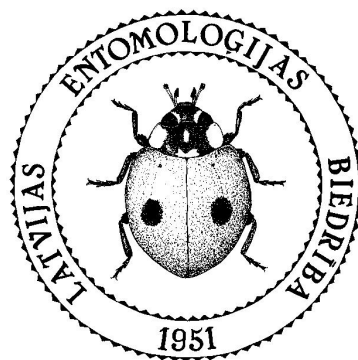


Biodiversity, Biogeography
and Nature Conservation
in WALLACEA and NEW GUINEA

Volume IV

Dmitry Telnov (executive editor),
Maxwell V. L. Barclay & Olivier S. G. Pauwels



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Title page photo: Papuan house surrounded by primary rainforest, Star Mountains, New Guinea (image by Dmitry Telnov).

***Catypnes marazziorum* sp. nov. (Coleoptera: Cerambycidae: Prioninae) from Papua New Guinea**

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Abstract: A new species of *Catypnes* Pascoe, 1864 is described and illustrated: *Catypnes marazziorum* sp. nov. (type locality: Papua New Guinea, Morobe Province, Kapiro village, deposited in Royal Belgian Institute of Natural Sciences, Brussels). The new species is compared with the single *Catypnes* species previously known from Papua New Guinea and with *C. pirkli* (Drumont, Komiya et Weigel, 2019), its closest congeneric taxon from Wallacea (Sulawesi). A distribution map for all known species of *Catypnes* is given.

Key words: Aegosomatini, *Catypnes*, taxonomy, new species, Papua New Guinea.

Introduction

Quite recently the former subgenus *Catypnes* Pascoe, 1864 of the genus *Toxeutes* Newman, 1840 was raised to genus level (Jin *et al.* 2020). *Catypnes* currently comprises six species after the recent descriptions of two species: one from New Caledonia and one from Sulawesi in Indonesia (Delahaye *et al.* 2016; Drumont *et al.* 2019).

Only one species of *Catypnes*, namely *C. dentifrons* (Aurivillius, 1925), was hitherto known from Papua New Guinea. It was described on the basis of a unique male collected on the Mt. Bolan located in south-eastern part of the country. In continuation of our investigation on this peculiar genus, we came across a series of specimens collected from Papua New Guinea. After comparing these specimens from Papua New Guinea with the types of all taxa constituting the genus *Catypnes* (namely *dentifrons* – NHRS, *negrosianus* – ZSM, *macleayi* – BMNH, *pascoei* – RBINS, *pirkli* – RBINS, *punctatissimus* [= *macleayi*] – MNHN and *salesnei* – NDC), we have come to the conclusion that these belong to a new species that is described and illustrated here.

Material and methods

All specimens examined in this study are mounted and were observed under Leica stereo microscope MZ-6. The dissected male genitalia were fixed onto a white card together with the specimen. Photographs were taken with a Leica stereo microscope Z6 APOA, a Planapo-lens 1.0 was used, and subsequently processed and measured with the Leica Applications-software 4.0. The final processing was made with Photoshop 7.0. Before making photographs all parts of male genitalia were immersed for a minimum of 24 hours in 80% lactic acid and subsequently photographed in 99.5% glycerol.

Total body length is measured from the anterior border of the clypeus to the apex of elytra and does not include partially exposed abdominal segments.

Data from all specimen labels are reproduced verbatim, without additions. If not stated, all labels are printed. Authors' comments are given in square brackets. If there are multiple labels on a specimen these are separated by a slash. Each studied specimen of the new species is provided with a black-framed label on red paper as 'HOLOTYPE' or 'PARATYPE'.



The material discussed below and types studied are housed in the following collections:

ADC – Collection Alain Drumont, Brussels, Belgium;
 AWC – Collection Andreas Weigel, Wernburg, Germany;
 BMNH – Natural History Museum (formerly British Museum, Natural History), London, United Kingdom;
 GVMC – Collection Giuseppe & Valentino Marazzi, Arese, Italy;
 JDC – Collection Jiří Dvořáček, Krenov, Český Krumlov, Czech Republic;
 MNHN – Muséum national d'Histoire naturelle, Paris, France;
 NDC – Collection Norbert Delahaye, Plaisir, France;
 NHRS – Swedish Museum of Natural History, Stockholm, Sweden;
 RBINS – Royal Belgian Institute of Natural Sciences, Brussels, Belgium;
 ZKC – Collection Ziro Komiya, Tokyo, Japan;
 ZSM – Zoologische Staatssammlung München, Munich, Germany.

