A REVIEW OF THE GARTER SNAKE
THAMNOPHIS ELEGANS IN MEXICO

By Robert G. Webb
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A REVIEW OF THE GARTER SNAKE
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By ROBERT G. WEBB

ABSTRACT: The little-known Mexican garter snake, *Thamnophis elegans errans* Smith is redescribed. Field work and an examination of most available specimens, including the type-material, provide data that amplify known variation and demonstrate intergradation with *T. elegans vagrans* in northwestern Chihuahua. *Thamnophis e. errans* occurs in pine-oak forests of the Sierra Madre Occidental and is known from the Mexican states of Chihuahua, Durango, and Zacatecas.

INTRODUCTION

I am aware of only four publications that provide noteworthy data concerning *Thamnophis elegans* in Mexico. In the original description, Smith (1942) presented morphological data on the type series of six specimens, and he referred to them as a subspecies of *ordinoides* (= *elegans*). Fitch (1948) reinterpreted Smith's data and considered *errans* to be a distinct species. Smith, et al. (1950), employing Fitch's nomenclature, commented on variation in eight specimens in the British Museum. Tanner (1959), in discussing new material from Chihuahua, treated *errans* as a subspecies of *elegans*. It is the purpose of this report to augment previous knowledge concerning variation and the distribution of *T. e. errans*, and to comment on intergradation with *T. elegans vagrans* in northern Chihuahua.

Specimens utilized are deposited in the following institutions (to which the abbreviations refer in the text): BYU, Brigham Young University; BMNH, British Museum (Natural History); FMNH, Field Museum of Natural History; KU, University of Kansas, Museum of Natural History; LACM, Natural History Museum of Los Angeles County; MSU, The Museum, Michigan State University; MVZ, Museum of Vertebrate Zoology, University of California; UAZ, University of Arizona, Department of Biological Sciences; UNM, University of New Mexico, Museum of Southwestern Biology; and USNM, National Museum of Natural History. I am grateful to the persons in charge of the above-mentioned collections;

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2Research Associate in Herpetology, Natural History Museum of Los Angeles County, and Department of Biological Sciences, The University of Texas at El Paso, El Paso, Texas 79968.
Robert F. Inger and George R. Zug allowed me to borrow type material. I especially thank Rollin H. Baker for aid in the field on numerous occasions, Tom Van Devender and Michael D. Robinson for aid extended in my study of UAZ Chihuahuan specimens, and Richard C. Lovelace for the photograph of the holotype (Fig. 2).

**THAMNOPHIS ELEGANS ERRANS SMITH**

**Mexican Wandering Garter Snake**

*Thamnophis ordinoides errans* Smith 1942:112.
*Thamnophis errans* Fitch 1948:122.

**Type Material:** Holotype—USNM 46336, female, from near Colonia García, Chihuahua. Paratypes—Three topotypes, USNM 46337-39, and two from Coyotes, Durango, FMNH 1499 (2).

**Diagnosis:** The following combination of characters serves to distinguish *T. e. errans* from the annelid subspecies *T. e. vagrans*, as well as from all other species of garter snakes geographically sympatric with *T. e. errans*: Dorsal scale rows 19-19-17; supralabials 7; pale vertebral stripe distinct throughout length of body and tail and usually confined to vertebral row; pale lateral stripe on second and third scale rows anteriorly and only slightly paler than first dorsal row; black collar usually not separated middorsally by pale vertebral stripe; immaculate belly with pale orange wash (in life) in snakes (both sexes) exceeding 350 mm body length; tongue entirely black.

*Thamnophis elegans errans* is easily confused with *Thamnophis cyrtopsis*. Three specimens (MSU 560, 3167, 3677) considered to be *T. cyrtopsis* by Conant (1963:494), and another (KU 33871) referred to *T. cyrtopsis cyclides* by Chaplin and Fugler (1955:127) are *T. e. errans*. *Thamnophis e. errans* and *T. cyrtopsis* resemble each other in having 19-19-17 dorsal scale rows, and the pale lateral stripe on the second and third dorsal scale rows. The sympatric subspecies *T. cyrtopsis pulchripilates* further resembles *T. e. errans* in having seven supralabials and the vertebral stripe confined to the vertebral row. These two forms can be distinguished by a difference in overall coloration. The dorsolateral area is olive in *T. e. errans*, and black in *T. c. pulchripilates*; the first dorsal scale row is scarcely darker than the pale lateral stripe in *T. e. errans*, but is blackish brown in *T. c. pulchripilates*. *Thamnophis e. errans* is distinguished from all subspecies of *T. cyrtopsis* by having the tongue entirely black (instead of red with black tip) and the venter pale orange (instead of yellow) in adults. Both of these color characteristics are difficult, if not impossible, to determine in preserved material.

