

## A New Genus of the Acalyptini (Coleoptera, Curculionidae) with Five Segments in the Funicle

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**Abstract** A new genus and species of the flower weevil tribe Acalyptini is described from Sulawesi, Indonesia under the name *Meredoloides niisatoi* gen. et sp. nov. *Meredoloides* closely resembles in appearance *Meredolus* MARSHALL occurring in the Solomon Islands, but is characterized in having the antennae 5-segmented in the funicle. The weevils were found on the inflorescences of coconut palm, *Cocos nucifera*, which is also the host of *Meredolus*.

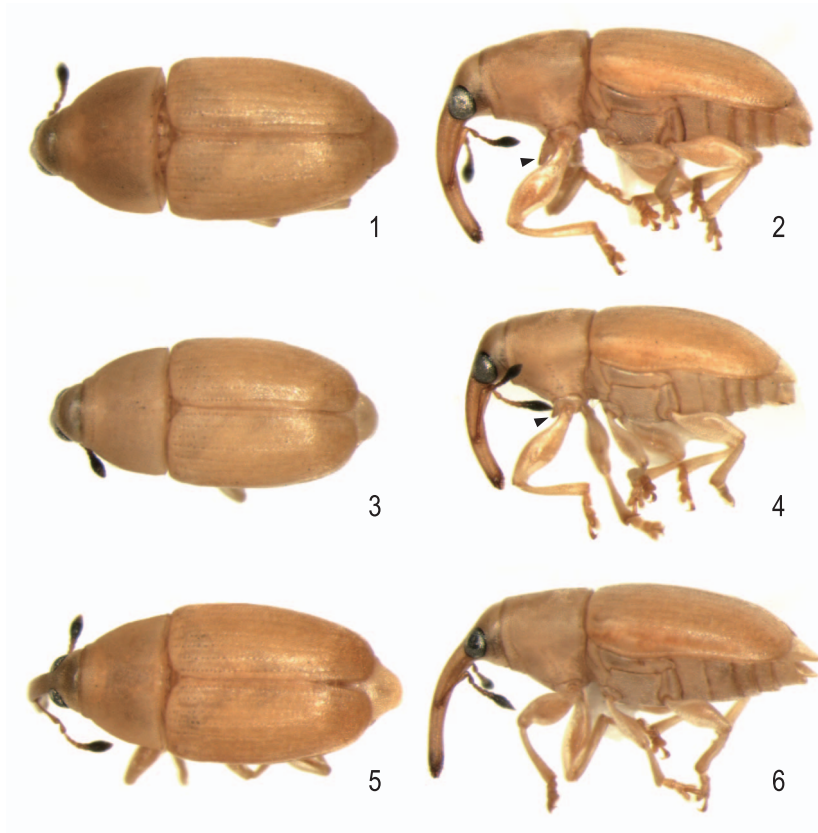
Fundamental number of the funicular segments in the antennae is seven in the family Curculionidae. They are often reduced in number to six and rarely to five or less in several taxa in parallel. The funicle is 7-segmented in all the previously known genera of the Acalyptini *sensu* KOJIMA & MORIMOTO, 2005. However, one species is provided with the antenna, which has five segments in the funicle and thus represents a new genus, was found from Sulawesi on the inflorescences of coconut palm. The weevil is very similar to *Meredolus* MARSHALL, 1935 from the Solomon Islands associated with the inflorescence of coconut palm except for the number of the funicle.

The type materials are preserved in the Laboratory of Entomology, Tokyo University of Agriculture, Atsugi, Kanagawa, Japan.

*Meredoloides* gen. nov.

Type species: *Meredoloides niisatoi* gen. et sp. nov.

Head with forehead slightly narrower than base of rostrum, with median fovea indefinite. Eyes weakly convex, their curvature not continuous with that of temple. Rostrum with shallow groove laterally forming false scrobe, extending beyond antennal insertion and antennal scape obliquely retracted to groove. Antennae with funicle 5-segmented; club with segmentation indefinite. Prothorax transverse, widest at or just a little before base, shallowly bisinuate at base, weakly constricted at apex. Scutellum distinct. Elytra leaving propygidium broadly exposed, with ten striae, 9th and 10th confused posteriorly. Legs with femora clavate, inerm; tibiae gradually widening from base to apex; tarsal claws simple and widely divaricate. Prosternum between fore coxae narrow, with ventral process, which is concaved dorsally, immediately in front of fore

