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RESEARCH PAPER

A review of the genus *Platynectes* from the Solomon Islands (Coleoptera: Dytiscidae: Agabinae)

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Abstract. Seven new species of the genus *Platynectes* Régimbart, 1879 from the Solomon Islands are described: Platynectes barana sp. nov., P. mbaole sp. nov., P. popomanaseu sp. nov. (all from Guadalcanal), P. lunga sp. nov. (Guadalcanal and Savo), P. malaita sp. nov. (Malaita), P. makira sp. nov. (Makira) and P. owaraha sp. nov. (Makira and Owaraha). Platynectes insularis J. Balfour-Browne, 1939, described from Vanuatu and the Solomons, currently considered a junior subjective synonym of P. semperi Régimbart, 1899, is reinstituted as a valid species based on its morphology and a molecular analysis by Toussaint et al. (2017). The paratypes of *P. insularis* from the Solomons are shown to belong to a new species – P. owaraha sp. nov., and, thus, the distribution of P. insularis is restricted to Vanuatu. Habitus and male genitalia are illustrated for all seven new species and P. insularis. A checklist of Dytiscidae so far recorded from the Solomon Islands and Vanuatu is appended.

Key words. Coleoptera, Dytiscidae, *Platynectes*, taxonomy, new species, Solomon Islands, Vanuatu, Melanesia, Australasian Region

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Introduction

The predominantly tropical Agabinae genus *Platynec*tes Régimbart, 1879 to date includes 83 species from the Australian, Neotropical, Oriental and Palaearctic Regions (NILSSON & HÁJEK 2022). The genus was extensively studied in recent years: Some Neotropical Platynectes s. str. were treated by Gustafson et al. (2016) and Short et al. (2020), while the Andean subgenus Agametrus Sharp, 1882 was updated by Šťastný et al. (2020) and García (2021); the Palaearctic-Oriental members of the subgenus Gueorguievtes Vazirani, 1976 were studied by NILSSON (1998), Šťastný (2003), Brancucci (2008), Brancucci & Vongsana (2010), and most recently by Hájek et al. (2019); the first account of the genus from the Moluccas was published by HENDRICH & BALKE (2000). Finally, new species of *Platynectes* from Australia were described by HENDRICH & ŠŤASTNÝ (2014), and a comprehensive revision of Australian taxa will be published in the near future

(L. Hendrich et al., in prep.). A molecular phylogenetic analysis of *Platynectes* was compiled by Toussaint et al. (2017). Despite the numerous works mentioned above, our knowledge of the classification and diversity of *Platynectes* remains unsatisfactory, in particular: the subgeneric classification of the genus needs to be improved, and many new species from Pacific Islands still wait for description.

The Solomon Archipelago consists of over 1,000 islands, ranging from low-lying coral atolls to mountainous volcanic islands. Large parts of the islands are still covered with pristine tropical forest, and the archipelago is known for its considerable diversity of plants and animals. However, only very little is known about diving beetles: HELLER (1934) described a new Sandracottus Sharp, 1882 from Bougainville, and BALFOUR-BROWNE (1939) mentioned additional seven Dytiscidae species from the Solomons; since then, two new species from the genera Hyphydrus Illiger, 1802 (BISTRÖM 1982) and Carabdytes Balke,



Hendrich & Wewalka, 1992 (BALKE 1998, BALKE et al. 2017) were described, increasing the total number of known species to ten from the archipelago (for checklist of Dytiscidae recorded from the Solomon Islands and Vanuatu, see Appendix).

To understand the diversity, distributional patterns and origin of Dytiscidae in the Solomon Islands, we have started a taxonomic research initiative, resulting so far in the review of the genus Copelatus Erichson, 1832, reporting the occurrence of ten species, including description of six new ones (Hájek et al. 2021). The present second part addresses the genus *Platynectes*. Despite of the considerable diversity of *Platynectes* in the Australasian Region, only a single species had been recorded from the Solomon Islands to date – Balfour-Browne (1939) described P. insularis from Vanuatu and eastern Solomons (Owaraha). However, a study of the respective material in the BMNH confirmed that the type series of P. insularis included two different species, and the specimens from the Solomons are here differentiated as P. owaraha sp. nov. In addition, a visit by the first author on Guadalcanal, recent collections made by parataxonomists on the same island, and the study of older material deposited in museums, revealed the presence of additional six species in the islands, all of them new to science, which are described here.

Material and methods

The material was examined using an Olympus SZX12 stereomicroscope. Habitus photographs were taken with a Canon EOS R camera fitted with the Canon MPE65 macro lens, attached to a Stackmaster macro rail (Stonemaster: https://www.stonemaster-onlineshop.de). Illumination was with three or four LED segments SN-1 from Stonemaster. Image stacks were generated using the Stackmaster and images were then assembled with the computer software Helicon Focus v. 4.77TM. The male genitalia were studied and illustrated in temporary glycerine mounts using an Olympus BX41 transmitted light microscope with Canon DS126291 attachment; they were subsequently washed in distilled water and mounted in DMHF on the same card as the beetle.

Measurements were taken with an ocular graticule. The following abbreviations were used in the descriptions: TL – total length of body, a single measurement of length from front of head to apex of elytra; TL-h – total length without head length, length of body from anterior margin of pronotum to apex of elytra; MW – maximum width of body; WC/WS – ratio of width of metacoxa (WC) and width of metaventrite (WS) (cf. Petrov et al. 2010: 43, Fig. 3). The terminology to denote the orientation of the genitalia follows MILLER & NILSSON (2003). Whereas all Solomons' *Platynectes* species are rather uniform in morphology, the comprehensive description is provided only for the first species (*P. barana* sp. nov.), while only the changing characters are given for the other species.

Exact label data are cited and given in quotation marks for the type material. Authors' additional remarks are provided in square brackets; [hw]-preceding data are handwritten; [p]-preceding data are printed. Separate label lines are indicated by a slash (/), separate labels by a double slash (//).

The specimens included in this study are deposited in the following collections:

BMNH Natural History Museum [former British Museum (Natural History)], London, Great Britain (Maxwell V. L. Barclay, Christine Taylor);

BPBM Bernice P. Bishop Museum, Honolulu, Hawaii, USA (Jim Boone);

JSCL Jaroslav Šťastný private collection, Liberec, Czech Republic; LHCM Lars Hendrich collection, Munich, Germany (property of Naturhistorisches Museum Wien, Vienna, Austria);

MNHN Muséum National d'Histoire Naturelle, Paris, France (Antoine Mantilleri):

NMPC National Museum, Prague, Czech Republic (Jiří Hájek); SJCP Stanislav Jákl private collection, Prague, Czech Republic;

ZSMG Zoologische Staatssammlung München, Munich, Germany (part of Staatliche Naturwissenschaftliche Sammlungen Bayern, SNSB) (Michael Balke, Lars Hendrich).

Taxonomy

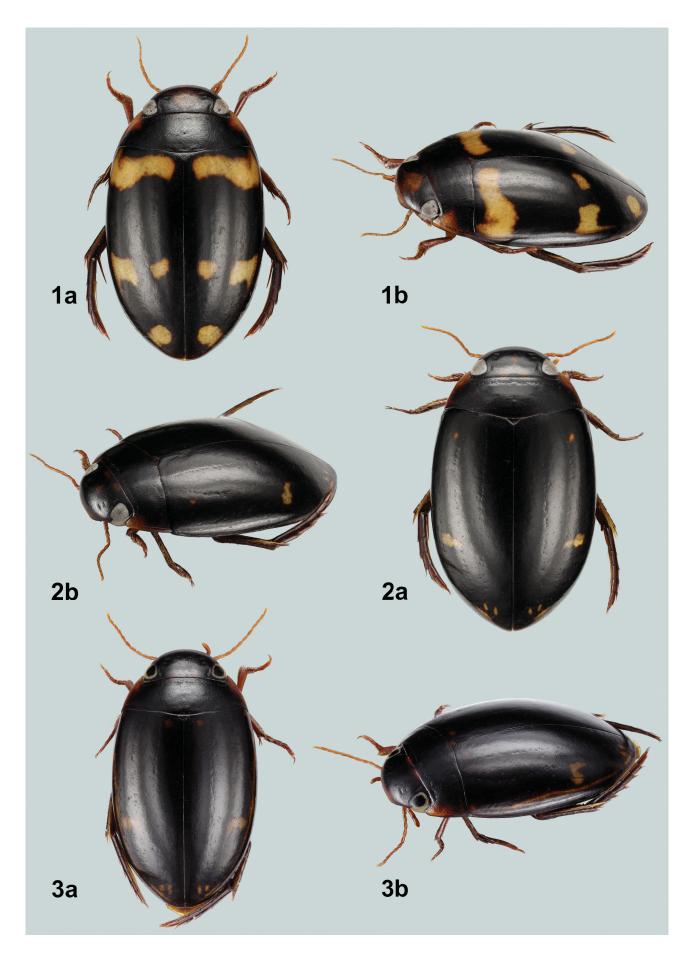
Platynectes barana sp. nov.

