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A new species of *Philacelota* Heller (Scarabaeidae: Melolonthinae: Melolonthini) from Flores Island, Indonesia

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Abstract. *Philacelota jakli* sp. n. (Scarabaeidae: Melolonthinae: Melolonthini) is described, illustrated and compared with the other two known congeners, *P. submaculata* Heller and *P. sulana* Heller. *Philacelota submaculata* is here designated the type species for the genus.

Key words. Type species designation, species description, tribal placement.

Introduction

Heller (1900) proposed the generic name *Philacelota* for two new species, *P. submaculata* from northern Sulawesi and *P. sulana* from Sula Mangoli, Indonesia. Neither he nor any subsequent author designated a type species, therefore *Philacelota submaculata*, for which the aedeagus is known, is hereby so designated in order to assure the taxonomic stability of the genus. In *Philacelota* the male antennal club is seven-lamellate with the lamellae nearly equidimensional and longer than the peduncle; the female antennal club is five-lamellate with the lamellae much shorter than in the male and the two proximal lamellae only about one-third the length of the distal lamellae. In both sexes the proximal antennomere of the flagellum is nearly as long as the scape and pedicel combined.

In the overall shape, size, and vittate elytra the species of *Philacelota* are reminiscent of *Engertia* Dalla Torre, 1912, in which the antennal club of both sexes is five-lamellate (six-lamellate in one species) and the proximal antennomere of the flagellum is only as long as the succeeding antennomere. Lacroix (2010) placed *Engertia* in the Leucopholini and *Philacelota* in the Melolonthini, tribes that are maintained as distinct also in other recent works (e.g. Bezděk 2016). However, Britton (1978) did not recognize the tribe Leucopholini and Matsumoto (2010) and Prokofiev (2016) questioned the split, as it does not appear to be supported by morphological evidence. As the sole purpose of this paper is to describe a new species, the question of tribal division is here left unresolved and the tribe Melolonthini is regarded as an undifferentiated assemblage with the genera *Philacelota* and *Engertia* closely resembling each other.

Materials and Methods

Specimens of the new species were compared to photos of *Philacelota* types provided by the Zoological Museum Dresden. Photographic comparison was sufficient in this case because differences in gross morphology among congeners are quite obvious.

The specimen length is given from the tip of the clypeus to the tip of the elytra. Both the holotype and male paratype have been dissected and the cleaned aedeagi glued to the tips of paper tongues pinned underneath the specimens. The types bear red holotype and allotype labels and yellow paratype labels.

Instead of differentiating between bristles and setae (Zídek 2006), only the term ‘seta’ is used in this paper. The terms ‘seta’ and ‘scale’ refer to degrees of hair modification, both stiff and usually pigmented, that differ in shape and cross-section. Whereas setae are tubular and erect, variously inclined or recumbent, scales are flattened in cross-section and always recumbent or nearly so.

Systematics

***Philacelota jakli* Zidek, sp. n.**
Fig. 1–8

Material. Holotype male from Indonesia, Flores Island, Ruteng area, Mt. Kuwus, alt. 500–900 m, leg. S. Jákl xii-2004. Allotype female from the same locality and date. Paratype male and paratype female from the same locality and date. The holotype and allotype have been deposited at the Zoological Museum Dresden, Germany, and the paratypes at the Natural History Museum, London, UK.

Etymology. Named for the Czech entomologist Stanislav Jákl, who collected and graciously made available the entire type series.

Description of male holotype. Fig. 1–5. Length (excluding pygidium) 14 mm. Integument brownish black, with upturned part of clypeus, lateral margins of pronotum and elytra, mouthparts, prothorax, abdomen and legs dark brown, and antenna light brown. Prosternum – metasternum with dense cover of long, soft, brownish-yellow hairs; on other parts of body vestiture composed solely of whitish setae.