**Description**

**Color and Pattern:** Top of head dark brown to olive brown; parietal spots absent or obscure; black nuchal blotch or collar about five scales long, extending laterally to third or fourth dorsal scale row; anterior part of black collar (small dorsal
scales behind pariets) often brown; black collar occasionally interrupted by vertebral stripe, but usually complete and indented posteriorly where vertebral stripe terminates; yellow or buff vertebral stripe distinct throughout length of body and tail, but sometimes dim posteriorly; vertebral stripe confined to vertebral row, occasionally covering parts of adjacent scale rows, and usually slightly expanded and bright yellow just behind black collar; black marks on sutures between supralabials, if present, usually not reaching edge of lip with exception of posteriormost black mark; black marks lacking on infralabial sutures, except for suture between ninth and tenth infralabials; dorsolateral area uniformly gray-green or olive, or with indistinct black spots arranged in checkerboard fashion, the uppermost spots encroaching on vertebral stripe; checkerboard pattern occasionally evident throughout length of body; largest black spots in dorsolateral areas on neck; checkerboard pattern more evident anteriorly than posteriorly and more so in young than in adults; scattered white flecks in dorsolateral areas in some specimens; keels of scales in dorsolateral areas slightly paler than ground color; pale lateral stripe on second and third dorsal scale rows only slightly paler than first dorsal scale row; edges of some scales of first three dorsal scale rows often black; black spots occasional on first scale row in neck region; belly immaculate pale yellow in young but pale orange in specimens exceeding 350 mm SVL; tongue entirely black.

Notes on color and pattern of living snakes are as follows: Six new-born young (LACM 116064-69, SVL 175 to 188 mm)—top of head dark brown with indistinct parietal spots; collar black with yellow dots immediately behind pariets; vertebral stripe yellow-green; dorsolateral area olive with black spotting anteriorly but becoming patternless posteriorly; lateral stripe olive-yellow, only slightly paler than first dorsal scale row; underside of head white; belly and underside of tail pale yellow. Adult male (LACM 116073, SVL 526 mm)—top of head brown blending posteriorly with black collar; vertebral stripe white-yellow; dorsolateral area brown-olive with black specks anteriorly; lateral stripe cream; first scale row gray-green with orange tinge; underside of head and neck white with yellow-orange tinge; belly and underside of tail orange; iris buff with brown marks. Adult female (LACM 116079, SVL 536 mm, Fig. 1)—top of head and dorsolateral area dark olive; nuchal blotch black; scattered black specks in dorsolateral area; vertebral and lateral stripes yellow; first scale row and adjacent part of ventrals pale olive; supralabials yellow with lower part of supralabials three to six pale orange; underside of head pale yellow with ventrolateral part pale orange; belly and underside of tail pale orange; iris pale orange with brown marks.

A small male (LACM 116077, SVL 187 mm) has the third, fourth, and fifth supralabials pale orange, a small pale orange blotch at the angle of the jaw under the seventh supralabial, the underside of the head white, and the rest of the ventral surface including the tail yellow-green. A male of larger size (LACM 116078, SVL 343 mm) resembles the above-mentioned female except that the orange is brighter on the lower parts of the supralabials and anteriorly on the belly; the underside of the tail is green-yellow with only a faint pale orange tinge.