(Figs 1, 8)

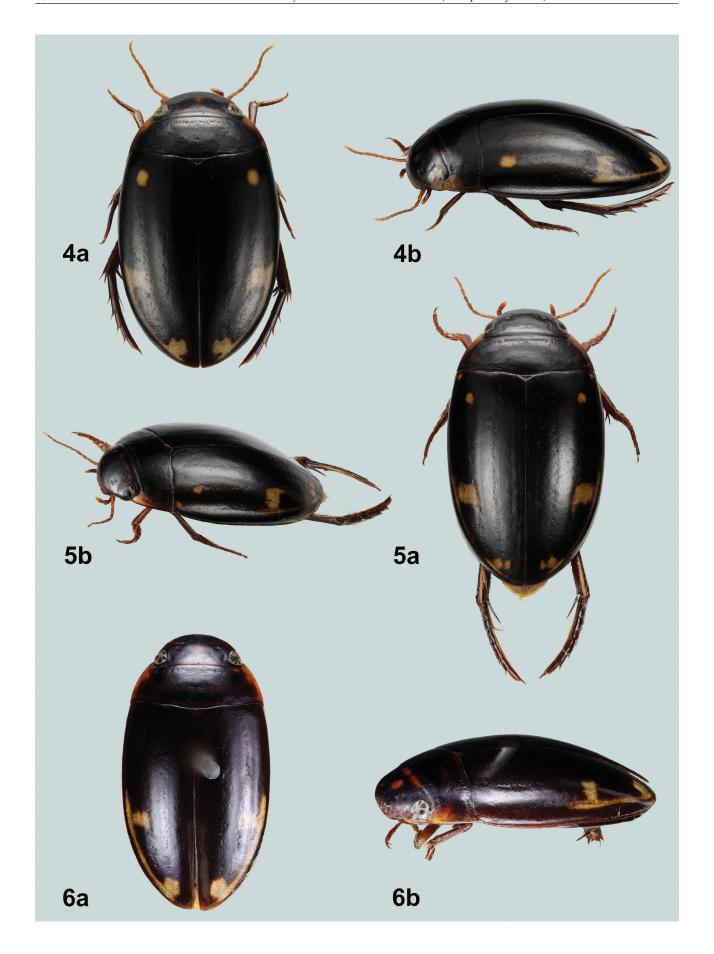
Type locality. Solomon Islands, Guadalcanal, 3.5 km SE of Barana vill. Type material. HOLOTYPE: ♂ (NMPC), labelled: 'SOLOMON ISLANDS, GUADALCANAL / ca. 3.5 km SE of Barana vill. / (drying up stream in shaded gorge) / 09°29.8'S, 159°59.5'E; 190 m / Jiří Hájek leg., 24.xi.-14.xii.2013 [p] // HOLOTYPE \circlearrowleft / PLATYNECTES / barana sp. nov. / J. Hájek et al. det. 2021 [p, red label]'. Paratypes: 19 🔗 18 ♀, same label data as holotype but two specimens with 'DNA M. Balke 6320 and 6321' [p, white label] (BPBM, JSCL, NMPC, ZSMG); 1 ♂ 2 ♀♀, labelled: 'SOLOMON ISLANDS, GUADALCANAL/Mt. Austine - BARANA vill. env. / (secondary forest, gardens, stream) / 09°28.0′S, 159°58.4′E; 280 m / Jiří Hájek leg., 23.xi.-8.xii.2013 [p]' (NMPC); 2 ♀♀, labelled: 'SOLOMON ISLANDS, GUADALCANAL/LUNGA river env., Honiara reg. / 5-15km S of Barana vill. / 50-100 m, 22.xi.-18.xii.2016 / St. Jákl leg.' (NMPC); 1 ♀, labelled: 'Solomon Islands, GUADALCANAL / Koso vill. env. / 15-18km SSE of Honiara / 500-650 m, 1.-18.xii.2016 / St. Jákl leg.' (NMPC); 34 $\circlearrowleft \circlearrowleft 28 \circlearrowleft \circlearrowleft$, labelled: 'Solomon Islands / GUADALCANAL I., Honiara reg. / Barana vill. env. 100-300 / XI-XII.2018 / St. Jakl leg. / Coll. Hendrich' (LHCM, NMPC, ZSMG); 10 ♂♂ 4 ♀♀, labelled: 'from / small stream [hw] // SOLOMON IS.: [red underlined] / Guadalcanal I. / Tapenanje. c. $1{,}100$ ft. / 21-23.xii.1953. / J.D.Bradley [p] // RENNEL I. / Expedition. / B.M.1954-222 [p]' (BMNH); 8 ♂♂ 6 ♀♀, with same label data, but locality label handwritten (BMNH); 1 $\,$, labelled: 'swift stream [hw] // SOLOMON ISLANDS [red underlined] / GUADALCANAL / MONITEZ CREEK / 3.VII.1965 / P.N.LAWRENCE [hw]' (BMNH); 1 ∂ 1 ♀, labelled: 'Salomonen: C-Guadalcanal, / 0.5 km N Mbaole, 2799 feet / S 09°37.69 E 160°06.69E / 2007 K. Mailautoka leg. [p]', both specimens with additional label: 'DNA/M. Balke/3335 [2908 respectively] [p, green label]' (ZSMG); 5 ♂ 6 ♀♀, labelled: 'SOLOMON IS. / Guadalcanal/ Betikama R. / VIII.1960 // W.W. Brandt collector / Bishop[p]' (BPBM). All paratypes with the respective red printed label.

Description. *Male holotype. Habitus* (Fig. 1) elongate oblong oval, broadest in one third of elytral length, dorsally convex; body outline continuous, without angle between base of pronotum and elytra. Dorsal surface shiny.

Colouration. Surface black. Head with orange-brown clypeus, big round orange spot medially on frons and two small spots on vertex; appendages orange-brown. Pronotum with narrowly orange-brown sides and large triangular orange spot antero-laterally; basal margin somewhat reddish translucent. Scutellum black. Elytron black with brownish lateral margin and epipleura, disc with distinct



Figs 1–3. Habitus of *Platynectes* in dorsal (a) and frontolateral (b) view. 1-P. barana sp. nov.; 2-P. lunga sp. nov.; 3-P. makira sp. nov. Not to scale.



Figs 4–6. Habitus of *Platynectes* in dorsal (a) and frontolateral (b) view. 4 – *P. malaita* sp. nov.; 5 – *P. mbaole* sp. nov.; 6 – *P. owaraha* sp. nov. Not to scale.



Fig 7. Habitus of *Platynectes popomanaseu* sp. nov. in dorsal (a) and frontolateral (b) view.

yellowish pattern consisting of subbasal transverse band, two postmedial spots in two thirds of elytral length, and one subapical spot; subbasal band reaching neither lateral margin nor suture, broadest in lateral half, narrowed in medial half, slightly concave on its posterior margins; lateral postmedial spot transverse, medial spot round; preapical spot roundish, trace of thin line connecting lateral postmedial and preapical spot perceptible. Legs orange-brown. Ventral surface brown-blackish, median part of metacoxae and metacoxal processes reddish-brown; abdominal ventrites II–IV with orange-brown spots laterally.

Head. Moderately broad, ca. 0.58× width of pronotum, transversely elliptical. Anterior margin of clypeus truncate. Antennae with antennomeres elongate; club-shaped. Eyes emarginate anterolaterally. Punctation double; several large setigerous punctures present in fronto-clypeal grooves, in depressions on frons, and in rows along eyes; fine punctures distributed sparsely and irregularly on head surface, mostly on lines of reticulation. Reticulation consisting of heterogeneous polygonal meshes, meshes mostly incomplete (not closed); reticulation absent anteriorly on clypeus. Microreticulation (i.e. secondary reticulation inside meshes) absent.

Pronotum. Transverse, broadest at posterior angles. Both anterior and posterior angles acute. Sides slightly and evenly curved, with distinct, broad lateral beading except for anterior angles. Anterior margin straight, posterior margin slightly sinuate. Punctation double, similar to that of head; row of coarse setigerous punctures present along anterior and basal margin (except for medially); fine punctures distributed irregularly on pronotal surface, present mostly on lines of reticulation. Reticulation similar to that of head, consisting of heterogeneous polygonal meshes; reticulation reduced in centre of disc, meshes larger, incomplete and less impressed on disc, becoming smaller,

closed and deeply impressed near sides. Microreticulation absent. Centre of pronotal disc with small fossa.

Scutellum broadly triangular.

Elytra with sides evenly rounded, lateral margin bordered. Punctation double; coarse punctures present in two discal and a lateral relatively distinct longitudinal lines, few punctures present also along suture and lateral margin; fine punctures distributed irregularly over elytral surface, occurring mostly on lines of reticulation. Reticulation similar to that of head and pronotum but slightly less impressed, consisting of heterogeneous polygonal meshes; meshes often incomplete. Traces of microreticulation hardly perceptible in apical half of elytra.

