

N. e. transversa may readily be differentiated from *N. sipedon sipedon* by the immaculate caudals near the tip of the tail, by the presence of not more than three neck bands (in *sipedon* there are 4 to 10 or more cross bands), by the absence of semi-lunar spots on the ventrals, and by ventrals usually more than 145, usually less in *sipedon*.

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The Snakes of the Genus *Sonora* in the United States and Lower California¹

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NO previous taxonomic study of an inclusive nature has been made of the group of difficult little North American snakes placed in the genus *Sonora*. Many years ago Dr. Frank N. Blanchard noticed that there were signs of differentiation on an east-west axis, but had too few specimens to attempt a revision of the group. At his suggestion, the writer has studied the genus; and several times as many specimens have been examined as have been available to any other one person.²

Certain results of the study are presented at this time so that those interested in the genus may use them. Consideration of extralimital species, relationships and variation have been omitted from this note, which is intended to clarify the status of named forms and to describe others regarded as new.

In recent treatments of the genus, *taylori*, *semiannulata* and *occipitalis* have been recognized, though the latter two are not correctly separated, despite the distinctive morphological adaptation of *occipitalis* to living in sand. *S. semiannulata* of current lists is a complex of several forms of varying distinctness, and has in consequence been assigned an excessively wide range. In this paper the *semiannulata* complex is analyzed into seven forms, and *occipitalis* and *taylori* are rediagnosed. The author will welcome criticisms of his arrangement in the hope that any subsequent paper may benefit from them.

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

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USE OF THE KEY.—The number of dorsal scales should first be counted at about the end of the first fourth or fifth of the length of the body, close enough to the head to determine reduction when this occurs unusually far forward. The count, however, should not be made on the neck, where high counts would be obtained. The posterior count should be made about ten ventral scutes in front of the vent, since back of that point there is occasionally an irregular variation on the sides. In doubtful cases counts should be taken until the condition is understood, remembering that the characteristic reduction is only mid-dorsal.

In using the key all of the data presented should be considered carefully, and with attention to detail, or it may fail. The distinctions stated in the key serve to identify more than 90 per cent of the specimens seen by the writer.

KEY TO THE SPECIES OF *Sonora* IN THE UNITED STATES AND LOWER CALIFORNIA

1. Snout normal; abdomen rounded or but slightly angulate; scale rows various..... 2
Snout distinctly flattened and attenuated; abdomen strongly angulate; scale rows 15–15 *S. occipitalis*
2. Anterior scale rows 15, rarely 14 or 16 3
Anterior scale rows 13, rarely 14; ventrals in males 126–139, in females 136–148 *S. taylori*
3. Scale rows near anus 15 or 14; color various 4
Scale rows near anus 13; color all brownish; ventrals in males 150–155 (av. 152.5), in females about 164; caudals in males 43–48 (av. 45.5), in females about 39 *S. mosaueri*, sp. nov.
4. Scale rows near anus 15 in 90 per cent of specimens, but 14 in 10 per cent; ventrals in males 134–155 (av. 147), in females 140–162 (av. 153); caudals in males 39–52 (av. 43.5), in females 31–44 (av. 37); unicolor, bicolor, streaked, or with 1–25 dark cross bands on body exclusive of tail *S. episcopa*
Scale rows near anus 14, very rarely 15 or 13; ventrals OR caudals running distinctly higher 5
5. Ventrals in males 153–168 (av. 161), in females 162–183 (av. 172); caudals in males 41–57 (av. 53), in females 37–54 (av. 47) 6
Ventrals in males 147–155 (av. 151), in females 157–166 (av. 160); caudals in males 53–59 (av. 56), in females 46–51 (av. 48.5); color varying from unicolor to a regular series of 28–42 dark cross bands on body *S. semiannulata blanchardi*, subsp. nov.
6. A regular series of dark cross bands present 7
No series of bands present 8
7. Most of the body bands meeting across the abdomen; lateral scales heavily shaded with gray *S. semiannulata gloydi*, subsp. nov.
Bands not meeting across abdomen, or only a few so meeting; lateral scales lightly shaded with gray, or not shaded *S. s. semiannulata*
8. Caudals in males more than 49, in females more than 41 ... (*S. miniata*, sp. nov.) 9
Caudals in males fewer than 49, in females fewer than 41 ... *S. mosaueri*, sp. nov.
9. A sharp-edged dorsal pink stripe present; stripe contrasting with the bluish-gray to brownish-gray lateral scales *S. miniata linearis*, subsp. nov.
Dorsal pink stripe absent or blending gradually with the grayish to reddish color of the sides *S. m. miniata*, subsp. nov.

