*Zootaxa* 4462 (1): 139–140
http://www.mapress.com/j/zt/


**Correspondence**

ISSN 1175-5326 (print edition)
**ZOOTAXA**
ISSN 1175-5334 (online edition)

https://doi.org/10.11646/zootaxa.4462.1.9
http://zoobank.org/urn:lsid:zoobank.org:pub:AC88D895-9BBC-4300-9850-3AE7F4674781

# Two new synonyms in the dung beetle genus *Parachorius* (Coleoptera: Scarabaeidae: Scarabaeinae) from the Oriental Region

SERGEI TARASOV
*National Institute for Mathematical and Biological Synthesis, University of Tennessee, Knoxville, TN 37996, USA.*
*E-mail: sergxf@yandex.ru*

The dung beetle genus *Parachorius* Harold, 1873 (= *Cassolus* Sharp, 1875) belongs to the monotypic tribe Parachoriini Tarasov, 2017 and includes 19 species from the Oriental and southeastern Palaearctic Regions (Tarasov 2017). Two recent studies (Ochi *et al.* 2017a, b) described two new species of this genus from Laos and Sumatra. The investigation of detailed descriptions and illustrations from those studies and their assessment in the light of the recent revision of *Parachorius* (Tarasov 2017) revealed that those new species are synonyms of earlier described ones: *P. javanus* (Boucomont, 1914) = *P. singgalangensis* Ochi, Kon & Hartini, 2017, **new synonymy**, and *P. fukiensis* (Balthasar, 1960) = *C. laosensis* Ochi, Kon & Higurashi, 2017, **new synonymy**. Unfortunately, this oversight happened because the authors of those new species did not check the type material of already described taxa.

### *Parachorius javanus* (Boucomont, 1914)

*Cassolus javanus* Boucomont, 1914: 251 (type locality: Sokabumi [West Java]); Balthasar 1963: 263
*Parachorius javanus*: Tarasov 2017: 128
*Parachorius singgalangensis* Ochi, Kon & Hartini, 2017: 68 (type locality: Mt Singgalang, West Sumatra), **new synonymy**

The original description treats *P. singgalangensis* to be the closest relative of *P. javanus*. The authors of the original description did not examine the types of *P. javanus* and misidentified it, which caused them to conclude that *P. singgalangensis* is a new species. The shape of parameres (which are medially narrowed and apically acute), of what the authors consider to be the aedeagus of *P. javanus* (Figs. 10–12 in Ochi *et al.* 2017a), clearly indicates that their "*P. javanus*" represents another but closely related species *P. pseudojavanus* Tarasov, 2017. At the same time the aedeagus illustrations of *P. singgalangensis* (Figs. 7–8 in Ochi *et al.* 2017a), where parameres are notched basally and claw shaped in lateral view, belong to the true *P. javanus* (see Fig. 14A, E in Tarasov 2017). Besides the shape of aedeagus *P. javanus* differs from *P. pseudojavanus* by the first tooth of protibia notably modified in males and approximately twice as wide as the second tooth. This diagnostic character is also mentioned and illustrated for *P. singgalangensis* (Fig. 3 in Ochi *et al.* 2017a). Thus, based on these evidence, I can confidently conclude that *P. singgalangensis* is a junior synonym of *P. javanus*.

*Parachorius javanus* has been only known by one male holotype from West Java, the study of Ochi *et al.* (2017a) provides a new distribution record of this species, based on three specimens, for West Sumatra (Mt. Singgalang).

### *Parachorius fukiensis* (Balthasar, 1960)

*Cassolus fukiensis* Balthasar, 1960: 90 (type locality: Kuatun, Fújiàn Province, China); Balthasar 1963: 261
*Parachorius fukiensis*: Tarasov 2017: 119
*Cassolus laosensis* Ochi, Kon & Higurashi, 2017: 73 (type locality: Nong Phet, Xieng Khouang, Laos), **new synonymy**

In the original description, the authors compare *C. laosensis* only with *P. nudus* (Sharp, 1875) from Cambodia [*Cassolus* is a junior synonym of *Parachorius* (Tarasov 2017)] and do not assess the species identity of *C. laosensis* against many other *Parachorius* species occurring in Indochina. However, the authors provide the detailed illustrations and description of *C. laosensis* that allow comparing this species to the other representatives of *Parachorius*. The main diagnostic characters listed for *C. laosensis* are: (1) first tooth notably modified in males, approximately twice as wide as second tooth (Fig. 3 in Ochi *et al.* 2017b), (2) metafemoral posterior margin in males not serrate, simple, or dilated in apical third

*Accepted by A. Bezděk: 17 Jul. 2018; published: 24 Aug. 2018*

of metafemur and produced in angle (Fig. 7 in *Ochi et al.* 2017b), (3) metatibia slightly sinuate, inner margin not denticulate, produced in small angle apically (Fig. 6 in Ochi *et al.* 2017b), (4) aedeagus with symmetrical parameres which emarginate superiorly, their apex rounded (Figs. 11–12 in Ochi *et al.* 2017b). These characters clearly indicate that *C. laosensis* is conspecific with the earlier described species *P. fukiensis* (see Fig. 8 in Tarasov 2017) that occurs in southeast China, Laos, and Vietnam, and is also known from the similar geographic locality as that of *C. laosensis* (namely, Xieng Khouang prov., Laos). Thus, I can confidently conclude that *C. laosensis* is a junior synonym of *P. fukiensis*.

## References


Ochi, T., Kon, M. & Hartini, S. (2017a) Generic transfer of *Cassolus javanus* Boucomont (Coleoptera, Scarabaeidae) to the genus *Parachorius*, with description of a new species of *Parachorius* from West Sumatra, Indonesia. *Kogane*, 20, 67–71.

Ochi, T., Kon, M. & Higurashi, T. (2017b) A new species of the genus *Cassolus* (Coleoptera, Scarabaeidae) from Laos. *Kogane*, 20, 73–76.

Tarasov, S. (2017) A cybertaxonomic revision of the new dung beetle tribe Parachoriini (Coleoptera: Scarabaeidae: Scarabaeinae) and its phylogenetic assessment using molecular and morphological data. *Zootaxa*, 4329 (2), 101–149. https://doi.org/10.11646/zootaxa.4329.2.1