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Review of the millipede family Diplomaragnidae of Japan, with description of a new species and the restoration of the combination *Diplomaragna hokkaidensis* (Verhoeff, 1939) (Diplopoda, Chordeumatida, Diplomaragnidae)

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Abstract

Diplomaragnidae are currently represented in Japan by ten species in three genera. One species is described here as new to science: *Tokyosoma flexuosum* sp. n. *Maritimosoma hokkaidense* (Verhoeff, 1939) is returned to *Diplomaragna*: *Diplomaragna hokkaidensis* (Verhoeff, 1939). The distributions of the Japanese species of Diplomaragnidae are mapped.

Key words: Millipede, diplomaragnid, new species, description, transfer, map, Japan

Introduction

The first data on diplomaragnids of Japan derive from the paper by Verhoeff (1914) where the new genus *Syntelopodeuma* Verhoeff, 1914 and the new species *S. gracilipes* Verhoeff, 1914 were described, and the subfamily Diplomaragninae obtained full family status. Later Verhoeff described another new species of this genus (*S. hokkaidense* Verhoeff, 1939) (Verhoeff 1939), and erected a new monotypic genus *Niponiothauma* Verhoeff, 1942 with the type species *N. inflatum* Verhoeff, 1942 (Verhoeff 1942). Shear (1990) reillustrated this species and expressed his doubts about its type locality.

Verhoeff (1929), in a key, introduced a new subfamily Tokyosominae (recte: Tokyosomatinae) with type genus *Tokyosoma* gen. n. and its type species *Tokyosoma takakuwai* sp. n. However, he only gave an ample diagnosis of the subfamily and a very short description ("♂, ♀, 20 mm lg") of the type species. A more complete description of the type species was only published three years later (Verhoeff 1932). However, according to the rules of the International Code of Zoological Nomenclature (Arts. 12.1, 12.2.6 and 13.5) a valid name should be accompanied by a description or diagnosis; so all the three taxa were proposed validly, and the valid publication date of the type species is *Tokyosoma takakuwai* Verhoeff, 1929. Mistakes in Verhoeff's description and localities were corrected by Takakuwa (1954) and Miyosi (1958, 1959). Murakami (1971) also redescribed *Tokyosoma takakuwai*.

In addition, several cave-dwelling diplomaragnids have been discovered: Miyosi (1958) described the new genus *Pterygostegia* Miyosi, 1958 with the type species *P. kuroiwadensis* Miyosi, 1958. Murakami & Kawasaki (1975, 1976) added three more species to this genus from caves of two prefectures (*P. obliqua*, *P. anops*, and *P. grandilobata*). Later, a description of *Diplomaragna tsurusakii* Shear, 1990, from Hokkaido Island, appeared.

It should be noted that the taxonomic history of the family Diplomaragnidae is dramatic considering the creation of new families and genera and their subsequent synonymization and transfer, as well as new combinations of species. Information on this progress can be obtained from the publications by Golovatch (1977, 1979), Shear (1979, 1990), and Mikhaljova (2000). In addition, a new, in-depth study of the gonopod structure of Japanese Diplomaragnidae is required, especially on the species of the genera *Tokyosoma* and *Pterygostegia* (Mikhaljova *et al.* 2010).

The present paper provides a description of a new species as well as a list of Diplomaragnidae occurring in

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