2002

New Species of Tricolor Leptotyphlops (Reptilia: Squamata: Leptotyphlopidae) from Central Peru

Edgar Lehr, *Illinois Wesleyan University*
Van Wallach
Gunther Kohler
Cesar Aguilar

American Society of Ichthyologists and Herpetologists
Copeia, (2002);
No. 1, pp.131-136

New Species of Tricolor *Leptotyphlops* (Reptilia: Squamata: Leptotyphlopidae) from Central Peru

Edgar Lehr, Van Wallach, Gunther Köhler, and César Aguilar

A new species of slender blind snake, *Leptotyphlops alfredschmidti*, is described from two localities (2940 and 3090 m) from the western Andean slopes of central Peru (Departamento de Ancash, Provincia de Huarmey). *Leptotyphlops alfredschmidti* is referred to the *Leptotyphlops tesselatus* group. The new species shares with *Leptotyphlops teaguei* and *Leptotyphlops tricolor* a tricolor body pattern of red, black, and yellowish longitudinal stripes but differs from all members of the group in several features of coloration pattern and pholidosis.

Se describe una nueva especie de serpiente ciega, *Leptotyphlops alfredschmidti*, procedente de dos localidades (2940 y 3090 m) ubicados en los Andes occidentales del Perú central (Departamento de Ancash, Provincia de Huarmey). Se asigna a *Leptotyphlops alfredschmidti* en el grupo *Leptotyphlops tesselatus*. La nueva especie comparte un patrón corporal tricolor de rayas longitudinales amarillentas, rojas y negras con *Leptotyphlops teaguei* y *Leptotyphlops tricolor*, pero difiere de todos los miembros del grupo en muchos otros carácteres de patrón de coloración y folidosis.

KNOWLEDGE of Peruvian *Leptotyphlops* is limited, and for most species, few specimens and few localities are known. Two Peruvian species of *Leptotyphlops* have a body pattern consisting of red, black, and yellow longitudinal stripes: *Leptotyphlops teaguei* Orejas-Miranda 1964, and *Leptotyphlops tricolor* Orejas-Miranda and Zug 1974. *Leptotyphlops teaguei* was described from northern Peru based on two specimens and *L. tricolor* from central Peru based on three specimens. Four additional specimens of *L. tricolor* were mentioned by Zug (1977), adding to the knowledge of distribution and variation in pholidosis for that taxon. *Leptotyphlops rubrolineatus* (Werner 1901), only known from the type (MTKD D 1752), which was destroyed during the Second World War, has a tricolor body pattern of alternating red and black longitudinal stripes, while yellow coloration is restricted to the chin and ventral tail (Werner 1901). Measurements and scale counts of *L. rubrolineatus* are unknown.

During an expediton to the western slopes of central Peru (Departamento de Ancash) in 1997, Lehr and Aguilar found three specimens of *Leptotyphlops* with a tricolor body pattern of red, black, and yellow longitudinal stripes. Comparison of our material with specimens of *L. teaguei* and *L. tricolor* and information from the literature revealed that our specimens represent a new species of *Leptotyphlops*. Herein we describe this new species.

Materials and Methods

Field notes for coloration in life were recorded by E. Lehr on 4 February 1997. Specimens were preserved by injection of a mixture (5: 1000) of 40% formalin and 98% ethanol and stored in 70% ethanol. Measurements of preserved specimens were taken with vernier calipers and rounded to the nearest 0.1 mm, except total length, which was taken with a ruler to the nearest millimeter. The number of middorsal scales excludes the rostral scale and caudal spine, and the number of subcaudals excludes the caudal spine. Drawings were made using a stereo microscope (Leica MZ 12) with a drawing tube attachment. Two specimens were dissected (SMF 80066-67), to examine the viscera and compared with descriptions of visceral characters found in Wallach (1985, 1993, 1998). Measurements of the viscera made to the nearest millimeter.

Mean values for the visceral data are reported in two forms: length and midpoint (MP) of a character are presented as percent snout–vent length (% SVL) values; ratios of two characters are presented as decimal fractions. Institutional abbreviations follow Leviton et al. (1985) except MHNSM (Museo de Historia Natural Mayor de San Marcos). Comparative data for the related species are from Orejas-Miranda (1964), Orejas-Miranda and Zug (1974), Zug (1977), and our Material Examined (see Appendix 1).

