

Revision of the Genus *Anisolepisma* (Zygentoma: Lepismatidae: Acrotelsatinae)

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ABSTRACT. The morphology of the enigmatic silverfish genus *Anisolepisma* Paclt is clarified with a redescription of the type species and the description of three new species. The genus is placed within the subfamily Acrotelsatinae and its relevance to the phylogeny and zoogeography of the Lepismatidae discussed. *Paracrotelsa* Paclt is also placed within the Acrotelsatinae.

KEYWORDS. Thysanura; taxonomy; new species; redescription; *Paracrotelsa*

SMITH, GRAEME B. 2016. Revision of the genus *Anisolepisma* (Zygentoma: Lepismatidae: Acrotelsatinae). *Records of the Australian Museum* 68(6): 269–312. <http://dx.doi.org/10.3853/j.2201-4349.68.2016.1662>

Silvestri (1908) described the silverfish *Heterolepisma hartmeyeri* from a single female specimen collected by the 1905 Hamburg Museum Expedition to south-western Australia. He reluctantly placed the species in the genus *Heterolepisma* Escherich, 1905 probably because of the smooth macrochaetae and parabolic urotergite X, noting that the species differed from others in the genus by the unusual form of the thoracic sterna. His illustration of the metathoracic sternum showed it as a medial cordiform plate posteriorly fringed with setae, flanked by two small oval sclerites whereas the sternal plates of all other *Heterolepisma* species are posteriorly free, partially covering the coxae. Silvestri noted the species also possessed a relatively long scape and unique urosternal chaetotaxy (2+1+2 combs instead of 1+1). He illustrated but did not comment on the unique arrangement of papillae on the ultimate article of the labial palp (2+2 in a diamond arrangement). Stach (1933) compared the species of the genus *Heterolepisma* but expressly excluded *H. hartmeyeri*

due to these differences. He declined to create a new genus for the species, believing this should be left to the original author. Eventually Paclt (1967), in his review of the Lepismatidae, created the necessary new genus *Anisolepisma* with a short diagnosis in French, reproducing Silvestri's original illustration of the metathoracic sternum, apparently without examination of the type specimen. Mendes (1982), in his unpublished thesis, repeatedly comments on the uncertainty surrounding this species, its unusual characters and the inadequacy of the original description to answer fundamental questions regarding its placement. Irish (1990) makes similar remarks in his unpublished thesis, listing *Anisolepisma* as one of the poorly known, monotypic genera in need of revision. Mendes (1991), in his review of the phylogeny of the Lepismatidae, expressly excluded *Anisolepisma* (as well as *Paracrotelsa* Paclt, 1967, *Panlepisma* Silvestri, 1940, *Apteryskenoma* s.str. Paclt, 1967) from his analysis due to the paucity of adequate detail.