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SNAKES OF THE GENUS *TANTILLA* IN THE
UNITED STATES¹

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The snakes of the genus *Tantilla* are among the few types of snakes in temperate North America with grooved fangs posteriorly on the maxilla. The scale characters which distinguish them most readily from all other snakes in our fauna are the smooth dorsal scales, in fifteen rows; the divided anal plate; and the absence of a loreal plate. The coloration in all of our species is uniform except for a black cap, which is absent in only one species.

South of the Mexican border the generic range extends to Peru, Paraguay, and Brazil, with a considerably larger number of forms than in our fauna.

Tantilla wilcoxi Stejneger.

Tantilla wilcoxi Stejneger, Proc. U. S. Nat. Mus., 25, p. 156, 1902—Fort Huachuca, Arizona.

Diagnosis.—Distribution of dark pigment on head similar to that in *coronata*, but white band behind it bordered by a dotted dark line instead of a band three or four scale lengths in width, as in *coronata*. Ventrals and caudals more numerous than in *coronata*. The maximum length is 347 mm.

Range.—Huachuca Mountains, Arizona.

Tantilla coronata coronata Baird and Girard.

Tantilla coronata Baird and Girard, Cat. N. Amer. Rept., pt. 1, p. 131, 1853—Kemper County, Mississippi.

¹ Contribution from the Department of Zoology of the University of Michigan.

² At the time of Dr. Blanchard's death in September, 1937, the manuscript for this paper was unfinished but sufficiently complete to make clear the author's conclusions on the systematics of the species treated. Although lacking an introduction and the interpretations Dr. Blanchard would doubtless have added, it is a valuable taxonomic contribution. At the request of Mrs. Blanchard it has been prepared for publication by Karl P. Schmidt and Howard K. Gloyd, who wish to assure the institutions and individuals who furthered the study in various ways that their courtesies are deeply appreciated.

Diagnosis.—A light band on back of head crossing tips of parietals and bordered behind with a broad black band, three or four scale lengths in width, usually extending to the fifth dorsal scale behind the head in the mid-line; similar to *wilcoxi*, but with broader black band (one-half to one and one-half scale lengths wide in *wilcoxi*), and with fewer ventrals and caudals. Black of head extending laterally towards last upper labial, sometimes reaching labial border across last two upper labials, and extending below eye nearly or quite to the labial border. The maximum length known is 324 mm.

Range.—South Carolina to southeastern Louisiana, north into western Kentucky.

***Tantilla coronata wagneri* (Jan).**

Homalocranium wagneri Jan, Arch. Zool., Modena, 2, p. 51, 1862—Florida.

Diagnosis.—Head pattern like that of *coronata* but the white band more often nearly obliterated with dark pigment, and the black usually not extending beyond the fourth scale behind the parietals in the mid-line; ventrals fewer, caudals more numerous than in *coronata*; size smaller. The maximum length known is 240 mm.

Range.—Peninsular Florida.

Remarks.—Jan's description appears composite, but as he emphasized a specimen from Florida, and as the species was referred to the synonymy of *coronata* by Boulenger, it seems preferable to adopt Jan's name *wagneri*, for this well distinguished species, designating the co-type from Florida as the lectotype. A translation of the original description (Arch. Zool., Modena, 2, p. 51, 1862) follows: "*Homalocranium wagneri*. The relative position of the supralabials is in this species identical with that observed in *H. melanocephalum*, which it resembles likewise in coloration. It differs from it, however, in the mental, which is in contact with the chin shields, and in the internasals, which are a little more oblique in relation to the loreal. In our museum there are two specimens of this species, both with a white stripe which, however, in the larger individual, collected in Florida by Professor Wagner, is found on the occiput, while in the other, the source of which is unknown, it is actually on the nape. The body is pale reddish above, below white; the head has a dark shade except for a white spot back of the eye and the white stripe on the occiput from which extends a black half-collar. The length of the larger specimen is 26'' 8''', and the tail is 5''. Behind

two or three gular scutes there are 138 ventrals, an entire anal, and 45 double caudals."

The considerable overlap in scale characters with *coronata* seems to justify the subspecific arrangement.

***Tantilla planiceps* (Blainville).**

Coluber planiceps Blainville, Nouv. Ann. Mus. Hist. Nat. Paris, 4, p. 294, 1835—California.

Diagnosis.—Black of head extending three scale lengths behind parietal suture and downward on sides posteriorly to just below angle of mouth; behind and above, the black cap has a nearly straight, or somewhat convex, margin, and is bordered behind with a white band about one scale length in width. Similar to *eiseni* in head pattern, but differing from that species in having fewer ventrals, 134 to 140, instead of more than 165. The length reaches 220 mm.

Range.—Southern part of Lower California.

