



Notes on the morphology, taxonomy, and natural history of the genus *Platycerus* Geoffroy from China, with the description of a new species (Coleoptera: Scarabaeoidea: Lucanidae)

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Abstract

A checklist of the genus *Platycerus* Geoffroy is updated. A method for the observation of endophallus is introduced and used for the study of four species of *Platycerus* from China. The morphology of Chinese species of *Platycerus* is reviewed, and all the useful morphological characters are clarified. A character matrix is made to accumulate all the current information on morphology of Chinese species. *Platycerus yingqii* sp. nov. is described from the northern slope of Mount Taibaishan, southern Shaanxi, China. This new species is similar to *Platycerus rugosus*, but can be distinguished by male with a browner dorsal surface, remarkably shorter tarsi, lighter and redder ventrites, shorter gap between incisor teeth and mola, male genitalia with different endophallus, female with shorter metatarsi, and female genitalia with the inner apex of hemisternite not protruding beyond the outer apex. The morphological characters of the other three species from China are also studied. A key to the geographical species groups of *Platycerus* is presented. Keys to the Chinese species are provided for both males and females. Finally some natural history notes are given for some species of *Platycerus* from China.

Key words: Lucanidae, *Platycerus*, new species, China, checklist, identification key, morphology, character matrix, endophallus, natural history