Other abbreviations:

HT – Holotype;
 PT – Paratype.

Results

***Catypnes marazziorum* sp. nov.** (Figs 1–9 & 13–19)

Holotype ♂ ex ADC, will be deposited in RBINS: I.G.: 34.222) (Figs 1–3): Kapiro village, WAU, MOROBE, Papouasie Nvelle Guinée, 21.XII.1998 / COLLECTION / A. DRUMONT.

Paratypes 10♂ & 14♀: 1♀ (Allotype) AWC (Figs 4–6): PAPUA NEUGUINEA, Bulolo, Morobe Prov., September 1999 / local collector; 1♂ AWC (Figs 7–9): Kapiro village, Wau District, Morobe Prov., P. N. G. 12.IV.1997 / T. dentifrons [underside of the label, handwritten] / ex coll. G. et V. MARAZZI [handwritten] / COLLECTION / A. DRUMONT; 1♂ ADC: Wau, P. N. G., VII.1990; 1♀ ADC: Papua New Guinea, WAU, M.P., II-91 / *Toxentes dentifrons* ♀ Aurivillius, 1926 [handwritten], Det. A. DRUMONT, 2002; 1♂ ZKC: Papua New Guinea, Morobe Prov., Wau dist., Kapiro vill., 5.I.1995, local collector leg.; 2♀ ZKC: same locality, 14.III.1995, local collector leg.; 1♀ ex ZKC, will be deposited in RBINS: I.G.: 34.223), same locality and date, local collector leg.; 1♂ ZKC: same locality but 1.XII.1997, local collector leg.; 1♀ ZKC: same locality but 12.XII.1997, local collector leg.; 2♂ ZKC: same locality but III.1998, local collector leg.; 1♂ & 1♀ ADC: same locality but 26.III.2004, local collector leg.; 1♀ ZKC: same locality but 6.VIII.2007, local collector leg.; 1♂ ZKC: same locality but 13.IV.2008, local collector leg.; 1♀ ADC: Wau Valley, 1200 M., Morobe prov., P.N.G.,

23.XI.1995; 2♂ ADC: Wau Valley, Morobe prov., P.N.G., 15.II.1990; 1♂ & 1♀ GVMC: P.N.G., Morobe prov., Aseki, III.1998; 1♀ GVMC: P.N.G., Morobe prov., Wau, Mt. Kandi, 2.III.2005; 1♀ JDC: Papua New Guinea, Morobe Prov., Wau dist., Kapiro vill., 13.III.2006, leg. Hudson; 1♂ ZKC: Papua New Guinea, Oro Prov., Timbek vill., 18. II.1996, local collector leg.

Derivatio nominis: Patronymic. We dedicate this species jointly to Giuseppe and Valentino Marazzi, two entomologists passionate about the worldwide Cerambycidae, especially Prioninae and who participate in our researches since more than 20 years.

Measurements: Holotype ♂: 31.0 mm; allotype ♀: 29.0 mm; PT ♂: 27.5 (min.) - 33.5 (max.) mm, ♀: 31.0 (min.) - 37.5 (max.) mm.

