

New species of the genus *Tmesisternus* from New Guinea and the Maluku Islands (Coleoptera: Cerambycidae, Lamiinae, Tmesisternini)

Gerrit Withaar

Meidoornstraat 20, 9501VZ Stadskanaal, The Netherlands
email: g.withaar@hetnet.nl

Suara Serangga Papua (SUGAPA digital) 10(2): 42-53
urn:lsid:zoobank.org:pub:C6FC8669-7E85-4437-93F0-884D5A446410

Abstract: Eight new species in the genus *Tmesisternus* Latreille, 1829 have been identified. Three of the new species are found in Papua New Guinea, four in Papua, Indonesia and one in the Maluku Islands. The species are described and a comparison is made between some similar species. The habitus of the holotypes and male genital drawings are depicted.

Rangkuman: Delapan spesies baru dalam Genus *Tmesisternus* Latreille 1829 sudah diidentifikasi. Tiga dari spesies baru tersebut ditemukan di Papua New Guinea, empat spesies dari Papua, Indonesia dan satu spesies dari Kepulauan Maluku. Spesies-spesies tersebut dideskripsi dan perbandingan dibuat untuk spesies yang sama. Diberikan deskripsi habitus dari holotype dan gambar kelamin jantan.

Keywords: *Tmesisternus*, new species, New Guinea.

Introduction

The genus *Tmesisternus* Latreille, 1829 comprises many species and the discoveries of new species seems endless, shown by previous publications by Weigel (2003, 2006, 2008 and 2010), Withaar (2009, 2011, 2013, 2014, 2015 and 2016) and Weigel & Withaar (2006). After new studies in the collections of BPBM, ZMHB and RMNH, eight new species in the genus *Tmesisternus* have been found. The new discoveries include three species from Papua (Indonesia): *Tmesisternus araucarius* **spec.nov.**, *T. nielsius* **spec.nov.** and *T. ellenae* **spec.nov.**; four from Papua New Guinea: *T. bosavius* **spec.nov.**, *T. carlae* **spec.nov.**, *T. ingeae* **spec. nov.** and *T. burgersi* **spec.nov.**; and one from the Maluku Islands: *T. wajaus* **spec.nov.**

Abbreviations:

BPBM - Bernice P. Bishop Museum, Honolulu, Hawaii, United States of America
PNG - Papua New Guinea
RMNH - Naturalis Biodiversity Center, Leiden, The Netherlands
ZMHB - Museum für Naturkunde (Humboldt Museum), Berlin, Germany

Descriptions:

Tmesisternus carlae **spec.nov.** (Figs. 1a-b)

urn:lsid:zoobank.org:act:8D45B4BF-19D5-490B-8E0F-A431E86E6347

Holotype: ♂ BPBM: PNG, Fly river, Okabia, 400 m., 26.viii.1969, leg. Sedlacek.

Paratypes: 1 ♀, BPBM: PNG, Malambi, R. Lae, N.G. Mariluga, VIII, 4500 m., 29.xii.1956, coll. J.H. Ardley. 1 ♀, RMNH: PNG, N.E. Garaina, 830 m., 13-15.i.1958.

Description: Total length 13 mm.; width 4 mm.

Head: Black-brown, smooth and shiny. A fine double ridged groove, with a nearly visible small elyptical depression from base to labrum and very weak lateral ridges from antennal insertions to labrum. Entirely covered with deep punctures.

Antenna: Brown, smooth and shiny. In all type specimens not complete. Scape a little swollen to the apex and the third segment, in one paratype longer than the fourth.

Pronotum: Black-brown, smooth and shiny. From base weak bending to the smaller apex. Weak lateral ridges with a small rounded tubercle on one fourth from apex and a ventrolateral tubercle on one third from base. Except for a small longitudinal area in the centre, entirely covered with deep punctures.

Scutellum: At base rounded and at apex pointed. Black-brown, shiny and smooth. The apex not reaching the elytra base.

Elytra: Black-brown, smooth and shiny. Elongate, almost parallel sided and weak tapering to the laterally sharp pointed apex. Two weak longitudinal ridges, one along the suture and another one almost parallel with the suture and ending at the sharp lateral tubercle from apex. Dorsally entirely covered with punctures, at the base deep and finer to the apex and sides. Wide lateral areas with very fine transparent pubescens. On some places at the epipleura more concentrated pubescent areas, forming three, hardly visible dots.

Legs: Femora black with base red brown. Tibia and tarsi red.

Abdomen: Black-brown, smooth and shiny. A wide lateral area with very short grey pubescens.

Etymology: This species is named in honor of my lovely daughter Carla.

Note: According to the key of Gressitt (1984) p. 32 this species belongs to the *griseus* group.

Tmesisternus araucarius spec.nov. (Figs. 2a-b)

urn:lsid:zoobank.org:act:F9FA09B8-6568-494B-9D7D-13F38DE99E0B

Holotype: ♂, RMNH. Indonesia, Papua: Ned. Ind. American Third Archbold exp., Araucaria camp, 800 m., 3.iv.1939. Leg. L.J. Toxopeus.

