San Juanillo, (Guanacaste Prov.), Costa Rica." Holotype, Univ. Michigan Mus. Zool. 80458 (*vide* Peters, 1952:38), collected 7 October 1931 by Austin Smith (not examined by authors).

• DEFINITION. Dorsolateral light stripes seldom extending onto tail, bolder in males, and usually one and two half scale rows (or less) wide at hind legs; dorsal scales 50-60 ($\bar{x} = 56$); subdigital



MAP. Solid circles mark type-localities, open circles indicate other locality records, stars mark fossil localities. Question mark indicates uncertain subspecies range boundary.

lamellae usually more than 43; relatively large (maximum SVL 74 mm).

2. *Sceloporus variabilis marmoratus* Hallowell

Sceloporus marmoratus Hallowell, 1852:178. Type-locality, "San Antonio, Texas." Type-specimen apparently lost (*vide* Smith, 1939).

Sceloporus delicatissimus Hallowell, 1852:178. Type-locality, "San Antonio, Texas." Holotype, U.S. Nat. Mus. 16020, collected by S. W. Woodhouse (not examined by authors).

Sceloporus variabilis marmoratus: Smith, 1934:21. First use of combination.

● DEFINITION. Dorsolateral light stripes seldom extending onto tail, bolder in males, and usually one and two half scale rows (or less) wide at hind legs; dorsal scales 54–72 (usually more than 60, \bar{x} = 63); subdigital lamellae usually more than 43; size relatively small (maximum SVL 57 mm).

3. *Sceloporus variabilis smithi* Hartweg and Oliver

Sceloporus variabilis smithi Hartweg and Oliver, 1937:1. Type-locality, "Quiengola Mountain, in the vicinity of Tehuantepec, Oaxaca, Mexico." Holotype, Univ. Michigan Mus. Zool. 81777, collected 4 July 1936 by N. Hartweg and J. Oliver (examined by authors).

● DEFINITION. Dorsolateral light stripes prominent posteriorly in both sexes and extending well onto tail, usually two and two half scale rows wide at hind legs; dorsal scales 50–65 (\bar{x} = 58); subdigital lamellae average 43; relatively large (maximum SVL 71 mm).

4. *Sceloporus variabilis teapensis* Günther

Sceloporus teapensis Günther, 1890:75. Type-locality, "Mexico, Teapa in Tabasco." Syntypes, British Mus. (Natur. Hist.) 1946.8.9.92–98 (6 specimens), collected by H. H. Smith (not examined by authors).

Sceloporus variabilis teapensis: Cole, 1978:8. First use of combination.

● DEFINITION. Dorsolateral light stripes seldom extending onto tail, bolder in males, usually one and two half scale rows (or less) wide at hind legs; dorsal scales 38–50 (\bar{x} = 45); subdigital lamellae average 40; size medium (maximum SVL 64 mm).

● COMMENT. The paleoclimatic and paleobotanic evidence discussed by Savage (1960) suggests that sceloporine lizards have been adapting to increasingly arid conditions in association with the Madre-Tertiary Geoflora. Within this Oligocene vegetational complex, Savage (1960) defined a Sierra Madre Oriental component consisting of oak and pine-oak woodlands and chaparral. Sites and Dixon (1982) suggested that *S. variabilis* may have originated in this faulted highland region, which because of its age and relative stability, could have served as a Pleistocene refugium during eustatic changes in sea level. *Sceloporus v. variabilis* is today the most widespread and least specialized of all forms of *S. variabilis* with respect to habitat preference, and is extremely abundant in rocky slopes in both tropical semi-evergreen and oak communities along the eastern front of the Sierra Madre Oriental. It may thus be closest to the ancestral stock from which the other subspecies were derived. Subsequent subspeciation events in *S. variabilis* can be explained by further divergence of some populations in response to selection after range expansion by the ancestral form.

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