



## A review of the genera *Prismognathus* Motschulsky and *Cladophyllus* Houlbert (Coleoptera: Scarabaeoidea: Lucanidae) from China, with the description of two new species

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### Abstract

A classification scheme is provided for the genera *Cladophyllus* Houlbert, *Cyclorasis* Thomson, *Eligmodontus* Houlbert, *Gonometopus* Houlbert, *Prismognathus* Motschulsky and *Tetrarthrius* Didier. The Chinese species of *Prismognathus* (in the present sense) and *Cladophyllus* are reviewed, with the male and female genitalia illustrated. New distribution data are given for some Chinese species. Two new species of *Prismognathus* are described, *P. haojiani* **new species** from Guizhou, and *P. shani* **new species** from Sichuan. Keys to males and females of the Chinese *Prismognathus* and *Cladophyllus* are also given.

**Key words:** Lucanidae, *Prismognathus*, *Cladophyllus*, new species, China

### Introduction

The genera *Cladophyllus* Houlbert, *Cyclorasis* Thomson, *Eligmodontus* Houlbert, *Gonometopus* Houlbert, *Prismognathus* Motschulsky and *Tetrarthrius* Didier constitute a small group of genera in Lucaninae, which is separable from the genera *Cyclommatus* Parry, *Dorcus* MacLeay, *Lucanus* Scopoli and *Prosopocoilus* Hope & Westwood using the following combination of characters: mesotibia in both sexes with one evident lateral external spine; male ocular canthus intruding the eye for less than half the outer margin of the eye; male protibia not smooth on lateral external margin; female pronotum angled at lateral margins and markedly wider at lateral angle than near anterior margin; vertex of the female head without tubercles, instead with a pair of shallow depressions near base of mandible; female mandible strongly incurved near apex, with the dorsal tooth completely developed; male genitalia without a pair of struts alongside the median lobe.

These genera were all considered synonyms of *Dorcus* by Arrow (1943, 1950); but such classification was not fully accepted by other authors (Didier & Séguy 1952, 1953; Benesh 1960; Endrödi 1971; Kurosawa 1975; Lacroix 1978; Fujita & Ichikawa 1986; Bomans 1989; Sakaino 1992; Mizunuma & Nagai 1994; Boucher 1996; Ikeda 1997; Nagai 2000a, 2000b, 2005; Bartolozzi 2003; Baba 2004; Bartolozzi & Wan 2006; Wan *et al.* 2007; Fujita 2010) who considered *Prismognathus* as a valid genus. Nagai (2005) treated *Gonometopus*, *Eligmodontus* and *Tetrarthrius* as synonyms of *Prismognathus* and this classification was followed by Bartolozzi & Wan (2006), who placed *Cyclorasis* also as a synonym of *Prismognathus*. Boucher (1996) expressed some doubts about the validity of *Cladophyllus* but gave no taxonomic changes; subsequently, Fujita (2010) treated *Cladophyllus* as a synonym of *Prismognathus*. We examined most species of this genus group and recognized four genera as follows. The asterisk (\*) mark means that the specimens of the species have been examined by us.

1) *Prismognathus* Motschulsky, 1860 (type species: *Prismognathus subaeneus* Motschulsky, 1860)

= *Eligmodontus* Houlbert, 1915 (type species: *Eligmodontus arcuatus* Houlbert, 1915)

= *Gonometopus* Houlbert, 1915 (type species: *Gonometopus triapicalis* Houlbert, 1915)

Diagnostic characters (Figs. 35–72, 79–110, 168–197, 200–223): Antennomere 9 of both sexes less than 3.5 times wider than long; flagellum of the median lobe wide at basal part but narrow and linear near apex; lateral and