Leptotyphlops alfredschmidti sp. nov.

Holotype.—MHNSM 20068, adult male (Figs. 1–2), collected at Malvas (09°55′36″S, 77°39′00″W, elevation 2940 m), Provincia de Huarmey, Departamento de Ancash, Peru (Fig. 3), on 4 February 1997 by E. Lehr and C. Aguilar.

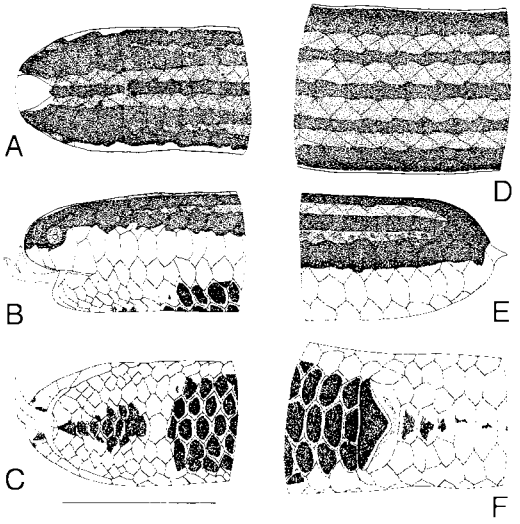

Fig. 1. Holotype of *Leptotyphlops alfredschmidti* sp. nov., MHNSM 20068. (A, B, C) Dorsal, lateral, and ventral view of head, respectively. (D) Dorsal view of midbody. (E) Lateral view of tail. (F) Ventral view of cloacal region. Heavy stippling, dark gray (except gray blotches on chin, and ventral surface of tail); light stippling, hazelnut brown; no stippling, cream. Scale = 5 mm.

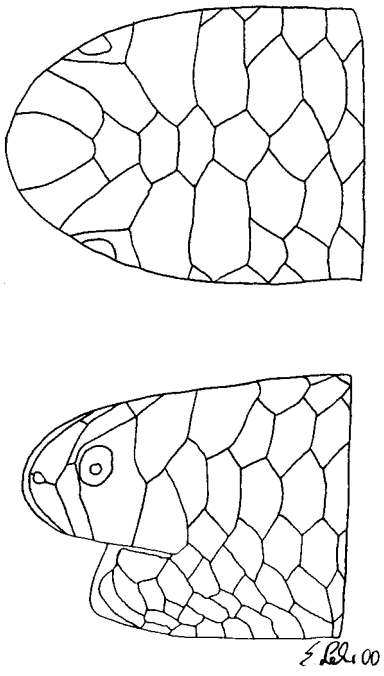

Fig. 2. *Leptotyphlops alfredschmidti*, MHNSM 20068. Head in dorsal (Top) and lateral (Bottom) view without stippling. Scale = 5 mm.

