



The type species of the threadsnake genus *Tricheilostoma* Jan revisited (Squamata, Leptotyphlopidae)

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For most of the last 150 years, *Tricheilostoma* Jan, 1860 has resided in the synonymy of other snake genera such as *Glauconia* Gray, 1845 and *Leptotyphlops* Fitzinger, 1843 (Boulenger, 1893; McDiarmid *et al.*, 1999). Thus there has been less practical concern over the identity of the type species. This changed recently with the proposal of a new classification of the family Leptotyphlopidae and resurrection of the Genus *Tricheilostoma* (Adalsteinsson *et al.*, 2009). Pinto *et al.* (2010) alluded to a potential taxonomic problem with the type species of that genus, but determined that no change was necessary. However, the problem remains and affects 15 species of South American and African snakes. The purpose of this note is to resolve the issue and make the necessary taxonomic changes.

The name *Tricheilostoma* was introduced by Jan (1860) without diagnosis or type species designation, in a figure legend of an issue ("livraison") presenting snake illustrations. It was in one of a series of issues treated here as a periodical, *Iconographie Générale des Ophidiens*, comprising three volumes (Volume 1, 1860–1866; Volume 2, 1866–1870; Volume 3, 1870–1881). Authorship of the separate issues was attributed to Georges Jan, as noted in the headers of the plates and in new taxa described in figure legends, although the volumes were edited by Jan and Ferdinand Sordelli. *Tricheilostoma* was used in the first issue as a subgenus for two African species (*Stenosoma gracile* Jan, 1860, and *S. bicolor* Jan, 1860). In the second issue of Volume 1, appearing in 1861, it was used as a subgenus for a New World species (*S. macrolepis* Peters, 1858) and another African species (*S. sundewalli* Jan). As pointed out by McDiarmid *et al.* (1999), some confusion has existed over the dates of publication of names proposed by Jan. In part, this is because some explanatory text was published separately in a journal (Jan 1861b) and different collections of issues can be found bound together in various libraries.

Loveridge (1957) mistakenly designated *Stenosoma macrolepis* as type species of *Tricheilostoma*, referring to the journal article (Jan 1861b). Pinto *et al.* (2010) acknowledged the mistake but considered his type designation to be valid based on Art. 70.2 of the ICZN which states that an earlier, overlooked, type fixation should be accepted and any later fixations treated as invalid. However, that article is irrelevant here because no type was ever correctly fixed.

One of the two African species mentioned by Jan, *Stenosoma gracile*, is now a synonym of the other, *S. bicolor*. Thus, I designate *Stenosoma bicolor* Jan, 1860 as the type species of *Tricheilostoma* Jan, 1860. That genus now contains four species: *Tricheilostoma bicolor* (Jan, 1860), *T. broadleyi* (Wallach & Hahn, 1997), *T. greenwelli* (Wallach & Boundy, 2005), and *T. sundewalli* (Jan, 1861a) (Adalsteinsson *et al.*, 2009). *Guinea* Hedges, Adalsteinsson, & Branch, 2009 in Adalsteinsson *et al.* (2009), the genus that previously contained those species, is a homonym of the hymenopteran genus *Guinea* Koçak & Kemal, 2008.

In making these changes, the group of 11 New World species previously placed in *Tricheilostoma* requires a new genus. For those species, I propose the new generic name *Trilepida* (from classical Greek; feminine; "three scales") to continue allusion to the character (presence of three supralabials) which is useful—in combination with other traits (brown or pale brown venter, usually 10 midtail scales, moderate anterior supralabials)—in diagnosing the group (Adalsteinsson *et al.*, 2009). I designate *Stenosoma macrolepis* Peters, 1858, as type species. The genus contains these 11 species (Adalsteinsson *et al.*, 2009; Pinto *et al.*, 2010; Pinto & Curcio, 2011): *Trilepida anthracina* (Bailey, 1946), *T. brasiliensis* (Laurent, 1949), *T. brevissima* (Shreve, 1964), *T. dugandi* (Dunn, 1944), *T. fuliginosa* (Passos, Caramaschi, & Pinto, 2006), *T. guayaquilensis* (Orejas-Miranda & Peters, 1970), *T. joshuai* (Dunn, 1944), *T. koppesi* (Amaral, 1955), *T. macrolepis* (Peters, 1858), *T. nicefori* (Dunn, 1946), and *T. salgueiroi* (Amaral, 1955).

To summarize, the generic name *Tricheilostoma* Jan, previously applied to New World species, now replaces the African genus *Guinea* Hedges, Adalsteinsson, & Branch (the latter name becoming a homonym of *Guinea* Koçak & Kemal). A new genus, *Trilepida*, is erected for the New World species previously placed in *Tricheilostoma*. The total number of recognized genera of leptotyphlopoid snakes (twelve) is unchanged.