Description: Total length 17 mm. ; width 5 mm. Female unknown.

Head: Black-brown, entirely covered with contiguous long yellow pubescens except on a central longitudinal fine grooved ridge, two finer lateral ridges and wide areas behind the upper eye lobes.

Antenna: Black-brown and shiny, in holotype not complete, the left with only one segment remnant and the right with six segments. The scape and other segments a little swollen to the apex, the segments are covered with very fine grey pubescens.

Pronotum: Black-brown and shiny. Wide, but narrower than the elytra base, square, with straight lateral ridges almost parallel sided. At apex with an extended blunt tubercle on each side. Entirely with contiguous yellow pubescent dots.

Scutellum: Black-brown and shining. Laterally covered with dots of yellow, contiguous pubescens.

Elytra: Black-brown, at base smooth and shiny, with punctures and contiguous long yellow pubescent dots. Wide and almost parallel sided, the end bending to the truncated apex with very small lateral tubercles. Along the sides and apex largely covered with fine yellow brown pubescens. There are two transverse bands of contiguous, longitudinal yellow pubescens: One centrally from side to side and another one postmedially starting from suture and bending apically to both sides.

Abdomen: Black and shiny, laterally with fine grey pubescens.

Legs: Black to black-brown, with fine grey pubescens.

Etymology: This species is named after Auracaria camp in the third Archbold Expedition, where the holotype was found.

Note: It resembles *Tmesisternus trivittatus* in the *trivittatus* group (Gressitt, 1984) but *T. araucarius* has a square pronotum and is much more slender than *T. trivittatus*, furthermore the genitalia are different.

Tmesisternus bosavius spec.nov. (Figs. 3a-b)

urn:lsid:zoobank.org:act:9FFDFDBA-E5D0-4F3C-B18C-5C07B6D1FA70

Holotype: ♂, BPBM. PNG: Mt. Bosavi, 6.5.1979, leg. Gressitt.

Paratype: 1 ♂, RMNH. PNG: Simbai, Bismarck Range, 1850 m., 27.5.1988.

Description: Total length: 10.5 mm.; width 4 mm. Female unknown.

Head: Black-brown, from base to labrum with two strong ridges, narrowed and reunited to the labrum and on vertex an elliptical depression. Lateral ridges from labrum extending to antennal insertions. Entirely with scattered long yellow pubescens, except for the above mentioned ridges and in front of labrum. On each side of the central ridge a yellow pubescent dot.

Antenna: Eleven segments, colored yellow-red and shiny. The scape short and swollen, fourth segment somewhat longer than the third, almost reaching the elytral apex. Antenna entirely covered with very short transparent pubescens, ventrally fringed.

Pronotum: Black-brown, at base straight, to apex tapering. Laterally in front of the apex a small, sharp tubercle and ventrolaterally another similar tubercle. Entirely covered with scattered deep punctures and scattered grey contiguous pubescens except for a small longitudinal central area.

Scutellum: Black-brown and entirely with short grey pubescens.

Elytra: Black-brown, with the shoulders and a large postscutellar area, smooth and shiny. Almost parallel sided, gradually narrowed to the suturally strong spined apex. With punctures along base and sides, some in rows. Dorsally almost without punctures. Entirely covered with yellow longitudinal pubescens, except at the base and post-scuttle area and three longitudinal ridges from which the lateral ones are reuniting in front of the apex and running to the strong lateral spine of the apex.

Legs: Entirely yellow red with fine transparent pubescens. The femur pedonculate. The paratype has the legs more olive colored with the tarsi red.

DOI: 10.19269/sugapa2017.10(2).02

Abdomen: Red brown, shiny and smooth. Laterally scarcely with grey pubescens.

Etymology: The species is named after the village Bosavi where the holotype was found by Gressitt.

Note: According to the key of Gressitt (1984) p. 32 this species belongs in the *griseus* group.

***Tmesisternus burgersi* spec.nov.** (Fig. 4)

urn:lsid:zoobank.org:act:37D49FEE-D55F-4D74-8714-5DE05017E68D

Holotype: ♀, ZMHB. PNG: Huhnsteinspitze, Kaiser Augustus Fluss Expedition, 9.iii.1943, leg. S.G. Burgers.

Description. Total length: 14 mm.; width: 5 mm. Male unknown.

Head: Smooth, yellow-brown colored with a wide, deep groove from vertex to front but not reaching labrum, with a deep elliptical depression with deep punctures and a very short, fine groove extending to labrum. Labrum yellow. Between the fine groove and the antennal insertions a few deep punctures.

Antenna: Eleven segments, yellow colored and almost reaching the elytra apex. Entirely covered with very fine grey pubescens.

Pronotum: Smooth, yellow-brown colored. Lateral ridges from base straight to one quarter distance from apex, continued with a falcate corner to a fine ridged apex. Ventrolaterally with another very small hardly visible tubercle. Dorsally on both sides of the centre two longitudinal depressions. The most lateral depressions are transversally rugose.