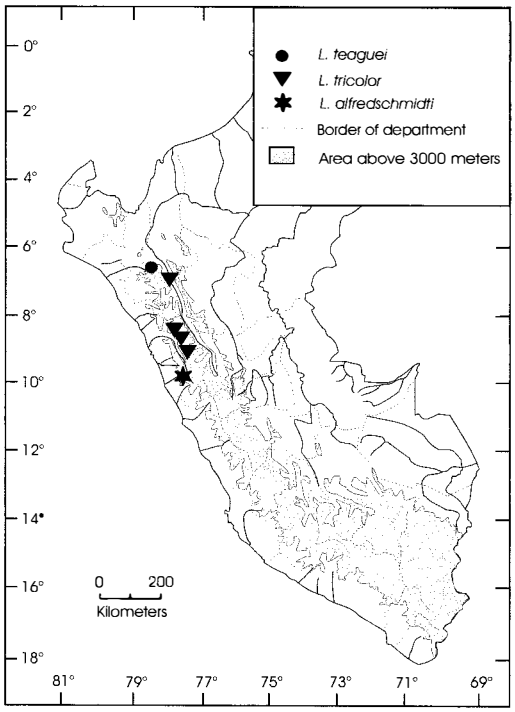

Fig. 3. Distribution of *Leptotyphlops alfredschmidti*, *Leptotyphlops teaguei*, and *Leptotyphlops tricolor*. Distribution of *L. teaguei* after Orejas-Miranda 1964, distribution of *L. tricolor* after Orejas-Miranda and Zug (1974) and Zug (1977). Circle: *L. teaguei* (type locality: between Chota and Cutervo, elevation 2700 m, Departamento de Cajamarca); triangles: *L. tricolor* [from north to south: (1) Cajabamba, elevation 2700 m, Departamento de Cajamarca, (2) type locality: Yunca Pampa, elevation 2700 m, Departamento de Ancash, (3) 2 km N. Marcara, elevation 2800 m, Departamento de Ancash, (4) Huaraz, elevation 3250 m, Departamento de Ancash], star: *L. alfredschmidti* (type locality: Malvas, elevation 2940 m, Departamento de Ancash).

Paratypes.—SMF 80066, adult female, collected at Malvas (09°55′38″S, 77°38′47″W, elevation 3090 m), on 2 February 1997 by E. Lehr and C. Aguilar; SMF 80067, subadult female, collected with the holotype.

Diagnosis.—*Leptotyphlops alfredschmidti* is placed in the *L. tesselatus* group sensu Orejas-Miranda (1964), characterized by broad contact between the supraocular and first supralabial (Fig. 2). The new species differs from all species in that group, except *L. teaguei* and *L. tricolor*, by having a tricolor body pattern of red, black, and yellowish longitudinal stripes. *Leptotyphlops alfredschmidti* differs from the latter two species in number of middorsal scales (Table 1).

TABLE 1. COMPARISON OF SELECTED CHARACTERS OF PRESERVED SPECIMENS OF *Leptotyphlops alfredschmidti, Leptotyphlops teaguei,* AND *Leptotyphlops tricolor.*

	L. alfredschmidti sp. nov. (n = 3)	*L. teaguei* (n = 3)	*L. tricolor* (n = 7)
dorsal black longitudinal stripes	throughout length of body and tail	throughout length of body and tail	restricted to head and tail
coloration of chin	white with narrow gray midventral stripe	black	cream with narrow black midventral stripe
ventral coloration of tail	white with gray midventral blotches forming a stripe	white	cream
maximum total length (mm)	255 (MHNSM 20068)	150 (J. Cadle 130006)	324 (KU 135176, Zug, 1977)
middorsal scales	267–279	232–259 (Orejas-Miranda, 1964; this paper)	285–310 (Zug, 1977)
anal plate	bordered anteriorly by 5 rows of scales	bordered anteriorly by 3 rows of scales (Orejas-Miranda, 1964)	bordered anteriorly by 5 rows of scales (Orejas-Miranda and Zug, 1974)
subcaudals	14–16	16–20 (Orejas-Miranda, 1964; this paper)	18–21 (n = 3) (Orejas-Miranda and Zug 1974)

Description of holotype.—An adult male with total length of 255 mm and tail length of 11.8 mm; midbody diameter of 5.0 mm; total length/tail length 21.6; total length/midbody diameter 51.0; head slightly depressed; body subcylindrical, slightly tapered cranially and caudally; tail tip with mucronate spine (Fig. 1E).

Rostral triangular in dorsal aspect, dorsal apex extending to transverse line between anterior border of eyes (Figs. 1A, 2); nasal completely divided with naris in center of suture; naris and pupil located at about the same level (Figs. 1B, 2); supranasal one-third longer than infranasal; supralabial border formed by rostrum, infranasal, anterior supralabial, ocular, and posterior supralabial; rostrum, ocular, and posterior labial of subequal width at supralabial border; infranasal and anterior supralabial subequal, their width slightly less than width of rostrum, ocular, and posterior supralabial; anterior supralabial single, three times higher than wide, in contact dorsally with supraocular at level of eye; ocular twice as high as wide; eye at level of maximum width of ocular and in anterodorsal portion of ocular without reaching nasal border; posterior supralabial tall, one and a half times as high as wide, reaching level of eye; frontal, interparietal and interoccipital subequal and slightly smaller than more posterior middorsal scales (Fig. 2); large supranasal and supraocular (latter polygonal in shape) subequal and three quarters the size of the subequal parietal and occipital, both enlarged and transversely oriented; eye in contact with supraocular-ocular suture; mental followed by four infralabials on each side; first pair of infralabials separated by divided mental (Fig. 1C).