Legs. Meso- and metafemora with bunch of spiniform setae along posterolateral margin. Pro- and mesotibia club shaped, densely punctured with spiniferous punctures over ventral surface. Metatibia with two lines of coarse spiniferous punctures over ventral surface. Pro- and mesotarsomeres 1-3 moderately dilated, ventrally with adhesive setae. Pro- and mesotarsal claws simple, evenly curved; anterior claw longer and less curved than posterior one. Metatarsal claws subequal; anterior (outer) claw longer, thicker and more straight than posterior (inner) one. Surface of legs with distinct reticulation consisting of elongate oblique or transverse meshes. Elongate natatorial setae present in lesser extent on dorsal surface or pro- and mesotarsomeres 1-3, and in high number on dorsal margin of meso- and metatibiae, as well as on both, dorsal and ventral margin of metatarsomeres.

Ventral surface. Genae reticulated with polygonal meshes. Prosternum sinuate anteriorly, obtusely keeled medially. Lateral portions of prosternum rugosely punctate, with transverse reticulation. Prosternal column with sparse fine punctation. Prosternal process broadly lanceolate, in cross-section slightly convex; distinctly bordered

in basal half, apex pointed; surface with irregular sparse double punctation. Medial part of metaventrite without microsculpture, shiny, with sparse fine punctation; lateral parts of metaventrite ('metasternal wings') slender, tongue-shaped, transversely reticulated. Ratio WC/WS = 5.0. Metacoxal lines well impressed, incomplete anteriorly, almost parallel-sided. Metacoxal plates reticulated with polygonal meshes, punctation consisting of sparse fine punctures. Abdominal ventrites I-V with reticulation consisting of longitudinal (I), oblique (II) or transverse (III-V) meshes. Punctation double; bunch of coarse setigerous punctures present in centre of ventrites III–V, additional setigerous punctures arranged sparsely in transverse line in medial part of ventrites; fine punctures distributed sparsely and irregularly on ventrite surface. Apical abdominal ventrite (VI) with posterior margin regularly rounded, distinctly beaded; reticulation present only baso-laterally; surface posterolaterally with long and deep longitudinal grooves; punctation sparse but coarser than on other ventrites.

Male genitalia. Median lobe (Fig. 8a) in lateral aspect simple, sickle-shaped, slender in median part and distinctly broadened in apical third; apex broadly rounded, distinctly setose on ventral side. Parameres (Fig. 8b) narrowly triangular, slender, incised basally; dorsal surface densely setated; apical lobe long.

Female. Identical to male in habitus. Reticulation of dorsal surface more impressed; pro- and mesotarsomeres 1–3 not dilated and without adhesive setae; abdominal ventrite VI with sublateral grooves less developed.

Measurements. TL: 5.4–6.0 mm (mean value: 5.75 ± 0.15 mm); holotype: 5.7 mm. TL-h: 4.8–5.4 mm (mean value: 5.15 ± 0.10 mm); holotype: 5.1 mm. MW: 3.0–3.5 mm (mean value: 3.25 ± 0.10 mm); holotype: 3.2 mm.

Variability. All specimens of the type series are rather uniform in habitus, reticulation and colouration; minor variability can be seen only in shape and size of yellow elytral markings.

Differential diagnosis. The new species can be recognized from all other *Platynectes* from the Solomon Islands by combination of extensive yellow dorsal surface pattern (Fig. 1) and the shape of male genitalia (Fig. 8).

Etymology. The new species is named after its area of occurrence – Barana village, in the vicinity of which the new species was collected. The specific epithet is a noun in the nominative singular, standing in apposition.

Collecting circumstances. At the type locality, the species was collected in shaded pools of temporary forest stream (Fig. 22). At the other places, the specimens were collected in pools with muddy bottom made by forest stream. At all places, *P. barana* sp. nov. was syntopic with *P. lunga* sp. nov.; at the type locality, both *Platynectes* were collected together with *Carabdytes guadalcanalensis* (Balke, 1998), *Copelatus baranensis* Hájek et al., 2021, *C. variistriatus* Hájek et al., 2021, *Hyphydrus eldenbecki* Biström, 1982, and *Sandracottus femoralis* Heller, 1934.

Distribution. The new species is known from low and medium altitude area (ca. 190–650 m) in north-central Guadalcanal (Fig. 25A).

Platynectes lunga sp. nov.

(Figs 2, 9)

Type locality. Solomon Islands, Guadalcanal, 3.5 km SE of Barana village Type material. Holotype: \lozenge (NMPC), labelled: 'Solomon Islands, GUADALCANAL / ca. 3.5 km SE of Barana vill. / (drying up stream in shaded gorge) / 09°29.8'S, 159°59.5'E; 190 m / Jiří Hájek leg., 24.xi.-14.xii.2013 [p] // HOLOTYPE & / PLATYNECTES / lunga sp. nov. / J. Hájek et al. det. 2021 [p, red label]'. PARATYPES: 25 ♂♂ 16 ♀♀, same label data as holotype; two specimens with additional label: 'DNA / M. Balke / 6322 [6323 respectively] [p, white label]' (BPBM, JSCL, NMPC, ZSMG); 1 ♂ 2 ♀♀, labelled: 'SOLOMON ISLANDS, GUADALCANAL / Mt. Austine - Barana vill. env. / (secondary forest, gardens, stream) / 09°28.0'S, 159°58.4'E; 280 m / Jiří Hájek leg., 23.xi.-8.xii.2013 [p]'; 4 ♂ 1 ♀, labelled: 'SOLOMON ISLANDS, GUADALCANAL / ca. 4.5 km S of Barana vill., forest / nr. "Japanese camp" & Moka river / 09°30.3'S, 159°58.9′E; 275 m / Jiří Hájek leg., 5.-6.xii.2013 [p]' (NMPC); 8 33 5 ♀♀, labelled: 'SOLOMON ISLANDS, GUADALCANAL/LUNGA river env., Honiara reg. / 5-15km S of Barana vill. / 50-100 m, 22.xi.-18.xii.2016 / St. Jákl leg.' (NMPC); 31 ♂m 47 ♀♀, labelled: 'Solomon Islands, $GUADALCANAL/Koso\ vill.\ env.\ /\ 15\text{-}18km\ SSE\ of\ Honiara}\ /\ 500\text{-}650$ m, 1.-18.xii.2016 / St. Jákl leg.' (NMPC, SJCP); 26 ♂♂ 14 ♀♀, labelled: 'Solomon Islands / GUADALCANAL I., Honiara reg. / Barana vill. env. 100-300 / XI-XII.2018 / St. Jakl leg. / Coll. Hendrich' (LHCM, NMPC, ZSMG); 3 ♂♂ 1 ♀, labelled: 'Solomon Is. GUDALCANAL [sic!] I. / 80-250m, Lunga River env., 5-15 km / S of Barana vill., Honiara Reg. / 20.XI/15.XII.2013 [sic!] / St. Jakl leg./ Coll. Hendrich' (LHCM); 2 & d, labelled: 'South Pacific, Solomon Isl., / Guadalcanal 750-900 m / Karukiki env. 20-25 km SSE / Of Honiara, 1.-18.XII.2016 / St. Jakl leg./ Coll. Hendrich' (LHCM); 5 ♂ 4 ♀♀, labelled: 'South Pacific, Solomon Isl. / Guadalcanal 50-200m / LUNGA river env. 5-15 km S of / Barana vill., Honiara reg. / 22.XI.-18.XII.2016 / St. Jakl leg./ Coll. Hendrich' (LHCM). 9 ♂♂2 ♀♀, labelled: 'Salomonen: C-Guadalcanal, / 0.5 km N Mbaole, 2799 feet / S 09°37.69 E 160°06.69E / 2007 K. Mailautoka leg. [p]'; two specimens with additional label: 'DNA / M. Balke / 2909 [3336 $\,$ respectively] [p, green label]' (ZSMG); 5 ♂ ♂ 3 ♀♀, labelled: 'SOLOMON IS.: [red underlined] / Guadalcanal I. / Tapenanje. c. 1,100 ft. / 21-23. xii.1953. / J.D.Bradley [p] // RENNEL I. / Expedition. / B.M.1954-222 [p]' (BMNH); 1 ♂ 1♀, same label data, but with additional label: 'from / small stream [hw]' (BMNH); 4 $\stackrel{\wedge}{\circlearrowleft}$ 2 $\stackrel{\bigcirc}{\hookrightarrow}$, same label data, but first locality label handwritten (BMNH); 4 ♂♂ 6 ♀♀, labelled: 'SOLOMON IS.: $[orange\ underlined]\ /\ Guadal can al\ Is.\ /\ Suta\ /\ 27.vi.1956\ [p]\ /\!/\ E.S. Brown$ / B.M.1957-201 [p]' (BMNH); 3 ♂♂ 3 ♀♀, labelled: 'SOLOMON IS. / Guadalcanal, Suta / VI-27-1956 // J.L. Gressitt collector [p]' (BPBM); 1 ♂ 2 ♀♀, labelled: 'SOLOMON IS. / Guadalcanal / Betikama R. / labelled: 'SOLOMON ISLANDS [orange underlined] / Guadalcanal, / Nuhu. 26.x.65 / Roy. Soc. Exped. / B.M.1966-1. [p] // slow flowing pool. [p]' (BMNH); 2 33, labelled: '[on side:] 5316 [hw] / SOLOMON IS. / Guadalcanal [p] / Sorrohio R. / 26.vi. [hw] 195 [p] 6 [hw] / E.S.Brown $\hbox{ [p] // Pres. by / Com. Inst. Ent. / B.M. 1958-79 [p]' (BMNH). All paratypes}$ with the respective red printed label.

