


Two new species of the genus *Endelus* (Coleoptera: Buprestidae) from the Australian Region, with a new genus record for the Solomon Islands

Два новых вида рода *Endelus* (Coleoptera: Buprestidae) из Австралийской области с новым указанием рода для Соломоновых островов

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Abstract. Two new species of the genus *Endelus* (Coleoptera: Buprestidae: Aphanisticini), *E. (Endelus) carolianus* sp. nov. from Australia and *E. (E.) jakli* sp. nov. from the Solomon Islands, are described, illustrated, and their diagnostic characters are given. *Endelus carolianus* sp. nov. is the third representative of the genus in Australia. The genus *Endelus* is recorded for the Solomon Islands for the first time. A lectotype of *E. subcornutus* Kerremans, 1900 is designated.

Резюме. Описаны и проиллюстрированы два новых вида рода *Endelus* (Coleoptera: Buprestidae: Aphanisticini) – *E. (Endelus) carolianus* sp. nov. из Австралии и *E. (E.) jakli* sp. nov. с Соломоновых островов; приведены их диагностические признаки. *Endelus carolianus* sp. nov. является третьим представителем рода, известным из Австралии. Для Соломоновых островов род *Endelus* указывается впервые. Обозначен лектотип для *E. subcornutus* Kerremans, 1900.

Key words: Australian Region, Australia, Solomon Islands, Buprestidae, Agrilinae, Aphanisticini, *Endelus*, new genus record, new species

Ключевые слова: Австралийская область, Австралия, Соломоновы острова, Buprestidae, Agrilinae, Aphanisticini, *Endelus*, первое указание рода, новые виды

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Introduction

To date, the genus *Endelus* Deyrolle, 1864 includes 141 species and three subspecies distributed in the East Palaearctic, Oriental and Australian regions; they are recorded from Nepal, Sikkim, continental China and Taiwan, Japan, Southeast Asia, the Sunda and Philippine Islands, from New Guinea and Australia to Fiji (Bellamy, 2008; Kalashian, 2011, 2013, 2017, 2019, 2020, 2021a, 2021b; Wei & Shi, 2021). In the most southeastern

part of the range of the genus, only a few species are known: two species from Australia (Carter, 1924; Hołyński, 2003) and six species from Fiji (Bellamy, 2007). Among the materials kindly provided to me for study by Stanislav Jákl and the late Charles Bellamy and Svatopluk Bílý, two new species of *Endelus* were revealed. Their descriptions are given below. One of the newly described species is the third representative of the genus in the Australian fauna, and the genus is reported from the Solomon Islands for the first time.

Material and methods

The morphology of the beetles was studied using a Micromed MC-2 Zoom and a MBS-10 stereomicroscopes; measurements were taken using an ocular micrometer. Photographs of the new species were taken using a Canon EOS 800D digital camera equipped with a Canon MP-E 65 mm f/2.8 1–5× and an Irix 150 mm f/2.8 macro lenses and attached to a Stack Shot Macro Rail package (Cognisys Inc.); Helicon Focus Pro software was used for stacking the photos.

The following abbreviations are used in the text: BMNH – the Natural History Museum (British Museum, Natural History), London, United Kingdom; CSCA – California State Collection of Arthropods, Sacramento, USA; MKCY – personal collection of Mark Kalashian, Yerevan, Armenia; MNHN – Muséum national d'Histoire naturelle, Paris, France; NMPC – Národní Muzeum v Praze, Prague, Czech Republic; SJCP – personal collection of Stanislav Jákl, Příbram, Czech Republic; ZISP – Zoological Institute of the Russian Academy of Sciences, St Petersburg, Russia.

Label data are cited verbatim; the following abbreviations are used: (h) – handwritten, (p) – printed; data of different labels are separated by a slash (/). If necessary, current geographical names are given in square brackets ([]), as well as some other data. Author's labels with a designation of the type status (holotype, paratype, lectotype) are not cited in the text.