The tongue in all specimens is slaty gray. The pale orange ventral color, observed only in living specimens, shows ontogenetic development, appearing first
Figure 1. Top, pine-oak forest, general habitat of *Thamnophis elegans errans*, 15 km NW Valparaíso, 2545 m, Zacatecas. Bottom, adult female (LACM 116079, SVL 536 mm) from above locality. Both photographs taken 31 July 1970.
on the sides of the head, then encroaching on the belly, and finally the underside of the tail. Snakes exceeding 300 mm show some pale orange on the ventral surfaces; seemingly all specimens (both sexes) that exceed 350 mm SVL have the entire ventral surface pale orange (except underside of head).

Scutellation: Emphasis was placed on the number of dorsal scale rows, supralabials, ventrals and caudals (subcaudals). All specimens have the dorsal scales in 19-19-17 rows. Seven supralabials (third and fourth entering orbit) occur most frequently (97%). The posterior supralabials (especially the sixth and seventh) are enlarged; the sixth is higher than long. Ventrals in 24 males average 157.5 (150 to 164), and in 20 females, 151.9 (146 to 159). Caudal scales in 23 males average 86.4 (78 to 93), and in 16 females, 74.6 (69 to 81). These data on scutellation exclude specimens from the area of intergradation in northwestern Chihuahua; for a further discussion see section on intergradation and Tables 1 and 2.

Variation in ventral and caudal scales in two broods of young is available. A female (KU 40338, obtained on 25 June, SVL 450 mm) has 152 ventrals and 73 caudals and it contained eight well-developed young. One of the young (KU 40343), about 90 mm SVL, is deformed in having the first supralabials missing (cleft upper

<table>
<thead>
<tr>
<th>Sample</th>
<th>Dorsal Scale-Rows</th>
<th>Supralabials</th>
<th>Ventral Pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>T. e. vagrans</em></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>New Mexico</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>19-19-17 0 (0%)</td>
<td>7-7 0 (0%)</td>
<td>1 21 (40%)</td>
<td></td>
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<tr>
<td>21-19-17 7 (13%)</td>
<td>7-8 3 (6%)</td>
<td>2 19 (36%)</td>
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<tr>
<td>21-21-17 45 (85%)</td>
<td>8-8 51 (94%)</td>
<td>3 13 (24%)</td>
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<tr>
<td>23-21-17 1 (2%)</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Intergrades
Chihuichupa
19-19-17 8 (30%) 7-7 14 (52%) 1 13 (48%)
19-21-17 2 (7%) 7-8 6 (22%) 2 10 (37%)
21-19-17 12 (44%) 8-8 7 (26%) 3 4 (15%)
21-21-17 5 (19%)  

Intergrades
Yepomera
19-19-17 0 (0%) 6-7 1 (5%) 1 0 (0%)
19-21-17 1 (5%) 7-7 9 (45%) 2 7 (35%)
21-19-17 14 (70%) 7-8 5 (25%) 3 13 (65%)
21-19-15 1 (5%) 8-8 5 (25%)
21-21-17 4 (20%)  

Intergrades
Santa Clara
19-19-17 0 (0%) 7-7 2 (20%) 1 0 (0%)
19-21-17 1 (10%) 7-8 2 (20%) 2 5 (50%)
21-19-17 4 (40%) 8-8 6 (60%) 3 5 (50%)
21-21-17 5 (50%)

*T. e. errans*
S Chihuahua
and southward
19-19-17 56 (100%) 6-8 1 (2%) 1 56 (100%)
19-21-17 1 (10%) 7-7 53 (96%)
21-19-17 4 (40%) 7-8 1 (2%)
21-21-17 5 (50%) 8-8 0 (0%)
Table 2

Variation in number of ventral and caudal scales of New Mexico sample of *Thamnophis elegans vagrans*, of intergrades, and of *T. e. errans*.

