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Douglas A. Rossman

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OCCASIONAL PAPERS OF THE MUSEUM OF
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A NEW NATRICINE SNAKE OF THE GENUS *THAMNOPHIS*
FROM NORTHERN MEXICO

By DOUGLAS A. ROSSMAN

Through the generosity of Michael D. Sabath, I have had the opportunity of examining the only known specimen of a previously undescribed species of garter snake that he discovered in the Sierra de los Amargos of southeastern Coahuila, Mexico. Although the snake bears some resemblance to *Thamnophis scalaris* Cope in certain features and to *T. mendax* Walker in others, its type locality lies 290 miles north of the known range of *T. scalaris* and 165 miles northwest of the nearest recorded locality for *T. mendax*. Because of its geographic isolation from the species it most closely resembles, I hereby name the new garter snake

THAMNOPHIS EXSUL new species

Holotype.—Adult female; U. S. National Museum no. 166423; from relatively dry pine forest (ca. 9,100 feet) 11 mi. E, 3.5 mi. S San Antonio de las Alazanas, Coahuila; collected 6 July 1961 by M. D. Sabath and R. W. Axtell; original no. MDS 1051.

Diagnosis.—A species of *Thamnophis* characterized by 17-15 dorsal scale rows, 6 supralabials, a very short, narrow head, 21 nearly subequal maxillary teeth, no vertebral stripe, and an indistinct lateral stripe on the second dorsal scale row.

Description of holotype.—Dorsal scales keeled (except for those in first row, which are smooth and enlarged), in 17 rows anteriorly, reducing to 15

by loss of fourth row at the level of ventral 85 on the right and 86 on the left; ventrals $142\frac{1}{2}$ (half scutes are present at ventrals 82, 137, and 142); subcaudals 53; anal entire. Sublabials 6, third and fourth entering orbit; infralabials 8, four in contact with the anterior genials, of which the left is longer than its corresponding posterior genial (the latter appearing to be transversely divided), the right shorter ($A/P=0.837$); nasal semidivided, with suture below naris; loreal nearly square; preocular single; postoculars 2 on left, 3 on right; temporals 1+2. Scales on top of head normal; muzzle very broad, with internasal-rostral suture 166.7 per cent length of nasal-rostral suture; internasal suture 64.7 per cent length of prefrontal suture; frontal 36.4 per cent longer than muzzle¹ and 21.4 per cent shorter than parietals. Total length 411 mm, tail length 81 (19.7 per cent of total length); head 4.7 per cent of snout-vent length; diameter of eye 16.1 per cent of head length.

Maxilla has 21 moderately slender, slightly recurved teeth, subequal in size except that the posteriormost three are somewhat enlarged (definitely stouter, though not much longer). The penultimate tooth is offset toward the ectopterygoid process and might easily be taken for a replacement tooth, but a definite socket is present. Seven teeth lie anterior to the prefrontal process.

Dorsum in preserved specimen is grayish tan with a series of approximately 50 brown body blotches, very narrowly and irregularly margined with black. The first four blotches are complete across the dorsum, the remainder alternate or form a row of vertebral spots (which contain heavy concentrations of black pigment) alternating with the narrow blotches (see Figure 1). An indistinct lateral stripe, slightly lighter than the ground color, is discernible on the second dorsal scale row; there is no trace of a vertebral stripe. The nuchal blotches are narrowly separated middorsally and their coloration is continuous anteriorly with the dorsum of the head. A pair of indistinct, elongated, light parietal spots are present, as is an indistinct light area lying just anterior to and paralleling the frontoparietal suture. The supralabials are predominantly light with only a small amount of dark pigment present on posterodorsal corner of the second, the suborbital and posterior margins of the third and fourth, and the posterior margin of the fifth. The chin and throat region is yellow; the remainder of the venter is grayish brown with an irregular suffusion of black punctuations medially.

Relationships.—The affinities of *T. exsul* are unclear. It resembles *T.*

¹Muzzle length as used herein is the combined length of one prefrontal and the adjacent internasal when measured along the middorsal suture.

