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A New Blind Snake (genus Typhlops) from Costa Rica

by

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Included in a small collection of zoological material recently presented to the Museo Nacional de Costa Rica by Charles R. Palmer from the Quaker colony at Monteverde, Provincia de Puntarenas, is a single specimen of the blind snake genus *Typhlops*. This snake constitutes the first record of the genus for Costa Rica and brings to four, together with *Anomalepis, Helminthopis* and *Liotyphlops,* the number of genera of the family Typhlopidae known from the country. In addition, the specimen significantly contributes to our knowledge of the generic range by establishing the occurrence of *Typhlops* in lower Central America. The nearest known mainland records of the genus are from northern Honduras, 500 miles north of Monteverde and from the Amazonian region of Colombia 900 miles southeast, and northern Venezuela 1000 miles east of the Costa Rican locale. Although closely allied to other American species with completely divided nasals and more than 355 scales in the mid-dorsal series, the Costa Rican specimen appears to represent an undescribed population to be known as

Typhlops costaricensis, new species

HOLOTYPE: Museo Nacional de Costa Rica. Reptile No. 1960, from Monteverde, Sierra de Tilarán, Provincia de Puntarenas, Costa Rica; elevation 1500 m.; collected by James Walter between March 6 - 13, 1960.

DIAGNOSIS: A species of *Typhlops* closely related to *Typhlops stadelmani* SCHMIDT (6) of Honduras and *Typhlops tenuis* of Mexico and Guatemala, but differing from them in having the body scales in 20 longitudinal rows rather

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than in 18. The new species further differs from *T. stadelmani* in having 394 scales in the mid-dorsal series (as opposed to 347 in the Honduranean form). *T. costaricensis* also has a more robust body than *T. tenuis,* with the body diameter 46 times in total length (54-62 times in the northern species).

From its nearest South American ally *T. lehneri* ROUX (4) of northern Venezuela *T. costaricensis* differs principally in having 394 scales in the mid-dorsal series (289-332 in *T. lehneri*).

T. costaricensis differs from all Antillean members of the genus (see LEGLER 2 and 3 for a summary) in the combination of 20-20-20 longitudinal scale rows, 347 scale rows in mid-dorsal series, sutures of head scales not in form of deep sulci, and body robust with its diameter 46 times in total length.

DESCRIPTION: Body substantially cylindrical, very slightly flattened ventrally. Head not widened but somewhat flattened. Tail very short, little reduced in size anterior to terminal cone which ends in a short pointed spine. Snout curved, not sharp, markedly overhanging lower jaw. Nostrils not visible from above. Rostral curved upward from underside of jaw over snout, to a point slightly anterior to level of eyes; measured between nostrils about ⅓ as broad as head; posterior margin bluntly rounded. Four supralabials bordered above by two nasals, preocular and ocular. Nasals completely divided by a suture from first supralabial-rostral contact through nostril to rostral above nostril. Nasals separated by rostral. Supralabials increasing in size posteriorly; first supralabial smallest, longer than high, in contact with rostral and anterior nasal; second supralabial higher than long, bordered above by both nasals and preocular; third supralabial much higher than long, in contact with preocular and ocular; fourth supralabial very large, much higher than long, in contact with ocular and extending for about half its length posterior to ocular. Preocular slightly larger than ocular, higher than broad, in contact with supraocular above level of eye. Ocular broadest below level of eye. Eye prominent, covered by ocular and placed anterior and above center of scale. Supraoculars much broader than long. Prefrontal broader than long, separating nasals and supraoculars. Frontal posterior to supraoculars. Frontal and interparietal separating parietals. Median and posterior head series (supraoculars, prefrontal, frontal, interparietal and parietals) slightly larger than dorsal scales. Mental scale small, chin scales a little smaller than body scales. 20-20-20 scale rows around body; all rows of equal size. Four preanal scales. Median dorsal scales (prefrontal to tail cone) 394; 10 dorsal scales included in one head-width measured out longitudinally at mid-body. Median caudal series 7.