<table>
<thead>
<tr>
<th>Sample</th>
<th>N</th>
<th>Ventrals Range</th>
<th>Mean</th>
<th>N</th>
<th>Caudals Range</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>T. e. vagrans</em></td>
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<td></td>
<td></td>
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<tr>
<td>New Mexico</td>
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<tr>
<td>Males</td>
<td>22</td>
<td>155-171</td>
<td>160.0</td>
<td>19</td>
<td>75-94</td>
<td>83.5</td>
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<tr>
<td>Females</td>
<td>32</td>
<td>147-160</td>
<td>153.0</td>
<td>30</td>
<td>70-87</td>
<td>75.2</td>
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<tr>
<td><em>Intergrades</em></td>
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<tr>
<td>NW Chihuahua</td>
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<tr>
<td>Males</td>
<td>25</td>
<td>153-166</td>
<td>160.5</td>
<td>19</td>
<td>78-94</td>
<td>83.9</td>
</tr>
<tr>
<td>Females</td>
<td>21</td>
<td>147-160</td>
<td>153.6</td>
<td>16</td>
<td>67-83</td>
<td>73.6</td>
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<tr>
<td><em>T. e. errans</em></td>
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<tr>
<td>S Chihuahua and southward</td>
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<tr>
<td>Males</td>
<td>24</td>
<td>150-164</td>
<td>157.5</td>
<td>23</td>
<td>78-93</td>
<td>86.4</td>
</tr>
<tr>
<td>Females</td>
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<td>151.9</td>
<td>16</td>
<td>69-81</td>
<td>74.6</td>
</tr>
</tbody>
</table>

lips) and many incomplete, partial ventral scales. Data for the seven other unsexed young are: average SVL, 132.6 (124 to 138), and average tail length, 51.3 (43 to 71) mm; average number of ventrals, 155.4 (151 to 160), and of caudals, 85.7 (74 to 92); and, average position of umbilical scar on ventral 133.9 (131 to 137). For six young born on 28 July (not measured until 20 August) to a female (LACM 116063; SVL 472 mm) that has 155 ventrals and 79 caudals, the data are: average SVL, 182.5 (175 to 188) and of tail, 64.6 (61 to 70) mm; number of ventrals 153, 156, and 159, and caudals 89, 90, and 91, respectively, in three males; number of ventrals 153, 153, and 156, and caudals 76, 77, and 81, respectively, in three females; and, position of umbilical scar on ventral 136, 137, and 141 in three males, and on ventral 133, 134, and 135 in three females.

There is broad contact of the internasals with the rostral; the ratio of internaso-rostral to nasorostral contact averages 1.50 (1.2 to 1.9). The average ratio of the lengths of anterior to posterior chin shields is 0.85 (0.7 to 1.2); these characters are discussed further in the section on intergradation. Maxillary teeth range from 16 to 19 in *T. e. errans* (Smith, 1942; Smith, et al., 1950; Tanner, 1959).

Types: The holotype (Fig. 2) and three parapotypes (USNM 46336-39) are from near Colonia Garcia in northwestern Chihuahua, which is in an area where intergradation occurs with *T. e. vagrans*. The four specimens most closely resemble *T. e. errans*, but influences of *T. e. vagrans* include the blackened anterior edges of many ventral scales in USNM 46337; eight supralabials (right side of head) in USNM 46339; and black flecking posteriorly and laterally on the belly and eight supralabials on one side of the head in the holotype (USNM 46336). The two paratypes from Coyotes, Durango (both cataloged FMNH 1499), are referable to *T. e.
errans; they were collected by Heller and Barber in August, 1904. The larger of
the two specimens is unusual in having a wide vertebral stripe (covering halves of
adjacent paravertebral rows), a few dark flecks posteriorly and midventrally on
the belly, and in having the dark collar narrowly interrupted by the vertebral stripe.
The smaller specimen from Coyotes has the anteriormost pair of large dark body
blotches confluent middorsally. Other data were provided by Smith (1942) in the
original description.

**INTERGRADATION WITH *Thamnophis elegans vagrans***

Tanner (1959) studied snakes from the northernmost part of the range near
the type locality of *T. e. errans* (northwestern Chihuahua) that shared characteristics
with *T. e. vagrans* (21 dorsal scale rows and 8 supralabials). He considered this
variation to be representative of *T. e. errans*. Tanner, however, was unaware of
the invariable occurrence of 19 scale rows and 7 supralabials in populations of *T.
e. errans* to the south. Twenty-one scale rows, eight supralabials, and a black mid-
ventral pattern are characteristic of *T. e. vagrans*, which occurs northward into
Arizona, New Mexico, and beyond. Because these three features occur in some
specimens (of *T. e. errans*) from northwestern Chihuahua and are absent in *T. e.
errans* elsewhere, the specimens from northwestern Chihuahua are considered to
reflect intergradation with *T. e. vagrans*.

