



## Centipede systematics: progress and problems\*

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\**In: Zhang, Z.-Q. & Shear, W.A. (Eds) (2007) Linnaeus Tercentenary: Progress in Invertebrate Taxonomy. Zootaxa, 1668, 1–766.*

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### Abstract

Breakthroughs in centipede systematics over the past 25 years have included: a stable morphology-based cladogram for ordinal interrelationships that is largely congruent with well-sampled nuclear ribosomal genes; the discovery of mid Palaeozoic crown-group fossils, including Silurian-Devonian stem-group Scutigermorpha and an extinct order in the Middle Devonian; and, a web-based catalogue of all centipede species globally. Challenges include species delimitation in several groups, conflict between different kinds of molecular data (nuclear coding genes versus ribosomal genes), the inter-familial relationships and classification of the Geophilomorpha in particular, and effecting a synthesis between microanatomical studies of selected ‘model’ species and dense taxonomic sampling in numerical phylogenetic analyses.

**Key words:** Chilopoda, phylogeny, taxonomy