Scutellum: Yellow-brown, smooth and shiny. The top rounded.

Elytra: Yellow-brown colored. With pronounced shoulders, much wider than pronotal base, parallel sided to three quarters distance from base and from there gradually narrowing to the laterally spined apex. The distal half of the elytra with three very weak longitudinal ridges. The entire elytra covered with very fine scattered punctures, along its base some deeper ones.

Legs: Femur and tibia olive colored and tarsi chestnut colored, smooth and shiny.

Abdomen: Smooth and shiny, chestnut colored with laterally grey pubescens.

Etymology: This species is named in honor of the collector of the holotype S.G. Burgers.

Note: This species very much resembles *Tmesisternus glabrus* Withaar, 2013 from Sulawesi, but *T. burgersi* can be distinguished by its much smaller size and is from New Guinea only. *Tmesisternus glabrus* has a rounded elytra apex which is not present in *T. burgersi*.

Tmesisternus ellenae spec.nov. (Fig. 5)

urn:lsid:zoobank.org:act:FEE6072B-587D-48BC-BCF6-70C55153235C

Holotype: ♀, RMNH. Indonesia, West Papua: Birdshead Peninsula, Kebar Valley, West of Manokwari, 550 m., 4-31.iii.1962.

Description: Total length: 14 mm.; width: 4 mm. Male unknown.

Head: Black-brown with red eyes. Entirely covered with contiguous yellow pubescens, except for a longitudinal central ridge with an elliptical groove and lateral ridges, starting near antennal insertions, running obliquely to labrum but not reaching it and from there running obliquely backwards with a wider, dark area, reuniting with the central ridge, forming a “W”.

Head including eyes wider than width of the pronotum.

Antenna: Black-brown and shiny, in holotype not complete. Fourth segment longer than third, ventrally fringed.

Pronotum: Black-brown. At base wider than the apex and no lateral ridges. Sides laterally with a sharp tubercle on two third from base and visible from above. Entirely covered with yellow contiguous pubescens, except for three longitudinal smooth and shiny lines: a central one at base a little wider than at the apex and another one on each side, not visible from above. The yellow pubescens limited to punctures in black spots.

Scutellum: Black-brown with a yellow pubescent area in the middle, narrowed to the apex.

Elytra: Black-brown, almost parallel sided, bending to the lateral strong spined apex. Entirely covered with worn yellow pubescens and fine punctures. Dorsally with on each elytron three longitudinal ridges, including the suture.

Legs: Black-brown, femur clavate with fine grey pubescens, tarsi yellow-red.

Abdomen: Black, shiny in the centre and laterally with yellow pubescens, with black spots.

Etymology: This species is named in honor of my lovely daughter Ellen.

Note: According to the key of Gressitt (1984) p. 32, this species belongs to the *trivittatus* group and is very similar to *Tmesisternus trivittatus*. However, the two transverse white lines on the elytra in *trivittatus* are not present in *ellenae*.

Tmesisternus ingeae spec.nov. (Figs. 6a-b)

urn:lsid:zoobank.org:act:633BC85B-7A4B-4390-BA04-B0F33C5CCA44

Holotype: ♂, BPBM. “P. New Guinea” [probably Papua New Guinea, no exact locality], 9.xi.1944.

Description: Total length: 14 mm.; width: 4 mm. Female unknown.

Head: Shiny black, with from labrum to vertex a double ridged groove and from vertex to base a fine groove. On the vertex with some deep punctures. Lateral ridges bending from antennal insertions to the middle of the labrum and reaching the double ridged groove. Entirely covered with long contiguous white pubescens except for the double ridged groove, lateral ridges and an area behind the upper eye lobes. Some punctures next to the inner side of the two upper eye lobes.

Antenna: Red colored, eleven segments and the scape a little swollen. Fringed ventrally and entirely covered with very short grey pubescens except for the scape.

Pronotum: Shiny black, almost parallel sided. The lateral projecting ridges in the middle bending slightly inwards. The ridges do not reach the apex. On the lateral sides, more ventrally a weak, blunt tubercle. The pronotum ventrally and laterally with long contiguous white pubescens. Dorsally with shorter, white pubescens, sometimes forming a dotted pattern, except for a wide central area.

Scutellum: Black, smooth and shiny, base and apex rounded.

Elytra: Narrow, shiny chestnut colored. Just a little wider than the pronotum. Parallel sided, only the last quarter bending to the ecto-epically apex with a tubercle. Entirely covered with very short grey pubescens forming a marble pattern and several longer white pubescent pattern. Dorsally with weak scattered punctures, some deeper ones on epipleura, behind the shoulders and next to scutellum.

Legs: Femora black with red apex and red tibia and tarsi.

Abdomen: Ventrally, black, shiny, smooth and laterally with long yellow pubescens.

Etymology: This species is named in honor of my eldest and lovely daughter Inge.