*Thamnophis e. errans* has a maximum of 19 dorsal scale rows (100%) and
seven supralabials (97%). The ventral surface is immaculate pale yellow or orange.
In some specimens (LACM 116072, 116074) close examination reveals some ven-
tral scales with the anteriolateral edges narrowly blackened, and a young specimen
(LACM 116070) has tiny black dots arranged in a short midventral row posteriorly.
The diagnostic characteristics for *T. e. errans* (maximum of 19 scale rows and 7
supralabials, and lack of black ventrally) occur occasionally in *T. e. vagrans* accord-
ing to the detailed studies of Van Denburgh and Slevin (1917, data reitered by
Van Denburgh, 1922) and Fitch (1940). Tanner (1959) also reported data on scutella-
tion for *T. e. vagrans*.

Fifty-four specimens of *T. e. vagrans* from the vicinity of Glenwood and
Mogollon in southwestern Catron County, New Mexico were examined for com-
parative purposes. Most of these have 21-21-17 dorsal scale rows (85%); less fre-
quent combinations are 21-19-17 (13%) and 23-21-17 (2%). Eight supralabials
(fourth and fifth entering orbit) occur most frequently (97%). The number-coded
ventral patterns (explained in next paragraph) of 1 (40%) and 2 (36%) are more
frequent than the extensive black belly pattern of 3 (24%); the average number-
coded ventral pattern for this New Mexico population is 1.85. Ventrais in 22 males
average 160.0 (155 to 171), and in 32 females, 153.0 (147 to 160). Caudals in 19
males average 83.5 (75 to 94), and in 30 females, 75.2 (70 to 87).

In specimens of *T. e. errans* from northwestern Chihuahua three characteris-
tics—numbers of dorsal scale rows and supralabials, and ventral pattern—were
used to assess intergradation between the subspecies *errans* and *vagrants*. The de-
gree of black ventral pigmentation was number-coded as follows: 1—immaculate
or nearly so, 2—black pigmentation moderate, either confined to lateral spots on ends of ventrals (Fig. 28 in Stebbins 1966), or confined to scattered midventral spots or flecks, or a combination thereof, and 3—extensive black markings posteriorly, mostly continuous midventrally (Pl. 10 in Van Denburgh and Slevin 1917; Pl. 89 same in Van Denburgh 1922).

The specimens from this intergrading area are discussed by locality (1 to 8) below; the eight localities correspond to the north (1) to south (8) arrangement of the symbols on the distribution map (Fig. 3). The northernmost and southernmost localities—24 miles northeast Colonia García and Yepómera, respectively—are about 150 km apart.

1. 24 miles northeast Colonia García: one specimen; 21-21-17 scale rows, 7-7 supralabials, ventral pattern 2.
2. Colonia García: four specimens (holotype and paratypes); 19-19-17 scale rows in all; 7-8 supralabials in holotype and one paratype, others 7-7; ventral pattern 2 in holotype and one paratype, others 1.
3. 10.5 miles northeast El Largo: two specimens; both referable to *T. e. errans* in all features.
4. Colonia Chuhuichupa: 27 specimens (localities—Chuhuichupa, Black Canyon, and El Norte; see list of specimens); see Table 1.
5. Sierra del Nido: 2 specimens; both referable to *T. e. errans* in all features.
6. Santa Clara: 10 specimens; see Table 1.
7. 2 miles southwest San José Babícora: two specimens; both referable to *T. e. errans* in all features.
8. Yepómera: 20 specimens (localities—Yepómera and 5-6 kilometers north Yepómera); see Table 1.

The variation in the three largest samples (Chuhuichupa, Santa Clara, and Yepómera), as well as in *T. e. errans* (southern Chihuahua and southward) and in the New Mexico sample of *T. e. vagrans* is compared in Table 1. The Chuhuichupa sample is most like *T. e. errans*, the Yepómera sample is intermediate tending towards *T. e. vagrans*, and the Santa Clara sample is most like *T. e. vagrans*. In snakes with 21 rows anteriorly, 19 rows occur for a short distance just posterior to the neck and 21 rows extend posteriorly to near midbody. Many snakes in the Yepómera and Santa Clara samples have wide middorsal stripes that occupy the vertebral row and halves of the adjacent rows. The black ventral pigmentation is most extensive in specimens (especially MVZ 73074, 73076) from the Santa Clara sample. It is of interest that the specimens comprising the Yepómera sample are from a lower elevation (1890 m) in a general grassland habitat (Van Devender, 1973) rather than in pine-oak forest; the ten snakes from the vicinity of Santa Clara are also from a correspondingly low elevation (1860 to 1890 m).

