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Species diversity of *Strigamia* Gray, 1843 (Chilopoda: Linotaeniidae): a preliminary synthesis

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Abstract

The centipede genus *Strigamia* Gray (Chilopoda: Geophilomorpha: Linotaeniidae) is revised with regards to morphological diagnosis, composition in known species, taxonomic nomenclature, major characters differentiating species, and geographical distribution. Published information has been integrated and reinterpreted after direct examination of more than half of the known species. The genus *Strigamia* is distinguished from similar genera (*Agathothus* Bollman, *Araucania* Chamberlin, *Damothus* Chamberlin, *Zantaenia* Chamberlin) mainly by the conspicuous basal denticle of the forcipular tarsungulum, the paired ventral pore areas on the posterior part of trunk segments, and the remarkably swollen ultimate pair of legs in adult males. At least 32 distinct species are known and another 12 are recognized provisionally, whereas 21 names are rejected as synonyms. Of all other nominal species that have been referred to *Strigamia* or its synonyms in the past, 16 are shown not to actually belong to *Strigamia* and another 4 remain uncertain as to their generic assignment. Species of *Strigamia* differ mainly in the shape of the forcipular tarsungulum and denticle, average number of legs (overall range from 31 to 83 pairs, possibly to 91), aspect of pleuropretergite and shape of metasternite of the ultimate leg-bearing segment, and the arrangement of coxal pores. *Strigamia* as a whole inhabits the most part of the temperate Holarctic, but reaches southwards to the Indochinese region. The following new synonymies are introduced: *Leptodampius* Chamberlin, 1938 = *Korynia* Chamberlin, 1941 = *Strigamia* Gray, 1843; *Scolioplanes engadinus banaticus* Verhoeff, 1935 = *S. acuminata* (Leach, 1815); *Scolioplanes mediterraneus* Verhoeff, 1928 = *S. crassipes* (C.L. Koch, 1835). The following new combinations are introduced: *Strigamia auxa* (Chamberlin, 1954), *S. carmela* (Chamberlin, 1941), *S. texensis* (Chamberlin, 1941), *S. tripora* (Chamberlin, 1941), all from *Korynia*; *S. exul* (Meinert, 1886), *S. sacolinensis* (Meinert, 1870), *S. sibirica* (Seliwanoff, 1881), *S. sulcata* (Seliwanoff, 1881), all from *Scolioplanes* Bergsøe & Meinert; *S. fusata* (Attems, 1903) from *Diplochora* Attems; *S. lampra* (Chamberlin, 1938) from *Leptodampius*; *S. munda* (Chamberlin, 1952) from *Linotaenia* C.L. Koch; *S. svenhedini* (Verhoeff, 1933) from *Paraplanes* Verhoeff; *S. urania* (Crabill, 1954) from *Tomotaenia* Cook, 1895.

Key words: Geophilomorpha, morphology, taxonomy, distribution, identification

Introduction

Strigamia Gray is one of the richest and most widely distributed genera of soil-dwelling centipedes (Chilopoda Geophilomorpha; Fig. 1): more than 70 species-level taxa have been named to date, and these have been recorded from all major boreal lands, including vast parts of North America and Eurasia (Bonato *et al.* 2011).

At present, however, students dealing with *Strigamia* for taxonomic, faunistic and ecological investigations face a very inadequate and inconsistent taxonomy. The level of knowledge is very diverse between species: the North-European *S. maritima* (Leach) is one of the best known centipede species in the world, also with respect to developmental genetics and embryonic and post-hatching development (Lewis 1961; Arthur & Chipman 2005; Horneland & Meidell 2009; Brena & Akam 2012), but most North American species have been so vaguely described that they have been often confused and still today it is unclear how to distinguish them. Moreover, different authors worked independently on the faunas of different continents, developing parallel taxonomies employing different genus names. Nearctic species were studied mainly by H.C. Wood, O.F. Cook, R.V.