Middorsal scales 267; body with 14 scale rows, reducing to 12 rows at anal plate and 10 rows at the level of third subcaudal (and 10 rows at midtail); anal plate (= cloacal scute) enlarged and subtriangular with apex free posteriorly, anteriorly bordered by five rows of scales (Fig. 1F); 16 subcaudals, apical spine large with stout base.

Color of holotype in life.—Dorsum reddish brown with three (one middorsal, two dorsolateral) narrow black longitudinal stripes extending from head to tail. Regularity of these longitudinal stripes is lost on head and tail only. Middorsal stripe is narrowly interrupted on fourth dorsal scale of head, and the lateral black longitudinal stripes are fused with dorsolateral stripes anterior to level of sixth dorsal scale. Rostral scale completely yellow dorsally. Yellow dorsal coloration of supranasals restricted to region of suture with rostrals scale. Lateral black longitudinal stripe (three times as wide as each of the longitudinal middorsal and dorsolateral stripes) extending from head to tail, bordered below by a yellow ventrolateral longitudinal stripe (about half as wide as dorsolateral black stripe at midbody). Ventral surface black except chin and tail which are yellow. Outer edges of rostral scale ventrally dark gray. Dark gray blotches on chin forming a stripe extending

from postmental caudally to sixth mental. Midventral dark gray blotches on tail forming a narrow stripe.

Color of holotype in preservative.—Color after 40 months in ethanol (Fig. 1). Color pattern is similar to that described above with the following differences: reddish brown coloration changed to hazelnut brown, black coloration changed to dark gray, dark gray coloration changed to gray, and yellow coloration changed to cream.

Internal anatomy.—Based on two females, SMF 80066-67. Tongue with 6–7 pairs of short lateral lingual papillae distal to bifurcation in a serrated (saw-tooth) pattern. Sternohyoideus muscle 12.5%, sternohyoideus-heart gap 0.20; heart 4.1% (MP = 17.6%), snout–heart interval 19.6%, distance between junctions of left and right systemic arches with dorsal aorta equal to 0.25 heart length; heart–liver gap 7.5%, heart–liver interval 40.1%; right liver lobe 28.5% (MP = 41.3%), left liver lobe 20.2% (MP = 40.8%), length of left liver = 0.71 right liver, anterior and posterior liver asymmetries 0.13 and 0.16 total liver length, respectively; liver straight cranially and caudally but midportion with 8–10 overlapping loops and kinks in a zigzag configuration, 23–25 segments in right liver lobe, 18 segments in left liver lobe; right liver lobe nearly contacting or overlapping gall bladder (liver–gall bladder gap 0.8% to −0.9%), liver–kidney gap 20.3%, liver–kidney interval 52.7%; gall bladder 2.0% (MP = 56.6%), pancreas posterior to gall bladder, equal to or slightly larger than latter, with pancreatic limb extending cranially to spleen, which is smaller than either of the former and located just anterior to gall bladder, juxtasplenic body adjacent to spleen subequal in size to spleen; gall bladder–ovary gap 8.2%, gall bladder–kidney gap 18.4%, gall bladder–kidney interval 24.2%, right ovary 4.8% (MP = 68.1%), with 1–6 vitellogenic ova and 8 undeveloped follicles, left ovary 3.8% (MP = 71.8%), with 1–4 ova and 6–10 follicles, ovary–kidney gap 2.2%; right adrenal MP 72.8%, left adrenal MP 76.7%, right kidney 3.2% (MP = 77.4%), left kidney 3.3% (MP = 78.1%), kidney–vent gap 20.3%, kidney–vent interval 24.2%; rectal caecum bulbous 2.7%, five times the diameter of adjacent ileum and 0.8 left kidney length, rectal caecum–vent interval 12.4%.

