

## Description of two new *Wallacedela* species and notes on another species from Sulawesi

(Coleoptera: Cicindelidae)

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### Abstract

Two new species of tiger beetles are described from Sulawesi: *Wallacedela pseudofulvescens* sp. n. from the vicinity of Kendari, and *Wallacedela curvipennis* sp. n. from Tanah-Toraja. Information is given on a hitherto unknown female specimen of *Thopeutica? allardiana* CASSOLA, 1991.

### Introduction

The tiger beetle fauna of Sulawesi (formerly Celebes), Indonesia, is known to be exceptionally rich and diverse (CASSOLA 1991). Subsequently, a few new species were discovered and described, i. e. one species of *Thopeutica* s. str., five species of *Thopeutica*, subgenus *Pseudotherates*, and three species of *Wallacedela* (SAWADA & WIESNER 1994, 1997; CASSOLA 1996, 1997; MATALIN 1998; WERNER & WIESNER 1997, 1999). Some more data were provided by SAWADA & WIESNER in 2000. Our present understanding of the Sulawesi tiger beetle fauna now sums up to 99 species, 78 of which (78.8 %) are endemic to the island.

The bulk of Sulawesi's tiger beetle fauna is represented by two cicindelinae genera: first the genus *Thopeutica* CHAUDOIR (in SCHAUM, 1861), endemic to Wallacea, which includes elements from both Sulawesi (subgenus *Thopeutica* s.str.: 14 spp.; subgenus *Pseudotherates* CASSOLA, 1991: 19 spp.) and the Philippines (26 species); second the genus *Wallacedela* CASSOLA, 1991, endemic to Sulawesi (27 species, including the two described below, three of which were recorded only from Sulawesi Tenggara).

### *Wallacedela pseudofulvescens* sp. n.

**Holotype:** Male. S.E. Sulawesi (Sulawesi Tenggara): 30 km W of Kendari, Kendari Airport, 11-14.II.1994, M. STRBA & I. JENIS leg., deposited in the State Museum of Natural History, Stuttgart, Germany (SMNS), but presently as long term loan in second author's collection; paratype female from same locality, in first author's collection.

**Etymology:** The name of this additional new species of *Wallacedela* is chosen because it is strongly reminiscent of *W. fulvescens* (W. HORN, 1892).

**Diagnosis:** A rather small *Wallacedela* species belonging to the *eximia*-group, superficially similar to *W. fulvescens* (W. HORN, 1892) and *W. kurbatovi* MATALIN, 1998, however easily recognizable by the shape of male aedeagus and the much differently pitted mesepisternal coupling sulci of female.

**Description:** (Figs. 1a-d). Length 11 mm (without labrum).

Head shining bluish to black, with some green reflections on sides of vertex, sides of clypeus and the front part of cheeks; glabrous, two fine sensorial setae near both eyes. Clypeus and frons almost smooth, eyes and sides of vertex finely striated longitudinally. Labrum testaceous, transverse, feebly tridentate in