Note: According to the key of Gressitt (1984) p. 32, the species belongs to the *griseus* group.

Tmesisternus nielsius spec.nov. (Figs. 7a-b)

urn:lsid:zoobank.org:act:0362FC1B-3440-4D83-8975-3BC9B648805A

Holotype: ♂, RMNH. Indonesia, Papua: Neth. Ind. American Third Archbold Expedition, Araucaria camp, 800 m., 3.iv.1939, leg. J. Toxopeus.

Paratype: ♂, RMNH. Same place and expedition, 28.ii.1939, leg. J. Toxopeus.

Description: Total length 13 mm.; width 3.5 mm. Female unknown.

Head: Black-brown, glabrous, with large pronounced jaws and including the eyes nearly as wide as pronotum width. Entirely covered with contiguous grey pubescens, except for a longitudinal narrow, smooth, grooved ridge from base to labrum and laterally weakly pronounced ridges from labrum to antennal insertions and bending around the upper eye lobes.

Antenna: Black-brown, eleven segments and a little longer than the elytra apex. Entirely covered with very fine grey pubescens and fringed ventrally.

Pronotum: Square with rounded and pronounced sides. Glossy black-brown. Covered with many deep punctures and with contiguous grey pubescens, except for a longitudinal central, narrow elliptical smooth area. The blunt ventrolateral tubercles under the lateral ridges are not visible from above.

Scutellum: Black-brown. A rounded top and laterally with scarce grey pubescens.

Elytra: Black-brown, glossy and a little wider than pronotum. Very gradually tapering to the lateral strongly spined apex. Entirely covered with very fine grey pubescens and fine punctures, except the base which has some deep punctures, a smooth and shiny postscutellar area and dorsally with three longitudinal ridges, reuniting in front of the apex.

Legs: Entirely yellow colored and smooth.

Abdomen: Red-brown, smooth in the longitudinal middle area and laterally with scarce grey pubescens.

Etymology: This species is named in honor of my son Niels.

Note: After a recent study by the author it was discovered that among the male paratypes of *Tmesisternus attenuates* Gressitt, 1984 were some specimens that are not conspecific and in fact do belong to the herewith described new species. According to Gressitt (1984), p. 31, it can be placed in the *latithorax* group.

Tmesisternus wajaus spec. nov. (Figs. 8a-b)

urn:lsid:zoobank.org:act:7C315FEF-E034-417D-B97A-79BAF418472D

Holotype: ♂, BPBM. Indonesia, Maluku Islands: Batjan isl., Wajaua, 6.iv.1953, leg. A.M.R. Wegener.

Description: Total length: 13 mm.; width: 4mm. Female unknown

Head: Chestnut colored, shiny and entirely covered with long contiguous yellow pubescens, except for a longitudinal central grooved ridge with an elliptical depression on the front, lateral ridges not reaching labrum and a smooth area behind the upper eye lobes. Some deep punctures on vertex.

Antenna: Orange, smooth and shiny. Both antenna not complete in the holotype, ten segments visible. Black fringed ventrally and scape swollen to apex.

Pronotum: Chestnut colored, from base gradually tapering to the apex and without lateral ridges. A very small anterolateral tubercle just in front of the apex. More ventrally a central-lateral small, sharp tubercle. Entirely covered with long transverse contiguous scattered yellow pubescens, except for the sides and an elliptical, longitudinal area in the centre. Sides and dorsum with large punctures except the above mentioned area.

Scutellum: Chestnut colored, with yellow pubescens, except for a narrow smooth line in the middle.

Elytra: Chestnut colored, from base parallel sided and at least bending to the emarginated and laterally spined apex. On the elytra two smooth and shiny ridges, a sutural one and a second one starting on the disc and reaching to just in front of the lateral apex side. Partly heavily and deeply punctured and with irregular areas of long and contiguous longitudinal arranged yellow pubescens, except for an irregular bordered and positioned, smooth area on the disc.

Legs: Entirely orange with very short grey pubescens.

Abdomen: Chestnut colored, smooth and shiny and laterally with grey pubescens.

Etymology: This species is named after the village Wajaus on Batjan island in Indonesia where the holotype was found.

Note: Judged from the habitus, orange legs and antenna this species is most related to *Tmesisternus submilis* and *T. petchiali* but the pattern is clearly different. According to the key of Gressitt (1984), it belongs to the *trivittatus* or *lotor* group, but this is not correct.

Tmesisternus wajaus is morphologically very similar to the female of *T. watutius* Withaar, 2016 from PNG. However, in *T. wajaus* the body is chestnut colored (in *watutius* black), the legs and antenna are orange (green colored in *watutius*), the ridges on the head front are not M shaped, the elytra apex spine is smaller and on the elytra there is not a transverse black band like in *watutius*.