Additional material studied. SOLOMON ISLANDS: Savo: 7.x.1956., E.S.Brown, 11 specimens (BMNH, NMPC, ZSMG).

Description. *Male holotype. Habitus.* Broadest in one third of elytral length; body outline continuous.

Colouration (Fig. 2). Head with orange-brown clypeus and two small spots on vertex; appendages orange-brown. Pronotum with narrowly orange-brown sides and orange anterior corners; basal margin somewhat reddish translucent. Elytron black, disc with more or less distinct yellowish pattern consisting of postmedial spot in two thirds of elytral length, and three subapical spots; postmedial spot transverse, in centre narrowed; subapical spots consisting of two narrow longitudinal spots and oblique spot posterolaterally from them. Legs brown, basal part of metafemora brown-blackish. Prosternum and metacoxal processes brown.

Head ca. 0.62× width of pronotum, transversely elliptical. Meshes of reticulation mostly complete (closed).

Pronotum. Reticulation similar to that of head; meshes larger, incomplete and less impressed on disc, becoming smaller, closed and deeply impressed near sides. Traces of microreticulation perceptible laterally close to sides. Centre of pronotal disc with small fossa.

Elytra. Punctation double; coarse punctures present in two discal and two lateral, relatively distinct longitudinal lines; fine punctures occurring mostly on lines of reticulation. Reticulation similar to that of head and pronotum but slightly less impressed, consisting of heterogeneous polygonal meshes; meshes mostly complete. Traces of microreticulation perceptible in apical half and laterally on elytra.

Ventral surface. Medial part of metaventrite with rather dense fine punctation. Ratio WC/WS = 4.3. Metacoxal lines incomplete anteriorly, almost parallel-sided. Metacoxal plates reticulated with polygonal meshes, punctation consisting of sparse fine punctures; plates with short longitudinal strioles, and long, weakly impressed transverse striae. Abdominal ventrites with bunch of coarse setigerous punctures present in centre of ventrites III–V, additional setigerous punctures arranged sparsely in transverse line in medial part of ventrites.

Male genitalia. Median lobe (Fig. 9a) in lateral aspect only very slightly broadened to rounded apex; apex distinctly setose apico-ventrally. Parameres (Fig. 9b) narrowly triangular, slender, incised basally; dorsal surface densely setated; apical lobe long.

Female. Identical to male in habitus. Reticulation of dorsal surface more impressed, traces of microreticulation perceptible over major part of elytra; pro- and mesotarsomeres 1–3 not dilated and without adhesive setae; abdominal ventrite VI with sublateral grooves less developed.

Measurements. TL: 5.6-6.6 mm (mean value: $6.25 \pm$ 0.20 mm); holotype: 6.15 mm. TL-h: 5.0-6.0 mm (mean value: 5.55 ± 0.15 mm); holotype: 5.5 mm. MW: 3.2-3.9mm (mean value: 3.60 ± 0.10 mm); holotype: 3.55 mm. Variability. The specimens of the type series vary only in shape and size of yellow markings on dorsal surface, especially in the presence of an additional spot medially on frons, and the presence of subbasal spots on elytra; postmedian orange spot on elytra can be split into two spots. **Differential diagnosis.** The new species can be recognized from all other *Platynectes* from the Solomon Islands by combination of reduced yellow dorsal surface pattern (Fig. 2), closed meshes of dorsal surface reticulation, and the shape of male genitalia with median lobe slender in lateral view (Fig. 9). Based on the shape of the median lobe, P. lunga sp. nov. seems to be the most similar to P. malaita sp. nov., from which it differs in slightly larger body length (mean value = 6.25 ± 0.20 mm in *P. lunga* sp. nov., but only 5.85 ± 0.15 mm in *P. malaita* sp. nov.), less impressed dorsal surface reticulation) and much more reduced yellow colouration on elytra (see also under the latter species).

Etymology. The new species is named after its area of occurrence – Lunga river; majority of specimens was collected in its lower basin. The specific epithet is a noun in

the nominative singular, standing in apposition.

Collecting circumstances. At the type locality, the species was collected in shaded pools of temporary forest stream (Fig. 22). At night, *Platynectes* specimens were observed to leave pools and crawl in nearby hygropetric habitats, e.g. wet bank of pools, or a small spring (Fig. 23). At "Japanese camp", it was found in a forest spring (Fig. 24); at the other places, the specimens were collected in pools with muddy bottom made by forest stream, see also under *P. barana* sp. nov.

Distribution. The new species is known from low and medium altitude area (ca. 190–650 m) in north-central Guadalcanal, and from Savo Island situated north-westwards from Guadalcanal (Fig. 25A).

Platynectes makira sp. nov.

(Figs 3, 10)

Type locality. Solomon Islands, Makira, Bweinaniawariki-apu, ca. 10°34.4′S, 161°51.8′E.

Type material. HOLOTYPE: ♂ (BPBM), labelled: 'SOLOMON IS. / San Cristoval / Bweinaniawariki- / apu, 11.VIII.1960 [p] // C. W. O'Brian / Collector [p] // HOLOTYPE ♂ / *PLATYNECTES* / *makira* sp. nov. / J. Hájek et al. det. 2021 [p, red label]'. PARATYPES: 7 ♂ ♂ 8 ♀♀, same label data as holotype (BPBM, NMPC, ZSMG); 2 ♂ ♂ 3 ♀♀, 'SOLOMON IS. / San Cristoval / Wugiroga / 9.VIII.1960 [p] // C. W. O'Brian / Collector [p]' (BPBM). All paratypes with the respective red printed label.

Description. *Male holotype. Habitus.* Broadest in one third of elytral length; body outline continuous.

Colouration (Fig. 3). Head with orange-brown clypeus and two small spots on vertex; appendages orange-brown. Pronotum with broadly orange-brown sides and anterior corners; basal margin somewhat orangish translucent. Elytron black with brownish lateral margin and epipleura, disc with fairly distinct yellow-orange pattern consisting of two subbasal spots, one postmedial spot in two thirds of elytral length, two narrow subapical spots and band along lateral margin; first subapical spot small, indistinct, placed very close to base near scutellum; second subbasal spot larger and more distinct, placed sublaterally and more posteriorly than first spot; postmedial spot transverse, medially narrowed with posterior margin distinctly concave; preapical spots in form of two longitudinal, short, narrow bands; lateral longitudinal band continuous, starting as fairly distinct humeral spot, rather indistinct subbasally and apically. Fore and middle legs orange-brown, hind legs darker, brown. Ventral surface with brown head, prosternum and mesoventrite; metaventrite, metacoxal plates and abdominal ventrites darker, brown-blackish; apical ventrite orange-brown medio-posteriorly.

Head ca. 0.64× width of pronotum. Meshes of reticulation mostly incomplete (not closed).

Pronotum. Reticulation similar to that of head; meshes larger, incomplete and less impressed on disc, becoming smaller, closed and deeply impressed near sides. Traces of microreticulation badly perceptible close to lateral sides. Centre of pronotal disc with small longitudinal furrow.

Elytra. Punctation double; coarse punctures present in two discal and two lateral longitudinal lines; fine punctures occurring mostly on lines of reticulation. Reticulation similar to that of head and pronotum but slightly less im-



Figs 8–11. Male genitalia of *Platynectes*. 8 – *P. barana* sp. nov.; 9 – *P. lunga* sp. nov.; 10 – *P. makira* sp. nov.; 11 – *P. malaita* sp. nov. a – median lobe in lateral view; b – parameres. Scale bar = 0.5 mm.

pressed, consisting of heterogeneous polygonal meshes; meshes often incomplete. Traces of microreticulation hardly perceptible in apical third of elytra.

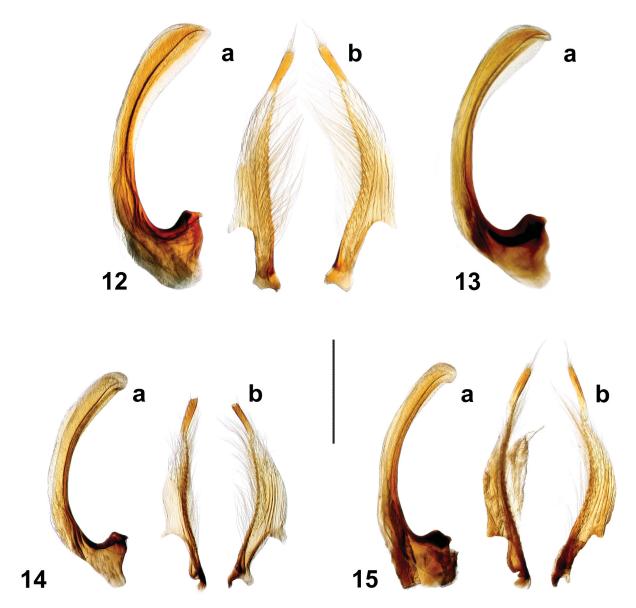
Ventral surface. Medial part of metaventrite with sparse fine punctation. Ratio WC/WS = 4.55. Metacoxal lines incomplete anteriorly, almost parallel-sided. Metacoxal plates reticulated with polygonal meshes; surface with short longitudinal strioles; punctation consisting of sparse fine punctures. Abdominal ventrites with bunch of coarse setigerous punctures present in centre of ventrites III–V, additional setigerous punctures arranged sparsely in transverse line in medial part of ventrites.