\* Studies of Tiger Beetles. CXVIII

\*\* 74th contribution to the knowlegde of Cicindelidae

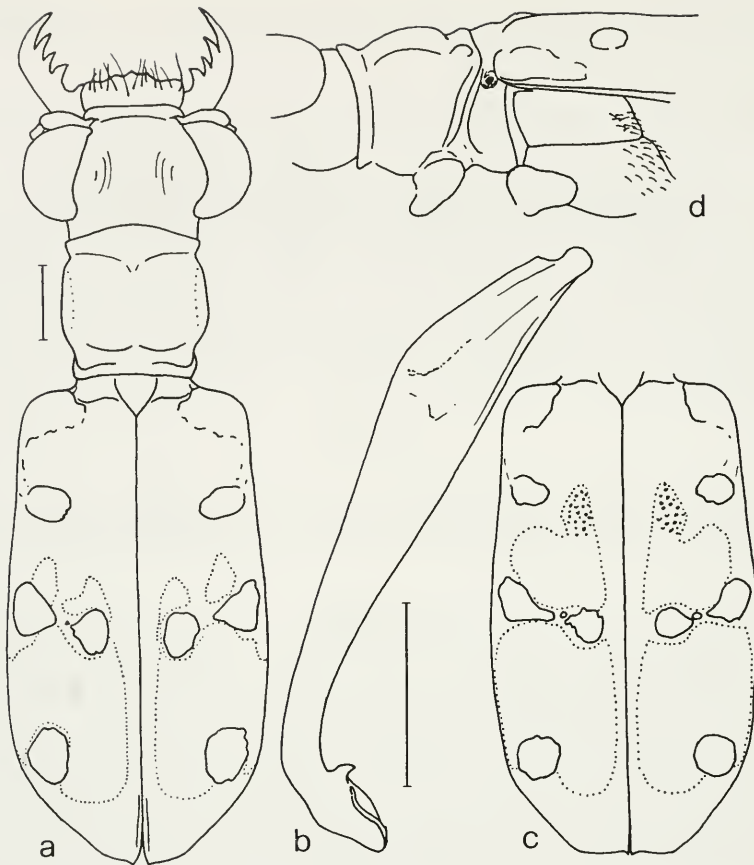


Fig. 1. *Wallacedela pseudofulvescens* n. sp., male holotype: habitus (a), aedeagus (b); female paratype: left elytron (c), coupling sulci (d). Scales: 1 mm.

the middle, with 12 long hairs near forward edge and 1-2 additional ones in the middle of disc. Mandibles testaceous to rufescent, slightly darkened on teeth; Mouth parts testaceous, with the last joints of palpi variably metallic dark. Antennae testaceous, approximately as long as half the length of the male elytra, slightly shorter in the female; scape and articles 2-4 nearly bare, a single erect seta on tip of scape, antennomeres 5-11 finely and evenly pubescent, progressively darkened toward apex, the last three ones almost black.

Thorax: Pronotum approximately as long as wide, rounded at sides, globose on disc, smooth, glabrous, shining black with some green or cupreous reflections at sides and on anterior and hind lobes; a few uneven wrinkles near anterior and hind margins. Epipleural rim effaced, not visible; episterna shining black, bare, a few white hairs on ventral sides of mesepisterna and epimera, on side margins of sternum, and on hind corner of metepisterna; female coupling sulci forming a deep pit in the upper corner of mesepisterna, immediately below the elytral shoulder.

Elytra wider than head and eyes together, slightly rounded at sides, with the sutural spine small in both sexes; dull black on disc, with a testaceous to rufescent colouration widely extending in the male to the entire anterior third of the elytra, along the suture, and to the apical part from the subapical spot to apex, slightly reduced in the female, leaving also a black punctured "mirror" in front disc of elytra. Elytral yellowish markings comprising a large humeral dot, a smaller posthumeral spot (both of which strongly stand out against the rufescent background), a marginal drop-shaped spot, a discal roundish dot slightly below it (both tending to narrowly coalesce in the middle), and a roundish subapical spot. Epipleura testaceous.

Abdominal sternites testaceous to rufescent, almost bare, with a very fine, short, white pubescence on the sublateral parts of third and fourth sternites. Coxae testaceous to rufescent, tinged with metallic bronze and slightly pubescent at sides; trochanters and legs testaceous to rufescent, tarsal segments slightly darkened at apex.

Aedeagus straight, elongate, slightly inflated in its outer third, with a blunt rounded button-ended apex.

**Remarks:** From the same province (Sulawesi Tenggara), only three species of *Wallacedela* have been recorded, namely the closely allied *W. kurbatovi* MATALIN, 1998, from the environs of Kolaka, *W. butonensis* CASSOLA, 1996, from Buton Island, and a female specimen of *W. brendelli* CASSOLA, 1991 (belonging to a different species-group), from Gunung Watuwila, NE of Kolaka (CASSOLA 1991, 1996; MATALIN 1998). To date *W. fulvescens* is known from its type locality only (Tombugu, near the south-eastern coast of Sulawesi Tengah), thus outside of Sulawesi Tenggara province but near to its border (CASSOLA 1991).

### *Wallacedela curvipenis* sp. n.

**Holotype:** Male. S.W. Sulawesi (Sulawesi Selatan): Tanah-Toraja, Karum-Ganga, January 2000, deposited in the State Museum of Natural History, Stuttgart, Germany (SMNS), but presently as long term loan in second author's collection.