Description: Habitus, male. Slightly elongated and subparallel; body dark-reddish brown except on the elytra which are lighter (especially apical third of the elytra); underside reddish-brown. Head slightly broader than long, upper side with dense and strong, deep punctures, diameter of punctures mostly much larger than their distances, punctures also partly touching; wrinkled on the sides up to the underside, partly with longitudinal furrows; underside in the middle broadly smooth, not punctured, underside between the eye lobes cross furrowed and with erect yellowish hairs; genae angularly protruding, almost rectangular; clypeus wrinkled, in front with long, erect yellowish hairs; mandibles dark brown, with blackish borders, outer margin strongly curved, tip bidentate, lower tooth shorter, outside covered with coarse deep punctures of different sizes and sparsely protruding yellowish hairs, inner margin behind tip almost parallel sided, then truncated before base; clypeus broadly deepened and wrinkled just inside anterior margin; eyes kidney-shaped, not edged, about twice as long as broad; distance between eyes on front about 2.5 times the width of the upper lobes in male. Antennae 11-segmented, light brown, 1-3 segments dark brown; scape short, length/apex width: 1.8; 3rd antennal segment longest, about 1.3 times as long as scape and reaching anterior tooth of pronotum; 1-8 segments covered with coarse punctures, these become finer towards end and distances between become larger towards apex; 9-11 segments chagrined, not punctured and dull, apex of the 7-10 segments angularly widened at the outside; apex of 11th segment rounded; underside of segments 5-10 flat and broadly furrowed, 3rd and 4th furrowed only in about apical half, 5-9 almost completely furrowed,