Respiratory system lacking left lung and tracheal lung; trachea 18.7% (MP = 10.3%), with avascular membrane separating tips of tracheal cartilages or rings, which number 161–168 (or 86.1 per 10% SVL), type G foramina located between tips of every second or third set of rings; anterior tip of lung 17.4%, cardiac lung 2.2%; right lung 36.0% (MP = 37.6%), unicameral with thick wall cranially composed of several tiers of alveoli, caudal 2/3 with trabeculae forming reticulate pattern, posterior lung tip 55.6%; right bronchus 18.4%, bronchus posterior tip 38.0%, bronchus/right lung 0.53, trachea-bronchus 37.1% (MP = 19.5%).

Etymology.—The new species is dedicated to Alfred A. Schmidt (Bergen-Enkheim, Germany), founder and honorary member of the DGHT (Deutsche Gesellschaft für Herpetologie und Terrarienkunde), in recognition of his support for this society.

Variation.—Variation in pholidosis is observed only in the number of middorsal scales (268 in SMF 80066, 279 in SMF 80067), and subcaudals (15 in SMF 80066, 14 SMF 80067). SMF 80066 (SMF 80067 in parenthesis) has a total length of 245 (181) mm, tail length of 10.3 (8.5) mm, and midbody diameter of 4.3 (3.0) mm. The color patterns of the paratypes are similar to that of the holotype. SMF 80066 has first and second supralabials and third left supralabial each with a dark gray blotch.

Natural history.—The type locality (Malvas, Fig. 3) belongs to the Serranía Esteparia ecoregion (Brack, 1986; Peñaherrera del Aguila, 1989), and is characterized by the vegetation formations of ''Matorral seco'' and ''Matorral subhúmedo'' (Instituto Nacional de Recursos Naturales, 1995, 1996). All specimens were found under rocks at midday. Snakes found in sympatry with *L. alfredschmidti* include *Philodryas simonsii* (MHNSM 20056) and *Sibynomorphus vagus* (SMF 80048). Clutch size 2–10 based on enlarged ova (two in SMF 80067, 10 in SMF 80066) in ovaries.

Relationships.—Since the pioneering work of Underwood (1967), who established the systematic value of such nontraditional characters as soft anatomy, Wallach (1985, 1993, 1998) has studied the visceral anatomy of snakes and used the size and topography of the viscera as taxonomic characters. Examination of the viscera, besides being useful as a source of discriminating characters, can sometimes solve questions that are unanswerable with the use of traditional characters alone [Cundall et al., 1994 (*Anomochilus*); Wallach, 1994 (*Aparallactus niger*), 1995 (*Tropidodipsas*), 2000 (*Typhlops*); Wallach and Günther, 1997 (*Typhlops mutilatus*), 1998 (*Xenophidion*); Wallach and Smith, 1992 (*Boella*)]. Certain visceral characters are diagnostic at higher taxonomic levels, others at lower levels

TABLE 2. VISCERAL DIFFERENCES BETWEEN *Leptotyphlops alfredschmidti* (SMF 80066-67) AND *Leptotyphlops tricolor* (KU 135177). Integer values represent % SVL; decimal fractions represent ratios of two characters.