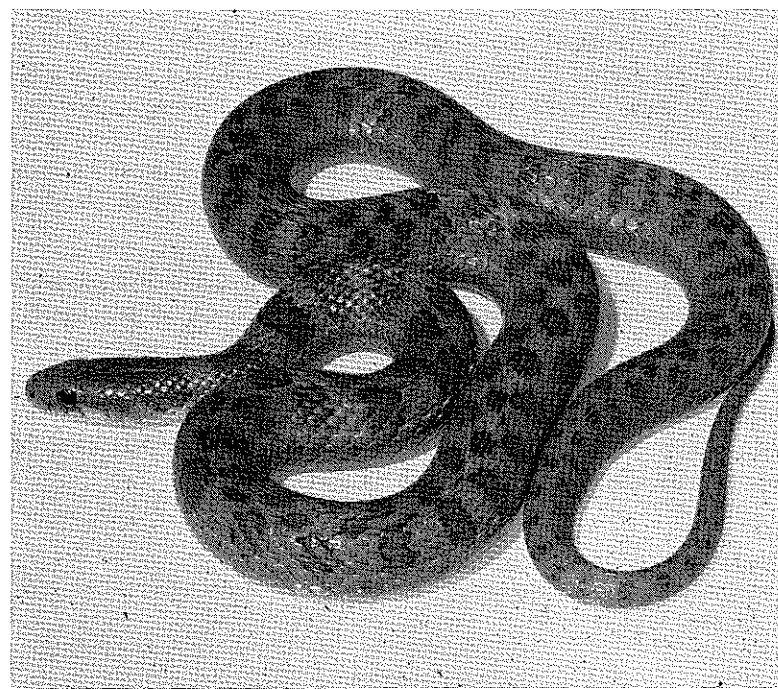


FIGURE 1. Dorsal pattern of *Thamnophis exsul* holotype (USNM 166423). Photograph by J. E. Werler and M. D. Sabath.

mendax in dorsal scale row number, number of maxillary teeth, and general aspect of the anterior color pattern. Nonetheless, *exsul* has a much shorter, narrower head ($H/SV=4.7\%$ in *exsul*, 5.8% in *mendax*), fewer supralabials (only one of 8 *mendax* has less than 7, and that on one side only), a lateral stripe (none in *mendax*, the dorsal blotches extending to the vent), no vertebral stripe (usually present in *mendax*), and slightly fewer subcaudals (53 in *exsul*, 57-61 in female *mendax*). The difference in the relative size and shape of the head is striking, and I doubt a close relationship.

T. exsul agrees with *T. scalaris* in ventral and subcaudal numbers, the presence of an indistinct stripe on the second dorsal scale row, and superficially in color pattern. Moreover I have seen specimens of *scalaris* with similar light areas on the parietals and frontal. However, *exsul* has fewer dorsal scale rows (only 4 of 71 *scalaris* have a maximum less than 19), fewer supra-

labials (only 2 of 84 *scalaris* have less than 7, and one of those only on a single side), no vertebral stripe (always present in *scalaris*), a shorter, narrower head ($H/SV = 5.1-5.6\%$, mean 5.4, in *scalaris*), and more maxillary teeth (21 in *exsul*; 15-18, mean 16.9, in *scalaris*). Although *exsul* more nearly resembles *scalaris* in general appearance than it does *mendax*, the differences are marked. Resolution of the relationships must await acquisition of a sufficient number of specimens of *exsul* to permit study of blood proteins, skeleton, and hemipenis.

Ecological Notes.—The holotype of *T. exsul* was discovered sunning in the grass "in an area where water accumulated as a result of drainage from the opposite slope. The grass was thick and rank, and soils waterlogged and 'squishy.' Below this 'sump' area, which sloped rather abruptly to the north, was the head of a very steep canyon draining to the valley below." (Ralph W. Axtell, pers. comm.). The habitat of the surrounding area has been thoroughly described by Axtell and Sabath (1963).

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