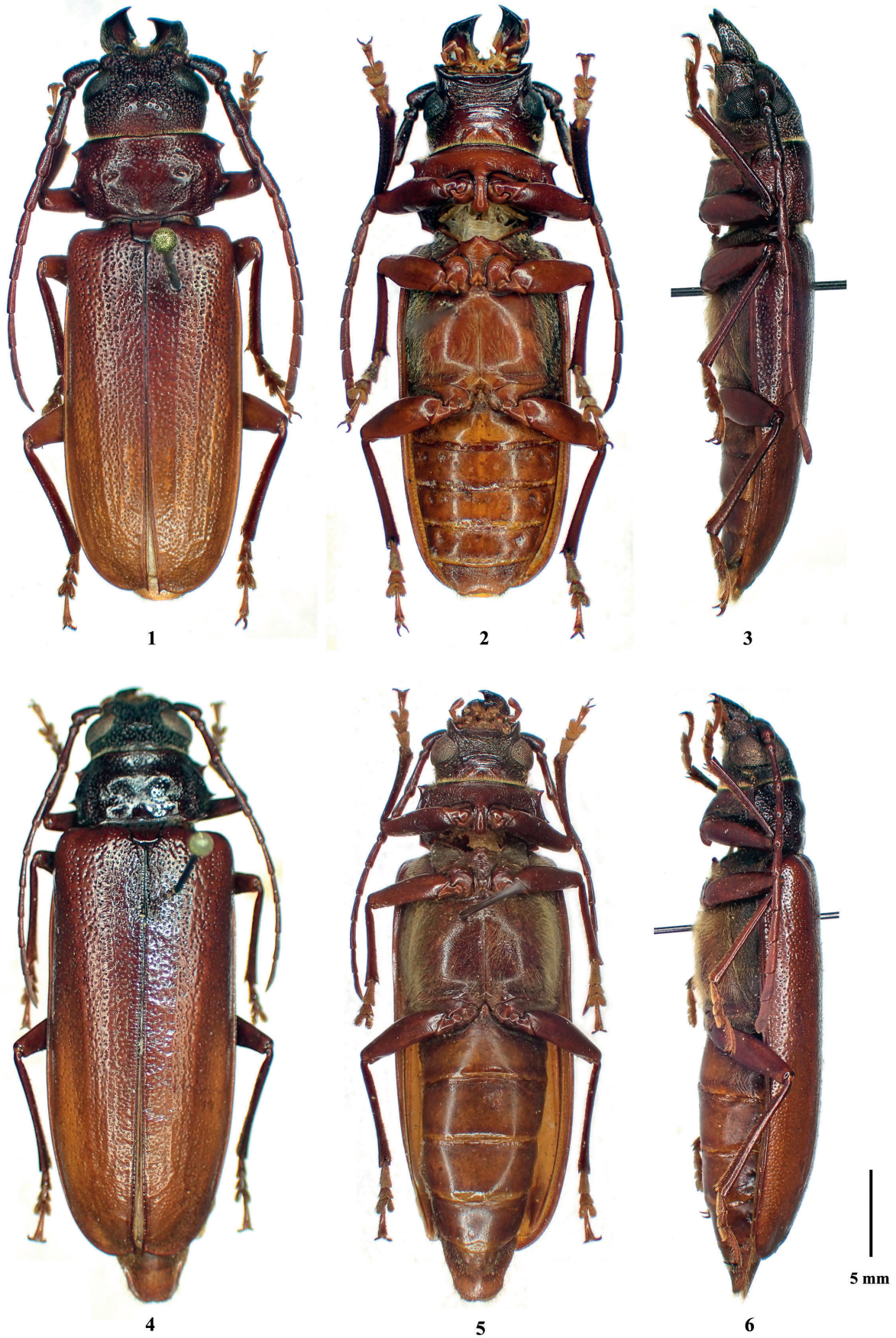


broad and flat, 6th segment weakly furrowed near apical part only. Pronotum rectangular in shape, median-length/base width = 0.62; anterior border straight with dense yellowish hairs, posterior border slightly wavy, middle part (nearly 3/5) also with short yellowish hairs, otherwise without hairs; pronotal hind corners obtuse, at middle tooth as wide as humeral angles; front tooth immediately after anterior border of pronotum, acute-angled; pronotal surface smooth shiny, punctures irregular, deep, diameters of punctures mostly smaller than their distances, small areas also without punctures; prosternum somewhat wrinkled; borders of coxae dark brown; prosternal process shiny, parallel-sided between coxae, widened backward, and protruding by about one third, broadly truncated at posterior border, almost at same height as coxae. Venter: Mesosternal process lower than coxa, triangular, truncate at end; mesoventrite shiny, very finely punctured; long protruding yellowish hairs on meso- and metaventrite, epimeron and episternum, the latter finely wrinkled; metepisternum about four times longer than wide, less tapering distally; abdomen shiny, smooth, glabrous, with very fine, hardly visible punctures; last abdominal ventrite slightly concave at the posterior border and with yellowish, erect hairs, which become longer towards tip and at sides. Elytra: about twice as long as wide, length/width = 2.1; almost parallel sided, shiny, the fine engraved punctures become finer towards apex; finely wrinkled or rugulose near apex; distances between the punctures variable, from almost touching each other to larger than their diameter; subscutellar area with rather dense and coarse punctures; elytra also with three very feeble costae; scutellum large, almost square, slightly rounded apically, smooth and glossy, with coarse punctures; elytral apex broadly rounded, sutural edge extended into a pointed tooth; behind the humeral region with a narrow lateral margin which disappears before apex; epipleura narrow, only under the shoulders very broad, chagrined, disappearing before apex. Legs: Femora smooth and shiny, very finely punctured, only slightly thickened in middle; tibiae