Male genitalia. Median lobe (Fig. 10a) in lateral aspect almost equally broad throughout its length; apex broadly rounded, distinctly setose on ventral side. Parameres (Fig. 10b) narrowly triangular, slender, incised basally; dorsal surface densely setated; apical lobe long.

Female. With elytral reticulation slightly more impressed, traces of microreticulation perceptible also laterally on pronotum and elytra.

Measurements. TL: 6.0–6.1 mm (mean value: 6.05 ± 0.05 mm); holotype: 6.1 mm. TL-h: 5.3–5.5 mm (mean value: 5.40 ± 0.05 mm); holotype: 5.45 mm. MW: 3.3–3.5 mm (mean value: 3.40 ± 0.05 mm); holotype: 3.45 mm. **Variability.** Minor variability can be seen in elytral colouration of the type specimens: lateral band distinct throughout its length, postmedian lateral spot connected with lateral band in some specimens; and in extent of area on elytra with the traces of microreticulation perceptible.

Differential diagnosis. Larger (6.0–6.1 mm) and more ovoid of two *Platynectes* species currently known from Makira Island. In addition, *P. makira* sp. nov. differs from the similar *P. owaraha* sp. nov. in the reticulation of pronotum reduced on centre of disc to punctures connected with short lines; in different elytral colouration which comprising two subbasal spots and long lateral longitudinal band extending to base of elytra (cf. Figs 3 and 6); and in male median lobe, which is almost equally broad throughout its length in lateral view (Fig. 10).



Figs 12–15. Male genitalia of *Platynectes*. 12 – *P. mbaole* sp. nov. (holotype); 13 – *P. mbaole* sp. nov. (paratype, Sutakiki); 14 – *P. owaraha* sp. nov.; 15 – *P. popomanaseu* sp. nov. a – median lobe in lateral view; b – parameres. Scale bar = 0.5 mm.

Etymology. The new species is named after its area of occurrence – Makira Island, also known as San Cristobal. The specific epithet is a noun in the nominative singular, standing in apposition.

Collecting circumstances. Unknown.

Distribution. The new species is so far known only from two close localities in the mountainous central part of Makira Island (Fig. 25A).

Platynectes malaita sp. nov.

(Figs 4, 11)

 Waisisi vill. env., $340 \, \text{m} / 09^\circ 29.8$ 'S $159^\circ 59.5$ 'E [sic!] / J. Horák leg., 5.-11. xii.2017 [p]' (NMPC). All paratypes with the respective red printed label.

Description. *Male holotype. Habitus.* Broadest before elytral midlength; body outline continuous.

Colouration (Fig. 4). Head with orange-brown clypeus, round orange spot medially on frons and two spots on vertex; appendages orange-brown. Pronotum with narrowly orange-brown sides and orange anterior corners; basal margin somewhat reddish translucent. Elytron black with brownish lateral margin and epipleura, disc with distinct yellowish pattern consisting of lateral subbasal spot, lateral postmedial spot in two thirds of elytral length, subapical spot, and thin sublateral line in apical half; subbasal spot round, postmedial and subapical spots transverse, connected with sublateral line. Legs orange-brown. Ventral surface brown-blackish, prosternum, median part of metacoxae and metacoxal processes reddish-brown.

Head ca. 0.63× width of pronotum, transversely elliptical. Meshes of reticulation often incomplete (not closed).

Pronotum. Reticulation similar to that of head; meshes larger, often incomplete and less impressed on disc, becoming smaller, closed and deeply impressed near sides. Microreticulation absent. Centre of pronotal disc with small fossa.

Elytra. Punctation double; coarse punctures present in two discal and two lateral, badly perceptible longitudinal lines; fine punctures occurring mostly on lines of reticulation. Reticulation similar to that of head and pronotum but slightly less impressed, consisting of heterogeneous polygonal meshes; meshes mostly complete. Traces of microreticulation hardly perceptible in apical half of elytra.

Ventral surface. Medial part of metaventrite with sparse fine punctation. Ratio WC/WS = 4.2. Metacoxal lines incomplete anteriorly, slightly diverging anteriorly. Metacoxal plates reticulated with polygonal meshes, punctation consisting of sparse fine punctures. Abdominal ventrites with bunch of coarse setigerous punctures present in centre of ventrites III–V, additional setigerous punctures arranged sparsely in transverse line in medial part of ventrites; fine punctures distributed sparsely and irregularly on ventrite surface.

Male genitalia. Median lobe (Fig. 11a) in lateral aspect slender in median part, only slightly widened to apex; apex broadly rounded, distinctly setose on ventral side. Parameres (Fig. 11b) narrowly triangular, slender, incised basally; dorsal surface densely setated; apical lobe long.

Female. Identical to male in habitus.

Measurements. TL: 5.5–6.1 mm (mean value: 5.85 ± 0.15 mm); holotype: 5.9 mm. TL-h: 4.9–5.5 mm (mean value: 5.25 ± 0.15 mm); holotype: 5.3 mm. MW: 3.1–3.5 mm (mean value: 3.30 ± 0.10 mm); holotype: 3.25 mm.

Variability. The specimens of the type series vary only in shape and size of yellow elytral markings.

Differential diagnosis. So far the only *Platynectes* known from Malaita Island. From similar and presumably closely related species from Guadalcanal, P. malaita sp. nov. can be recognized by combination of small body size, distinctive dorsal surface pattern (Fig. 4) and the shape of male genitalia (Fig. 11). Actually, we cannot exclude the possibility that P. malaita sp. nov. represents only an isolated population of *P. lunga* sp. nov. with just slightly smaller body size and more extensive dorsal surface colouration. Indeed, the body size of both species overlaps, dorsal colouration of P. malaita sp. nov. can be interpreted as an extension of that of P. lunga sp. nov., and the shape of median lobe of aedeagus is almost identical in both species. However, the difference in mean value of body length is significant $(6.25 \pm 0.20 \text{ mm in } P. lunga \text{ sp. nov., but only } 5.85 \pm 0.15$ mm in P. malaita sp. nov.), and the colour pattern of both species is stable with only minor variability which do not overlap. In addition, based on our experience, lotic *Platy*nectes species have only limited spreading abilities, and their distribution is usually limited to small area; therefore, we prefer to keep P. malaita sp. nov. as separate distinct species here.

Etymology. The new species is named after its area of occurrence – Malaita Island. The specific epithet is a noun in the nominative singular, standing in apposition.

Collecting circumstances. The specimens of the type series were collected in a small forest stream (S. Jákl, pers. comm.).

Distribution. The new species is so far known only from the small area around Waisisi bay in Malaita Island (Fig. 25A).

Platynectes mbaole sp. nov.

(Figs 5, 12-13)

Type locality. Solomon Islands, Guadalcanal, 0.5 km N of Mbaole, ca. $09^{\circ}37.69'S$ $160^{\circ}06.69'E$.

Type material. Holotype: ♂ (ZSMG), labelled: 'Salomonen: C-Guadalcanal, / 0.5 km N Mbaole, 2799 feet / S 09°37.69 E 160°06.69E / 2007 K. Mailautoka leg. [p] // HOLOTYPE ♂ / PLATYNECTES / mbaole sp. nov. / J. Hájek et al. det. 2021 [p, red label]'. PARATYPES: 7 ♂ ♂ 2 ♀♀, same label data as holotype, one specimen with additional label: 'DNA / M. Balke / 2910' [p, green label] (JSCL, NMPC, ZSMG); 4 ♂ ♂, labelled: 'SOLOMON IS. / Guadalcanal [p] / 4724 [on side] Sutakiki R. / 5/4. [hw] 196 [p] 3. / 2,000' [hw] / P.GREENSLADE [p] // SOLOMON IS: [red underlined] / Pres. / P.J.M.Greenslade. / B.M.1966-477 [p]' (BMNH, NMPC); 1 ♂ 1 ♀, labelled: 'SOLOMON IS.: [red underlined] / Guadalcanal Is. / Suta [ca. 9°41.5'S, 160°06.7'E] / 27.vi.1956 [p] // E.S.Brown / B.M.1957-201 [p]' (BMNH). All paratypes with the respective red printed label.

Description. *Male holotype. Habitus.* Broadest in one third of elytral length; body outline continuous.

Colouration (Fig. 5). Head with orange-brown clypeus and two small spots on vertex; appendages orange-brown. Pronotum with narrowly orange-brown sides and orange anterior corners; basal margin somewhat reddish translucent. Elytron black, disc with distinct yellowish pattern consisting of small basal spot in humeral area, subbasal spot, postmedial spot in two thirds of elytral length, two subapical spots and thin sublateral longitudinal line in apical half of elytra; humeral spot not connected with basal margin; subbasal spot round, situated approximately in two thirds of distance from suture to lateral margin; postmedial spot transverse, in centre narrowed, connected to sublateral line; subapical spots longitudinally elongate; sublateral line badly perceptible/interrupted in apical fifth of elytral length. Legs orange-brown, posterior legs somewhat darker than anterior two pairs. Ventral surface brown-blackish, prosternum and metacoxal processes brown.

