

## A New Asian species of *Demonax* Thomson, 1861 (Coleoptera: Cerambycidae: Cerambycinae: Clytini)

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### Taxonomy, new species, Coleoptera, Cerambycidae, Clytini, *Demonax*, Indonesia, Malaysia, Thailand

**Abstract.** *Demonax absconditus* sp. nov. from Thailand (Chiang Mai), *Demonax captivus* sp. nov. from Malaysia (Perak), *Demonax imperceptus* sp. nov. from Indonesia (Flores Island), *Demonax involutus* sp. nov. from Indonesia (Sumba Island), *Demonax macer* sp. nov. from Indonesia (Timor Island), *Demonax palikei* sp. nov. from Indonesia (Savu Island), *Demonax prodigus* sp. nov. and *Demonax pupillus* sp. nov. from Indonesia (Obi Island) are described and illustrated. New species are compared to related species.

### INTRODUCTION

The tribus Clytini Mulsant, 1839 is one of the most numerous - in terms of species - tribus of Cerambycidae. Species of tribus Clytini are known from all biogeographic zones of the Earth except the Antarctic region. Tribus Clytini is currently divided into approximately 70 genera. From the Palearctic, Oriental and Australian biogeographic regions, about 1350 species have been described so far. Within these regions the genera *Demonax* J. Thomson, 1861, *Chlorophorus* Chevrolat, 1863, *Xylotrechus* Chevrolat, 1860 and *Rhaphuma* Pascoe, 1858 are most numerous.

The genus *Demonax* J. Thomson, 1861 was erected by J. Thomson for *D. nigrofasciatus* from eastern Indonesia. About 420 species of this very diverse genus distributed especially in the east and southeast of Asia have been described since then.

In the present paper, I describe eight new species of the genus *Demonax*. *Demonax absconditus* sp. nov. from Thailand (Chiang Mai), *Demonax captivus* sp. nov. from Malaysia (Perak), *Demonax imperceptus* sp. nov. from Indonesia (Flores Island), *Demonax involutus* sp. nov. from Indonesia (Sumba Island), *Demonax macer* sp. nov. from Indonesia (Timor Island), *Demonax palikei* sp. nov. from Indonesia (Savu Island), *Demonax prodigus* sp. nov. and *Demonax pupillus* sp. nov. from Indonesia (Obi Island) are described and illustrated. New species are compared to related species (*Demonax alboapicalis* Dauber, 2008, *Demonax andamanicus* Gahan, 1906, *Demonax angustatus* Pic, 1943, *Demonax celebensis* Aurivillius, 1922, *Demonax culicinus* Pascoe, 1869, *Demonax cumulosus* Pascoe, 1869, *Demonax dolosus* Holzschuh, 1991, *Demonax macilentoides* Dauber, 2003, *Demonax niveofasciatus* Viktora, 2014, *Demonax ovicollis* (Fairmaire, 1895), *Demonax ordinatus* Pascoe, 1869, *Demonax parallelus* Aurivillius, 1922, *Demonax planicollis* Holzschuh, 1991, *Demonax truncatus* Dauber, 2008 and *Demonax ventralis* Gahan, 1906).

### MATERIAL AND METHODS

Specimens examined including type materials are deposited in the following collection:

CPV private collection of Petr Viktora, Kutná Hora, Czech Republic.

Slash (/) separates data in different rows on locality and determination labels.

The photographs of the habitus of all species were taken by the Canon EOS 350D digital

camera with the Sigma 105 mm macro lens. Microstructures of dissected parts were observed under the DNT DigiMicro Profi USB microscope. Composite images were created using the software Image Stacking Software Combine ZP. The photographs were modified using Adobe Photoshop CC if needed.

## TAXONOMY

### Tribe Clytini Mulsant, 1839

### Genus *Demonax* J. Thomson, 1861

**Type species.** *Demonax nigrofasciatus* Thomson, 1861.

### *Demonax absconditus* sp. nov.

(Fig. 1)

**Type locality.** Thailand, Chiang Mai prov., Chiang Dao Hill Resort env.

**Type material.** Holotype (♀): 'THAILAND,' / 'Chiang Mai prov.,' / '100 km N from Chiang Mai,' / 'Chiang Dao Hill Resort env.,' / 'h = 540-640m' / '4. - 11. ix. 2016' (CPV). The type is provided with a printed red label: '*Demonax absconditus* sp. nov.' / 'HOLOTYPE' / 'P. Viktora det., 2018'.

**Description.** Habitus of female holotype as in Fig. 1a, b. Body from ochre yellow to black, elongate, parallel, punctuate, with pubescence. Body length 15.45 mm, widest in humeral part of elytra (3.66 mm), 4.2 times longer than wide.