Sonora occipitalis (Hallowell)

Rhinostoma occipitale Hallowell, Proc. Acad. Nat. Sci. Phila., 1854: 95.

Lamprosoma annulatum Baird, U. S. Mex. Bound. Surv., 1859: 22 (Colorado Desert).

TYPE LOCALITY.—Mohave Desert of California.

DIAGNOSIS.—A *Sonora* with angulate abdomen, extended spade-like snout,

and always with dark bands on body and tail. The posterior maxillary teeth are not particularly enlarged and the nasal is single, as in all sonoras of the United States. The character most often used to separate this species from *semiannulata*, i.e., whether the bands encircle or not, is invalid, as each species often resembles the other on this basis. Equally or more useless for diagnosis is the number of ventrals.

RANGE.—Known from the following localities. ARIZONA: Yuma, Mohave, Maricopa (from near Aguila and Gila Bend), Pima (Tucson) and Pinal (Picacho) counties. CALIFORNIA: Imperial, eastern San Diego, Riverside, San Bernardino, Los Angeles (near Palmdale and east of Llano near San Bernardino Co. line), Kern (south and east of Tehachapi Mountains), and Inyo counties. NEVADA: Clark County (Boulder City).

REMARKS.—Contrary to frequent statements the range of this form appears to be restricted to the region of the Colorado and Mohave deserts and adjacent regions in southern Arizona. The single Utah record is for a specimen with vague locality brought in by a student to Dr. R. V. Chamberlin. I cannot consider Utah within the range on this evidence. The only other extralimital record, from Boulder, Colorado, must be in error.

Sonora taylori (Boulenger)

Contia taylori Boulenger, Cat. Sn. Brit. Mus., 2, 1894: 265, pl. 12, fig. 3.

TYPE LOCALITY.—Duval Co., Texas, and Nuevo Leon, Mexico.

DIAGNOSIS.—A species of *Sonora* with rounded abdomen and normal snout, characterized by 13–13 scale rows, and by having the lowest number of ventral scutes in the genus, as stated in the key. The color is brown, consistently without bands, and the heads of some specimens are darkened on the parietal region.

RANGE.—The records I have are as follows. MEXICO: Nuevo Leon. TEXAS: Hidalgo (Edinburg), Cameron (Brownsville), Duval (San Diego and vicinity), Bexar (Helotes) and Calhoun (Green Lake) counties.

REMARKS.—Two females examined have more than 13 scale rows, but the number is reduced to 13 posteriorly by mid-dorsal drooping. In such variants the number of ventrals will aid in identification.

Sonora episcopa (Kennicott)

Lamprosoma episcopum Kennicott, U. S. and Mex. Bound. Surv., 1859: 22, pl. 8, fig. 2. *Contia episcopa torquata* Cope, Bull. U. S. Nat. Mus., 17, 1880: 21 (northwestern Texas). *Contia nuchalis* Schenkel, Verh. Nat. Ges. Basel, 8, 1901: 162 (Fort Worth, Texas).

TYPE LOCALITY.—Eagle Pass, Maverick Co., Texas.

DIAGNOSIS.—A species of *Sonora* with rounded abdomen and normal snout, characterized by 15–15 scale rows and the lowest number of ventrals and caudals of any 15-rowed species of the genus with which it could be confused. The color is phenomenally variable: plain, streaked, striped, barred, collared; gray, brown, black, red. Combinations and intermediates of all these variations have been seen from one locality.

RANGE.—This is primarily an inhabitant of the Great Plains region. It is found from central Texas on the Rio Grande north to southeastern Kansas and west to extreme eastern Colorado and New Mexico.

REMARKS.—This snake does not seem to enter the Trans-Pecos region of Texas, and there is no evidence that it intergrades with either *taylori* or *blanchardi*. In about 10 per cent of the specimens the rows drop to 14 posteriorly, and then the number of ventrals and caudals must be utilized for proper identification. The loreal is absent on one or both sides in enough specimens to make it a slightly weak key character.

This is by far the commonest species of the genus and with *occipitalis* comprises most of the museum specimens.