Acknowledgements

I wish to thank Mr. B.J.H. Brugge and Mr. H. Huijbregts (RMNH), Mr. G.A. Samuelson and Mr. S. Meyer (BPBM) and Mr. J. Willers (ZMHB) for the opportunity to study material in the collections. I also thank Mr. Chris Davenport and Drs. Rob de Vos for commenting on the manuscript. Mrs. Daawia Suhartawan (Waena, Papua, Indonesia) I am grateful for the translation of the abstract into “rangkuman” in Bahasa Indonesia.

References

- Gressitt, J.L., 1984. Systematics and Biogeography of the longicorn beetle tribe Tmesisternini. Pacific Insects Monography: 411-260.
- Weigel, A., 2003. Zur Taxonomie, Synonymie und Faunistik der Gattung *Tmesisternus* Latreille, 1829 mit Beschreibung zweier neuer Arten (Coleoptera: Cerambycidae, Tmesisternini). Veröffentlichungen Naturkundemuseum Erfurt **22**: 127-136.
- Weigel, A., 2006. Neue Arten der Gattung *Tmesisternus* Latreille, 1829 (Col., Cerambycidae) aus Neuguinea. Veröffentlichungen Naturkundemuseum Erfurt **25**: 223-230.
- Weigel, A., 2008. Taxonomische Bemerkungen zu den Tmesisternini mit Beschreibung zwei neuer Taxa von der Insel Biak (West-Papua) (Col., Cerambycidae, Lamiinae). Vernate **27**: 263-269.
- Weigel, A., 2010. Beschreibung einer neuen Tmesisternus-Art (Col., Cerambycidae) von Sulawesi (Indonesien). Vernate **29**: 201-204.
- Weigel, A. & G. Withaar, 2006. Notes on the taxonomy of the genera *Tmesisternopsis* Breuning, 1945 and *Tmesisternus* Latreille, 1829 (Coleoptera, Cerambycidae, Tmesisternini), with description of a new genus from Sulawesi. Journal of the Zoological Society of London Wallacea **2**: 67-71.
- Withaar, G., 2009. The distribution of the genus *Tmesisternus* Latreille, 1829 (Coleoptera: Cerambycidae, Tmesisternini), with the description of six new species from the Indonesian islands Flores and Sulawesi. Sugapa **3** (3) 14-27.
- Withaar, G., 2011. Four new species of the genus *Tmesisternus* Latreille, 1829 (Coleoptera: Cerambycidae, Tmesisternini), from New Guinea. Sugapa **6** (1) 1-10.
- Withaar, G., 2013. Four new species of the genus *Tmesisternus* Latreille, 1829 (Coleoptera: Cerambycidae, Tmesisternini) from Papua and Sulawesi. Sugapa **7** (3) 72-81.
- Withaar, G., 2014. Four new species of the genus *Tmesisternus* Latreille, 1829 (Coleoptera: Cerambycidae, Tmesisternini) from New Guinea, the Solomon Islands and Sulawesi. Sugapa **8** (4) 116-123.
- Withaar, G., 2015. *Roodenburgia*, a new genus in the tribe Tmesisternini (Coleoptera: Cerambycidae, Lamiinae) with two new species. Sugapa **9** (2) 47-54.
- Withaar, G., 2016. New species of the genus *Tmesisternus* and *Pascoea* from New Guinea (Coleoptera: Cerambycidae, Lamiinae, Tmesisternini). Sugapa digital (www.sugapa.org) **10**(1): 13-29.