Head ochre yellow, short, broadest across the eyes, narrower than pronotum, with sparse yellowish pubescence. Dorsal surface with distinct punctuation, near base with granulation. Head between antennal insertions with longitudinal narrow furrow. Clypeus ochre yellow, shiny, with yellowish setation. Eyes black, distinctly emarginate. Mandibles shiny, bicolor, basal part ochre yellow with yellowish setation, apical part black.

Maxillary palpus ochre yellow with darker lateral margins, ultimate palpomere longest, axe-shaped, widest at apex.

Antennae with dense punctuation and yellowish pubescence, pubescence on scape longest. Antennomeres 1 and 2 ochre yellow, antennomeres 3-6 dark brown, antennomeres 7-11 ochre yellow with darker apex. Antennomeres 3-9 with longer yellowish setae in inner side. Antennomeres 3 and 4 with distinct spine in inner side of apex, spine on antennomere 4 slightly longer. Antennomere 2 shortest, antennomeres 3 and 7 longest. Antennae reaching three quarters of elytral length. Ratios of relative lengths of antennomeres 1-11 equal to: 0.77 : 0.23 : 1.00 : 0.72 : 0.94 : 0.94 : 1.00 : 0.78 : 0.71 : 0.57 : 0.69.

Pronotum ochre yellow, narrower than elytra in base, 1.53 times longer than wide at the base and 1.24 times longer than wide at the widest point (near middle of the pronotum). Pronotum with granulation, sparse yellowish pubescence, in lateral angles near base with denser white pubescence. Lateral margins only slightly arcuate, anterior margin arcuate, base almost straight, slightly undulated.

Scutellum ochre yellow, rounded, with punctuation and sparse yellowish pubescence.

Elytra 10.0 mm long and 3.66 mm wide; elongate, narrowing apically, with dense punctuation and bicolor pubescence. Elytra bicolor (as in Fig. 1). Ochre yellow parts: basal fifth of elytra with sparse yellowish pubescence, below first strip of longer and denser yellowish pubescence in

basal half of elytra, below second strip of longer and denser yellowish pubescence behind middle of elytra. Black parts: rest of elytra include place below third strip of longer and denser yellowish pubescence in elytral apex. Black places with short black pubescence. Apex of each elytron slightly undulated with short thorn in outer side.

Legs long and narrow, from ochre yellow to black, punctuate, with yellowish pubescence. Each apical half of tibia and tarsus with distinctly longer pubescence. Profemora distinctly paler than meso- and metafemora. Metatibia and metafemora distinctly longer than pro- and mesotibia and pro- and mesofemora. Metatarsomere 1 1.85 times longer than metatarsomeres 2 and 3 together.

Ventral side of body from ochre yellow to black, with yellowish pubescence and spots of white pubescence (as in Fig. 1b).