Sonora semiannulata semiannulata Baird and Girard

Sonora semiannulata Baird and Girard, Cat. N. Amer. Rept., Pt. 1, 1853: 117.

Contia isozona Cope, Proc. Acad. Nat. Sci. Phila., 1866: 304 (Fort Whipple, Arizona).

TYPE LOCALITY.—“Sonora, Mexico.”

DIAGNOSIS.—A *Sonora* with normal snout, and with abdomen not angulate. Scale rows 15 (or very rarely 16) anteriorly, reducing mid-dorsally to 14 posteriorly. Black bands consistently present on body and tail, and usually encircling tail. The ventrals average 160 for males and 171 for females; the caudals average 52 and 46 respectively. The number of ventrals best separates this form from *blanchardi*, though there is some overlap; however, of those having ventrals few enough for confusion, three of the six females have too few caudals for *blanchardi*, and there are too few caudals in all three males with overlapping ventral count.

RANGE.—Known from the following localities. ARIZONA, UTAH and NEVADA: Scattered localities. CALIFORNIA: Inyo County. IDAHO: Snake River region. MEXICO: Sonora (type specimen only).

REMARKS.—The data are based on 47 males and 34 females. This form, as here defined, may be composite. Grave doubt pertains to the type specimen from Sonora. Not only are the head scales atypical, but the number of caudals is far lower than in any other specimen referred to the species. In the absence of other material from Sonora, and since no specimens similar to the type have appeared anywhere, the writer is at present averse to basing any change in taxonomy on this one individual, which may be aberrant. More material from northern Mexico is essential to an understanding of this and other problems in the genus.

Sonora semiannulata blanchardi, subsp. nov.

TYPE.—MZUM³ 83122, collected by F. N. Blanchard and J. T. Carney, September 28, 1935, on northeastern slopes of the Chisos Mountains, Brewster County, Texas.

PARATYPES.—TEXAS: Brewster Co., MZUM 83123–6, north or northeastern slopes of Chisos Mts.; MZUM 83127–8, Castolon, 15 miles south of Terlingua; FMNH 26611, Green Gulch, Chisos Mts.; KU 14164, near Glenn Spring, 10 miles southeast of the Chisos Mts.; KU 14165, Glenn Spring, 9 miles south of Chisos Mts.; SM (unbanded specimen) Hot Springs;

³ Abbreviated references to collections made in this paper are: MZUM, Museum of Zoology, University of Michigan; FMNH, Field Museum of Natural History; KU, Kansas University; MVZ, Museum of Vertebrate Zoology; SDSNH, San Diego Society of Natural History; CAS, California Academy of Sciences; NPS, National Park Service; SM, private collection of Stanley Mulaik; Chi. AS, Chicago Academy of Sciences; LMK, private collection of L. M. Klauber; ES, private collection of Earl Sanders; EHT, private collection of E. H. Taylor; USNM, U. S. National Museum; UCLA, University of California at Los Angeles.

NPS, Government Spring. MEXICO: EHT 4681, 20 miles south of Chihuahua City, Chihuahua.

DIAGNOSIS.—Snout and abdomen of normal shape; 15 scale rows anteriorly and 14 posteriorly; ventrals fewer than in *semiannulata* and caudals higher than in *episcopa* (for figures see key). The color may be uniform brownish or grayish or may have bands as in *semiannulata*, or may show intermediate conditions in which the bands are only partially present.

DESCRIPTION OF TYPE.—Female; total length 237 mm., tail 48 mm.; ventrals 158; caudals 47; scale rows 15 anteriorly, dropping to 14 at the distance of 102 mm. from end of snout; scale pits single, very faint, apparently absent from most scales; head scales normal; temporals 1–2 on each side; right labials 7 and 6, left labials 7 and 7; left supraocular in type with a slight notch on posterior outer edge; anterior chin shields in contact with first three infralabials of each side and with the single small scale separating the posterior chin shields; eight irregular rows of small scales between anterior chin shields and first ventral; the fourth infralabial the only one of the series touched by the posterior chin shields; the ventrals just anterior to anal shields divided, one on the right side and two on the left; caudals all divided; tail complete.

Head darker than body; extreme posterior ends of parietals light colored; dorsal scales with irregular brown mid-portion on tan ground, microscopically speckled with brown; margins of scales brownish and hyaline; most scales with dark apical spot; lateral scales similar but progressively lighter toward abdomen; ventral scutes with dorsal coloration on ends; a few ventrals and several caudals with a little yellow marking.