Of interest is the variation within a single brood of 10 young (UAZ 34889-98, born 10 July). The female (UAZ 34888, obtained 18 June at Yepómera, SVL 461 mm) has 21-21-17 scale rows, 7-7 supralabials, a type 2 ventral pattern (approaching type 3), 156 ventrals and 72 caudals. Data for the 10 young are: average SVL 151.0 (143 to 155) mm (date measured unknown); average number of ventrals 154.6
Figure 3. Map of northwestern Mexico showing localities (open circles) for *Thamnophis elegans errans*; localities representing intergrading population with *T. e. vagrans* in northwestern Chihuahua indicated by solid circles. Localities a short distance apart share the same symbol. Shaded area indicates approximate extent of pine-oak forest in Sierra Madre Occidental.
(151 to 160) and caudals 78.5 (70 to 85); dorsal scale rows 21-19-17 in eight, 21-21-17 in one, and 19-21-17 in one; supralabials 7-7 in two, 7-8 in four, and 8-8 in four; and, an average coded ventral pattern of 2.7 (2 to 3).

The maximum number of scale rows and supralabials are the most meaningful of the three characteristics used to assess intergradation. Specimens that otherwise have evidence of intergradation resemble *T. e. errans* in features of color and pattern. Some specimens lack evidence of intergradation and are indistinguishable from *T. e. errans*. Tongue color has not been observed in live snakes from the intergrading area, but further resemblance to *T. e. errans* is indicated by the completely black tongue of one recently preserved snake (LACM 75431). The tongue is red, black-tipped in live specimens of *T. e. vagrans* from the Sacramento Mountains, Otero County, and from near Black Mountain, Catron County, New Mexico. The exposed tongue of some preserved specimens of *T. e. vagrans* (UNM) is also pale (red) with a black tip.

Variation in numbers of ventral and caudal scales of both sexes is noted in Table 2 for *T. e. errans* (southern Chihuahua and southward), for *T. e. errans* from the intergrading area with *T. e. vagrans*] northwestern Chihuahua, and for the New Mexico population of *T. e. vagrans*. Ventral scales were counted according to the Dowling method (1951). Males have more ventral and caudal scales than females of both subspecies. Geographic variation seems to be negligible, with little difference in either sex in numbers of ventral and caudal scales between the two subspecies. Data in Van Denburgh and Slevin (1917:242), Van Denburgh (1922:832), and Fitch (1940:11, Fig. 3) suggest geographic variation in numbers of ventral scales in the wide-ranging *T. e. vagrans*, and greater numbers of ventrals in both sexes elsewhere than that for the sample of *T. e. vagrans* examined from Catron County, New Mexico.

Two features of scutellation used to delineate subspecies in the *elegans* rassenkreis have been the relative lengths of the anterior and posterior pair of genials or chin shields (Fitch, 1940) and the shape of the internasals (Fitch, 1940; Fox, 1951). These characters were assessed only in the late stages of this study and values were determined for only a few specimens. The data for *T. e. errans* are compared below with corresponding data for *T. e. vagrans* provided by Fitch (1940), who explained the use of these characters.

The average ratio of internasorostral contact to nasorostral contact was given for *T. e. vagrans* from different localities by Fitch (1940:117, Table 10). It is of interest that the broadest, most truncate internasals (broadest contact with rostral) occur in the southernmost population from New Mexico and Arizona, averaging 1.12. In 16 *T. e. errans*, the internasorostral contact is broader, averaging 1.50 (1.2 to 1.9). In five snakes from the intergrading area in northern Chihuahua the degree of contact is about the same as in *T. e. errans* from farther south, averaging 1.48 (1.4 to 1.7). The relatively broader contact of the internasals and rostrals may further serve to distinguish *T. e. errans* from *T. e. vagrans*.