**Male.** Unknown.

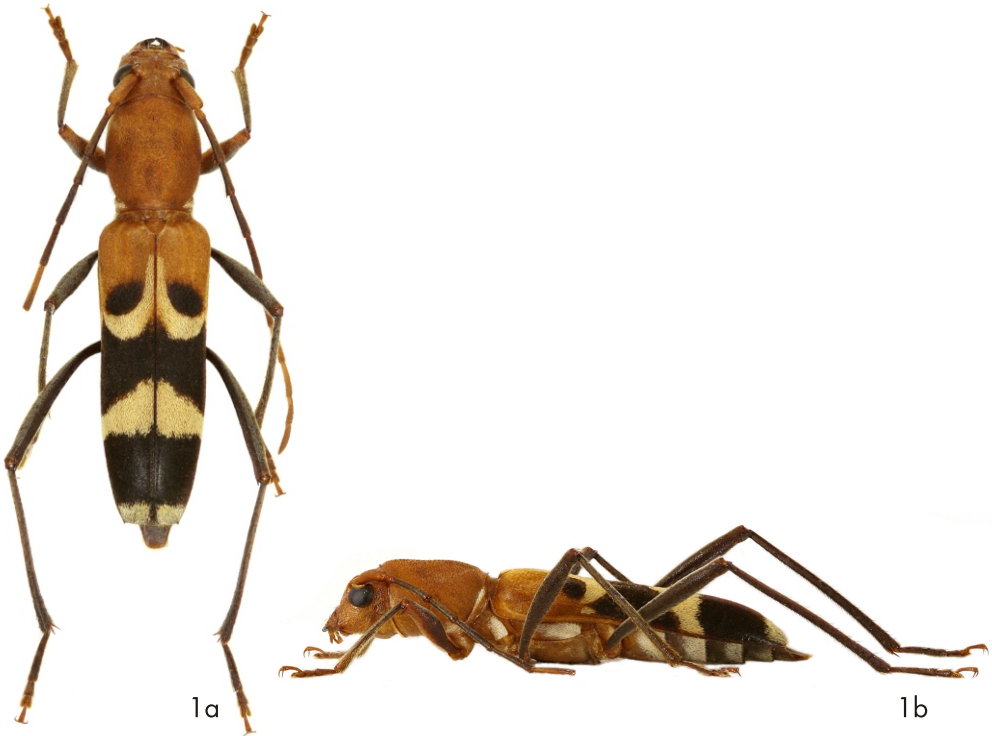


Fig. 1. *Demonax absconditus* sp. nov., female holotype: a- dorsal view; b- lateral view.

**Differential diagnosis.** The most similar species is *Demonax ovicollis* (Fairmaire, 1895), described from northern Vietnam. *Demonax absconditus* sp. nov. distinctly differs from the species *D. ovicollis* mainly by its wider and bicolour antennae, elytra darker with different shape and placement of colour spots, apex of elytra black, meso- and metafemora and meso- and metatibia almost black, metatarsomere 1 only 1.85 times longer than metatarsomeres 2 and 3 together; while *D. ovicollis* has narrower ochre yellow antennae, apex of elytra ochre yellow, legs almost ochre yellow, metatarsomere 1 2.7 times longer than metatarsomeres 2 and 3 together.

**Etymology.** From Latin *absconditus* (hidden).

**Distribution.** Thailand (Chiang Mai prov.).

***Demonax captivus* sp. nov.**  
(Figs. 2-3)

**Type locality.** W Malaysia, Perak, Cameron Highlands, road Tapah - Ringlet, 19 miles to Ringlet.

**Type material.** Holotype (♂): 'W Malaysia' / 'Perak, Cameron Highlands' / 'road Tapah - Ringlet' / '19 miles to Ringlet' / 'iii. -v. 2007' / 'local collector leg.' (CPV); Paratypes: (1 ♂): 'W Malaysia' / 'Perak, Cameron Highlands' / 'road Tapah - Ringlet' / '19 miles to Ringlet' / 'iv. 2012' / 'local collector leg.' (CPV); (2 ♂♂): 'W Malaysia' / '19. miles S Ringlet' / 'v. 2005' / 'local collector lgt.' (CPV); (1 ♀): 'W Malaysia' / 'Perak, Cameron Highlands' / 'road Tapah - Ringlet' / '19 miles to Ringlet' / 'ii. 2013' / 'local collector leg.' (CPV); (1 ♀): 'MALAYSIA - Perak, Belum Forest' / '84km E of Gerik, alt. 950m' / '05°32'53"N, 101°36'28"E' / '25. iii. -2. iv. 2014' / 'P. Viktora lgt.' (CPV). The types are provided with a printed red label: '*Demonax captivus* sp. nov.' / 'HOLOTYPUS (respective PARATYPUS)' / 'P. Viktora det., 2018'.

