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## A revision of the *Pediacus* Shuckard 1839 (Coleoptera: Cucujidae) of Asia and Australasia

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### Abstract

The *Pediacus* Shuckard fauna of Asia and Australasia is revised. Eighteen species are recorded, described and illustrated from the regions and a key to species is provided. Nine new species are described: *Pediacus australis* sp. nov. (Australia, Papua New Guinea, Philippines, Thailand), *P. carinatus* sp. nov. (Indonesia, Malaysia, Thailand), *P. fujianensis* sp. nov. (China), *P. japonicoides* sp. nov. (Taiwan); *P. leei* sp. nov. (Taiwan), *P. pendleburyi* sp. nov. (Malaysia), *P. sinensis* sp. nov. (China), *P. taiwanensis* sp. nov. (Taiwan) and *P. thomasi* sp. nov. (Taiwan). A checklist of the *Pediacus* fauna of the world is given, listing a total of 31 species.

**Key words:** Beetle, taxonomy, new species, key to species, checklist

### Introduction

The genus *Pediacus* Shuckard was established by Shuckard (1839) when he transferred *Cucujus dermestoides* Fabricius to the new genus. Most recently, Thomas (2004) listed 22 species of *Pediacus* worldwide, covering a largely Holarctic distribution, but also extending to the Neotropics. The genus is absent from the African continent, as is true for the remainder of the Cucujidae. *Pediacus* is one of four genera currently included in the family Cucujidae, along with the Holarctic *Cucujus* Fabricius, the Neotropical *Palaestes* Perty and the Australian *Platisus* Erichson. *Pediacus* is most closely related to *Cucujus*, based on external morphology and the structure of the male genitalia. In *Pediacus* and *Cucujus* the basal tarsomere is significantly shorter than tarsomeres II to IV (II to III in the hind tarsomere of males) and the aedeagus is inverted with parameres ventrad of the penis and has a flagellum. In contrast, in *Palaestes* and *Platisus* the basal tarsomere is subequal in length to tarsomeres II to IV and the aedeagus lies on its side in the abdomen and lacks a flagellum (Thomas, undated webpage; Thomas & Leschen 2010). *Pediacus* and *Cucujus* are most easily differentiated based on their difference in size and the form of the head and antennae. *Pediacus* species are relatively small, ranging from 2.7 to 7.0 mm in length (Thomas 2004), the temple area of the head is either absent or consists of a small acute denticle, and the antennae have a moderately developed 3-segmented club. In contrast, *Cucujus* species range from 9.5 mm in length (*C. clavipes clavipes* Fabricius, 1781, cited in Lee & Thomas 2011) to 24.7 mm (*C. mniszewski* Grouvelle, 1874, cited in Lee & Satô 2007), have well-developed temples that are produced laterally beyond the eye width (Thomas, undated webpage), and have filiform to moniliform antennae. Thomas (2004) noted the similarity of the male genitalia of *Pediacus* and *Cucujus* but that *Cucujus* species have a longer and more heavily sclerotized flagellum and a relatively longer, solid median strut.

The taxonomy of *Pediacus* has received little attention over the past. The only major revision has been Thomas's (2004) treatment of the North American fauna. Study of the Asian fauna has been sporadic and largely limited to single species' descriptions. This study is the first revision of the fauna of the Asian region as a whole and is the first to describe a species from the Australasian region. We record eighteen species of *Pediacus* from the Asian and Australasian regions including nine newly described species.

*Pediacus stephani* Thomas, 2004: 168; western North America.  
*Pediacus subglaber* LeConte, 1854: 73; eastern North America.  
*Pediacus tabellatus* Wollaston, 1864: 131; Canary Islands.  
*Pediacus taiwanensis* Marris & Ślipiński **sp. nov.**; Taiwan.  
*Pediacus thomasi* Marris & Ślipiński **sp. nov.**; Taiwan.

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