



Sinahemeroscopus magnificus, new genus and species of ‘libelluloid’ dragonfly from the Chinese Mesozoic (Odonata, Anisoptera: Nannogomphidae?)

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Abstract

Sinahemeroscopus magnificus **gen.** and **sp. nov.** is described from the Early Cretaceous of China. We tentatively attribute it to the Nannogomphidae. This family was currently known from the Late Jurassic of Germany.

Key words: Odonata, Cavilabiata, **sp. nov.**, Early Cretaceous, China

Our knowledge on the Mesozoic record of the ‘libelluloid’ lineage of Odonata (clade Cavilabiata Bechly, 1996) has recently increased with discoveries of its oldest representative from the Middle Jurassic of Inner Mongolia in China (Huang and Nel 2007). Fossils have also been described from the Jurassic of Germany (Bechly 2003), UK, and Spain (Fleck *et al.* 2009). Fleck *et al.* (2009) discussed the timing, appearance, and Mesozoic diversification of this clade. It appears this group was flourishing during the Late Jurassic and Early Cretaceous with numerous families that are now extinct. The oldest known fossil of the modern most diverse family Libellulidae is dated from the Late Cretaceous (Fleck *et al.* 1999). Some of these Mesozoic families are currently known from limited strata. This is the case for the Nannogomphidae Bechly, 1996 known only from the Late Jurassic of Germany (Bechly *et al.* 1996, 1998; Bechly 2003).

Here we describe a new genus and species we tentatively attribute to Nannogomphidae making it the first early Cretaceous representative of this family from China. The type material was collected near the Liutiaogou Village, Xiangyang Township, Ningcheng County, Inner Mongolia, NE China (ca. 30 km western of the famous Daohugou Village). This locality has yielded a rich variety of plants, vertebrates (e.g. lampreys, see Chang *et al.* 2006), and invertebrates (including a variety of insects) that are preserved in finely laminated yellowish shale.

Wing venation nomenclature follows Riek and Kukalová-Peck (1984) as amended by Nel *et al.* (1993) and Bechly (1996). The higher classification of fossil and extant Odonatoptera, as well as familial and generic characters follow Bechly (1996; 2008).

Order Odonata Fabricius, 1793

Family Nannogomphidae Bechly, 1996

Type genus. *Nannogomphus* Handlirsch, 1906, by original designation; other included genera. *Prohemeroscopus* Bechly *et al.*, 1998, *Sinahemeroscopus* gen. nov.