Head. Clypeus with anterior margin semilunar, narrowly upturned, glabrous and impunctate, remaining surface densely tuberculate and setose; setae short and erect. Fronto-clypeal suture complete, impressed, with raised edges. Frons and vertex tuberculate, covered by short, erect microsetae and recumbent larger, longer, transversely oriented setae. Antennal club seven-lamellate, with lamellae nearly equidimensional and longer than peduncle; proximal antennomere of flagellum as long as scape and pedicel combined; peduncle very sparsely setose except dense brush of longer setae on posterior side of scape (Fig. 3). Canthus narrow, covered by sturdy setae, overlapping nearly one-half of eye length. Labrum deeply bilobed and densely setose. Terminal maxillary palpomere pointed.

Pronotum. Weakly transverse, widest at midlength, bordered all around, with lateral margins finely crenulate and obliquely angular at midlength, front and hind angles obtuse. Glabrous median line wider posteriorly, extending along entire length and onto scutellum. Setae recumbent, long and narrow, forming a partial whorl pattern on disc.

Scutellum. Triangular and equilateral, with basal margin incomplete, micropunctate and covered by recumbent setae surrounding glabrous median line.

Elytra. Elytron five-costate (including sutural costa), costae barely elevated and rounded in profile, punctate and very sparsely setose; lateral costa nearly as narrow as sutural costa and with a row of coarser punctures in apical half of length. Humeral umbones rounded, glabrous; terminal umbones smaller, glabrous, resulting from confluence of second and third costae.

Venter (Fig. 2). Integument of prosternum–metasternum obscured by dense cover of long, soft, brownish-yellow hairs, showing only small, rounded, peg-like tip of metasternal process. Abdominal ventrites covered by short recumbent setae distributed without medial break, only narrow anterior margins barren. Ventrites I–III equally long, ventrite IV twice as long as III.

Pygidium. Triangular, with apical margin broadly rounded and entirely covered by short recumbent setae.

Legs. Setose, tibiae without transverse carinae, length of terminal tarsomere plus pretarsus (tarsal claw) slightly less than that of four proximal tarsomeres combined, ventral denticle at about midlength of pretarsus. Protibia very weakly bidentate, with only a hint of second tooth; spur minute. Metafemur setose antero- and posteroventrally, medial surface devoid of setae.

Aedeagus (Fig. 4–5). Parameres longer than phallobase, gradually tapering toward blunt tips; in lateral view each paramere with a proximal backward-directed ventral tooth and a distal dorso-ventral expansion into a rounded ventral heel and a sharp dorsal peak.

Female allotype (Fig. 6–8). Length (excluding pygidium) 14 mm. Differs from male in having body and pygidium somewhat wider, protibia more distinctly bidentate, and antennal club five-lamellate (Fig. 8), with lamellae much shorter than in male and two proximal lamellae only about one-third as long as distal lamellae. Setation and prosternal – metasternal pubescence as dense and extensive as in male except medial parts of ventrites I–III nearly devoid of setae and ventrite IV only slightly longer than preceding.

Variability. In the female paratype the integument is chestnut brown both ventrally and dorsally, probably due to a near-teneral condition.

Comparison. *Philacelota submaculata* (Fig. 9) bears squamose vestiture, whereas *P. sulana* (Fig. 10) bears setose vestiture, as does the new species. The aedeagus of *P. sulana* is not known (type not dissected), but external differences alone nevertheless clearly separate the new species from its congeners. *P. jakli* sp. n. is larger (14 mm excluding pygidium), bears much longer and denser vestiture than *P. sulana*, has the protibia weakly bidentate (no trace of a second tooth in the other two species), the pronotal median line reaches the front margin, the pronotal angles are obtuse, and due to lateral angulation the maximum pronotal width is situated at midlength (at base in the other two species). In addition to structural features, the three species of *Philacelota* are widely separated geographically: The type locality of the new species, Flores Island, lies ca. 1200 km south of the type locality of *P. submaculata* (northern Sulawesi) and ca. 800 km south of the type locality of *P. sulana* (Sula Mangoli).