almost parallel sided, widened towards apex, with coarse punctures, the distances between them much larger than their diameter, inner sides with oblique yellowish hairs; tarsi with claw article the longest, 4th very small, hardly visible, all joints with yellowish hairs above, 3rd joint very deeply lobed, ratio of tarsal joints 1-5: 0.6 / 0.4 / 0.4 / 0.08 / 1.0. Male genitalia (Figs 13–18): median lobe with non-inverted endophallus (Fig. 13), 6.2 mm long, 1.0 mm wide,

nearly straight in lateral view, median struts about 2/5 length of median lobe, median lobe curved in lateral view; dorsal plate almost parallel-sided with apex broadly rounded triangularly, shorter than ventral plate; ventral plate almost parallel-sided, strongly narrowed before apex and extended into parallel-sided spine; endophallus very long, not distinctly subdivided into phallomeres (according to Yamasako & Ohbayashi 2011), inside median lobe (basal phallomere) with a pair of characteristic crescent-shaped sclerites (Fig. 14), a band-shaped folded structure inside first part of endophallus (more than 6 mm long); tegmen (Figs 16–17) 5 mm long, about 1 mm wide at base of parameres, parameres almost parallel-sided, slightly narrowed to apex, and tight together at the base, closer than the width of a paramere, width of paramere before apex 0.25 mm; apex rounded and with long yellowish hairs at anterior sixth, obtuse angled in lateral view; base of the parameres with a small wide tooth inside (Fig. 17); 8th tergite (Fig. 18) 2.5 mm long, about 2.8 mm wide, sides rounded and slightly concave before apex; anterior margin concave; apical 3/5 with long yellowish hairs, longer and more dense around the anterior edges. Sexual dimorphism: Female (Figs 4–6) with antennae shorter (only reaching to the beginning of the abdomen) and finer; scape less strongly thickened; shorter mandibles; wider eyes, thus the distance between eyes at the frons smaller, about 1.5 of the eye width; cheeks less strongly angularly protruding; femora less thickened; elytral length-width ratio: ♂ 2,1-2,2, ♀ 2,3-2,4 (4 specimens measured). In a female (PT from Wau) about 123 eggs were found (see fig. 19), size of eggs about 2.5 mm long and 1.2 mm wide, in average.