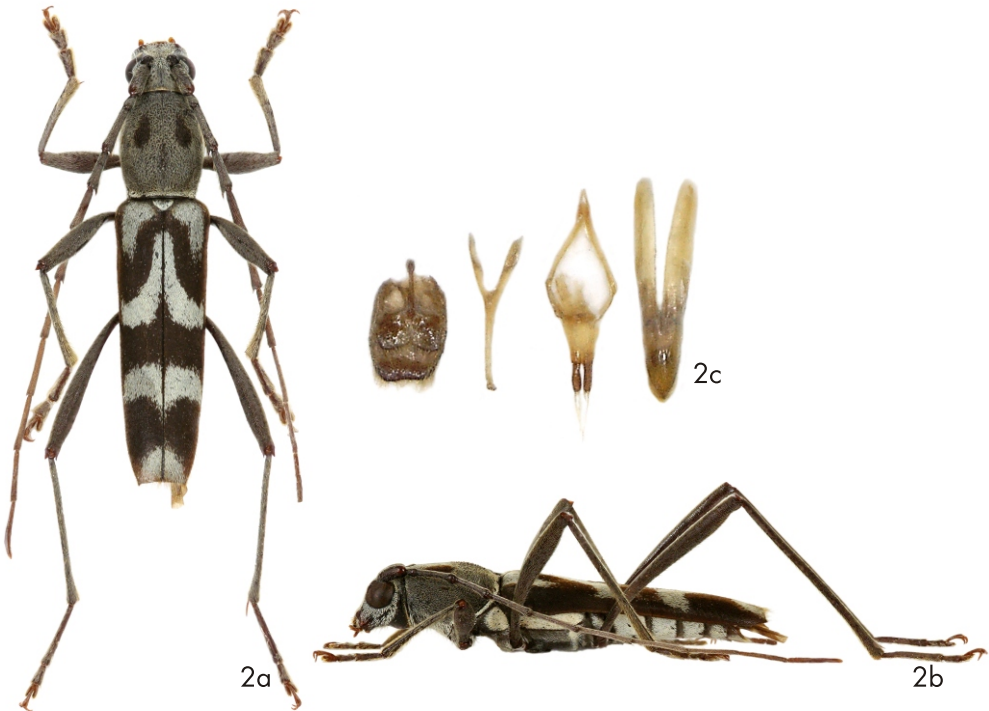


Fig. 2. *Demonax captivus* sp. nov., male holotype: a- dorsal view; b- lateral view; c- male genitalia.

**Description.** Habitus of male holotype as in Fig. 2a, b. Body from blackish brown to black, elongate, narrow, parallel, punctuate, with pubescence. Body length 13.25 mm (male paratypes from 10.8 to 13.9 mm), widest in humeral part of elytra (2.87 mm), 4.6 times longer than wide.

Head black, short, broadest across the eyes, narrower than pronotum, with punctuation, dense whitish pubescence (pubescence in anterior part distinctly longer) and a few longer pale setae. Clypeus pale brown, shiny, with yellowish setation. Eyes dark, distinctly emarginate.

Maxillary palpus brown with pale brown apex. Ultimate palpomere longest, axe-shaped,

widest at apex.

Antennae filiform, blackish brown, with dense punctuation and whitish pubescence. Apex of scape without punctuation. Antennomeres 3-8 with long pale setae in inner side. Antennomeres 6-10 slightly serrate. Antennomeres 3-6 with distinct spines in inner side of apex, spine on antennomere 4 longest. Antennae slightly longer than body (as in Fig. 2a).

Antennomere 2 shortest, antennomeres 7, 8, and 11 longest. Ratios of relative lengths of antennomeres 1-11 equal to: 0.68 : 0.34 : 1.00 : 0.85 : 0.95 : 1.12 : 1.25 : 1.25 : 1.18 : 1.09 : 1.24.

Pronotum black, narrower than elytra in base, 1.58 times longer than wide at the base and 1.27 times longer than wide at the widest point (near the middle of pronotum). Pronotum with granulation, whitish pubescence and two elliptical spots with black pubescence. Disc in middle with distinct longitudinal elevation in basal part. Pronotum with denser whitish pubescence near posterior margin. Lateral margins only slightly arcuate, anterior margin and base almost straight.

Scutellum black, triangular with rounded apex, with dense whitish pubescence.

Elytra 8.68 mm long and 2.87 mm wide; black, elongate, narrowing apically, with dense punctuation and whitish and black pubescence (as in Fig. 2a), elytral apex with long yellowish setae. Apex of each elytron slightly undulated with short thorn in outer side.

Legs long and narrow, from blackish brown to black, punctuate, with whitish pubescence. Each apical half of tibia and tarsus with distinctly longer yellowish pubescence. Metatibia and metafemora distinctly longer than pro- and mesotibia and pro- and mesofemora. Metatarsomere 1 1.87 times longer than metatarsomeres 2 and 3 together.



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Fig. 3. *Demonax captivus* sp. nov.: female paratype.

Ventral side of body black, almost completely covered by dense white pubescence (as in Fig. 2b).

Male genitalia as in Fig. 2c.

**Female.** Habitus of female paratype as in Fig. 3. Body length (female paratypes) from 10.4 to 11.0 mm. Colour of female same as in male. Female without distinct differences, antennae shorter (reaching elytral apex), protarsi and mesotarsi narrower than in male.

**Differential diagnosis.** The most similar species are *Demonax cumulosus* Pascoe, 1869 and *Demonax ordinatus* Pascoe, 1869, which are both known from Peninsular Malaysia. *Demonax captivus* sp. nov. distinctly differs from the species *D. cumulosus* and *D. ordinatus* mainly by different shape and placement of spots on elytra and all antennomeres blackish brown; while *D. cumulosus* and *D. ordinatus* have antennomeres 8-11 and partly antennomere 7 pale brown.

**Etymology.** From Latin *captivus* (captive).

**Distribution.** Malaysia (Perak).

***Demonax imperceptus* sp. nov.**

(Fig. 4)

**Type locality.** Indonesia, Flores Island.

**Type material.** Holotype (♀): 'Indonesia, 'Flores' / 'xii. 2004' (CPV). The type is provided with a printed red label: '*Demonax imperceptus* sp. nov.' / 'HOLOTYPUS' / 'P. Viktora det., 2018'.

