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A new species of the genus *Polyrhanis* Rivalier, 1963 (Coleoptera: Cicindelidae) from Papua (New Guinea, Indonesia)

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ABSTRACT

A new tiger beetles species, *Polyrhanis dabraensis* sp. nov., is described from Dabra (Foja mountains region, Papua, New Guinea, Indonesia). Its elytral markings are similar to those of *Polyrhanis funerata* and *P. barbata*, but it is much smaller and its anteapical spot is more expanded on the disc and is connected with the apical lunule. The aedeagus has a thin straight hook (spur) directed perpendicularly on the dorsal side, like that of *P. io*, *P. innocentior*, *P. excisilabris*, *P. olthofi*, and *P. vannideki*. It is easily recognized by its distinctive elytral markings and small body size.

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Introduction

The fauna of tiger beetles of the Indonesian part of New Guinea includes 63 species, 29 of which are endemic. The genus *Polyrhanis* Rivalier, 1963, which presently accounts for 50 species in all, is represented in this area by 26 species, of which 18 are endemic (Schüle, 2010). Thus, *Polyrhanis* species make up 41% of all tiger beetles in this region and 62% of the endemic tiger beetles. Approximately three quarters of all *Polyrhanis* species living in New Guinea (presently 43) were recorded from the Indonesian part of the island (Cassola, 1987a; Wiesner, 1992; Schüle, 2010). Thus, this area is likely the center of origin and richness of genus *Polyrhanis* (Cassola, 1990). For example, only seven species have been recorded in the Solomon Islands (Cassola, 1987a, 1987b, 1990). Moreover, a related species, *Parapolyrhanis oceanica*, was described from the Fiji Islands (Cassola, 1983, 1986, 2009). Since the last review of the Cicindelidae of New Guinea (Cassola, 1987a), seven additional new species of *Polyrhanis* have been described (Cassola and Werner, 1996a, 1996b, 2001; Schüle, 1998; Wiesner, 1999, 2000; Matalin and Wiesner, 2008). Here, we report a new *Polyrhanis* species from Papua (New Guinea, Indonesia).

Material and methods

The type materials are kept in the following collections:

- ZISP - Zoological Institute of Russian Academy of Science (St. Petersburg, Russia)
 MPU - Moscow State Pedagogical University (Moscow, Russia),
 FCC - collection of Fabio Cassola (Rome, Italy),
 PUC - collection of Pavel Udovichenko (Moscow, Russia).

Taxonomy

Polyrhanis dabraensis sp. nov.

(Figs. 1–2 and 3–15)

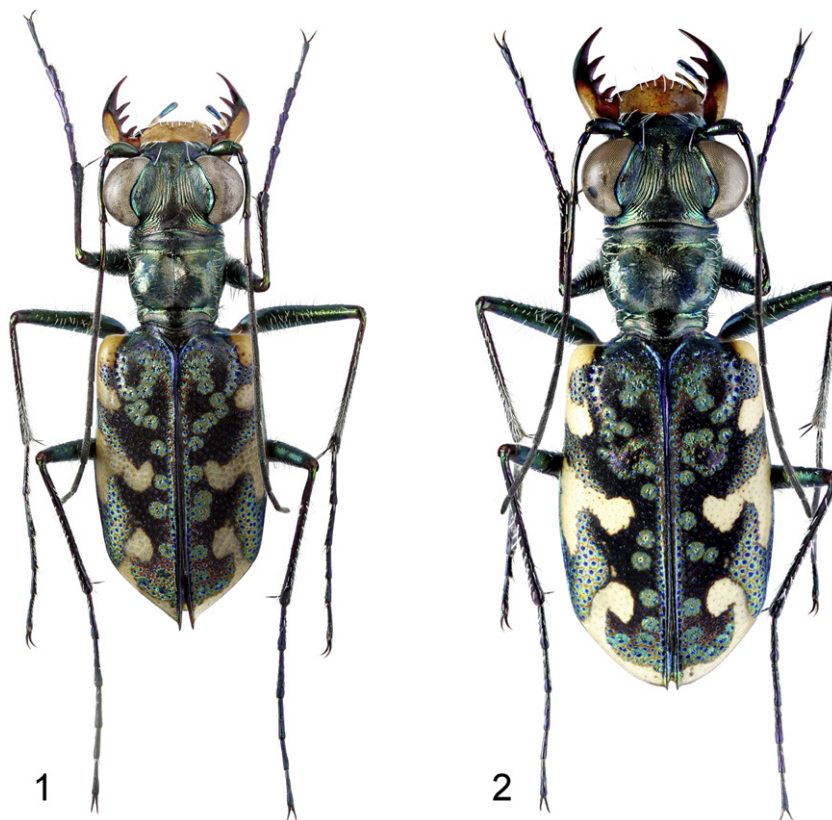
Type material. Holotype (♂): Indonesia, Papua (New Guinea), Dabra env., Buare river vall., 3°18'S 138°43'E, 5–16.I.2009, at light, leg. V. Sinyaev & A. Zamesov (ZISP). Paratypes (11♂♂ 12♀♀), labeled as the holotype, deposited in: 1♂ 2♀♀ (ZISP), 4♂♂ 6♀♀ (MPU), 5♂♂ 3♀♀ (FCC), 1♂ 1♀ (PUC).