***Tantilla eiseni* Stejneger.**

Tantilla eiseni Stejneger, Proc. U. S. Nat. Mus., 18, p. 117, 1896—Fresno, California.

Diagnosis.—Black of head extending below angle of mouth onto gular scales (as in *planiceps*, sometimes nearly encircling the throat), reaching about two scale lengths behind parietal suture and narrowly bordered posteriorly with white; the white band sometimes with black dots behind it. Ventrals more numerous than in *planiceps* and *atriceps* (165 or more). Differing from *atriceps*, further, in that the black cap extends two to three scale lengths behind parietal suture, instead of one to two, and in that the posterior white border is wider. A large species, varying in total length from 130 to 373 mm.

Range.—Fresno County, California, to northern part of Lower California.

***Tantilla gracilis* Baird and Girard.**

Tantilla gracilis Baird and Girard, Cat. N. Amer. Rept., pt. 1, p. 132, 1853—Indianola, Texas.

Diagnosis.—The only species of the genus in our fauna without a definitely black head; head usually brown, but little, if any, darker than the dorsal body color; exceptional specimens may have the head nearly black, the black cap then concave medially and extended laterally; contrasts with other species of *Tantilla* in having usually six, instead of seven, upper labials, and one instead of two

postoculars; ventrals fewer than in either *atriceps* or *nigriceps*. A small species, varying from about 85 to 225 mm. in total length.

Range.—Missouri and eastern Kansas (except in the north) south to extreme southern Texas, west to about the ninety-eighth meridian.

***Tantilla atriceps* (Günther).**

Homalocranium atriceps Günther, Biol. Centr. Amer., Reptiles, p. 146, pl. 52, fig. B, 1895—Nuevo Leon, Mexico.

Diagnosis.—Black of head extending only one or two scale lengths behind parietal suture, its posterior margin not pointed and but slightly, if at all, convex, narrowly bordered behind with white, the black not extending below angle of mouth onto gular scales; mental plate usually in contact with anterior chin shields between the first lower labials (in general contrast with *nigriceps*); like *nigriceps* in number of ventrals, but caudals more numerous. A small species, the total length varying from 96 to 230 mm. (*nigriceps*, 120 to 350 mm.).

Range.—Oklahoma, and western Texas to southeastern Arizona.

***Tantilla nigriceps* Kennicott.**

Tantilla nigriceps Kennicott, Proc. Acad. Nat. Sci. Phila., 1860, p. 328—Fort Bliss, New Mexico (restr.).

Diagnosis.—Black of head extending three or four scale lengths behind parietal suture; posterior border of black cap very convex or even pointed behind in the median line, but not extending laterally onto the last two upper labials, nor reaching nearly or quite to the labial border below the eyes; not extending laterally onto the gulars, and not bordered posteriorly with white; like *atriceps* in number of ventrals, but caudals less numerous; mental plates usually excluded from contact with anterior chin shields by first lower labials (in contrast with *atriceps*). A larger species than *atriceps*, 120 to 350 mm. (*atriceps*, 96 to 230 mm.).

Range.—Western Kansas and eastern Colorado southward through Oklahoma and Texas to New Mexico and southern Arizona.

***Tantilla utahensis* sp. nov.**

Type from St. George, Washington County, Utah. Adult female. No. 55214 California Academy of Sciences. Collected by V. M. Tanner.

Diagnosis.—Much like *atriceps*, but a larger and more elongate species with more ventrals and with a relatively short tail. The ventrals in *utahensis* range from 153 to 160 in males (130 to 147 in *atriceps*) and from 163 to 172 in females (145 to 157 in *atriceps*). The total length of the specimens of *utahensis* examined ranges from 128 mm. to 297 mm.; in *atriceps* it ranges from 96 to 230 mm.

Description of type.—Ventral plates $166\frac{1}{2}$; anal divided; caudals 63; dorsal scales smooth, uniformly in 15 rows; upper labials 7-7; lower labials 6-6; oculars 1-2 on each side; temporals 1-1 on each side; posterior chin shields shorter than the anterior, juxtaposed; mental broadly in contact with the anterior chin shields; portion of rostral seen from above longer than the internasal suture; the internasals much shorter than the prefrontals; other upper head shields as normal for the genus.

Total length 235 mm., tail 56 mm.

The general color above and below is pale brown (in alcohol); the top and sides of the head are very dark brown, backward to the scales adjacent to the parietals and downward to the upper edges of the upper labials.