MEASUREMENTS: Total length 369 mm; head length 7.5 mm; head width 6.5 mm; head width 56.8 times in total length; diameter at mid-body 8.0 mm; diameter 46 times in total length; tail length 4.5 mm; tail width 5.5 mm; tail length 82 times in total length; tail 1.22 times as broad as long.

COLORATION: Anterior portion of head dull yellow with some brown markings; other head scales dull brown; throat yellow. Dorsal part of body dull brown with several irregular black spots; under magnification each dorsal scale appears to be heavily punctated with brown, except margins of scales which are

yellowish. A dull black ring encircles body 6-8 scale rows anterior to anus, ring about five scale rows wide. Belly light with some brown punctations; underside of tail dull yellow; terminal spine yellow.

REMARKS: *Typhlops costaricensis, T. stadelman,* and *T. tenuis* appear to form a natural group of closely related populations. The basic similarity in the arrangement of the head scales, the completely divided nasal and the high number of scales in the mid-dorsal series characterize the *tenuis* group.. Relationship with Antillean species and to *T. lehneri* of Venezuela is suggested by the head scalation. Since examples of the genus from Mexico and Central America are few and the Honduranean and Costa Rican forms are known from single specimens, there is a possibility that the three members of the *tenuis* group may be conspecific. The absence of material of the genus from British Honduras, El Salvador, Nicaragua and Panama makes resolution of the problem difficult. The three forms differ from one another in scalation and if the differences hold as additional specimens are acquired specific recognition seems warranted. The known distribution of *T. tenuis* and its allies is illustrated (Fig. 1).

Typhlops basimaculata COPE (1) from Veracruz and Tabasco, México, has been considered a valid species (TAYLOR, 9) or a race of *T. tenuis* (SMITH and TAYLOR, 7). Stuart's remarks indicate that the Mexican and Guatemalan forms differ in no major respect and we refer *basimaculata* to the synonymy of *tenuis.*

The four native and one introduced species of *Typhlops* known from Mexico and Central America may be distinguished by the following key.

A KEY TO MEXICAN AND CENTRAL AMERICAN *TYPHLOPS*

1a. No subocular.

2a. Preocular separated from anterior nasal.

3a. More than 355 scales in mid-dorsal series.

4a. Scale rows 18-18-18..... *T. tenuis*
(Southern Veracruz and Tabasco, Mexico, to Central Guatemala).

4b. Scale rows 20-20-20..... *T. costaricensis*
(Northwest Costa Rica).

3b. Less than 355 scales in mid-dorsal series..... *T. stadelmani*
(Northern Honduras)

2b. Preocular in contact with anterior nasal..... *T. bramina*
(Southern Asia; Guerrero and Michoacán, Mexico).

1b. A subocular..... *T. microstoma* (Northern Yucatán, Mexico).

SUMMARY

A new species of blind-snake, *Typhlops costaricensis,* is described from the Monteverde colony, Provincia de Puntarenas, Costa Rica. Relations with other mainland species are considered.

RESUMEN

Se describe una especie nueva de serpiente ciega, *Typhlops costaricensis,* de la colonia de Monteverde, provincia de Puntarenas, Costa Rica. Esta especie está estrechamente emparentada con *T. stadelmani* de Honduras y *T. tenuis* de México y Guatemala, de las que se diferencian por tener las escamas corporales en 20 hileras longitudinales en vez de 18. Tiene el cuerpo más robusto que *T. tenuis,* y se diferencia de *T. stadelmani* y de *T. lehneri,* de Venezuela, en el número de escamas de la hilera media dorsal.