Taxonomic part

Order **Coleoptera**

Family **Buprestidae**

Subfamily **Agriinae**

Tribe **Aphanisticini**

Genus *Endelus* Deyrolle, 1864

Subgenus *Endelus* Deyrolle, 1864

Endelus (Endelus) carolianus sp. nov.

(Figs 1, 5)

Holotype. Male, "Austr[alia], QSL [Queensland], Lamington Nat. Pk. Binna Burra Low, Ballanjui Falls Track 650 m, 13.I.1991, Pollock & Reichert / *Asplenium foliage*" [h] (CSCA).

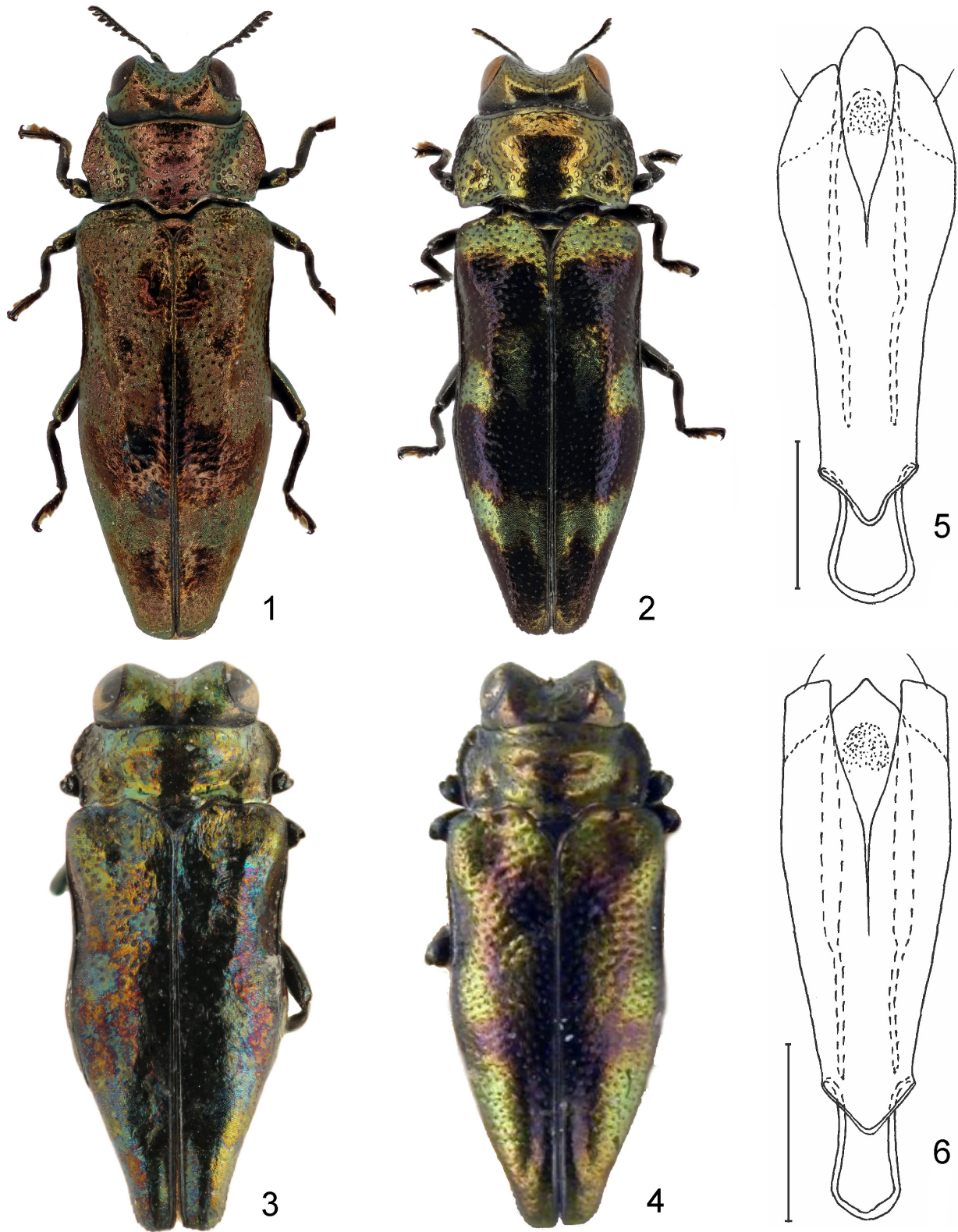
Paratypes. 1 male, 4 females (including allotype), same data as for holotype (CSCA, MKCY).