Paratypes.—Univ. Utah Nos. 109 and 465, and a specimen without number from St. George; Calif. Acad. Sci. No. 54214 (a specimen with tip of tail missing); five specimens in Beck Collection at Brigham Young Univ. and Brigham Young Univ. No. 2274; all from St. George, Washington County, Utah. With these are associated four specimens from California: Klauber Coll. No. 9320, Springville, Tulare County, California; Calif. Acad. Sci. No. 65378, Panamint Mountains, California; and two specimens Museum of Vertebrate Zoology, Univ. Calif., Nos. 19331, Middle Fork of Kaweah River, and 19322, one-half mile above Ash Mountain Headquarters, Sequoia National Park, both in Tulare County, California. The range of variation in ventrals and caudals in these specimens is shown in the table (p. 376). The head scales are invariable.

Range.—Southwestern Utah and west into Sierra Nevada in California.

***Tantilla kirnia*¹ sp. nov.**

Type from nine miles east of Pleasanton, Atascosa County, Texas. No. 28102 Field Museum of Natural History. Adult male. Collected by Calvin C. Forster for the A. J. Kirn Collection.

¹ Named for Mr. A. J. Kirn of Somerset, Texas, an enthusiastic student of reptiles.

Diagnosis.—Allied to *Tantilla nigriceps* but smaller in size, and with a lower number of ventrals and caudals in both sexes. Ventrals in males 130–138, caudals 43–48; in the one female specimen 141 and 39. Total length from 132 to 224 mm. in eight specimens examined.

Description of type.—Ventral plates 125½; anal divided; caudals 41; dorsal scales smooth, uniformly in 15 rows; upper labials 7–7; lower labials 6–6; oculars 1–2 on each side; temporals 1–1 on each side; posterior chin shields much shorter than the anterior, juxtaposed; mental well separated from the anterior chin shields by a suture of the first lower labials; portion of rostral seen from above longer than the internasal suture; internasals much shorter than the prefrontals; prefrontals extending laterally to meet the second upper labials; other upper head shields as normal for the genus.

Total length 206 mm., tail 42 mm.

The general color (in alcohol) is pale brown, lighter brown beneath; top of head very dark brown, extending backward to the third scale behind the parietals.

Paratypes.—Field Mus. Nos. 28099–101, and Univ. Kansas No. 18003, Atascosa County, Texas; Cornell Univ. No. 2003, Field Mus. No. 28103, and U. S. Nat. Mus. No. 22386, Bexar County, Texas; U. S. Nat. Mus. No. 16669, San Diego, Duval County, Texas; Baylor Univ. No. 5972–3, Tom Green County, Texas; and Univ. Oklahoma No. 13117, Comanche County, Oklahoma. The variation in the ventrals and caudals in these specimens (which unfortunately include only one female) is shown in the table (p. 376). The head scales are uniform in the series.

Range.—Comanche County, Oklahoma, southward through Texas nearly to Brownsville, westward to San Antonio.

Remarks.—Mr. A. J. Kirn states that the type was collected in the loose soil of an old barnyard, about three inches below the surface, where the ground began to be hard. In life the middle of the belly was pink from about the twenty-fourth ventral to the tip of the tail, paler forward to the tenth ventral, and without color from the chin to this point.

Tantilla kirnia is readily distinguishable from *T. nigriceps*, to which its range is adjacent, by its low number of ventrals, and from *T. gracilis*, which overlaps its range, by the black cap and the number of upper labials and postoculars; it appears to differ from *T. atriceps*, whose range is to the west and southwest of that of *kirnia*, in its much lower number of caudals.

¹ The tabular review of scutellation (p. 376) supplements this key.

SUMMARY OF SCUTELLATION

SPECIES	VENTRALS						CAUDALS					
	MALES			FEMALES			MALES			FEMALES		
	No.	Extremes	Av.	No.	Extremes	Av.	No.	Extremes	Av.	No.	Extremes	Av.
<i>wilcoxi</i> ...	4	149-155	153	1	157	157	1	69	69	1	58	58
<i>coronata</i> ...	35	131-141	135	24	139-148	143	30	42-51	46	23	41-46	44
<i>wagneri</i> ...	12	119-129	127	30	123-145	132	9	50-67	57	19	41-59	51
<i>planiceps</i> ...	2	134-140	137	2	56-60	58
<i>eiseni</i>	19	165-174	169	16	174-190	178	19	58-69	66	17	53-66	60
<i>gracilis</i> ...	85	115-127	122	76	126-138	132	43	44-57	51	44	36-48	42
<i>atriceps</i> ...	30	130-147	142	12	145-157	150	30	54-70	63	12	51-64	57
<i>nigriceps</i> ...	17	146-159	143	24	150-161	155	5	43-62	52	16	35-58	44
<i>kirnia</i>	7	130-138	134	1	141	141	6	43-48	45	1	39	39
<i>utahensis</i> ...	7	153-160	157	10	163-172	167	6	59-73	65	8	50-64	59

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