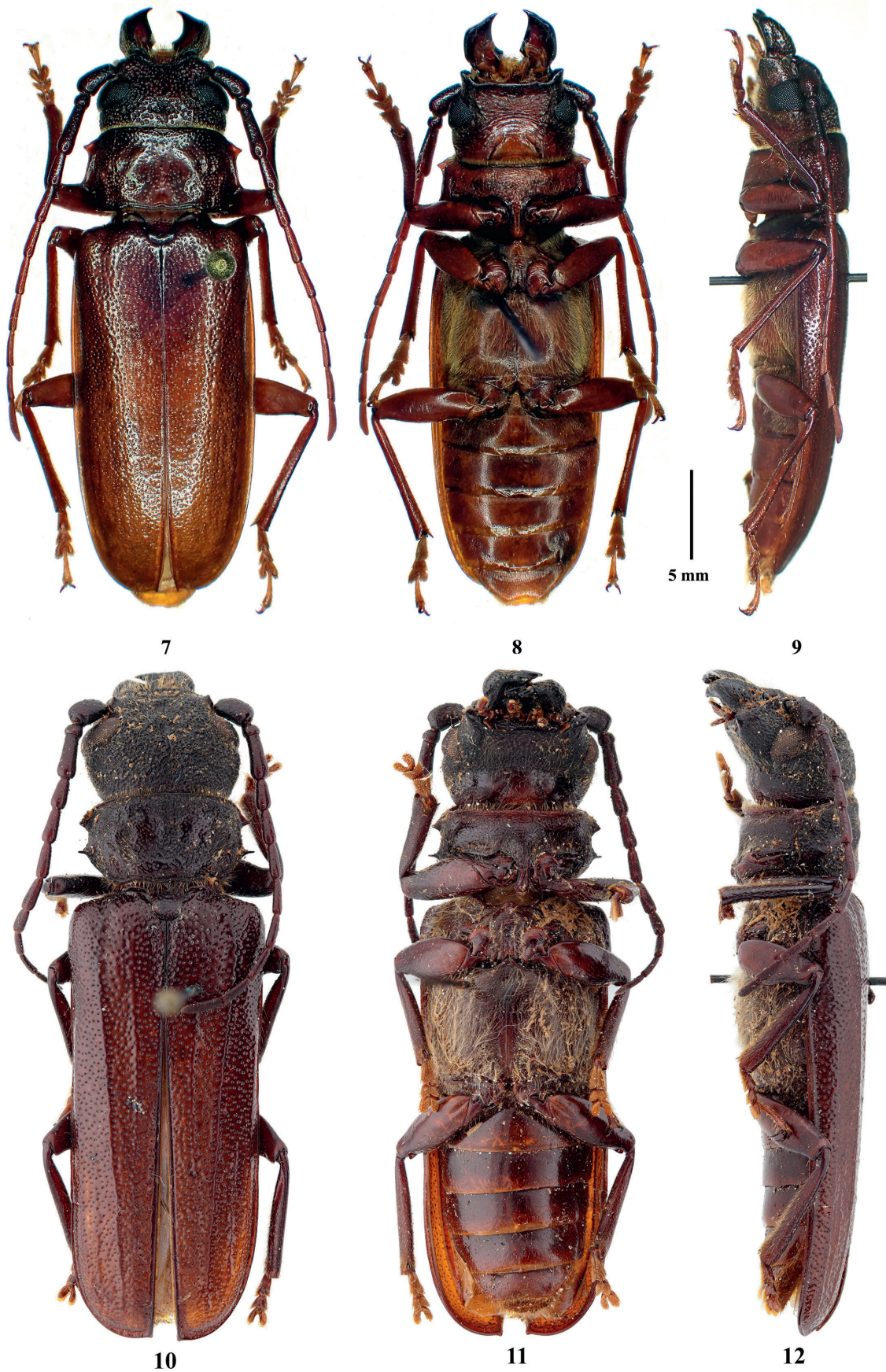
Differential diagnosis: We have examined holotype (male) of *Catypnes dentifrons* (Figs 10–12), the only other species present in Papua New Guinea, preserved in NHRS, from which males of *C. marazziorum* sp. nov. (Figs 1–3 & 7–9) differ by the following morphological characters: width of the head smaller than pronotum (as wide as pronotum in *C. dentifrons*), median lateral tooth of pronotum triangular (stretched in a tapering spine in *C. dentifrons*), 1st antennal segment elongated (short and robust in *C. dentifrons*), 2nd elytral costa weak (distinct in *C. dentifrons*), apical tooth of the sutural angle acute and distinct (weak and short in *C. dentifrons*), femora thin and elongated (large and robust in *C. dentifrons*). *C. marazziorum* sp. nov. is externally similar to *C. pirkli* (Drumont, Komiya & Weigel, 2019) from Sulawesi in Indonesia, from which the new species can be mainly distinguished