Description. Body (Fig. 1) elongate, 2.85–3.05 times as long as wide, convex, bronze-coloured with distinct reddish cupreous reflection; frons, lateral portions of central convexity of pronotum and most part of elytra with fine greenish reflection; elytra with reddish cupreous rounded spot near anterior fourth of suture, that being narrowly continued posteriorly along suture, reaching transverse undulate band near posterior third, with transverse spot before apex, and with small irregular spots between suture and lateral parts of elytra near anterior two-fifths. Ventral surface black-bronze with olive tint. Dorsal surface and propleura distinctly microreticulated, silky lustrous except for nearly glabrous and shiny spots and band on elytra; ventral surface finely reticulated, rather shiny.

Body length 4.60–5.10 mm, width 1.60–1.68 mm.

Head large, moderately narrowed anteriorly, narrower than anterior margin of pronotum, frontovertex distinctly arcuately concave, oculo-frontal margins somewhat keel-shaped, eyes rather convex, temples slightly protruding beyond head outline, forming small ledge. Clypeus turned posteriorly, connecting to frons at obtuse angle, strongly transversely triangular, slightly emarginate distally. Frons very slightly widened posteriorly, with short keels behind antennal cavities, with a pair of deep, slightly irregularly rounded postclypeal foveae and with deep median fovea near upper third of eyes (in frontal view). Frons with rather large flat irregular punctures, vertex with several smaller punctures, those being smoothed and sparser laterally. Antennae serrate starting from almost equilateral fifth antennomere; sixth antennomere slightly transverse, next antennomeres strongly transverse.

Pronotum 1.90–2.05 times as wide as long, widest approximately at middle or just behind middle. Anterior margin bisinuate, bordered with narrow elevation separated from disc by entire distinct groove laterally continued along lateral margins and reaching posterior angles but smoothed near widest portion of pronotum; sides of pronotum angularly arcuate, without pronounced serration but with slightly uneven margins; posterior margin strongly bisinuate, with moderately wide median lobe being almost straight truncate posteriorly.



Figs 1–6. *Endelus (Endelus)* spp. **1, 5**, *E. (E.) carolianus* **sp. nov.**, holotype, male; **2, 6**, *E. (E.) jakli* **sp. nov.**, paratype, male; **3**, *E. (E.) carteri* Holyński, 2003, holotype; **4**, *E. (E.) subcornutus* Kerremans, 1900, lectotype. Habitus in dorsal view (1–4); male genitalia (5, 6). Scale bars: 1 mm. Photos by T. Grejyan (1–3), M.V.L. Barclay & K. Webb (4).

Pronotum widely, somewhat irregularly flattened laterally; disc convex, with indistinct depressions behind anterior margin and at level of posterior third of pronotum, separating indistinct median gibbosity; surface with large irregular punctures. Scutellum nearly equilaterally triangular.

Elytra approximately 2.16–2.32 times as long as wide, with subparallel margins, widest near humeral tubercles and near posterior two-fifths, with sides slightly sinuate between these points, in posterior two-fifths, anteriorly very weakly convexly, apically weakly sinuately narrowed to slightly irregularly arcuate apex. Elytra generally convex, with narrow transversal depression along base. Elytral sides without distinct serration, with only a few indistinct denticles apically, bordered by deep groove being strongly smoothed posteriorly and reaching level of transverse shiny band. Surfaces of elytra with small, rather deep, distinct irregular punctures being slightly smoothed posteriorly.