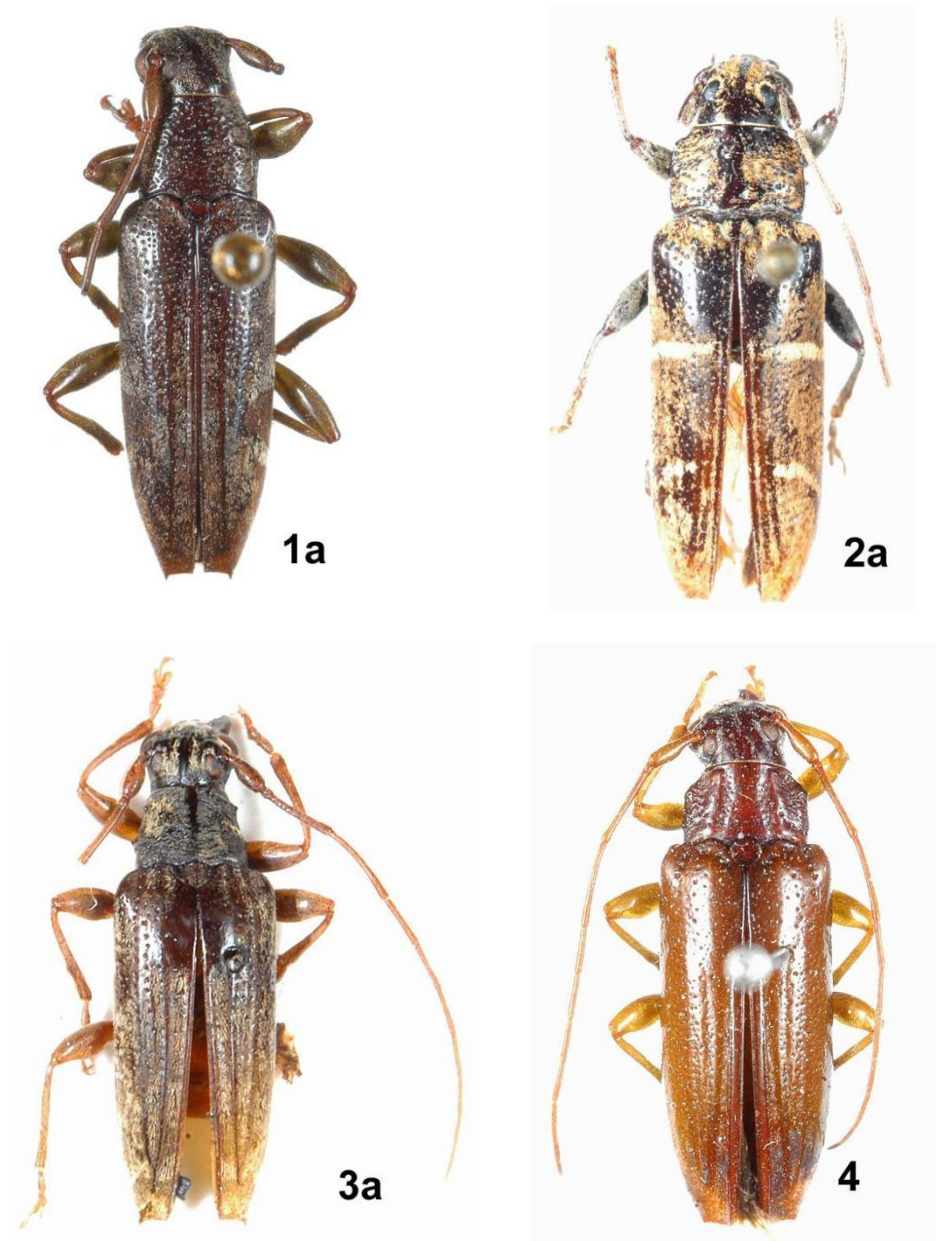


Fig. 1a. *Tmesisternus carlae* holotype ♂, Okabia, Fly River, PNG (BPBM); **fig. 2a.** *T. araucarius* holotype ♂, Araucaria Camp, Dutch New Guinea (RMNH); **fig. 3a.** *T. bosavius* holotype ♂, Mt. Bosavi, PNG (BPBM); **fig. 4.** *T. burgersi* holotype ♀, Huhnsteinspitze, German New Guinea (ZMHB).