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References

- Adalsteinsson, S.A., Branch, W.R., Trape, S., Vitt, L.J. & Hedges, S.B. (2009) Molecular phylogeny, classification, and biogeography of snakes of the Family Leptotyphlopidae (Reptilia, Squamata). *Zootaxa*, 2244, 1–50.
- Amaral, A.D. (1955 [dated 1954]) Contribuição ao conhecimento dos ofídios do Brasil XIV. *Memorias do Instituto Butantan, São Paulo*, 26, 203–205.
- Bailey, J.R. (1946) *Leptotyphlops anthracinus*, a new blind snake from eastern Ecuador. *Occasional Papers of the Museum of Zoology, University of Michigan*, 492, 1–5.
- Boulenger, G.A. (1893) *Catalogue of the snakes in the British Museum (Natural History)*. Vol. I, containing the families Typhlopidae, Glauconiidae, Boidae, Ilysiidae, Uropeltidae, Xenopeltidae, and Colubridae aglyphae, part. Trustees of the British Museum, London, 448 pp.
- Dunn, E.R. (1944) A review of the Colombian snakes of the families Typhlopidae and Leptotyphlopidae. *Caldasia*, 3, 47–55.
- Dunn, E.R. (1946) A new snake from the Eastern Andes of Colombia. *Caldasia*, 4, 121–122.
- Fitzinger, L.J.F.J. (1843) *Systema Reptilium. Fasciculus primus. Amblyglossae*. Braumüller et Seidel Bibliopolas, Wien, 106 pp.
- Gray, J.E. (1845) *Catalogue of the Specimens of Lizards in the Collection of the British Museum*. British Museum (Natural History), London, 289 pp.
- Jan, G. (1860) Première Livraison. *Iconographie Générale des Ophidiens*, 1 (1), plates 1–6.
- Jan, G. (1861a) Deuxième Livraison. *Iconographie Générale des Ophidiens*, 1 (2), plates 1–6.
- Jan, G. (1861b) Note sulla famiglia dei tiflopidi sui loro generi e sulle specie del genere *Stenostoma*. *Archivo per La Zoologia, l'Anatomia e la Fisiologia*, 1, 178–199.
- Koçak, A.Ö. & Kemal, M. (2008) Nomenclatural notes on the genus group names in the order Hymenoptera (Chalcidoidea). *Miscellaneous Paper, Center for Entomological Studies Ankara*, 143, 3–8.
- Laurent, R.F. (1949) Note sur quelques reptiles appartenant à la collection de l'Institut Royal des Sciences Naturelles de Belgique. III. Formes américaines. *Bulletin de L'Institut Royal des Sciences Naturelles de Belgique*, 25, 1–20.
- Loveridge, A. (1957) Check list of the reptiles and amphibians of East Africa (Uganda; Kenya; Tanganyika; Zanzibar). *Bulletin of the Museum of Comparative Zoology*, 117, 153–362.
- McDiarmid, R.W., Campbell, J.A. & Touré, T.A. (1999) *Snake Species of the World. A Taxonomic and Geographic Reference*. (Vol. 1). Herpetologists League, Washington, D.C., 511 pp.
- Orejas-Miranda, B.R. & Peters, G. (1970) Eine neue Schlankblindschlange (Serpentes: Leptotyphlopidae) aus Ecuador. *Mitteilungen aus dem Zoologischen Museum in Berlin*, 46, 439–441.
- Passos, P., Caramaschi, U. & Pinto, R.R. (2006) Redescription of *Leptotyphlops koppesi* Amaral, 1954, and description of a new species of the *Leptotyphlops dulcis* group from central Brazil (Serpentes: Leptotyphlopidae). *Amphibia-Reptilia*, 27, 347–357.
- Peters, W.C.H. (1858 [dated 1857]) Vier neue amerikanische Schlangen aus der Familie der Typhlopinen und darüber einige vorläufige Mittheilungen. *Monatsberichte der königlich Akademie der Wissenschaften zu Berlin*, 1857, 402.
- Pinto, R.R. & Curcio, F.F. (2011) On the generic identity of *Siagonodon brasiliensis*, with the description of a new leptotyphlopid from central Brazil (Serpentes: Leptotyphlopidae). *Copeia*, 2011, 53–63.
- Pinto, R.R., Passos, P., Portilla, J.R.C., Arrendondo, J.C. & Fernandes, R. (2010) Taxonomy of the threadsnakes of the Tribe Epictini (Squamata: Serpentes: Leptotyphlopidae) in Colombia. *Zootaxa*, 2724, 1–28.
- Shreve, B. (1964) A new species of the snake *Leptotyphlops* from Colombia. *Breviora, Museum of Comparative Zoology*, 211, 1–4.
- Wallach, V. & Boundy, J. (2005) *Leptotyphlops greenwelli*, a new wormsnake of the *L. bicolor* species group from Nigeria (Serpentes: Leptotyphlopidae). *Annals of Carnegie Museum*, 74, 39–44.
- Wallach, V. & Hahn, D.E. (1997) *Leptotyphlops broadleyi*, a new species of worm snake from Cote d'Ivoire (Serpentes: Leptotyphlopidae). *African Journal of Herpetology*, 46, 103–109.