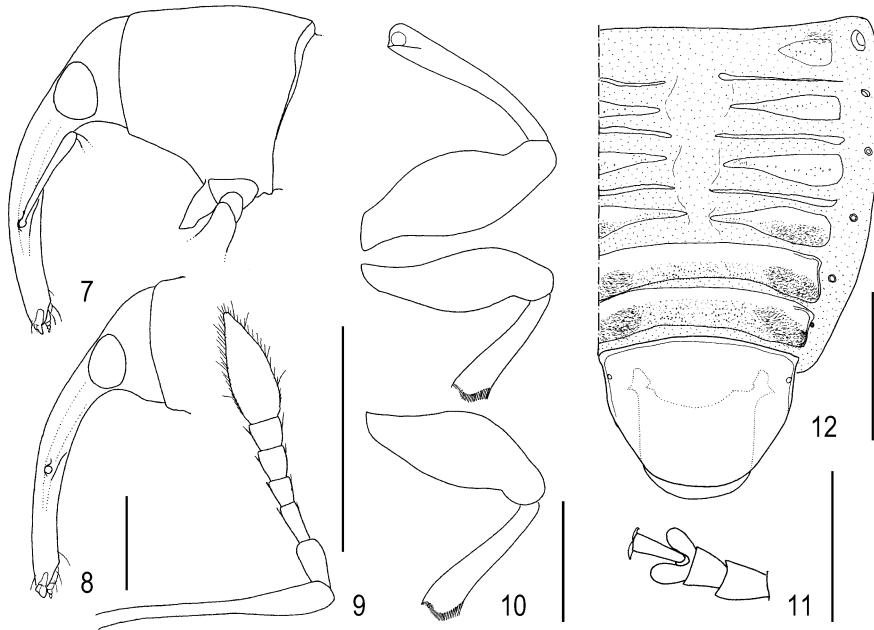


Figs. 1–6. Habitus photographs of *Meredoloides niisatoi* gen. et sp. nov. — 1, Large male, dorsal; 2, ditto, lateral; 3, small male, dorsal; 4, ditto, lateral; 5, female, dorsal; 6, ditto, lateral. Black triangular marks in Figs. 2 & 4 indicate the prosternal process.

coxae in male, the process greater in larger male and reduced in size in smaller male or faintly tuberculate instead of process in female; mesosternal process less than half as wide as middle coxa. Venter with 2nd ventrite as long as 1st behind coxae and as long as 3rd and 4th combined, 5th shorter than 3rd and 4th combined, with a pair of long erect setae.

*Etymology.* Resembling ('-oides', Greek) *Meredolus* MARSHALL.

*Comments.* *Meredoloides* closely resembles the monotypic genus *Meredolus* MARSHALL (type species: *M. cocotis* MARSHALL) in appearance among the known genera of Acalyptini in the following points: pale yellow in color, prothorax widest at or near base, femora edentate and prosternum with dorsally concaved process in front of fore coxae in male. However, *Meredoloides* is easily distinguished from *Meredolus* and other genera of Acalyptini in having the antennae 5-segmented in the funicle and the club segmented indefinitely. The latter is visibly at least 3-segmented in Acalyptini as usual.



Figs. 7–12. Characteristics of *Meredoloides niisatoi* gen. et sp. nov. — 7, Head and prothorax, lateral; 8, head, lateral; 9, antenna; 10, femora and tibiae; 11, tergite; 12, fore tarsus (7, 9–12, male; 8, female). Scale=0.5 mm.

*Meredoloides niisatoi* sp. nov.

(Figs. 1–17)

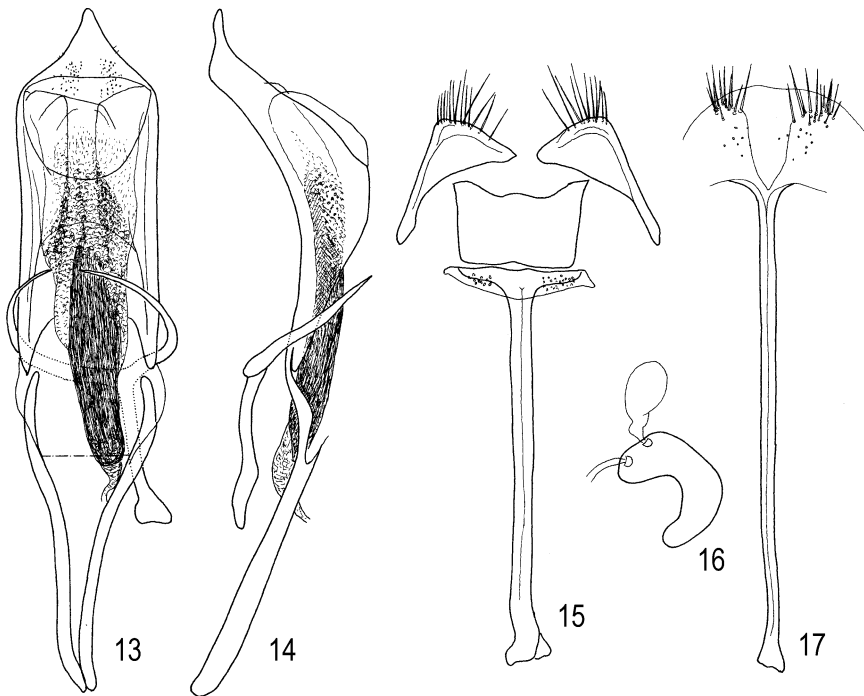
**Male.** Length: 2.5–3.1 mm; width: 1.2–1.4 mm.