RANGE.—Known from the following localities. TEXAS: El Paso (El Paso and vicinity) and Brewster (around Chisos Mts. and along Rio Grande) counties. NEW MEXICO: Sierra (Elephant Butte Dam) County. MEXICO: Lake Santa Maria and a point 20 miles south of Chihuahua City, Chihuahua.

REMARKS.—The scale counts will usually identify this form quite easily despite the considerable range of coloration. The characters differentiating the race are best shown by specimens from Brewster County, Texas, for in El Paso County there are indications of intergradation with *semiannulata*. It is probable that intergradation occurs across southwestern New Mexico, though specimens are not at hand from this region. The complex questions of relationships to which knowledge of this intergradation gives rise cannot be discussed here.

The data are based upon 15 males and 18 females.

In naming this snake for Dr. F. N. Blanchard I can but partially signify the admiration felt by all of his students for his very unusual interpretive and critical ability.

Sonora semiannulata gloydi, subsp. nov.

TYPE.—MZUM 83754, collected by Mr. William Holzmark in 1936 on the Bright Angel Trail, Lower Sonoran level of the Grand Canyon, Grand Canyon National Park, Arizona.

PARATYPES.—Grand Canyon National Park, Arizona: Grand Canyon National Park collection 107, vicinity of Indian Gardens; UCLA 32, mouth

of Garden Creek; MVZ 17580, Bright Angel Trail.

DIAGNOSIS.—Morphologically like *S. s. semiannulata*, from which it differs in coloration. The black bands are wider than the interspaces on the back and extend downward onto the ventrals; most of the bands completely cross the abdomen, though they are more diffuse ventrally than dorsally. The scales of the interspaces are heavily shaded with dark gray except sometimes for the lower and median rows.

DESCRIPTION OF TYPE.—Female; total length 350 mm., tail 61 mm. lacking tip; ventrals 178; caudals 48 lacking tip; scale rows 16— (probably abnormal) 15–14, the drops occurring 165 mm. and 249 mm. from the snout, respectively; scale pits single, small, present on most dorsal scutes; oculars 1–2, upper postocular the larger; left temporals 1–1, right 1–2; left supralabials 6 (fifth fused to what is normally sixth), right 7; infralabials 7–7; posterior chin shields separated by a small scale; 7 irregular rows of small scales between posterior chin shields and first ventral; first ventral with one small scale on each side, second ventral with small scale only on right side.

Head dark gray; upper lip light; lower jaws and throat light; 26 black bands on body, 6 on tail; body bands extend onto ventrals in dilute and somewhat narrowed condition, and about 19 meet across the belly, thus ringing the body; tail encircled by all its bands; the dorsal scales between bands almost all dark brownish-gray with light borders; scales in bands faintly light-edged in lowest 2–3 rows; belly light between bands.

RANGE.—Except for intergrades, this form is known only by the type and paratypes, all of which are from the Grand Canyon.

REMARKS.—A good series of *semiannulata* from St. George, Washington Co., Utah, is closer to *gloydii* than to the typical subspecies in coloration, and is believed to prove intergradation. A specimen from Boulder Dam, Mohave Co., Arizona, shows somewhat less resemblance toward *gloydii*.

Comparison with the paratypes indicates that the type is probably unusual in lacking the dark head crescent and in having practically all the scales between the body bands heavily darkened.

It is a very real pleasure to name this snake in honor of Dr. Howard Kay Gloyd.

Sonora miniata miniata, sp. and subsp. nov.

TYPE.—Chi. AS 5139, from 2 miles northwest of Mesa, Arizona, collected by Earl Sanders.

PARATYPES.—Mesa, Arizona: Chi. AS 5140, 3 miles north of Mesa; ES, 19 specimens (nos. 1–19), Mesa and vicinity.

DIAGNOSIS.—The species as a whole is differentiated from *semiannulata*, to which it is structurally similar, by the absence of bands on body and tail, and the lack of the black head crescent which is usually evident in *semiannulata*. No specimens showing an intermediate coloration are known. From *episcopa* it differs in having the scale rows 15–14 instead of 15–15 and in the much higher number of ventral and caudal scutes.