Derivatio nominis. The new species is named after its type locality, Dabra village.

Description. Total length (without labrum): holotype (male), 6.7 mm; paratypes: 6.5–6.9 mm (mean 6.8 mm, n = 11) in males, 7.2–7.9 mm (mean 7.6 mm, n = 13) in females. Head deep bronze with dull golden-green reflections; clypeus slightly but clearly

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Figs. 1–2. *Polyrhaxis dabraensis* sp. nov., habitus: 1 – holotype, ♂; 2 – paratype, ♀.

concave in the centre, velvety glabrous, with sparse thin white setae laterally; frons velvety glabrous, green tinged around the antennal base, with small oval indistinct convex area between the anterior edge of eyes; vertex velvety glabrous in the centre, with five-six deep striae laterally; occiput glabrous in the centre and rugose laterally; supraorbital area with bright green lateral margin, six to seven shallow smooth striae and two pairs of setae (one near the anterior edge of eye and the other in the posterior third of inner eye's edge); genae bright green with light golden-purple tinge, distinctly sub-parallel striated, and covered with numerous sparse white setae. Eyes large, strongly prominent, head with eyes 1.37–1.5 times (mean 1.4, $n=16$) wider than pronotum. Mandibles with three inner teeth, dark brown, with pale lateral spot extended from its base to middle of the apical inner tooth level; in females simple, in males right mandible with distinct additional ventral tooth in anterior third (Fig. 5). Labial and maxillary palpi pale except bright metallic green apical joints. Labrum transversal, 2.3–2.6 times (mean 2.4, $n=7$) as long as wide in males and 2.0–2.3 times (mean 2.1, $n=9$) as long as wide in females; pale, unidentate, with two broad shallow impressions laterally and six central marginal setae (five as aberration) and a single lateral seta near base on each side (Figs. 3–4). Antennae very long, extended over 3/4 of elytral length; scape metallic green with light golden tinge apically, with a single long seta on tip; second joint deep green; third and fourth joints deep green with distinct purple luster in apical half, with one to two thin setae laterally and two short stout plus two to three very small setae apically; 5–11th antennomeres dark brown, finely covered by numerous short setae.

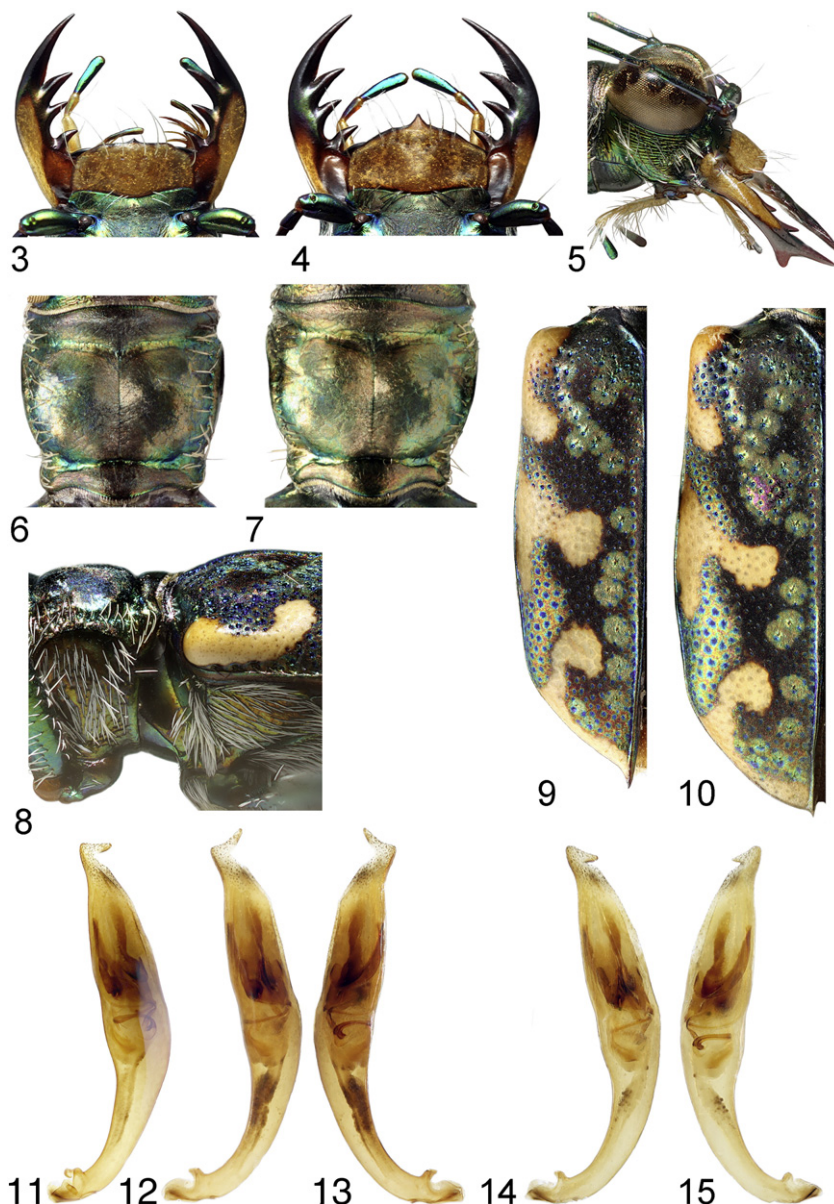
Pronotum deep bronze with velvety green reflections; subquadrate in males and indistinctly transversal in females, with lateral sides distinctly convergent basally; glabrous but sparse white setae