**Description.** Habitus of female holotype as in Fig. 4a, b. Body black, elongate, narrow, parallel, punctuate, with pubescence. Body length 6.3 mm, widest in five sevenths of elytral length from base to apex (1.22 mm), 5.15 times longer than wide.

Head black, relatively short, broadest across the eyes, narrower than pronotum, with granulation in basal part, covered by sparse white pubescence. Clypeus pale brown, distinctly paler than anterior part of head. Mandibles pale brown. Eyes dark, distinctly emarginate.

Maxillary palpus brown. Ultimate palpomere longest, axe-shaped, widest at apex.

Antennae brown, filiform, with punctuation and short pale pubescence. Antennomeres 4-6 with a few pale setae in inner side of apex. Antennomere 2 shortest, antennomere 5 longest. Antennomeres 3 and 4 prolonged into very long spines in inner side of apex. Antennae reaching two thirds of elytral length. Ratios of relative lengths of antennomeres 1-11 equal to: 0.65 : 0.30 : 1.00 : 0.82 : 1.15 : 0.88 : 0.83 : 0.68 : 0.63 : 0.50 : 0.63.

Pronotum black, roundly elongate, 1.8 times longer than wide at the base and 1.2 times longer than wide at the widest point (middle of pronotum). Pronotum with dense small-sized granulation and sparse white pubescence. White pubescence near base denser (as in Fig. 4a). Lateral margins slightly arcuate, anterior margin and base almost straight.

Scutellum black, roundly triangular, with sparse and short white pubescence.

Elytra 4.37 mm long and 1.22 mm wide; black, narrow, elongate, almost matte, with dense small-sized punctuation, covered by sparse yellowish pubescence and stripes of denser white pubescence (as in Fig. 4a). Elytral apex undulated. Each elytron with short thorn in outer side of apex.

Legs long and narrow, dark brown, with dense punctuation, covered by sparser white pubescence. Meso- and metafemora and meso- and metatibia with distinct dark setae. Metatibia and metafemora distinctly longer than pro- and mesotibia and pro- and mesofemora. Metatarsomere 1 2.24 times longer than metatarsomeres 2 and 3 together.

Ventral side of body black, partly covered by stripes of white pubescence (as in Fig. 4b).

**Male.** Unknown.



Fig. 4. *Demonax imperceptus* sp. nov., female holotype: a- dorsal view; b- lateral view.

**Differential diagnosis.** The most similar species are *Demonax dolosus* Holzschuh, 1991 and *Demonax planicollis* Holzschuh, 1991, described from Northern Thailand, *Demonax niveofasciatus* Viktora, 2014, described from Peninsular Malaysia, *Demonax macer* sp. nov. and *Demonax palikei* sp. nov. *Demonax imperceptus* sp. nov. distinctly differs from *D. dolosus* by pronotum with dense indistinct granulation and sparse white pubescence, while female of *D. dolosus* has pronotum irregularly dense reticulated with longer and dense strip of white pubescence near base. *D. imperceptus* sp. nov. distinctly differs from *D. planicollis* by antennomeres 3 and 4 prolonged into very long spines in inner side of apex, while *D. planicollis* has antennomeres 3 and 4 without distinct spines. *D. imperceptus* sp. nov. distinctly differs from *D. niveofasciatus* by distinctly narrower body (ratio body length / body width 5.15) and narrower pronotum (ratio pronotal length / pronotal width in widest point 1.2), while *D. niveofasciatus* has ratio body length / body width 4.1, pronotum almost symmetric (ratio pronotal length / pronotal width in widest point 1.05). *D. imperceptus* sp. nov. distinctly differs from *D. macer* sp. nov. by wider body (ratio body length / body width 5.15), wider pronotum (ratio pronotal length / pronotal width in widest point 1.2), pronotum with dense indistinct granulation and sparse white pubescence, while *D. macer* has ratio body length / body width 5.3, ratio pronotal length /

pronotal width in widest point 1.25, pronotum with punctuation (punctures relatively large and sparse) and small-sized granulation. *D. imperceptus* sp. nov. distinctly differs from female of *D. palikei* sp. nov. by pronotum and head covered by sparse white pubescence, while female of *D. palikei* has pronotum with wide stripes of white pubescence near anterior margin and base, head covered by long and dense white pubescence.

**Etymology.** From Latin *imperceptus* (unperceived).

**Distribution.** Indonesia (Flores Island).

***Demonax involutus* sp. nov.**  
(Figs. 5-6)

**Type locality.** Indonesia, Sumba Island, Luku - Melolo N. R.

**Type material.** Holotype (♂): 'INDONESIA, East Sumba' / '550 m' / 'Luku - Melolo N. R.' / '1. - 10. vii. 2005' (CPV); Paratypes: (4 ♀♀): same data as holotype (CPV). The types are provided with a printed red label: '*Demonax involutus* sp. nov.' / 'HOLOTYPUS (respective PARATYPUS)' / 'P. Viktora det., 2018'.