The subspecies *miniata*, especially, and to a lesser extent *linearis*, is further separated from *semiannulata* by the fact that the shading on the posterior two-thirds of the head extends over the nape for one to four rows and well down onto the sides of this part of the neck. This dark crown and

nape has not been seen in *semiannulata*. Such occipital darkening is very prominent in the young, where it may be black, but is obscure in some individuals. The race *miniata* is gray or reddish gray in immaturity, but the adults vary from solid gray to reddish brown or uniform pinkish. In some specimens the middle of the back is lighter and pinker than the sides, suggesting the subspecies *linearis*, but the bicoloration is less pronounced and the dorsal stripe is not sharp-edged; rather, it merges gradually with the lateral coloration.

DESCRIPTION OF TYPE.—Female; total length 329 mm., tail 59 mm.; ventrals 173; caudals 45; scale rows 15–14, the reduction being mid-dorsal and at a point 94 mm. behind the snout; scale pits apparently absent; scales on top of head normal; preoculars, right one, left two; postoculars, right two, left one, the dorsal one fused with supraocular; temporals 1–2 on each side, second dorsal temporal of right side in type fused to scale behind it; supralabials 7, second left supralabial in type with large notch; infralabials 6, fourth largest, sixth longest; posterior chin shields very small, separated by one scale, touching fourth infralabials; about 7 rows of small scales between anterior chin shields and first ventral; first two ventrals reduced, flanked by small scales.

Snout to frontal faded pink; light grayish tan from frontal to two scales behind parietals and down to level of mouth-angle; abdomen and sides creamy, becoming pinkish tan dorsally (in alcohol); scales with diffuse brown bases, save for median 2–3 rows.

RANGE.—Specimens assigned to this form have been seen from the following places. ARIZONA: Maricopa (Mesa and vicinity, Phoenix, near Aguila, near Wickenburg), Mohave (Kingman), Yavapai (Prescott, near Congress Junction), Pima (region of Santa Catalina Mts.) counties. IDAHO: Ada County (Snake River Canyon).

REMARKS.—Despite the fact that *miniata* and *semiannulata* are separated upon color alone, they are known to occur together at only four localities: Prescott, Phoenix and Yuma in Arizona, and the Snake River in Idaho. Good series of each are at hand from places in which the other has not been found, and many scattered localities of both do not duplicate. At Yuma, *miniata* far outnumbers *semiannulata*: the latter may occasionally follow or be carried down the Colorado River to that point. The data hint at an ecological separation, so new specimens should bear ecological and very exact locality data.

In the two dozen specimens seen from Mesa there were none of the *semiannulata* type and practically no approach to *linearis*. The present concept of the subspecies is based chiefly on this series. Isolated specimens give but a poor idea of the population, so material from all western Arizona must be viewed as tentatively placed here until the intergrading area with *linearis* is better known. The Chicago Academy of Sciences series from near Wickenburg resembles *linearis* more than the Mesa material does, but is predominantly *miniata*. At Yuma the population is more strongly *linearis* and may be regarded as intergrading. Of the 32 specimens of *linearis* and the 53 of *miniata* examined, excluding the individuals from Yuma, the diagnostic characters will separate about seven-eighths into the proper subspecies.

The name *miniata* refers to the vermilion color so conspicuous, at least dorsally, on most adults of the species.

Sonora miniata linearis, subsp. nov.

TYPE.—LMK 2013, from Seeley, Imperial County, California, collected by Chas. McHone, July 15, 1929.

PARATYPES.—Imperial Co., California: LMK 109, 1743, 8506, 23647; MVZ 5610; SDSNH 14518, 13729; CAS 64587-8; KU 6663.

DIAGNOSIS.—Structurally similar to *miniata miniata*, but distinguished from it by having a distinct dorsal stripe, usually quite sharp-edged, contrasting in color with the sides. In life the stripe is vermilion, in preservative salmon to cream. The sides are bluish gray to brownish gray, instead of reddish to brown.

DESCRIPTION OF TYPE.—Female; total length 376 mm., tail 66 mm.; ventrals 180; caudals 47; scale rows 15-14; many scales with irregular scattered depressions, but apical pits apparently absent; head scales normal; oculars 1-2; temporals 1-2; supralabials 7; infralabials 7, fifth right infralabial in type larger than the left and with a posterior projection; posterior chin shields much smaller than anterior, touching fourth labials and barely reaching third on right; 8 rows of small scales between anterior chin shields and first ventrals.