laterally; with sharp anterior and posterior transversal grooves and thin but distinct midline (Figs. 6–7). Pro-, meso- and metathorax glabrous, light green with blue reflections. Proepisternum bronze with light golden reflections, fully covered by numerous sparse white setae; metepimeron and metepisternum, base and posterior margin of mesepimeron, the lateral part of metathorax, and anterior margin of coxae covered by numerous white setae. Anterior margin of metathorax with sparse, very thin short setae. Coupling sulcus of female as a shallow strip sinuate in apical third (Fig. 8).

Elytra 1.7–1.77 times (mean 1.73, $n=7$) as long as wide in males and 1.63–1.69 times (mean 1.65, $n=9$) as long in females; chocolate-brown, with wide purple-green shining lateral area, covered by numerous bright blue points; epipleuron pale; the apex of elytra in males with distinct sharp sutural spines. White elytral pattern represented by a wide, complete, slightly curved, humeral lunula, a wide middle band with a relatively short basal lateral band, and a complete apical lunula whose anteapical spot is distinctly expanded on the disc and narrowly connected with the apical part. Disc of elytra with six to eight large bright green points (“gemmae”) extended along suture, 12 to 14 situated as a circle in humeral area with three spots below them; the basal part of female's elytral disc with metallic purple-bronze indistinctly convex area (Figs. 9–10).

Abdominal sternites glabrous, metallic blue-green; lateral margins of 1st–5th sternites with numerous thin white setae. Legs metallic green, tarsus and apex of tibia with distinct blue reflection, knees dark brown with blue luster; trochanters light brown.

Aedeagus 0.56–0.58 times (mean 0.57, $n=7$) as long as elytra, slender and relatively long, medial lobe apically with a thin straight spur directed perpendicularly on the dorsal side (Figs. 11–15).



Figs. 3–15. *Polyrrhanis dabraensis* sp. nov.: 3–4 – labrum; 5 – right mandible of male; 6–7 – pronotum; 8 – coupling sulcus of female; 9–10 – left elytra; 11–15 – aedeagus; 3, 6, 9 – males; 4, 7, 10 – females; 11 – holotype; 3–10, 12–15 – paratype; 3–4, 6–7, 9–10 – dorsal view; 5, 11–12, 14 – right lateral view; 8, 13, 15 – left lateral view.

Comments. This new species is similar in its elytral markings to *Polyrrhanis funerata* and *P. barbata*, but it is much smaller and the anteapical spot is distinctly expanded on the disc and is connected with the apical lunule (see Cassola, 1987a). The aedeagus has a thin straight hook or spur directed perpendicularly on the dorsal side and is similar to that of *P. io* (W. Horn, 1900), *P. innocentior*, *P. excisilabris*, *P. olthofi*, and *P. vannideki* (see Cassola, 1987a). However, it is easily recognized by the distinctive elytral markings and the small body size (which is larger than that of *P. guineensis* and more or less the same as *P. bennigsenia*).

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