Character	*L. alfredschmidti* (n = 2)	*L. tricolor* (n = 1)
Sternohyoideus posterior tip	12.5 (11.9–13.1)	13.6
Sternohyoideus–heart gap	0.20 (0.18–0.2)	0.16
Heart length	4.1 (3.6–4.6)	3.5
Left systemic arch junction	0.94 (0.88–1.00)	0.82
Systemic arches/heart	0.25 (0.24–0.25)	0.41
Heart–liver gap	7.5 (6.9–8.1)	9.9
Anterior liver asymmetry	0.13 (0.09–0.17)	0.02
Posterior liver asymmetry	0.16 (0.15–0.21)	0.11
Left liver/right liver	0.71 (0.70–0.71)	0.87
Right liver segments	24.0 (23–25)	18
Liver–kidney gap	20.3 (20.0–20.6)	18.1
Gall bladder length	2.0 (1.9–2.0)	1.2
Gall bladder–ovary gap	8.2 (8.0–8.3)	7.0
Gall bladder–kidney gap	18.4 (17.8–18.9)	15.5
Left kidney midpoint	78.1 (77.0–79.2)	80.8
Rectal caecum length	2.7 (2.3–3.0)	1.9
Rectal caecum/left kidney	0.81 (0.74–0.88)	0.58
Tracheal rings	164.5 (161–168)	203
Tracheal rings/10% SVL	86.1 (81.7–90.5)	109.1
Anterior tip of lung	17.4 (16.5–18.3)	19.0
Cardiac lung length	2.2 (2.1–2.3)	0.8
Right lung length	36.0 (30.0–41.9)	28.9
Right lung midpoint	37.6 (35.6–39.6)	34.2
Right bronchus length	18.4 (17.4–19.4)	21.0
Right bronchus posterior tip	38.0 (36.0–40.0)	40.8
Right bronchus/right lung	0.53 (0.41–0.65)	0.73
Trachea–bronchus length	37.1 (35.0–39.1)	39.6
Trachea–bronchus midpoint	19.5 (18.5–20.4)	21.0
Right lung posterior tip	55.6 (50.6–60.6)	48.7
Total lung length	38.2 (32.3–44.1)	29.7
Total lung midpoint	36.5 (34.4–38.6)	33.8

(Wallach, 1998). A comparison of the viscera of the only members of the *tesselatus* species group for which data are available (*L. tesselatus*, *L. tricolor*, *L. alfredschmidti*) reveals that *L. alfredschmidti* is more similar to *L. tricolor* than to *L. tesselatus*, sharing 35 of 99 characters with *L. tricolor* and only 12 of 99 with *L. tesselatus*; only the respiratory system of *L. tesselatus* more closely resembles that of *L. alfredschmidti* than that of *L. tricolor*. Major differences in the mean values of the viscera between *L. alfredschmidti* and *L. tricolor* are listed in Table 2 (sample sizes are too small for statistical comparisons). The combination of features of both the external and internal anatomy of *L. alfredschmidti* suggests that its nearest relative is *L. tricolor*.

ACKNOWLEDGMENTS

The research was supported by the Forschungsinstitut und Naturmuseum Senckenberg, Frankfurt a.M. Collecting and export permits were issued by the Ministerio de Agricultura (INRENA), Lima. VW thanks W. E. Duellman (KU), R. Günther (ZMB), G. Köhler (SMF), and H. Voris (FMNH) for permission to dissect specimens in their care.

LITERATURE CITED

BRACK, A. 1986. Las Ecoregiones del Perú. Boletín de Lima 44:57–70.

CUNDALL, D., V. WALLACH, AND D. A. ROSSMAN. 1994. The systematic relationships of the snake genus *Anomochilus*. Zool. J. Linn. Soc. (1993) 109:275–299.

INSTITUTO NACIONAL DE RECURSOS NATURALES (INRENA). 1995. Mapa forestal del Peru 1995. Direccion General Forestal, Lima, Peru.

———. 1996. Guia explicativa del mapa forestal 1995. Direccion General Forestal, Lima. Publicacion del INRENA 49:1–129.

LEVITON, A. E., R. H. GIBBS JR., E. HEAL, AND C. E. DAWSON. 1985. Standards in herpetology and ich-

thyology. Part I. Standard symbolic codes for institutional resource collections in herpetology and ichthyology. Copeia 1985:802–821.

OREJAS-MIRANDA, B. R. 1964. Dos nuevos Leptotyphlopidae de Sur America. Com. Zool. Mus. Hist. Nat. Montevideo 8:1–7.

———, AND ZUG, G. 1974. A new tricolor *Leptotyphlops* (Reptilia: Serpentes) from Peru. Proc. Biol. Soc. Wash. 87:167–174.

PEÑAHERRERA DEL AGUILA, C. 1989. Atlas del Perú. Instituto Geográfico Nacional, Peru, Lima.

