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East African odontopygid millipedes 1: Five new species of *Xystopyge* (Attems, 1909) and a proposal for a new gonopod terminology (Diplopoda; Spirostreptida; Odontopygidae)

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Abstract

Five new species of the endemic East African genus *Xystopyge* are described: *X. pelecys*, *X. frontieri*, *X. proplicatus*, *X. biacanthus*, and *X. zanzibarensis*. Three are from the Eastern Arc Mountains, Tanzania, two are from the Usambara Mtns. and one is from the Uluguru Mtns. One further species is from the Kenyan lowland bordering Tanzania, and one from the island of Zanzibar, Tanzania. *Xystopyge robusta hoffmani* Vandenspiegel & Pierrard, 2004, is elevated to full species status: *Xystopyge hoffmani* **n.stat.** A new gonopod terminology for Odontopygidae, adapted from Hoffman's (2008) terminology for the related family Spirostreptidae, is used for the descriptions of the new species. New records of previously described *Xystopyge* species are given.

Introduction

In the early years of diplopod taxonomy species were distinguished based on their external body form; only much later did the value of the differences in gonopod morphology become clear. This was also the case for the endemic Afrotropical family Odontopygidae. The first mention of the name *Odontopyge* was by Brandt (1841) who proposed it for a subdivision/subgenus of the genus/subgenus *Spirostreptus* Brandt, 1833, the new subgenus containing a single new species, *Spirostreptus (Odontopyge) kollarii*, and characterized, as the name implies, by the spines on the anal valves. Later, in the early 20th century, a lot of new odontopygid species were described, and *Odontopyge*, now raised to a full genus, was split up in different genera based on gonopod structure by specialists such as Attems (e.g., 1909b). The climax of this phase was the monographic treatment of the family Odontopygidae by Kraus (1960, 1966) at which point a total of 40 genera and 357 species had been described. However, the identity of *O. kollarii* had not been settled, and did indeed seem difficult to solve since the type specimen was female and apparently had been lost from the Museum of Leningrad in 1941 (Hoffman 1991). Nevertheless, based on comparison of the original description of *O. kollari* with odontopygid species known from the general area including the type locality of *O. kollari*, Hoffman (1991) proposed that *Omopyge zavattarii* Manfredi, 1941, and *Omopyge sudanica* Kraus, 1966, both be synonymised with *Odontopyge kollarii*. As a result Hoffman suggested a new classification where the genus *Omopyge* Manfredi, 1941, was synonymised under *Odontopyge* Brandt, 1841, and the species previously referred to the genus *Odontopyge* (the messy majority within Odontopygidae) were orphaned. In Hoffman's classification, the enigmatic genus *Atopogestus* Kraus, 1966, is placed in a separate family Atopogestidae (but see Mauriès 1997), and the family Odontopygidae is divided into four subfamilies: Odontopyginae, Perodontopyginae, Lissopyginae and Archepyginae. Since Kraus' *magna opera* there has been but modest progress in documentation of the incredible diversity of Odontopygidae. Especially from East Africa, few new species and genera have been described despite lots of undescribed material sitting in various collections: the new genus *Callistodontopyge* with one new species and one new subspecies (Hoffman and Howell 1981, Hoffman 2002), a review of the genus *Xystopyge* Attems, 1909, with 9 new species and 2 new subspecies