Head ca. 0.63× width of pronotum, transversely elliptical. Meshes of reticulation mostly incomplete (not closed).

Pronotum. Reticulation similar to that of head; meshes somewhat larger and elongate, more often incomplete and less impressed on disc, becoming smaller, closed and deeply impressed near sides. Traces of microreticulation perceptible laterally close to sides. Centre of pronotal disc with small longitudinal furrow.

Elytra. Punctation double; coarse punctures present in two discal and two lateral, relatively distinct longitudinal lines; fine punctures occurring mostly on lines of reticulation. Reticulation similar to that of head and pronotum, consisting of heterogeneous polygonal meshes; meshes often elongate and incomplete. Microreticulation absent.

Ventral surface. Medial part of metaventrite with rather dense fine punctation. Ratio WC/WS = 4.7. Metacoxal lines

incomplete anteriorly, slightly diverging. Metacoxal plates reticulated with polygonal meshes, punctation consisting of sparse fine punctures; plates with short longitudinal strioles. Abdominal ventrites with bunch of coarse setigerous punctures present in centre of ventrites III–V, additional setigerous punctures arranged sparsely in transverse line in medial part of ventrites.

Male genitalia. Median lobe (Fig. 12a) in lateral aspect slender medially, strongly broadened to prominent apex; apex setose on apico-ventrally. Parameres (Fig. 12b) narrowly triangular, slender, incised basally; dorsal surface densely setated; apical lobe long.

Female. Identical to male in habitus. Reticulation of dorsal surface more impressed, thus beetle appearing submatt; meshes on elytra less elongate, mostly closed.

Measurements. TL: 6.5–7.2 mm (mean value: 6.85 ± 0.15 mm); holotype: 6.9 mm. TL-h: 5.8–6.4 mm (mean value: 6.10 ± 0.15 mm); holotype: 6.1 mm. MW: 3.7–4.0 mm (mean value: 3.80 ± 0.10 mm); holotype: 3.8 mm.

Variability. The variability among the specimens of the type series can be seen only in shape and size of yellow markings: the humeral spot may absent completely and the subbasal spot is very small in some specimens, whereas additional two short longitudinal lines present posterior to elytral midlength close to suture in other specimen; sublateral longitudinal line in apical half of elytra may be complete.

Differential diagnosis. The new species can be recognized from all other *Platynectes* from the Solomon Islands by combination of large body size, distinctive dorsal surface pattern (Fig. 5) and the shape of male genitalia with prominent apex of the median lobe (Figs 12–13).

Etymology. The new species is named after its area of occurrence – Mbaole village, in the vicinity of which the new species was collected. The specific epithet is a noun in the nominative singular, standing in apposition.

Collecting circumstances. Unknown.

Distribution. The new species is known from medium altitude area (ca. 840 m) in north-central Guadalcanal (Fig. 25A).

Platynectes owaraha sp. nov.

(Figs 6, 14)

Platynectes insularis J. Balfour-Browne, 1939: 466 (partim). Platynectes semperi Régimbart, 1899: Guéorguiev (1972): 53 (partim).

Type locality. Solomon Islands, Owaraha.

Type material. HOLOTYPE: ♂ (BMNH), labelled: 'Para-/ type [p, round label with yellow frame] // British Solomons [p] / ... [illegible] 193 [p] 2 [hw] / R.J.A.W.Lewer [p] / [on reverse:] Santa Ana [hw] // Pres.by / Imp.Inst.Ent. / B.M.1936-90. [p] // Platynectes / insularis m. [hw] / J.Balfour-Browne det. [p] // HOLOTYPE ♂ / PLATYNECTES / owaraha sp. nov. / J. Hájek et al. det. 2021 [p, red label]'. PARATYPE: 1 ♀, labelled: 'Para-/ type [p, round label with yellow frame] // with stream [hw] British Solomons [p] / ... [illegible] 193 [p] 2 [hw] / R.J.A.W.Lewer [p] / [on reverse:] Santa / Ana [hw] // Pres.by / Imp.Inst.Ent. / B.M.1936-90. [p] // Platynectes / insularis m. [hw] / J.Balfour-Browne det. [p]' (BMNH). The paratype with the respective red printed label.

Additional material studied. 1 ♂ (immature specimen without left elytron): San Cristoval [Makira], Pagato R. [River], camp 2 [ca. 10°34.9′S, 162°02.7′E], rocks in midstream, 3.viii.[19]65, Roy. Soc. Exped. (BMNH).

Description. *Male holotype. Habitus.* Broadest in one third of elytral length; body outline continuous.

Colouration (Fig. 6). Head along anterior margin anteriorly from eyes orange-brown, with round orange spot between eyes and two transverse spots on vertex; appendages orange-brown. Pronotum with broadly orange-brown sides and anterior corners; basal margin and disc of pronotum somewhat brownish translucent. Scutellum black, brownish translucent. Elytron black with brownish lateral margin and epipleura, disc with distinct yellow-orange pattern consisting of, one postmedial spot in two thirds of elytral length, one subapical spot and band along lateral margin; postmedial spot transverse, somewhat divided longitudinally to two parts, connected with longitudinal lateral band; preapical spot large, connected with longitudinal lateral band; lateral longitudinal band broad and distinct, starting at about elytral midlength and ending close to apex. Legs orange-brown. Ventral surface with brown head, prosternum, mesoventrite and lateral parts of metaventrite; medial part of metaventrite, metacoxal plates and abdominal ventrites darker, brown-blackish; apical ventrite orange-brown medio-posteriorly.

Head ca. 0.65× width of pronotum, transversely elliptical. Meshes of reticulation mostly complete (not closed); reticulation absent anteriorly on clypeus. Microreticulation absent.

Pronotum. Reticulation similar to that of head, consisting of heterogeneous polygonal meshes; meshes smaller, incomplete and less impressed on disc, becoming larger, closed and deeply impressed near sides. Microreticulation absent. Centre of pronotal disc with small longitudinal furrow.

Elytra. Punctation double; coarse punctures present in two discal and two lateral longitudinal lines; fine punctures occurring mostly on lines of reticulation. Reticulation similar to that of head and pronotum but slightly less impressed, consisting of heterogeneous polygonal meshes; meshes often incomplete. Traces of microreticulation hardly perceptible in apical third of elytra.

Ventral surface. Medial part of metaventrite without microsculpture, shiny, with sparse fine punctation. Ratio WC/WS = 4.50. Metacoxal lines incomplete anteriorly, slightly divergent. Metacoxal plates reticulated with polygonal meshes; surface with short longitudinal strioles; punctation consisting of sparse fine punctures. Abdominal ventrites with bunch of coarse setigerous punctures present in centre of ventrites III–V, additional setigerous punctures arranged sparsely in transverse line in medial part of ventrites.

Male genitalia. Median lobe (Fig. 14a) in lateral aspect slender in median part, only slightly widened to apex; apex broadly rounded, distinctly setose on ventral side. Parameres (Fig. 14b) narrowly triangular, slender, incised basally; dorsal surface densely setated; apical lobe long.

Female. Identical to male in habitus. Elytral reticulation slightly more impressed, traces of microreticulation better perceptible.

Measurements. TL: 5.6–5.9 mm; holotype: 5.6 mm. TL-h: 5.0–5.4 mm; holotype: 5.05 mm. MW: 3.0–3.1 mm; holotype: 3.0 mm.

Variability. No substantial variability can be seen in the limited material available for the study.

Differential diagnosis. Smallest (5.6–5.9 mm) of all *Platynectes* from Solomon Islands. *Platynectes owaraha* sp. nov. differs from similar and sympatric *P. makira* sp. nov. in more parallel-sided habitus; reticulation of pronotum well developed also on centre of disc; in different elytral colouration comprising only one postmedian and one subapical spot, and broad lateral longitudinal band which is beginning at about elytral midlength (cf. Figs 3 and 6); and in male median lobe, which is slightly widened to broadly rounded apex in lateral view (Fig. 14).

Two specimens of *P. owaraha* sp. nov. from Santa Ana (Owaraha) were part of the type series of *P. insularis* occurring in Vanuatu. Indeed, with small body length, and with elytral pattern, *P. owaraha* sp. nov. resembles the latter species. However, *P. owaraha* sp. nov. differs from *P. insularis* in more parallel-sided, dorsally more convex habitus; much broader beading of lateral sides of pronotum; elytral reticulation less impressed with meshes much more frequently incomplete (not closed); longitudinal lines of serial punctures on elytra more distinct; and prosternal column broadly convex.

Etymology. The new species is named after its area of occurrence – Owaraha Island, also known as Santa Ana. The specific epithet is a noun in the nominative singular, standing in apposition.

Collecting circumstances. Based on the label data, the specimens were collected in streams. Probably a lowland species; the highest point of Owaraha reaches altitude 150 m a.s.l., the single specimen from Makira was collected at altitude about 40 m a.s.l.

Distribution. The new species is known from small island Owaraha and nearby Makira Island (Fig. 25A).