The average ratio of length of anterior chin shields to length of posterior chin shields was given for *T. e. vagrans* from different localities by Fitch (1940:119, Table 11). The average value of 0.94 for the New Mexico-Arizona population is about the
same as that for the five Chihuahuan snakes from the intergrading area (0.95, 0.8 to 1.2). In 16 T. e. errans the anterior chin shields average 85 per cent as long as the posterior pair (0.85, 0.7 to 1.2). However to judge from the values throughout the range of T. e. vagrans, the relative lengths of the pairs of chin shields do not seem to differ appreciably in the two subspecies.

**Distribution**

*Thamnophis elegans errans* is confined to the pine-oak forests of the Sierra Madre Occidental, at elevations exceeding about 2286 m, and is known from the Mexican states of Chihuahua, Durango, and Zacatecas (Fig. 3). Individuals seem not to frequent ponds and streams; they are often found away from the vicinity of water in damp or even dry places under cover of logs and rocks. The specimens examined are listed geographically from north to south by state and locality.

*Specimens examined: Thamnophis elegans vagrans* (54)—Catron County, New Mexico: State Fish Hatchery, Glenwood (UNM 4467-77, 5325, 5443-47, 6792, 10507-08, 11109, 11194-95, 11201); Willow Creek, TIN-R17W (UNM 8296); Willow Creek at Ranger Station (UNM 25698-99); Willow Creek, 10 mi. E Mogollon (UNM 4531-52, 4611-15). *Thamnophis elegans errans x T. e. vagrans* (68)—Chihuahua: 24 mi. NE Colonia Garcia (LACM 75429); Colonia Garcia (USNM 46336-39); 10.5 mi. NE El Largo (LACM 75430-31); Black Canyon, 8 mi. W Colonia Chihuichupa (BYU 14225); El Norte, 3 mi. N Colonia Chihuichupa (UAZ 35238, 35250-54); Colonia Chihuichupa (BYU 13889-95, 13921-23, 14479-81, 14493-95, 14501, 14505, 15721, 15776); Arroyo Mesteño, Sierra del Nido (MVZ 73088, 73091); 2 mi. S Santa Clara (MVZ 70968); 1 mi. S and 0.5 mi. E Santa Clara (MVZ 73073-81); 2 mi. SW San José Babicora (KU 47315-16); Arroyo del Huachin, 5-6 km. N Yepómera (UAZ 34132-33, 34154-55); Yepómera (UAZ 34120, 34129-31, 34210, 34888-98). *Thamnophis elegans errans* (56)—Chihuahua: Bocoyina (BYU 15742); 2 mi. S Crel (BYU 14381, 14511, 15644, 17076-77); 15 mi. S and 16 mi. E Crel (KU 44286); Yoquivo (BMNH 1911.12.12.20); no data (LACM 21067). Durango: 18 mi. SSW Tepehuanes (LACM 116060-69); 1.5 mi. W San Luis (MSU 565); Hacienda Coyotes (FMNH 1499, N = 2; LACM 104092, 116070-75); 2 mi. NE El Salto (MVZ 67425); 6 mi. SW El Salto (LACM 116076); 10 mi. SW El Salto (KU 40338-46); 7 mi. SW Las Adjuntas (KU 33871); La Ciudad (BMNH 1882.11.15.22-25, 1882.11.15.27-29); 1 mi. SW La Ciudad (MSU 3167); 2.2 mi. W La Ciudad (LACM 50877); 1 mi. W Buenos Aires (LACM 104091); Rancho Las Margaritas (= El Capulin), ca. 22 km. SSE Mezquital (MSU 560, 3677). Zacatecas: 9 mi. NW Valparaíso (LACM 116077-79).

**Resumen**

Se redescribe la culebra *Thamnophis elegans errans* Smith y se demuestra su intergradación con *T. e. vagrans* en el noroeste de Chihuahua. *Thamnophis e. errans* está restringida a los bosques pino-encina de la Sierra Madre Occidental en los estados Mexicanos de Chihuahua, Durango y Zacatecas.

**LITERATURE CITED**


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