Prosternal process covered with sparse irregular, rather rough, large punctures; metasternum medially with rather deep, moderately large, sparse punctures, laterally with short semicircular wrinkles being mostly fused into more or less long transversal sinuous ones; abdomen with similar but more shallow sculpture being smoothed and becoming finer posteriorly but visible until anal ventrite. Anal ventrite widely cut distally, with rounded angles in both sexes.

Male genitalia as in Fig. 5.

Sexual dimorphism. Sexual dimorphism is very slightly pronounced in the structure of abdomen, which is somewhat more convex in the female than in the male.

Comparison. In the general appearance, coloration and structure of the head and pronotum, the new species has some resemblance to the Australian species *Endelus (Endelus) carteri* Holyński, 2003 (Fig. 3) and *E. (E.) subcornutus* Kerremans, 1900 (Fig. 4). It can be easily distinguished from them by much more elongated body (in *E. carteri*, body 2.55 times as long as wide, elytra 1.90 times as long as wide; in *E. subcornutus*, these ratios are 2.60 and 1.95, respectively), less convex eyes, somewhat shiner integument, and brighter coloration.

Distribution. North Australia: Queensland.

Habitat. Unknown.

Etymology. The new species is dedicated, with my gratitude and respect, to the blessed memory of Dr Charles (Chuck) Bellamy, a famous specialist in Buprestidae, who provided me with interesting material on some groups of jewel beetles. The specific name is derived from *Carolus*, the Latin spelling of the name Charles.

***Endelus (Endelus) jakli* sp. nov.**
(Figs 2, 6)

Holotype. Male, "SOUTH PACIFIC, Solomon Is., GUADALCANAL I., Honiara reg.[ion], Barana vill. env.[irons], 100–300 m, XI–XII.2018, St. Jákl leg." [p] (NMPC).

Paratypes. 23 males, 13 females (including allotype), 20 specimens of undetermined sex, same data as for holotype (BMNH – 1 male, 1 female; MNHN – 1 male, 1 female; NMPC – 3 males, 3 females; MKCY – 6 males, 6 females; SJCP – 11 males, 1 female and 20 specimens with undetermined sex; ZISP – 1 male, 1 female); 1 male, 2 females, "South Pacific, Solomon Is., GUADALCANAL I., 50–200 m, LUNGA RIVER env.[irons], ca 10–15 km S of Barana vill., Honiara reg.[ion], 21.XI.–17.XII.2017, St. Jakl leg." [p]; 1 female, "Solomon Islands, GUADALCANAL, ca 3.5 km SE of Barana vill. (cleaning in secondary forest, at light) 09°29.8'S 159°59.5'E, 190 m, Jiří Hájek leg., 24.xi.–14.xii.2013" [p] (NMPC).

Description. Body elongate, 2.95–3.10 times as long as wide, strongly convex. Head and pronotum golden-green, somewhere with fine reddish reflection, elytra dark violet-blue, with three golden-green, more or less undulate transverse bands along base, approximately at middle and near posterior quarter, median band sometimes narrowly interrupted near suture, elytral apex slightly brightened. Ventral surface black with indistinct bronze tint. Surface rather shiny, with indistinct shagreen except for more visibly microreticulated silky lustrous elytral bands and propleura.

Body length 4.00–4.35 mm, width 1.30–1.45 mm (Fig. 2).

Head large, very slightly narrowed anteriorly, slightly narrower than anterior margin of pronotum, frontovertex rather deeply, somewhat irregularly arcuately concave, oculo-frontal margins rounded, eyes slightly convex, very slightly protruding beyond head outline. Clypeus turned posteriorly, almost horizontal, strongly transversely triangular, with weakly emarginate ante-

rior margin. Frons slightly widened posteriorly, with strong keels posterior to antennal cavities, with a pair of deep rounded postclypeal foveae and with deep median fovea at level of upper quarter of eyes (in frontal view), that being continued as thin median longitudinal groove reaching anterior margin of pronotum. Surface with rather large shallow irregular punctures being smoothed towards vertex and here almost indistinct. Antennae serrate starting from slightly transverse fifth antennomere; subsequent antennomeres strongly transverse.