Platynectes popomanaseu sp. nov. (Figs 7, 15)

Type locality. Solomon Islands, Guadalcanal, Mount Popomanaseu, ca. $9^{\circ}42.2'S$, $160^{\circ}03.7'E$.

Type material. HOLOTYPE: \circlearrowleft (BMNH), labelled: 'SOLOMON IS: [red underlined] / Pres. / P.J.M. Greenslade. / B.M. 1966-477. [p] // SOLOMON IS. / Guadalcanal [p] / Popamanasiu /> 7000′ [hw] / 22/10 [hw] 196 [p] 5 [hw] / 20063. [hw] / P. Greenslade [p] // HOLOTYPE \circlearrowleft / PLATYNECTES / popomanaseu sp. nov. / J. Hájek et al. det. 2021 [p, red label]'. PARATYPE: $1 \ \subsetneq$, same label data as holotype [pinned on same card as holotype] (BMNH). The paratype with the respective red printed label.

Description. *Male holotype. Habitus.* Broadest before elytral midlength; body outline discontinuous, base of pronotum narrower than base of elytra.

Colouration (Fig. 7). Surface dark brown. Head with orange-brown clypeus, indistinct reddish-brown spot medially on frons and two spots on vertex; appendages orange. Pronotum with broadly orange sides; basal and anterior margins indistinctly paler, reddish-brown; with two indistinct reddish-brown spots on disc. Scutellum reddish-brown. Elytron with indistinct reddish-brown stripe along suture; sides light brown; epipleura orange-brown; elytral markings consisting of thin sublateral longitudinal yellow line in apical half, line almost interrupted subapically and then broadened to triangular subapical spot.

Legs orange-brown. Ventral surface with orange-brown prosternum, including prosternal process; metaventrite indistinctly paler, reddish-brown; metacoxal processes orange-brown; abdominal ventrites indistinctly paler laterally, apical ventrite orange-brown medio-posteriorly.

Head ca. 0.65× width of pronotum, transversely elliptical. Meshes of reticulation often incomplete (not closed).

Pronotum. Reticulation similar to that of head, meshes often incomplete; meshes finer and less impressed on disc, becoming larger and deeply impressed near sides. Microreticulation absent. Centre of pronotal disc with small indistinct longitudinal furrow.

Elytra. Punctation double; coarse punctures present in two discal and two lateral relatively distinct longitudinal lines, few punctures present also along suture; fine punctures distributed irregularly over elytral surface, occurring mostly in intersections of reticulation. Reticulation similar to that of head and pronotum but slightly less impressed, consisting of heterogeneous polygonal meshes; meshes often incomplete. Microreticulation absent.

Ventral surface. Medial part of metaventrite with sparse fine punctation. Ratio WC/WS = 4.80. Metacoxal lines incomplete anteriorly, almost parallel-sided. Metacoxal plates reticulated with polygonal meshes, punctation consisting of sparse fine punctures. Abdominal ventrites with bunch of coarse setigerous punctures present in centre of ventrites III–V, additional setigerous punctures arranged sparsely in transverse line in medial part of ventrites.

Male genitalia. Median lobe (Fig. 15a) in lateral aspect slender in median part; apex expanded, broadly rounded with subapical notch on dorsal side, distinctly setose on ventral side. Parameres (Fig. 15b) narrowly triangular, slender, deeply incised basally; dorsal surface densely setated; apical lobe very long.

Female. Identical to male in habitus.

Measurements. (N = 2). TL: \lozenge = 6.30 mm; \diamondsuit = 6.20 mm. Tl-h: \lozenge \diamondsuit = 5.50 mm. MW: \lozenge = 3.40 mm; \diamondsuit = 3.50 mm.

Differential diagnosis. The new species can be recognized from all other *Platynectes* from the Solomon Islands by combination of small body size, elongate habitus with discontinuous body outline, dorsal surface pattern (Fig. 7) and the shape of male genitalia (Fig. 15).

Etymology. The new species is named after its area of occurrence – volcano Mount Popomanaseu, the highest place on the Guadalcanal Island. The specific epithet is a noun in the nominative singular, standing in apposition.

Collecting circumstances. Unknown.

Distribution. The new species is so far known only from the type locality, Mount Popomanaseu in south-central Guadalcanal (Fig. 25A).

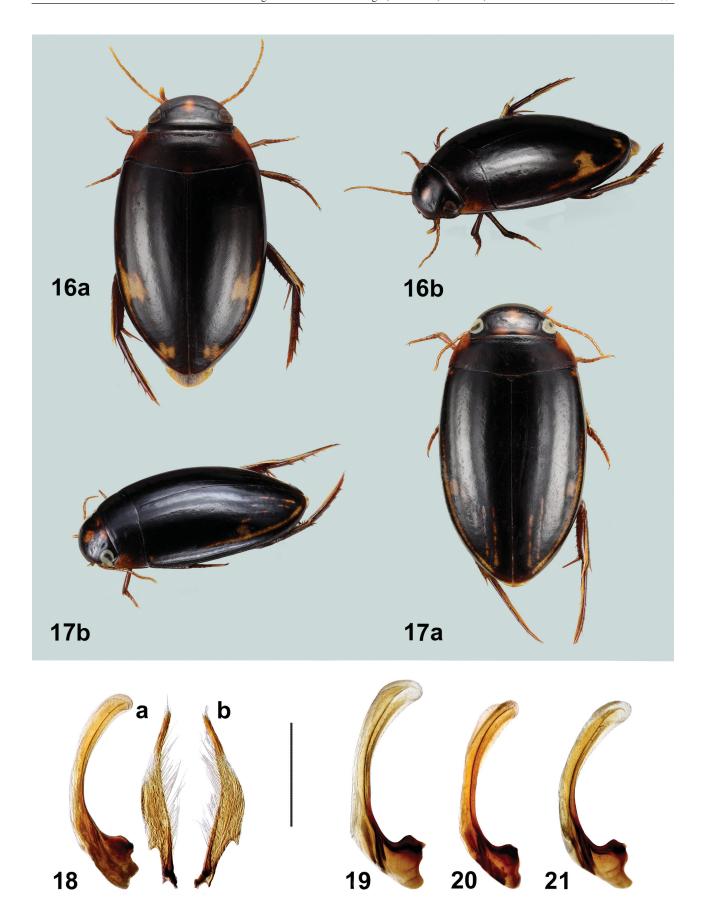
Platynectes insularis J. Balfour-Browne, 1939, status reinstituted

(Figs 16-21)

Platynectes insularis J. Balfour-Browne, 1939: 466.

Platynectes insularis ab. semilineatus Guignot, 1939: 180 (unavailable name)

Platynectes semperi Régimbart, 1899: Guéorguiev (1972): 53 (partim).



Figs 16–21. *Platynectes insularis* J. Balfour-Browne, 1939. 16 – paratype (Vanua Lava); 17 – ab. *semilineatus* (Ambrym); 18 – holotype (Vanua Lava); 19 – ab. *semilineatus* (Ambrym); 20 – paratype (Aneityum); 21 – paratype (Malekula). 16–17 – Habitus in dorsal (a) and frontolateral (b) view. 18–21 – Male genitalia: a – median lobe in lateral view; b – parameres. Scale bar = 0.5 mm.

Type locality. 'Banks Islands: Vanua Lava' [Vanuatu: Torba Province]. Type material. HOLOTYPE ♂ (BMNH), labelled: 'Holo [hw] / Type [p] / ♂ [hw] [round label with red frame] // New Hebrides: [orange underlined] / Banks Is. / Vanua Lava. / x.1929. / L.E.Cheesman. / B.M. 1930-477. [p] // Platynectes / insularis Type! [hw] / J.Balfour-Browne det. [p]'. PARATYPES: 1 \updownarrow , labelled: 'Allo [hw] / Type [p] / \updownarrow [hw] [round label with red frame] // New Hebrides: [orange underlined] / Banks Is. / Vanua Lava. / x.1929. / L.E.Cheesman. / B.M. 1930-477. [p] // Platynectes / insularis n. sp. [hw] / J.Balfour-Browne det. [p]'; 9 $\circlearrowleft \circlearrowleft 5 \circlearrowleft ,$ same locality label data as holotype, but 'Para- / type [p, round label with yellow frame]', one male with additional label 'Platynectes / insularis m. [hw] / J.Balfour-Browne det. [p]'; $5 \circlearrowleft 3 \circlearrowleft$, labelled: 'Para-/type [p, round label with yellow frame] // New Hebrides: [orange underlined] / Aneityum. / xi.1930. / L.E.Cheeseman. / B.M.1931-141. [p]', one male with additional label 'Platynectes / insularis m. [hw] / J.Balfour-Browne det. [p]'; 1 ♀, labelled: 'Para- / type [p, round label with yellow frame] // New Hebrides: [orange underlined] / Erromanga. / vii.1930. / L.E.Cheeseman. / B.M.1930-477. [p]'; 2 &&, labelled: 'Para-/type [p, round label with yellow frame] // New Hebrides: [orange underlined] / Malekula. / Malua Bay. / vi.1929. / L.E.Cheeseman. / B.M.1929-410. [p]'; 1 ♀, labelled: 'Para- / type [p, round label with yellow frame] // New Hebrides: [orange underlined] / Tanna. / x.1930. / L.E.Cheeseman. / B.M.1931-141. [p]' (all BMNH).