Scales of sides brownish gray with light edges and occasionally with black apical spots; head light brownish gray, darker in middle of parietals and postero-lateral to them; dorsal stripe two scales wide, sharpest on posterior half of body where it cuts cleanly through the middle of scales; scales in stripe lightly clouded with brown, cream colored (in preservative); stripe continued to near end of tail.

RANGE.—Known from the following localities. ARIZONA, Yuma County (specimens are most closely related to *linearis* but are considered intergrades). CALIFORNIA: Imperial, Riverside and San Bernardino (near Blythe Junction) counties. NEVADA: Pershing County (between Pleasant and Dixie Valleys). MEXICO: Lower California (Mt. Mayor Cocopah in Cocopah Range).

REMARKS.—The darkness of the head and nape is less distinct in most specimens than in *miniata*.

The precise relationship and degree of intergradation with *miniata* require further attention.

Sonora mosaueri, sp. nov.

TYPE.—MVZ 13772, Comondú, Lower California. Collected April 2, 1931, by C. C. Lamb.

PARATYPES.—Comondú, Lower California: MVZ 13770-1, 13773.

DIAGNOSIS.—A *Sonora* with normal snout, rounded belly, uniform coloration, 15 scale rows anteriorly, dropping successively to 14 and 13, the mid-dorsal row being lost first, followed by an adjacent row. If the number of dorsal scales should prove inadequate for identification when more specimens are at hand, the numbers of ventrals and caudals will help, as indicated in the key.

DESCRIPTION OF TYPE.—Male; total length 328 mm.; tail 58 mm. lack-

ing tip; ventrals 154; caudals 43 with tail-tip incomplete, as shown also by the tail-body ratio of .176; scale rows just behind head 19, rapidly reducing on neck to 15 by omission of lateral scales; mid-dorsal row dropped opposite 76th ventral, and opposite 102nd ventral another dorsal row is lost, leaving the formula 15-14-13; most scales with very minute pit just distal to a tiny brown spot, but not in the spot (the pits can best be seen by magnification and oblique lighting); scales normal on top of head; rostral, nasals and loreals normal; oculars 1-2; temporals 1-1 on right, 1-2 on left (a large irregular scale present on both sides above and behind second temporals in type); supralabials 7; infralabials 7, 4th the largest and the only one touching posterior chin shields; posterior chin shields about half the size of the anterior pair and separated by two small scales; about six irregular rows of small scales between chin shields and ventrals.

Color of back and sides in alcohol a medium grayish brown extending slightly onto the ventrals and caudals; dorsal scales with light margins, and with numerous minute brown specks overlying the more diffuse brown pigmentation; a small brown spot on the end of most scales; the first rows of lateral scales lighter than the other rows; ventral color a faded yellowish white interrupted along the mid-ventral line of the tail by a diffuse brown streak; upper lips light in color back to the sixth labial.

VARIATION IN THE PARATYPES.—Ventrals 151, 152, 153; caudals 45, 47, 48; tail-body ratios .189, .190, .192. In 13773 the dropping of the first scale row occurs so far forward that Linsdale⁴ attributed 14 rows to the specimen. The scales of the temporal region behind the first temporal are subject to wide variation in size and shape. The scales of the back tend to be darker at the base, particularly in two specimens, and in 13773 the lower surface of the tail is faintly mottled with brown.

RANGE.—Known with certainty from the type series alone.

REMARKS.—The type series contains only males. A female, USNM 67381, from "Lower California," is similar to the Comodon specimens except that it fails to reduce from 15-14 to 15-14-13. It is possible that the females of this species never or seldom reduce to 13 rows. Mocquard⁵ recorded nine specimens of "*Contia episcopa*" from Lower California, of which seven came from Santa Rosalia (no specific locality was given for the other two). Since he gave but a single dorsal count, 15 for each specimen, it is difficult to be sure of the identification. However, if they belong to this form, and if Mocquard's counts are accurate, it is evident that his specimens have the ventrals and caudals considerably more numerous than have the ones from Lower California examined by me. Because identification and verification of these specimens has not been made, Mocquard's data have not been used in preparing the key or diagnosis.

This species is dedicated to the memory of Dr. Walter Mosauer, whose work on desert reptiles and the musculature of snakes greatly increased our knowledge of reptilian ecology and ophidian relationships.

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⁴ *Univ. Calif. Publ. Zool.*, 38, 1932: 380.

⁵ *Nouv. Arch. Mus. Hist. Nat. Paris*, ser. 4, mem. 1, 1899: 319-320.