UNDERWOOD, G. 1967. A contribution to the classification of snakes. British Museum (Natural History), London.

WALLACH, V. 1985. A cladistic analysis of the terrestrial Australian Elapidae, p. 223–253. *In:* Biology of Australasian frogs and reptiles. G. Grigg, R. Shine, and H. Ehmann (eds.). Royal Zoological Society of New South Wales, Chipping Norton, New South Wales, Australia.

———. 1993. A new species of blind snake, *Typhlops marxi*, from the Philippines (Serpentes: Typhlopidae). Raffles Bull. Zool. 41:263–278.

———. 1994. *Aparallactus lineatus* (Peters) and *Aparallactus niger* Boulenger: two valid species from West Africa. J. Herpetol. 28:95–99.

———. 1995. Revalidation of the genus *Tropidodipsas* Günther, with notes on the Dipsadini and Nothopsini (Serpentes: Colubridae). *Ibid.* 29:476–481.

———. 1998. The lungs of snakes, p. 93–295. *In:* Biology of the Reptilia. Vol. 19. Morphology G. C. Gans, and A. S. Gaunt (eds.). Society for the Study of Amphibians and Reptiles, Oxford.

———. 2000. Critical review of some recent descriptions of Pakistani *Typhlops* by M. S. Khan, 1999 (Serpentes: Typhlopidae). Hamadryad 25:129–143.

———, AND R. GÜNTHER. 1997. Typhlopidae vs. Anomalepididae: the identity of *Typhlops mutilatus* Werner (Reptilia: Serpentes). Mitt. Zool. Mus. Berl. 73: 333–342.

———, AND ———. 1998. Visceral anatomy of the Malaysian snake genus *Xenophidion*, including a cladistic analysis and allocation to a new family (Serpentes: Xenophidiidae). Amphib.-Reptilia 19:385–404.

———, AND H. M. SMITH. 1992. *Boella tenella* is *Epicrates inornatus* (Reptilia: Serpentes). Bull. Md. Herpetol. Soc. 28:162–170.

WERNER, F. 1901. Reptilien und Batrachier aus Peru und Bolivien. Abh. Ber. K. Zool. Anthr.-Ethn. Mus. Dresden 1900/01: 9:1–14.

ZUG, G. 1977. Distribution and variation of *Leptotyphlops tricolor*. Copeia 1977:744–745.

(EL) STAATLICHE NATURHISTORISCHE SAMMLUNGEN DRESDEN, MUSEUM FÜR TIERKUNDE, A.-B.-MEYER-BAU, KÖNIGSBRÜCKER LANDSTRAßE 159, D-01109 DRESDEN, GERMANY; (VW) MUSEUM OF COMPARATIVE ZOOLOGY, HARVARD UNIVERSITY, 26 OXFORD STREET, CAMBRIDGE, MASSACHUSETTS 02138; (GK) FORSCHUNGSINSTITUT UND NATURMUSEUM SENCKENBERG, SEKTION HERPETOLOGIE, SENCKENBERANLAGE 25, D-60325 FRANKFURT A.M., GERMANY; AND (CA) MUSEO DE HISTORIA NATURAL, DEPARTAMENTO DE HERPETOLOGIA, UNIVERSIDAD NACIONAL MAYOR DE SAN MARCOS, AV. ARENALES 1256, JESÚS MARÍA, AP. 14-0434, LIMA, PERU. E-mail: (Lh) lehr@snsd.de. Send reprint requests LH. Submitted: 8 Dec. 2000. Accepted: 16 July 2001. Section editor: C. Guyer.

APPENDIX

COMPARATIVE MATERIAL EXAMINED

Leptotyphlops teaguei: Peru: J. Cadle 130006.

Leptotyphlops tesselatus: Peru: Departamento Lima: Lima, 154 m, FMNH 36726; La Molina, near Lima, 990 m, FMNH 134464; Lima, "am Fuß der Kordilleren," ZMB 26256.

Leptotyphlops tricolor: Peru: Departamento Ancash: Huaylas Province, Huaylas District: Yunca Pampa, 2700 m, MHNJP 0669 (holotype); Huaraz, 3250 m, KU 135177.