Additional material examined. VANUATU: AMBRYM: Mts., Marum et Bembow, 1935-1936 E. Aubert de la Rue, PARATYPE, *Platynectes insularis* Balf.Br. ab. *semilineatus* Guignot, $1 \copressed 1 \copressed 2 \copressed 2 \copressed 3 \copressed 3 \copressed 3 \copressed 4 \copressed 3 \copressed 4 \copressed 4 \copressed 4 \copressed 4 \copressed 4 \copressed 5 \copressed 4 \copressed 5 \copressed 6 \copressed$

Diagnosis. Small species. Rather variable in dorsal colouration: Typical specimens with round orange spot between eyes and two transverse spots on vertex; pronotum with lateral side and anterior corners broadly orange; elytron with transverse postmedian yellow-orange spot, two short longitudinal lines in apical third of elytron, and lateral band beginning before elytral midlength (Fig. 16). However, in some specimens, lines in apical third of elytron may be prolonged (ab. semilineatus), confluent into transverse spot, lateral band may be extended to basal third of elytron, or, on the other hand, spots on elytron may be absent and only lateral band is present. Reticulation consisting of heterogeneous polygonal meshes, meshes mostly complete (closed); fine punctures presenting both on lines of reticulation and inside meshes. Traces of microreticulation perceptible laterally and in apical third of elytra. Prosternal column steep, almost roof-shaped; prosternal process broadly lanceolate, in cross-section slightly convex; distinctly bordered in basal half, apex pointed. Ratio WC/ WS = 4.30. Metacoxal lines incomplete anteriorly, slightly divergent. Median lobe (Figs 18a, 19-21) in lateral aspect simple, sickle-shaped, slender in median part and slightly broadened in apical third; apex broadly rounded, distinctly setose on ventral side. Parameres (Figs 17b) narrowly triangular, slender, incised basally; dorsal surface densely setated; apical lobe long.

Measurements (N = 20). TL: 4.95-5.90 mm (mean value: 5.45 ± 0.20 mm). Tl-h: 4.30-5.30 mm (mean value: 4.85 ± 0.20 mm). MW: 2.55-3.15 mm (mean value: 2.90 ± 0.15 mm). Notes. Balfour-Browne (1939) stated the measurements (based on the same specimens) incorrectly as TL: 5.91-6.27 mm (mean value: 6.09); MW: 3.0-3.36 mm (mean value: 3.18 mm).

Comments on classification. Guéorguiev (1972) synonymised P. insularis with P. semperi Régimbart, 1899, without providing any detailed information. The identity of *P. semperi* is unclear as the syntype series contains specimens from the Philippines, Indonesian Sulawesi and New Guinea (RÉGIMBART 1899), and probably represent several species. So far a lectotype for this taxon was not designated. On the other hand, based on a molecular analysis by Toussaint et al. (2017: Fig. 2), P. insularis is closely related to species from Solomon Islands and differs significantly in COI sequence from taxa from the Philippines, Sunda Islands or New Guinea. Therefore, we reinstituted Platynectes insularis J. Balfour-Browne, 1939 here as a valid species. Platynectes insularis differs from all Solomon Islands' species, but *P. owaraha* sp. nov., in smaller body length and colouration of dorsal surface. For separation of P. insularis and P. owaraha sp. nov. see under the latter species.

Platynectes insularis in current concept is rather widespread and morphologically variable species. There are differences between populations in both, dorsal colouration (Figs 16-17) and the shape of the male genitalia (Figs 18–21). However, we were not able to find any constant pattern in colouration, while the differences in the shape of the median lobes may be (at least partially) artificial due to incomplete unfolding of median lobe of very old specimens during moistening process in KOH and glycerine. Additional, especially DNA grade material is necessary to answer the question whether P. insularis represent one variable species or a complex of species occurring on particular islands. The paratype specimens from Santa Ana (Solomon Islands, Owaraha) were recognised as a distinct species different from P. insularis (see under P. owaraha sp. nov.). Collecting circumstances. Unknown.

Distribution. Vanuatu (Ambrym, Aneityum, Erromango, Espiritu Santo, Malakula, Tanna, Vanua Lava) (Fig. 25B).

Discussion

The comprehensive molecular phylogenetic analysis by Toussaint et al (2017) revealed the current subgeneric classification of *Platynectes* by Guéorguiev (1972, 1978) and VAZIRANI (1976) to be inaccurate. According to these authors, all Oriental and the majority of Australasian Platynectes belong to the subgenus Gueorguievtes Vazirani, 1976; however, this clade is currently paraphyletic with respect to Neotropical Agametrus Sharp, 1882 and Australian Australonectes Guéorguiev, 1972 (Toussaint et al. 2017: fig. 2). Gueorguievtes should be restricted to species from continental southeast Asia and some taxa from Greater Sunda islands (clade VIII of Toussaint et al. 2017), while all remaining Oriental, Australasian and the majority of Australian Platynectes form a monophyletic unit (clades CVI-CVIII of Toussaint et al. 2017) for which the genus-level name Metaplatynectes Guéorguiev, 1978 (currently a synonym of *Gueorguievtes*) may be applicable. At present we refrain from a formal definition of this clade and the revalidation of the subgenus because this will be a subject of further study (L. Hendrich et al., in prep.).



Figs 22–24. Habitat of *Platynectes* in Guadalcanal. 22–23 – type locality of *P. barana* sp. nov. and *P. lunga* sp. nov.: 22 – large pool on drying-up stream in forested gorge; 23 – small spring with wet cliff where *Platynectes* were observed to crawl at night. 24 – forest spring near "Japanese Camp".



Fig. 25. Distribution of *Platynectes* species in the Solomon Islands (A) and Vanuatu (B).

All *Platynectes* species from the Solomon Islands are morphologically uniform and similar to each other. The best diagnostic characters separating particular taxa are relatively stable dorsal colour pattern, elytral reticulation, and predominantly the shape of male median lobe of aedeagus – however, it is noteworthy that wet mounts of the genitalia are necessary for the undoubted identification of species; standard dry preparation of genitalia does not provide relevant differentiation.

Similarly, to our previous study on the genus *Copelatus* (HÁJEK et al. 2021), with six recorded species, our account of *Platynectes* from the Solomon Islands has to be considered very preliminary. The presence of four species in Guadalcanal, the only island with noteworthy collecting efforts, suggested, that *Platynectes* species occurrence is structured according to elevation. That in turn means that several species may be expected to occur also on the other islands from which only a single or no species is known so far.

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Appendix

Checklist of Dytiscidae recorded from the Solomon Islands and Vanuatu

Solomon Islands

Carabdytes guadalcanalensis (Balke, 1998) (Guadalcanal)

Copelatus baranensis Hájek, Shaverdo, Hendrich & Balke, 2021 (Guadalcanal)

Copelatus bougainvillensis Hájek, Shaverdo, Hendrich & Balke, 2021 (Bougainville)

Copelatus kietensis Hájek, Shaverdo, Hendrich & Balke, 2021 (Bougainville)

Copelatus laevipennis Hájek, Shaverdo, Hendrich & Balke, 2021 (Guadalcanal)

Copelatus portior Guignot, 1956 (Guadalcanal, Ontong Java)

Copelatus tulagicus Guignot, 1942 (Guadalcanal, Santa Isabel, Tulagi) Copelatus urceolus Hájek, Shaverdo, Hendrich & Balke, 2021 (Gua-

dalcanal)

Copelatus variistriatus Hájek, Shaverdo, Hendrich & Balke, 2021

(Guadalcanal)

Copelatus sp. 1 (Guadalcanal)

Copelatus sp. 2 (Guadalcanal)

Hydaticus batchianensis similis Régimbart, 1899 (Solomons)

Hyphydrus eldenbecki Biström, 1982 (Guadalcanal)

Platynectes barana sp. nov. (Guadalcanal)

Platynectes lunga sp. nov. (Guadalcanal, Savo)

Platynectes makira sp. nov. (Makira)

Platynectes malaita sp. nov. (Malaita)

Platynectes mbaole sp. nov. (Guadalcanal)

Platynectes owaraha sp. nov. (Makira, Owaraha)

Platynectes popomanaseu sp. nov. (Guadalcanal)

Sandracottus femoralis Heller, 1934 (Buka, Guadalcanal)

Vanuatu

Copelatus amaroides Guignot, 1952 ("Fiji or New Hebrides")

Copelatus diffisus Guignot, 1939 (Pentecost)

Copelatus gentilis Sharp, 1882 (Malakula)

Copelatus portior Guignot, 1956 (Malakula)

Cybister tripunctatus temnenkii Aubé, 1838 (Malakula)

Exocelina cheesmanae (J. Balfour-Browne, 1939) (Malakula, Vanua Lava)

Platynectes insularis J. Balfour-Browne, 1939 (Ambrym, Aneityum, Erromango, Espiritu Santo, Malakula, Tanna, Vanua Lava)

Hydaticus consanguineus Aubé, 1838

Limbodessus cheesmanae (J. Balfour-Browne, 1939) (Erromango, Malakula)

Rhantus cheesmanae Balke, 1993 (Gaua, Erromango, Malakula)