Fig. 5. *Demonax involutus* sp. nov., male holotype: a- dorsal view; b- lateral view; c- male genitalia.

**Description.** Habitus of male holotype as in Fig. 5a, b. Body black, elongate, narrow, punctate, with pubescence. Body length 9.15 mm, widest in humeral part of elytra (1.95 mm), 4.7 times longer than wide.

Head black, broadest across the eyes, narrower than pronotum, with granulation and long



whitish pubescence. Clypeus pale brown, shiny, with yellowish setation. Eyes dark, distinctly longitudinally emarginate.

Maxillary palpus pale brown. Ultimate palpomere longest, with blackish margins.

Antennae filiform, with dense punctuation and dense bicolor pubescence. Antennomeres 1-7 and 10-11 blackish brown, antennomeres 8, 9 pale ochre yellow, antennomere 9 with darker apex. Antennomeres 2-6 with pale setation in inner side. Antennomeres 3 and 4 with long sharp spines in inner side of apex. Antennae reaching seven eighths of elytral length. Antennomere 2 shortest, antennomere 5 longest. Ratios of relative lengths of antennomeres 1-11 equal to: 0.75 : 0.34 : 1.00 : 0.92 : 1.06 : 0.96 : 0.92 : 0.79 : 0.79 : 0.65 : 0.74.

Pronotum black, narrower than elytra in basal part, 1.63 times longer than wide at the base and 1.21 times longer than wide at the widest point (middle of pronotum). Pronotum with granulation and whitish grey pubescence (pubescence in middle of pronotal disc distinctly sparser) (as in Fig. 5a). Lateral margins distinctly arcuate, base almost straight, anterior margin slightly arcuate.

Scutellum blackish brown, triangular, with dense punctuation and short and sparse whitish pubescence.

Elytra 5.65 mm long and 1.95 mm wide; black, elongate, narrowing apically, with dense punctuation, covered by black and goldenish pubescence and spots of whitish grey pubescence (as in Fig. 5a). Elytral apex with long goldenish setation. Apex of each elytron slightly undulated with distinct spine in outer side.

Legs long and narrow, from blackish brown to black, punctate, with whitish pubescence. Tibia and meso- and metafemora with goldenish setation. Pro- and mesotarsi with dense goldenish setation. Metatibia and metafemora distinctly longer than pro- and mesotibia and pro- and mesofemora. Metatarsomere 1 2.13 times longer than metatarsomeres 2 and 3 together.

Ventral side of body black, almost completely covered by whitish pubescence (as in Fig. 5b).

Male genitalia as in Fig. 5c.

**Female.** Habitus of female paratype as in Fig. 6. Body length (female paratypes) from 10.0 to 11.7 mm. Colour of female same as in male. Female without distinct differences, antennae shorter (reaching beyond middle of elytral length), pronotum slightly wider than in male, dorsal surface of pronotum reticulated (granulated in male).

**Differential diagnosis.** The most similar species are *Demonax andamanicus* Gahan, 1906 and *Demonax ventralis* Gahan, 1906. *Demonax involutus* sp. nov. distinctly differs from the species *D. andamanicus* mainly by different shape of pronotum (pronotum distinctly narrower and longer in *D. andamanicus*), by whitish grey spot in basal part of elytra, which reaching scutellum in *D. involutus* sp. nov. in contrast with *D. andamanicus* and by length of antennae, which reaching seven eighths of elytral length in male of *D. involutus* sp. nov., while male of *D. andamanicus* has antennae nearly twice as long as the body. *D. involutus* sp. nov. distinctly differs from the species *D. ventralis* mainly by different shape of whitish grey spots on elytra (*D. ventralis* has moreover whitish grey spot in elytral humeri in contrast with *D. involutus* sp. nov.) and by colour of antennomeres, which are blackish brown except antennomeres 8 and 9, which are ochre yellow in *D. involutus* sp. nov., while *D. ventralis* has antennomeres 1-5 dark brown and antennomeres 6-11 pale brown.

**Etymology.** From Latin *involutus* (obscure).

**Distribution.** Indonesia (Sumba Island).



Fig. 6. *Demonax involutus* sp. nov.: female paratype.

***Demonax macer* sp. nov.**

(Fig. 7)

**Type locality.** Indonesia, W Timor, Buraen, 50 km S of Kupang.

**Type material.** Holotype (♂): 'W TIMOR' / 'BURAEN, 50 km S of Kupang' / '26. i. - 9. 2. 2006' / 'St. Jákl lgt.' (CPV). The type is provided with a printed red label: 'Demonax macer sp. nov.' / 'HOLOTYPUS' / 'P. Viktora det., 2018'.