**Etymology:** This species of *Wallacedela* is named according to the distinctive shape of the aedeagus.

**Diagnosis:** A medium-sized *Wallacedela* species of the *W. gloriosa*-group, with labrum, head and pronotum variably metallic green, and the elytra dull black with golden green side margins; elytral markings forming a poorly visible humeral dot, a small posthumeral transversal spot, an oblique bilobed band in the middle, and a roundish subapical spot. Male aedeagus straight, slightly inflated in the middle, with the apex strongly bent downwards on the ventral side. Female unknown.

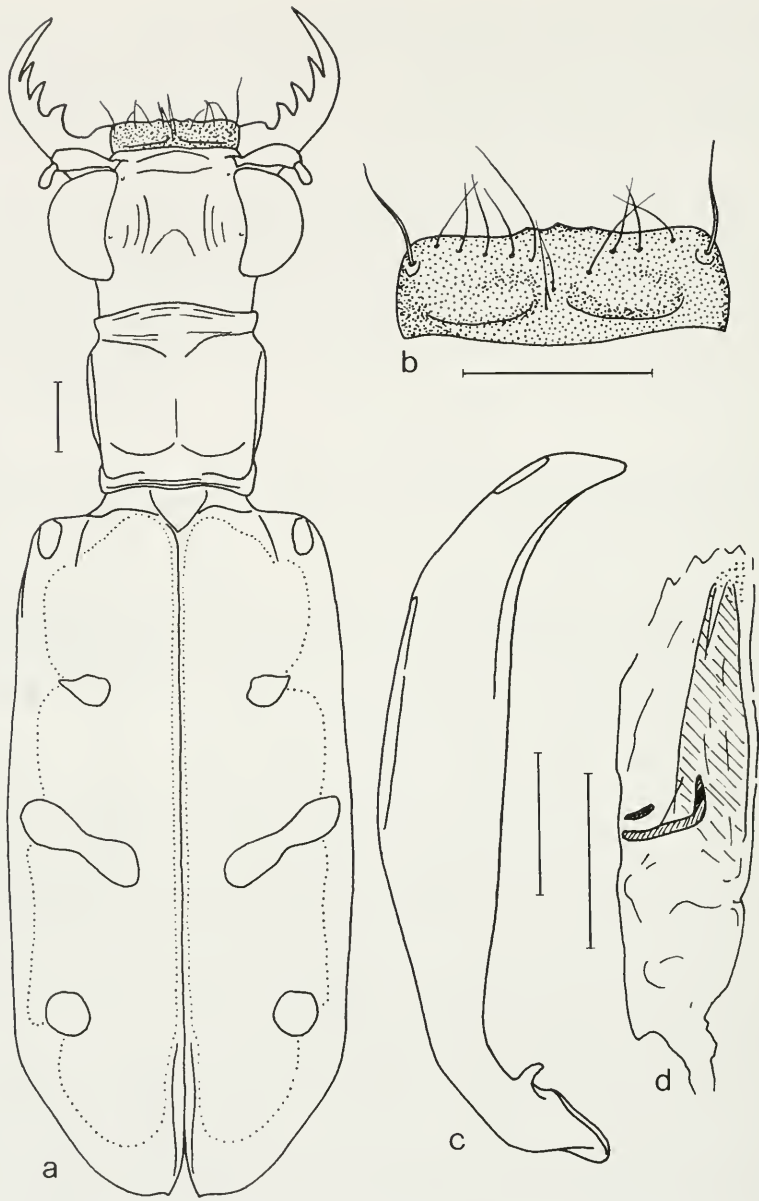
**Description:** (figs. 2a-d). Length: 15.2 mm (without labrum).

Head relatively small, metallic green with some slight cupreous or bluish reflections on vertex and eyes; glabrous, two fine sensorial setae near each eye. Clypeus and antennal plates smooth, shining metallic golden green; frons nearly smooth, vertex and eyes distinctly striate longitudinally. Labrum metallic golden green, with some slight cupreous reflections at sides, transverse, nearly three times wider than long, feebly tridentate in the middle, with 12 long hairs near forward edge and 2 additional ones in the middle of disc. Mandibles long, basally testaceous, metallic green in the middle, pitchy black on the sharp apical and inner teeth; labial and maxillary palpi slender, testaceous, their last joint metallic dark. Scape and articles 2-4 of the antennae metallic cupreous, nearly bare, a single erect seta on tip of scape; apical antennomeres (just the fourth and fifth segment of the left antenna are visible in the holotype specimen, all other segments lacking) dull black, finely and evenly pubescent.