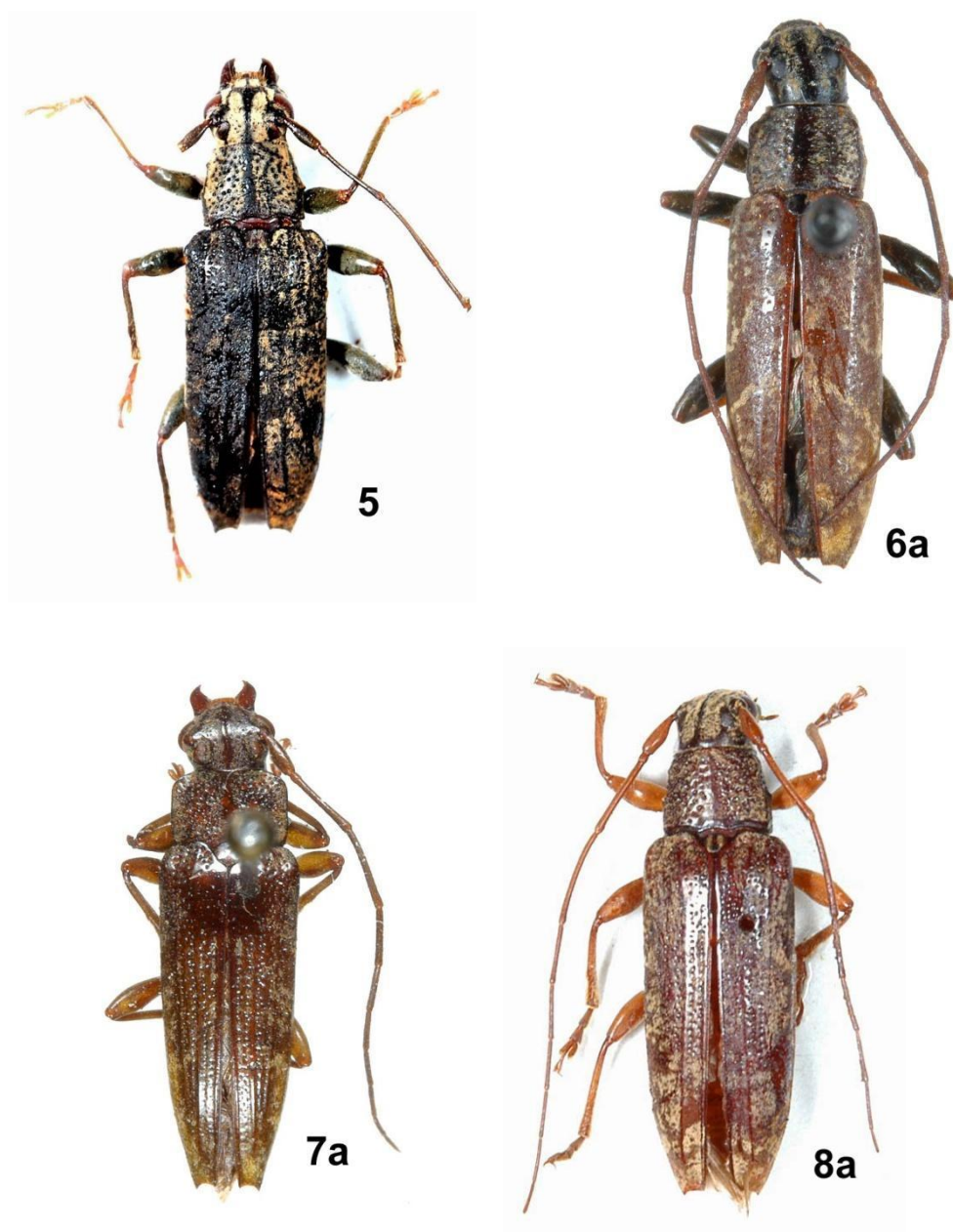


Fig. 5. *Tmesisternus ellenae* holotype ♀, Kebar Valley, Dutch New Guinea (RMNH); **fig. 6a.** *T. ingeae* holotype ♂, [no locality], Papua, Indonesia (BPBM); **fig. 7a.** *T. nielsius* holotype ♂, Araucaria Camp, Dutch New Guinea (RMNH); **fig. 8a.** *T. wajaus* holotype ♂, Wajaua, Batjan Island, Indonesia (BPBM).