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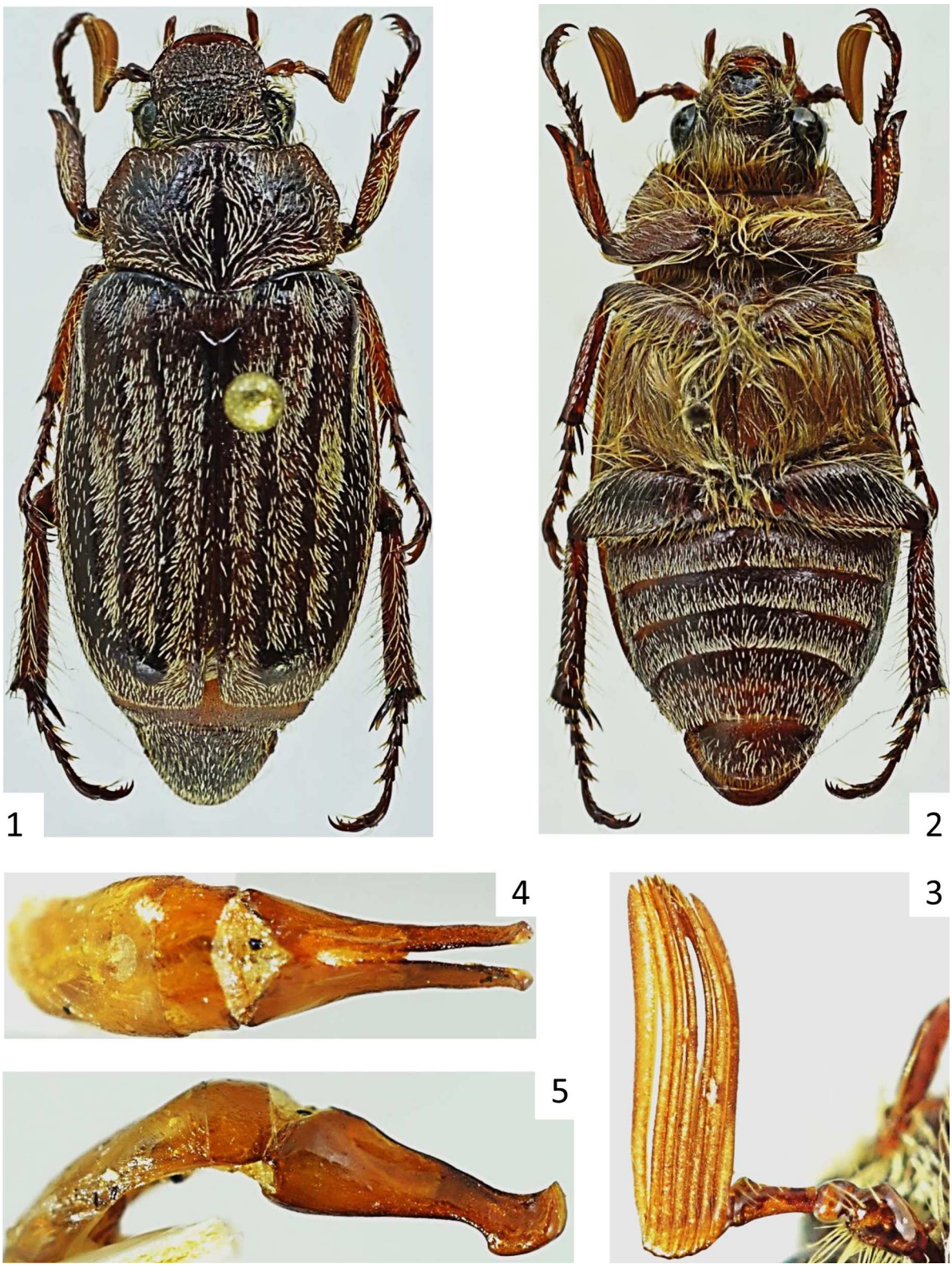
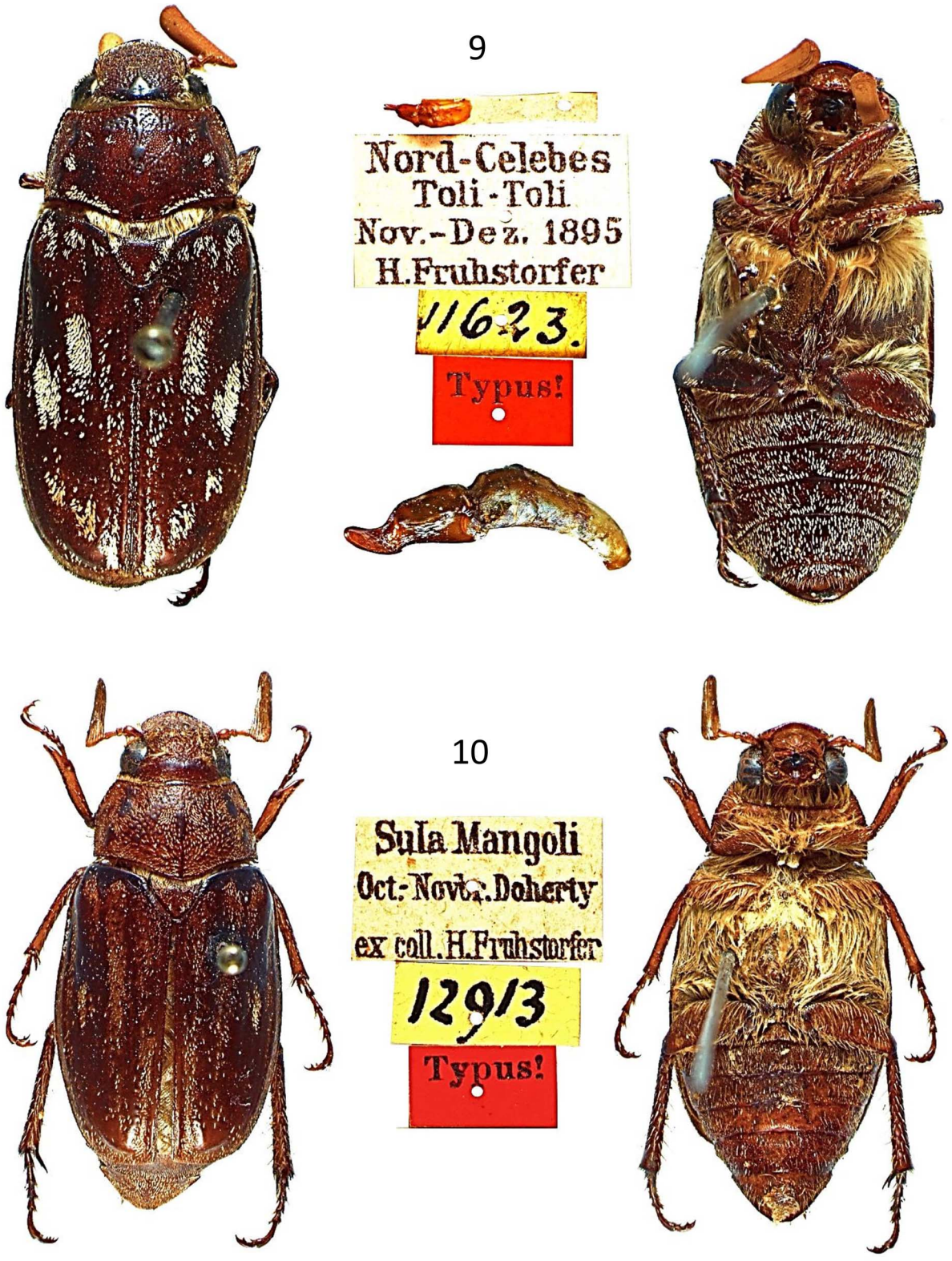


Figures 1–5. *Philacelota jakli* sp. n. Holotype male, 14 mm (excluding pygidium). **1)** Dorsal habitus. **2)** Ventral habitus. **3)** Antenna. **4)** Aedeagus, dorsal. **5)** Aedeagus, left lateral.

Figures 6–8. *Philacelota jakli* sp. n. Allotype female, 14 mm (excluding pygidium). **6)** Dorsal habitus. **7)** Ventral habitus. **8)** Antenna.



Figures 9–10. Heller's (1900) types of *Philacelota* deposited at the Zoological Museum Dresden (Senckenberg Naturhistorische Sammlungen Dresden), Germany. Photos courtesy Olaf Jäger. **9)** *P. submaculata*, male, 11.6 mm. **10)** *P. sulana*, male, 10 mm. Lengths exclude pygidium.