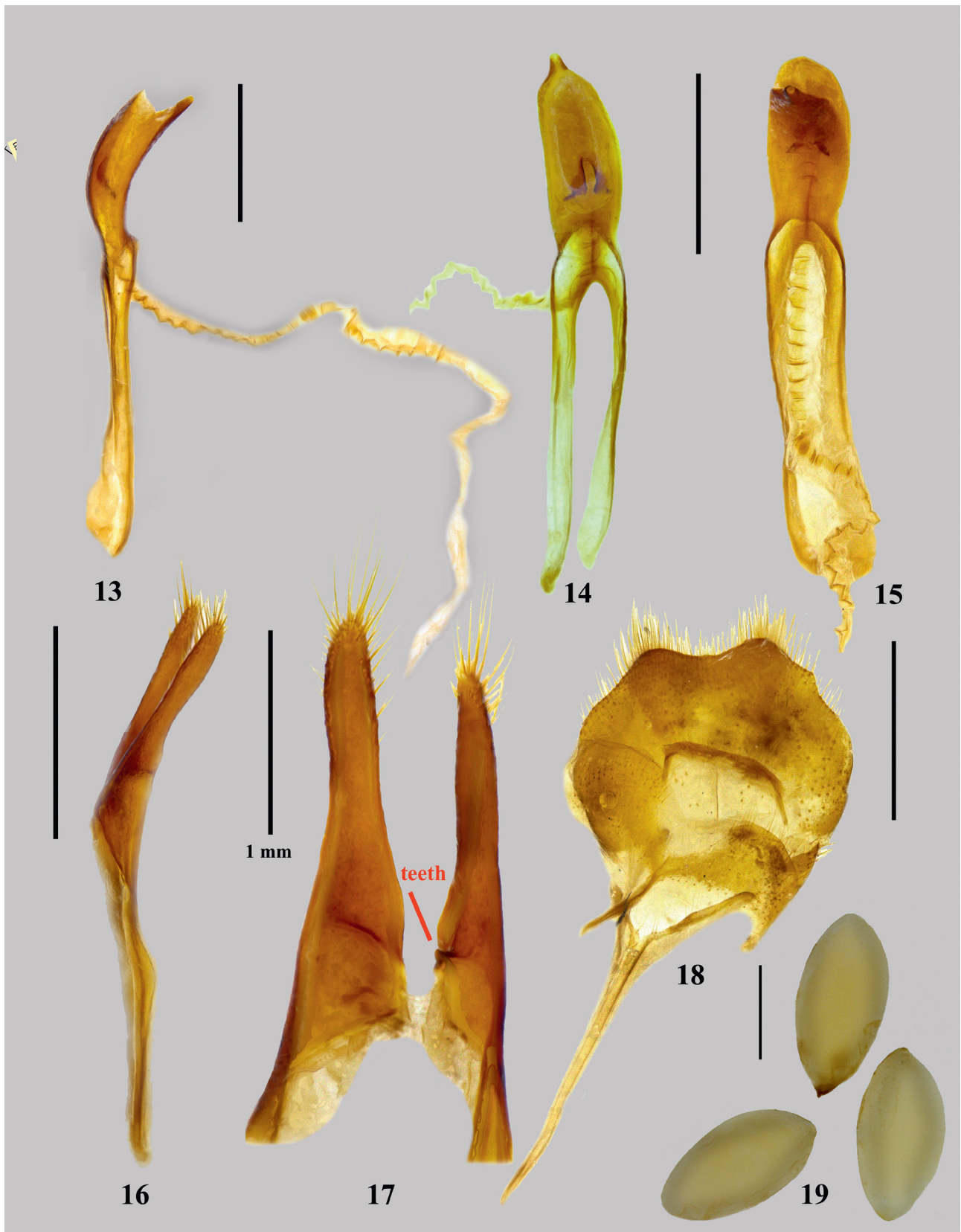
Figures 1–3. *Catypnes marazziorum* sp. nov. 1–3 – Holotype ♂ (RBINS), body length 31 mm. 1 – Habitus, dorsal view; 2 – ditto, ventral view; 3 – ditto, lateral view; 4–6 – Allotype ♀ (AWC), body length 29 mm. 4 – Habitus, dorsal view; 5 – ditto, ventral view; 6 – ditto, lateral view.