**Description.** Habitus of male holotype as in Fig. 7a, b. Body from brown to black, elongate, narrow, parallel, punctate, with pubescence. Body length 4.87 mm, widest in humeral part of elytra (0.92 mm), 5.3 times longer than wide.

Head black, relatively short, broadest across the eyes, only slightly narrower than pronotum. Dorsal surface with distinct granulation, covered by white pubescence, in frons distinctly denser. Clypeus pale brown, distinctly paler than anterior part of head. Mandibles blackish brown. Eyes dark, distinctly emarginate.

Maxillary palpus pale brown. Ultimate palpomere longest, axe-shaped, widest at apex.

Antennae dark brown, filiform, with dense punctuation and short pale pubescence. Antennomere 2 shortest, antennomeres 3 and 5 longest. Antennomeres 3 and 4 prolonged into long spines in inner side of apex. Spine of antennomere 4 slightly longer. Antennomeres 1-6 with pale setation in inner side. Antennae reaching five sevenths of elytral length. Ratios of relative lengths of antennomeres 1-11 equal to: 0.58 : 0.33 : 1.00 : 0.74 : 1.02 : 0.91 : 0.86 : 0.77 : 0.72 : 0.64 : 0.66.

Pronotum black, roundly elongate, slightly narrower than elytra in base, 1.66 times longer than wide at the base and 1.25 times longer than wide at the widest point (before middle from base to apex), with small-sized granulation and punctuation. Punctures relatively large and sparse. Dorsal surface covered by sparse pale pubescence, lateral margins, anterior margin and base covered by dense white pubescence (as in Fig. 7a, b). Lateral margins arcuate, anterior margin and base almost straight.

Scutellum black, roundly triangular, with sparse and short pale pubescence.

Elytra 3.23 mm long and 0.92 mm wide; blackish brown, narrow, elongate, parallel, matte, with dense punctuation, covered by black and paler pubescence and stripes of white pubescence (as in Fig. 7a). Each elytron with sharp angle on outer side of apex.

Legs long and narrow, dark brown, with dense punctuation and short pale pubescence. Meso- and metatibia and meso- and metafemora with longer yellowish setae. Each apical half of tibia with yellowish setation in inner side. Metatibia and metafemora distinctly longer than pro- and mesotibia and pro- and mesofemora. Metatarsomere 1 2.08 times longer than metatarsomeres 2 and 3 together.

Ventral side of body black, partly covered by white pubescence (as in Fig. 7b).

Male genitalia as in Fig. 7c.

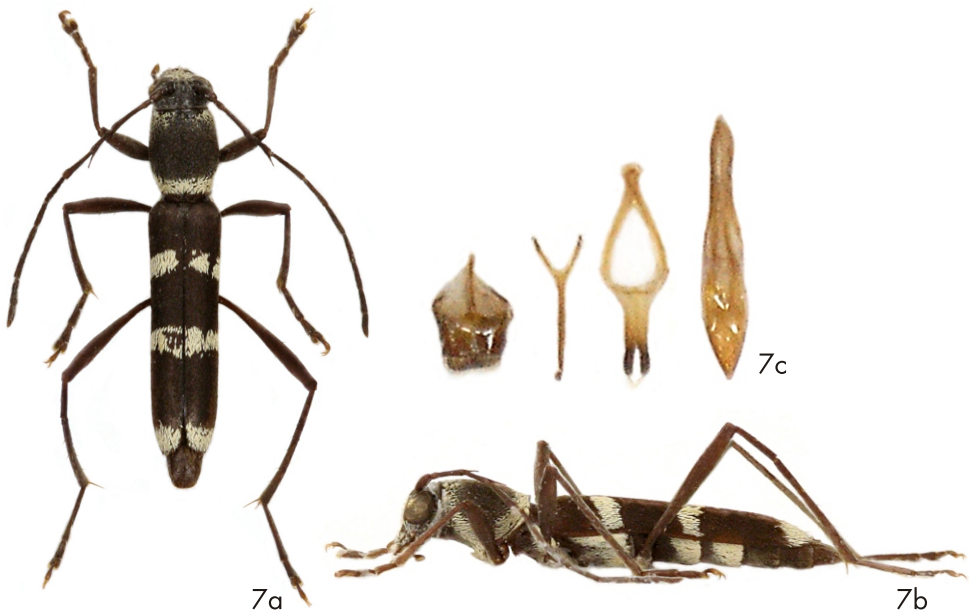


Fig. 7. *Demonax macer* sp. nov., male holotype: a- dorsal view; b- lateral view; c- male genitalia.