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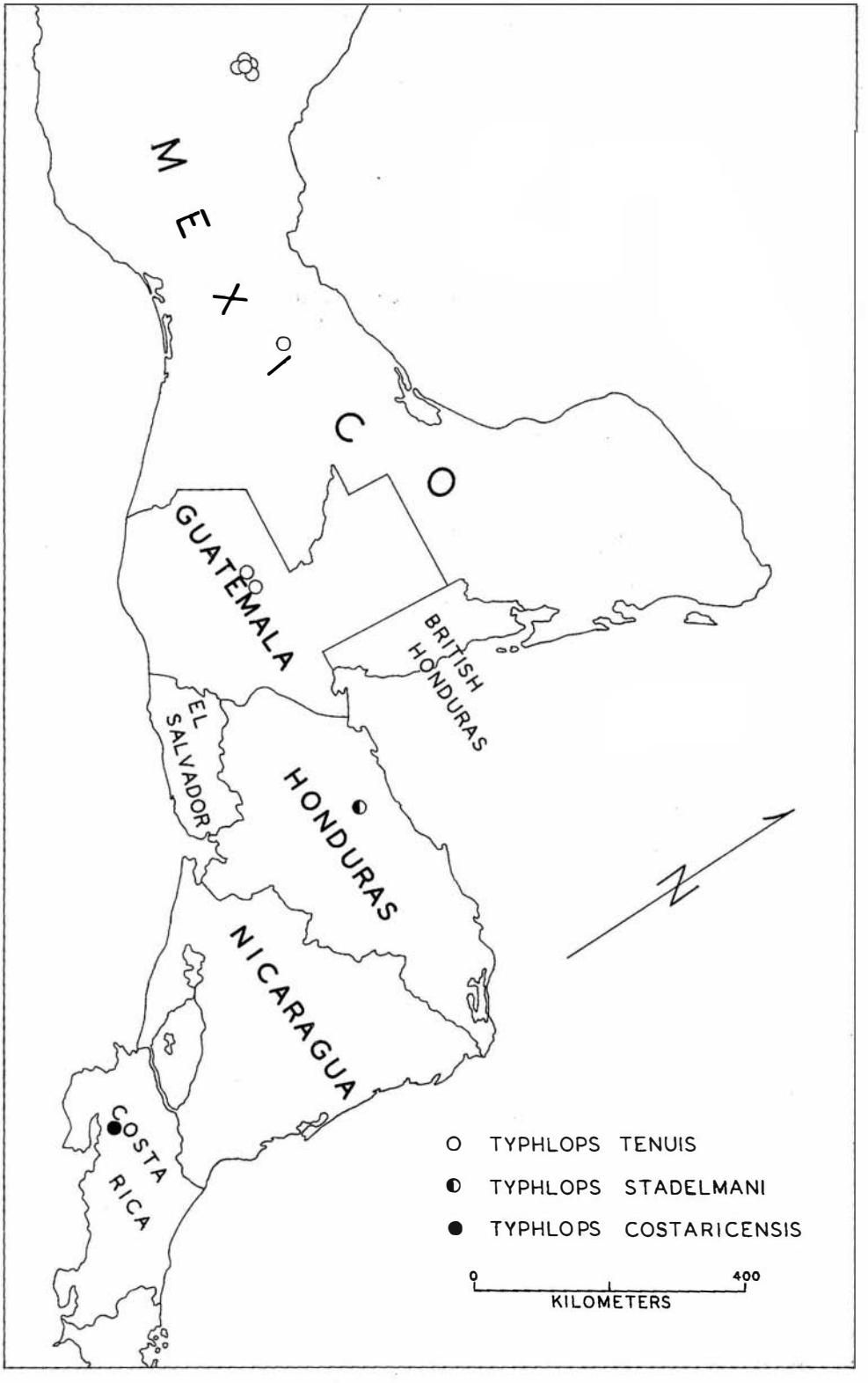
Fig. 1: Distribution of the blind snakes of the *Typhlops tenuis group.*


MEXICO
GUATEMALA
BRITISH HONDURAS
EL SALVADOR
HONDURAS
NICARAGUA
COSTA RICA
N
TYPHLOPS TENUIS
TYPHLOPS STADELMANI
TYPHLOPS COSTARICENSIS
0
400
KILOMETERS