Figures 7–12. Papuan *Catypnes* species. 7–9 – *C. marazziorum* sp. nov., paratype ♂ (AWC) from Kapiro village, body length 29 mm. 7 – Habitus, dorsal view; 8 – ditto, ventral view; 9 – ditto, lateral view; 10–12 – *C. dentifrons* (Aurivillius, 1925), holotype ♂ (NHRM). 10 – Habitus, dorsal view; 11 – ditto, ventral view; 12 – ditto, lateral view. (images 10–12 courtesy Jiří Pirkle).





Figures 13–19. *Catypnes marazziorum* sp. nov. 13–18 – Holotype ♂, genitalia. 13 – Median lobe with non inverted endophallus, lateral view; 14 – ditto, dorsal view; 15 – ditto, ventral view; 16 – Tegmen, lateral view; 17 – Parameres, ventral view; 18 – tergite 8, ventral view; 19 – Paratype ♀ from Wau, eggs [scale bars 2 mm].



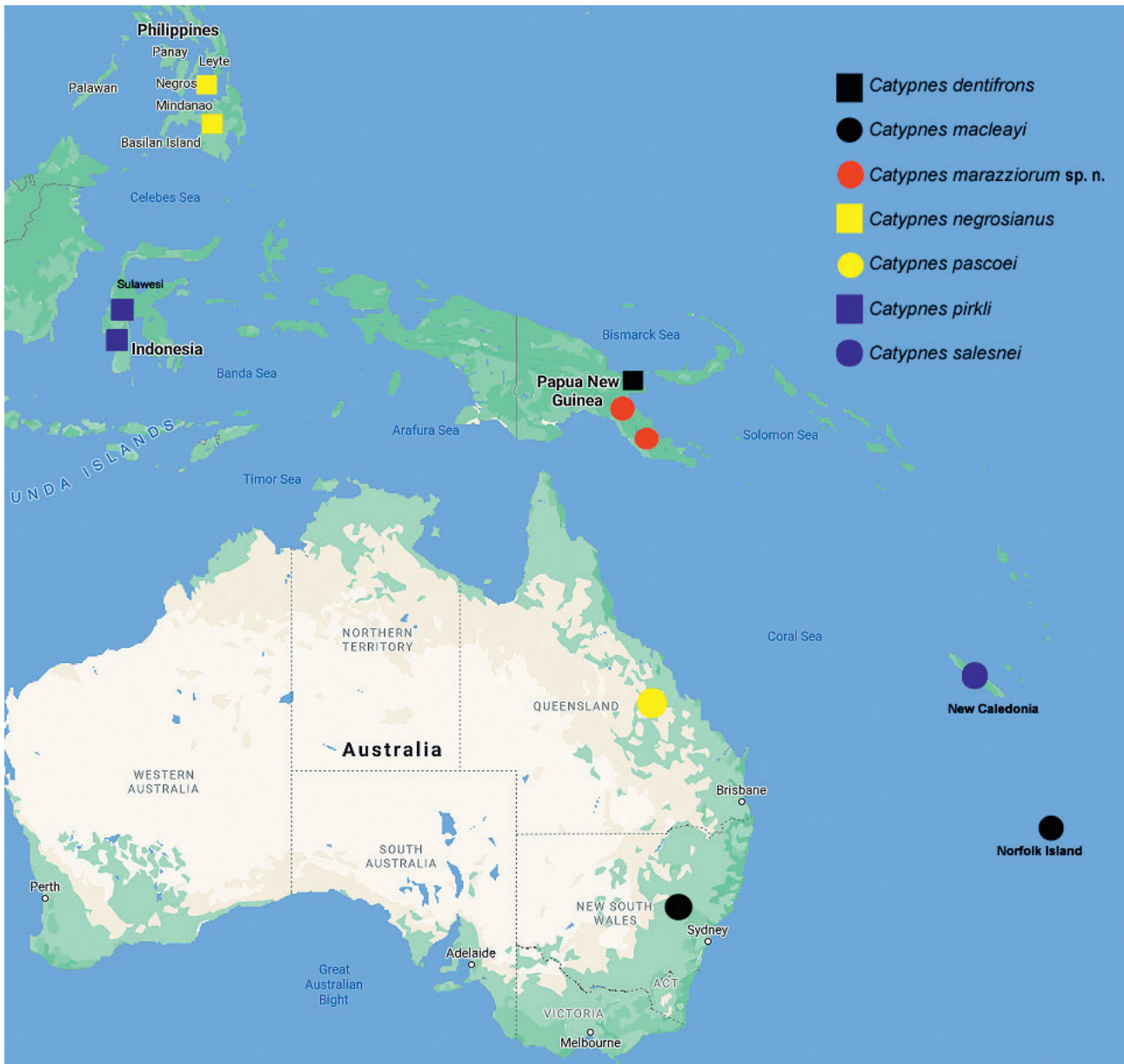


Figure 20. Distribution map for all known species of *Catypnes* Pascoe, 1864 (source: Google Maps).

by the following points: maximum width (including medium teeth) of pronotum equal to the width at shoulders while it is shorter in *C. pirkli*; surface of elytra glossy instead of being mat in *C. pirkli*, and by the elytral puncture which are deep and close (especially visible on the elytral disc and the area between the sutural line and the first costa) while those are light and composed of small punctures in *C. pirkli*.

Variability in the paratype series: none, except the one related to the sex and the size of the specimens.

Distribution: The new species is distributed in Papua New Guinea, presently known from the Morobe and Oro provinces only (see fig. 20).

Checklist of species of *Catypnes* Pascoe, 1864

***Catypnes dentifrons* (Aurivillius, 1925)**

Distribution: Papua New Guinea: Bolan Mts.

***Catypnes macleayi* Pascoe, 1864**

= *Toxentes punctatissimus* Thomson, 1877 [female]

Distribution: Australia: New South Wales, Norfolk.

***Catypnes marazziorum* sp. nov.**

Distribution: Papua New Guinea: Morobe and Oro provinces.

***Catypnes negrosianus* (Hüdepohl, 1987)**

Distribution: Philippines: Mindanao, Negros.



***Catypnes pascoei* (Lameere, 1904)**

Distribution: Australia: Queensland.

***Catypnes pirkli* (Drumont, Komiya et Weigel, 2019)**

Distribution: Indonesia: South and Central Sulawesi.

***Catypnes salesnei* (Delahaye, Drumont et Komiya, 2016)**

Distribution: New Caledonia.

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