Pronotum 1.75–1.80 times as wide as long, widest approximately at middle or just behind middle. Anterior margin slightly bisinuate, bordered by narrow elevation separated from disc by entire distinct groove; sides of pronotum widely, slightly irregularly arcuate, very weakly serrate; posterior margin slightly elevated, strongly bisinuate, with moderately wide median lobe being very finely sinuate posteriorly. Pronotum rather widely irregularly flattened laterally, disc strongly, somewhat irregularly convex. Surface covered with large flat irregular punctures laterally and basally, smoothed medially, punctures medially and anteriorly somewhere replaced by semicircular wrinkles. Scutellum nearly equilaterally triangular.

Elytra 2.2–2.3 times as long as wide, with subparallel margins, widest near humeral tubercles and near posterior two-fifths, with sides being slightly sinuate between these points, in posterior two-fifths, anteriorly very weakly convexly narrowed, apically weakly sinuately narrowed to slightly irregularly arcuate apex. Elytra generally convex, with narrow transversal depression along base. Elytral sides bordered by deep groove being smoothed posteriorly and reaching level of posterior band, almost indistinctly serrate; apices with more distinct small denticles. Surfaces of elytra with small, rather deep and distinct irregular punctures being slightly smoothed posteriorly.

Prosternal process with sparse irregular, rather rough, large punctures; metasternum with reticle of fine irregular, mostly transverse sinuous wrinkles, somewhere covered with small punctures; abdomen with very shallow semicircular short wrinkles being partly fused into longer sinuous transverse ones being smoothed and be-

coming smaller posteriorly but visible until anal ventrite. Anal ventrite widely cut distally, with rounded angles.

Male genitalia as in Fig. 6.

Sexual dimorphism. Sexual dimorphism is very weakly pronounced in the structure of the abdomen, which is slightly more convex in the female than in the male. In addition, the anal ventrite of the male is slightly wider than in the female.

Comparison. In the details of coloration, in particular, the pattern of elytra, *Endelus (Endelus) jakli* sp. nov. is similar to the species of the *E. (E.) marseuli* Deyrolle, 1864 species group distributed in the Malay Archipelago and the Philippines (see Kalashian, 2011, Plate 16). All the species of the group are distinguished from *E. jakli* sp. nov. by the much wider body which is 2.00–2.45 times as long as wide, and the elytra which are 1.5–1.8 times as long as wide, slightly but distinctly narrowed from the humeri towards approximately middle or three-fifths of their length.

Distribution. Solomon Islands: Guadalcanal Island.

Habitat. Some specimens were collected in a clearing in a secondary forest.

Etymology. The new species is dedicated to the collector of most of the type specimens, Stanislav Jákl, with my gratitude and respect.

***Endelus (Endelus) subcornutus* Kerremans, 1900 (Fig. 4)**

Endelus subcornutus Kerremans 1900: 344; Carter, 1924: 522; Bellamy, 2008: 2438.

Type material examined. Lectotype (designated here). Sex undetermined, “Holotype [p; on round paper with red edge, not original museum label] / N. Guinée, Staudinger [h] / Kerremans 1903-59 [p] / E. subcornutus Kerrem. N. Guinée [h; initial bottom label] / NHMUK015011457 [p] (BMNH).

Distribution. New Guinea Island (Papua New Guinea or Western New Guinea). Recorded by Carter (1924) from Australia, Cape York (North Queensland).

Notes. Described from “Nouvelle-Guinée (par Staudinger)” from an unknown number of specimens. The lectotype is designated to maintain the nomenclatural stability in the taxonomically difficult group.

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