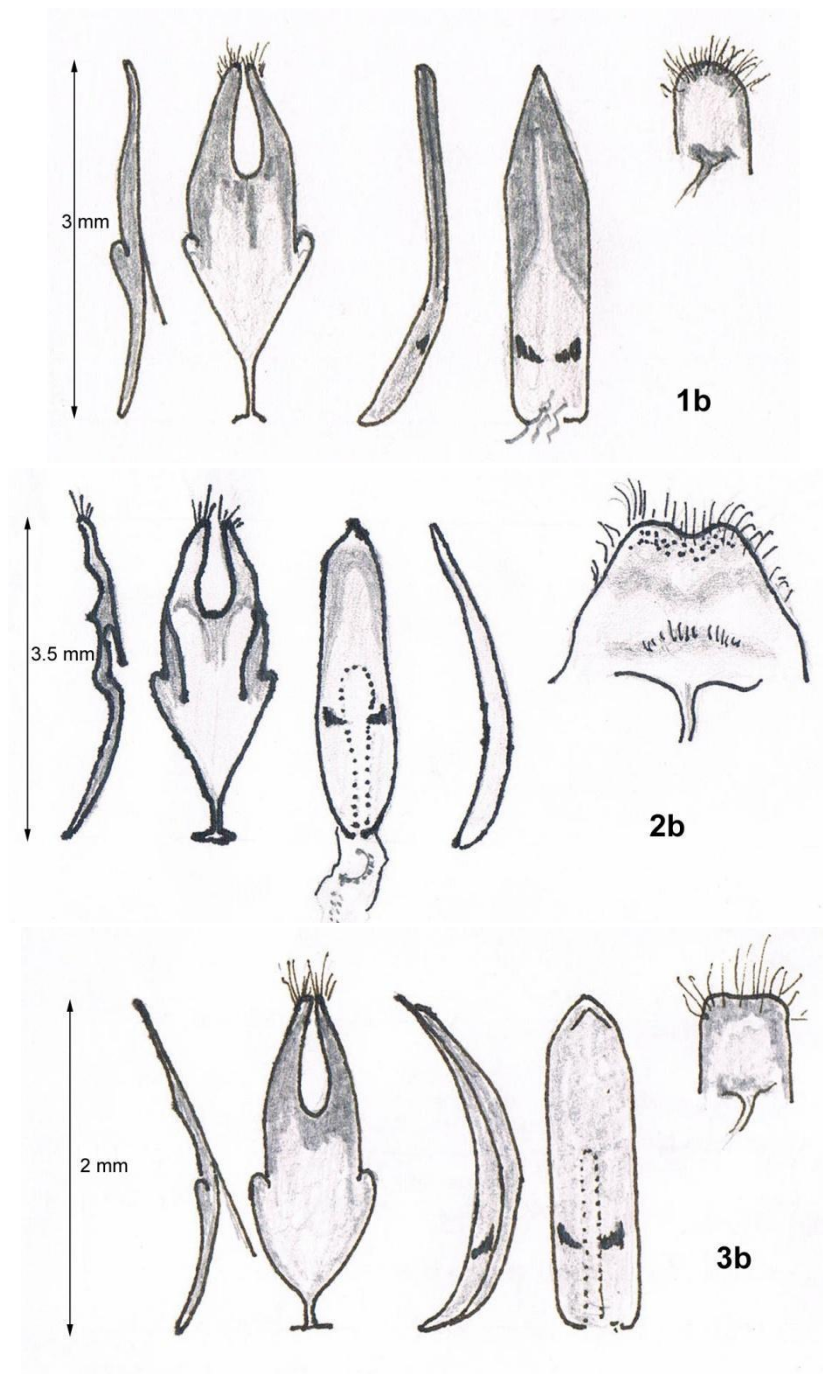


Fig. 1b. *Tmesisternus carlae*, male genitalia holotype; **fig. 2b.** *T. araucarius*, male genitalia holotype; **fig. 3b.** *T. bosavius*, male genitalia holotype.

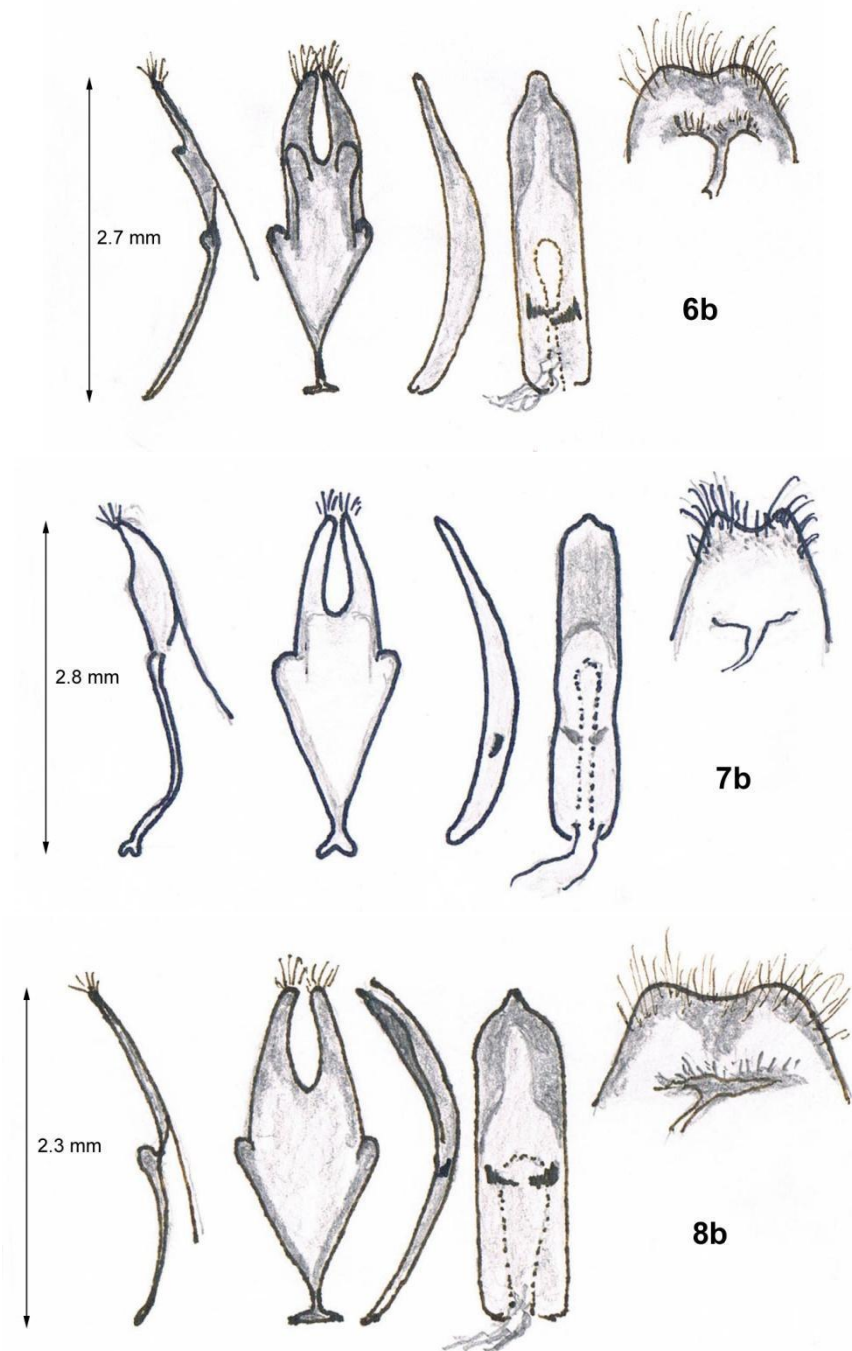


Fig. 6b. *Tmesisternus ingeae*, male genitalia holotype; **fig. 7b.** *T. nielsius*, male genitalia holotype; **fig. 8b.** *T. wajaus*, male genitalia holotype.