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Three new species of *Tuberepyris* Lanes et Azevedo (Hymenoptera, Bethyridae), with amended diagnosis of the genus

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Abstract

Three new species of the Afrotropical *Tuberepyris* are described and illustrated, *T. nihilus* Azevedo et Mugarbi, **sp. nov.** (Madagascar), *T. codex* Azevedo et Mugarbi, **sp. nov.** (South Africa), and *T. hamus* Azevedo et Mugarbi, **sp. nov.** (Central African Republic). The male of *Tuberepyris* is described for the first time. *T. basibrevis* Lanes et Azevedo from Tanzania is evaluated and the genus is redefined. A key to species of *Tuberepyris* is provided.

Key words: taxonomy, Epyrinae, Scleroderminae, Afrotropical region, Chrysoidea, wasp

Introduction

The Scleroderminae genus *Tuberepyris* Lanes et Azevedo, 2008 is hitherto monotypic. It is represented by only one female of *T. basibrevis* Lanes et Azevedo, 2008. The holotype of type species is from Tanzania and until this study no other specimen was recorded for this genus.

According to phylogeny proposed by Lanes and Azevedo (2008), it is a sister group of *Thlastepyrus* Evans, 1973 and *Alongatepyris* Azevedo, 1992. *Tuberepyris* is characterized by having the body flattened, the propleura with angulate protuberance visible in dorsal view, the forewing with subcostal vein present, anal and basal veins short and pterostigma small and triangular.

The goal of this study is to propose three new species from Eastern Africa and to reevaluate the limits of the genus.

Material and methods

The material here studied belongs to the following institutions: California Academy of Science, U.S.A., curator Robert Zuparko (CASC) and Iziko South African Museum, South Africa, curator Simon van Noort (ISAM). The material from CASC was collected under the scope of the project "Terrestrial Arthropod Inventory of Madagascar", coordinated by Brian Fisher.

The specimens were identified based on the key proposed by Lanes and Azevedo (2008). The terms for structures follow Evans (1964), and for integument sculpture follow Harris (1979). The main measurements are: LFW—length of forewing after tegulae; body length in dorsal view; LH—length of head in dorsal view, from vertex crest to median apical margin of clypeus; WH—width of head in dorsal view, its maximum width including eyes; WF—width of frons in dorsal view, its minimum width, usually about bottom of eyes; HE—height of eye in lateral view, across its maximum height; OOL—ocellar-ocular line in latero-dorsal view, the shortest distance from eye top to posterior ocellus; WOT—width of ocellar triangle in dorsal view, maximum width, including ocelli; DAO—diameter of anterior ocellus, was measured in frontal view, distance from posterior ocellus to vertex crest in dorsal view; VOL—vertex-ocular line in dorsal view.

References

- Azevedo, C.O. (1992) Sobre os Sclerodermini (Hymenoptera, Bethylidae, Epyrinae) da região de São Carlos, São Paulo, Brasil. *Revista Brasileira de Entomologia*, 36, 561–567.
- Evans, H.E. (1964) A synopsis of the American Bethylidae (Hymenoptera, Aculeata). *Bulletin of the Museum of Comparative Zoology*, 132, 1–122.
- Evans, H.E. (1973) Further studies on South American Bethylidae (Hymenoptera). *Proceedings of the Entomological Society of Washington*, 75, 195–204.
- Harris, R.A. (1979) A glossary of surface sculpturing. *Occasional Papers in Entomology*, 28, 1–31.
- Lanes, G.O. & Azevedo, C.O. (2008) Phylogeny and taxonomy of Sclerodermini (Hymenoptera, Bethylidae, Epyrinae). *Insect Systematics and Evolution*, 39, 55–86.
<http://dx.doi.org/10.1163/187631208788784165>
- Mugrabi, D.F. & Azevedo, C.O. (2010) Insecta, Hymenoptera, Bethylidae: range extension and filling gaps in Madagascar, *Check List*, 6, 62–63.
- Reeves, C. & Wit, M.J. (2000) Making ends meet in Gondwana: retracing the transforms of the Indian Ocean and reconnecting continental shear zones. *Terra Nova*, 12, 272–280.
<http://dx.doi.org/10.1046/j.1365-3121.2000.00309.x>
- Wit, M.J. (2003) Madagascar: Heads It's a Continent, Tails It's an Island. *Annual Review of Earth and Planetary Sciences*, 31, 213–248.
<http://dx.doi.org/10.1146/annurev.earth.31.100901.141337>