Thorax: Pronotum slightly longer than wide, subsquare, parallel-sided, moderately rounded above; surface bare and smooth, metallic green, with some violet reflections on disc. Proepisterna cupreous, narrowly visible from above in the middle, with some white long setae on ventral side near the coxae; Mesepisterna metallic golden green with cupreous reflections, glabrous, a few white setae on their lower parts and on epimera; sternum and metepisterna also metallic golden green, with cupreous reflections and a few white decumbent setae laterally and behind.

Elytra wider than head and eyes together, relatively elongate, subparallel-sided, dull black on disc, narrowly cupreous along the suture, golden green on the lateral margins (with a narrow spur towards the posthumeral spot), smooth, metallic shining green from base to shoulders. Elytral markings comprising a poorly visible humeral dot, a small posthumeral drop-shaped spot (acutely directed outwards), an oblique bilobed middle band (reaching neither the suture nor the lateral margin), and a roundish subapical spot. Apical part of elytra elongate, almost rightangled at the suture, the sutural tooth being very small, nearly lacking. Epipleura metallic green to cupreous.

Abdominal sternites metallic golden green, with cupreous reflections at sides, covered with a white decumbent pubescence on the sublateral parts of sternites 2-5. Coxae metallic green, with some white hairs in the front parts of pro- and mesocoxae and along the side margins of metacoxae; trochanters dark brown. Legs rather long and slender, almost glabrous, with the femora golden green below, dark cupreous above,



**Fig. 2.** *Wallacedela curvipennis* n. sp., male holotype: habitus (a), labrum (b), aedeagus (c), inner sac of aedeagus (d). Scales: 1 mm.

blackened on "knees": pro- and mesotibiae bronze green, hind tibiae metallic green basally, testaceous in their distal half (except the extreme tip which is black); fore tarsi metallic bronze with violaceous reflections, middle and hind tarsi more or less testaceous with dark metallic tips.

Aedeagus straight, 5.1 mm long, tapering, slightly inflated in the middle, with the apex strongly and abruptly bent downwards on the ventral side; inner sac of aedeagus large, poorly sclerotized, devoid of flagellum, with just a small arc-shaped transversal sclerite on the dorsal side and a long spatulated "tooth" on the ventral side.

**Remarks:** The single male holotype specimen of this remarkable new species from Central Sulawesi has been recently recorded and figured by SAWADA & WIESNER (2000, fig. 10) under "*Wallacedela* sp.". Although resembling a *Thopeutica* species, namely *Th. werneriana* CASSOLA, 1991, because of the general body shape and size, it is to be placed into the genus *Wallacedela* because of the poorly sclerotized inner sac of aedeagus. *W. curvipennis* n. sp. obviously belongs to the *W. gloriosa*-group of species, resembling *W. hirofumii* CASSOLA, 1991, except for the body colour pattern and the distinctive aedeagus, which distinguish it from all other congeners.

### *Thopeutica? allardiana* CASSOLA, 1991

SAWADA & WIESNER (2000, fig. 9) recorded and figured a female specimen from Salu-Bua, Puncak-Palopo, Palopo, Sulawesi Selatan, under "*Thopeutica (Thopeutica)* sp.". Further examination of this specimen proved its membership to *Thopeutica? allardiana* CASSOLA, 1991, a species which was described on the base of a single female specimen from the same area (Puncak, Palopo) (CASSOLA 1991). Two additional female specimens were later recorded from Palopo and Gn. Rantemario, 30 km NE of Enrekang) (CASSOLA 1996). Until a male will be found, the placement of this species into the genus *Thopeutica* is tentative.

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### Zusammenfassung

Zwei neue Arten von Sandlaufkäfern aus Sulawesi werden beschrieben, *W. pseudofulvescens* sp. n. aus der Umgebung von Kendari und *W. curvipennis* sp. n. von Tanah-Toraja. Außerdem wird über das dritte bisher überhaupt bekannt gewordene Exemplar von *Thopeutica? allardiana* CASSOLA, 1991 berichtet.

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