Derm pale yellow except antennal club fuscous, with fine silky pubescence.

Head with very shallow fine close punctures. Rostrum slightly longer than pronotum. Antennae inserted a little beyond middle of rostrum; scape longer than funicle, hardly reaching eye; funicle with 1st segment about twice as long as broad, 2nd a little shorter than 1st, 3rd and 4th subequal in length, 2/3 times as long as 2nd, 5th nearly as broad as long, slightly shorter than 4th; club nearly as long as basal three segments of funicle combined.

Prothorax 1.5 times as wide as long, narrowing in regular curve from broadest base to apex, subapical constriction weak; dorsum with very shallow fine subconfluent punctures. Scutellum triangular. Elytra a little wider than prothorax, 1.2 times as long as wide; striae very shallow, with fine punctures, stria 1 slightly deeper than others; intervals flat, finely shagreened.

Terminalia as figured; sternite 8 paired, subtriangular, without sclerite between them; spiculum gastrale T-shaped, with subquadrate median sclerite; aedeagus broad, median lobe acuminate and abruptly curved at apex in lateral view, internal sac densely



Figs. 13–17. Male and female terminalia of *Meredoloides niisatoi* gen. et sp. nov. — 13, aedeagus and tegmen, dorsal; 14, ditto, lateral; 15, sternite 8 and spiculum gastrale; 16, spermatheca; 17, spiculum ventrale. Scale=0.5 mm.

spinulose on basal half.

**Female.** Length: 2.5–3.2 mm; width: 1.2–1.5 mm. Differs from male in having rostrum 1.3–1.4 times as long as pronotum and antennae inserted at middle of rostrum. Terminalia as figured; spermatheca C-shaped; spiculum ventrale slender, about four times as long as basal part.

**Etymology.** The species is named after Dr. Tatsuya NIISATO, who found this interesting weevil.

**Type material.** Holotype: male, Indonesia: S. Sulawesi, near Enrekang, 50 km SE of Parepare, 13-X-2008, T. NIISATO. Paratypes: 5 males and 9 females, same data as the holotype.

**Distribution.** Known only from the type locality of South Sulawesi, Indonesia.

**Comments.** Morphometrical variation occurs remarkably in male individuals. Although not quantified, larger males display positive allometry in size of the prosternal process. This would suggest the presence of fighting among males as is known in the other weevil with thoracic horn of similar origin (EBERHARD & GARCIA-C., 1998).

**Biological notes.** Weevils were captured on the inflorescences of coconut palm with

other members of Acalyptini: *Parimera* sp. and *Derelomorphus* sp. The former may be the undescribed species and the latter may be conspecific with *D. eburneus* MARSHALL known as potentially important pollinator of coconut in Malaysia (COCK, 1985).

### Acknowledgment

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### 要 約

小島弘昭: 触角中間節が5節からなるデオゾウムシ族(コウチュウ目ゾウムシ科)の新属新種。——デオゾウムシ族の既知種は触角中間節が7節からなる。インドネシア・スラウェシ島のココヤシ花序から得られたデオゾウムシ族を調べたところ、触角中間節が5節からなる種が見つかったので、新属新種(*Meredoloides niisatoi* gen. et sp. nov.)として命名・記載した。本属は、ソロモン諸島から知られ、同じココヤシを寄主とする*Meredolus*属と外見が酷似するが、触角中間節数により既知のすべてのデオゾウムシ族の属と区別がつく。タイプ種大型雄では前胸基節前の突起が発達する相対成長が見られることから雄間の闘争行動の存在が示唆される。

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