**Female.** Unknown.

**Differential diagnosis.** The most similar species are *Demonax alboapicalis* Dauber, 2008 and *Demonax truncatus* Dauber, 2008, described from Peninsular Malaysia, *D. dolosus* Holzschuh, 1991, *D. planicollis* Holzschuh, 1991, *D. niveofasciatus* Viktora, 2014, *D. imperceptus* sp. nov. and *D. palikei* sp. nov. Male of *Demonax macer* sp. nov. distinctly differs from male of *D. alboapicalis* by narrower body, pronotum with small-sized granulation and

punctuation, antennomeres 3 and 4 with long spines in apex, while *D. alboapicalis* has pronotum with reticulation, antennomeres 3-5 with shorter (approximately half the length than in *D. macer* sp. nov.) spines in apex. *D. macer* sp. nov. differs from *D. truncatus* by narrower body, elytra almost parallel, pronotum with small-sized granulation and punctuation, elytra with wide transverse stripes of white pubescence, while *D. truncatus* has elytra more narrowing apically, pronotum with dense small-sized granulation without punctures, transverse stripes of white pubescence on elytra narrower. *Demonax macer* sp. nov. distinctly differs from *D. dolosus* by pronotum with lateral margins, anterior margin and base covered by dense white pubescence, while *D. dolosus* has strip of white pubescence only near pronotal base. *D. macer* sp. nov. distinctly differs from *D. planicollis* by antennomeres 3 and 4 prolonged into long spines in inner side of apex, while *D. planicollis* has antennomeres 3 and 4 without distinct spines. *D. macer* sp. nov. distinctly differs from *D. niveofasciatus* by distinctly narrower body (ratio body length / body width 5.3) and narrower pronotum (ratio pronotal length / pronotal width in widest point 1.25), while *D. niveofasciatus* has ratio body length / body width 4.1, pronotum almost symmetric (ratio pronotal length / pronotal width in widest point 1.05). *D. macer* sp. nov. distinctly differs from *D. imperceptus* sp. nov. by narrower body (ratio body length / body width 5.3), narrower pronotum (ratio pronotal length / pronotal width in widest point 1.25), pronotum with punctuation (punctures relatively large and sparse) and small-sized granulation, while *D. imperceptus* has ratio body length / body width 5.15, ratio pronotal length / pronotal width in widest point 1.2, pronotum with dense indistinct granulation and sparse white pubescence. Male of *D. macer* sp. nov. distinctly differs from male of *D. palikei* by narrower body (ratio body length / body width 5.3), narrower pronotum (ratio pronotal length / pronotal width in widest point 1.25), pronotum with punctuation (punctures relatively large and sparse) and small-sized granulation, while *D. palikei* has ratio body length / body width 5.1, ratio pronotal length / pronotal width in widest point 1.2, pronotum with dense small-sized punctuation and granulation.

**Etymology.** From Latin *macer* (gaunt).

**Distribution.** Indonesia (Timor Island).

***Demonax palikei* sp. nov.**

(Figs. 8-9)

**Type locality.** Indonesia, Savu Island, Desa Raenalulu, Raka Forest.

**Type material.** Holotype (♂): 'INDONESIA, LESSER SUNDA' / 'SAVU Is., DESA RAENALULU' / 'RAKA FOREST, 190m' / '10°5468'S 121°8168'E' / 'J. Horák leg. 18.xi.-2.xii.2016' (CPV); Paratypes: (3 ♂♂, 1 ♀): same data as holotype (CPV). The types are provided with a printed red label: '*Demonax palikei* sp. nov.' / 'HOLOTYPE (respective PARATYPE)' / 'P. Viktora det., 2018'.

**Description.** Habitus of male holotype as in Fig. 8a, b. Body black, elongate, narrow, parallel, punctuate, with pubescence. Body length 5.5 mm (male paratypes from 5.3 to 5.6 mm), widest in humeral part of elytra (1.08 mm), 5.1 times longer than wide.

Head black, relatively short, broadest across the eyes, slightly narrower than pronotum, covered by long and dense white pubescence. Dorsal surface with fine and dense punctuation. Clypeus pale brown, distinctly paler than anterior part of head. Mandibles blackish brown. Eyes dark, distinctly emarginate.

Maxillary palpus pale brown. Ultimate palpomere longest, axe-shaped, widest at apex.

Antennae filiform, blackish brown, with dense punctuation and short pale pubescence. Antennomere 2 shortest, antennomeres 3, 5, 6 and 7 longest. Antennomeres 3 and 4 prolonged into very long spines in inner side of apex. Antennae reaching six sevenths of elytral length. Ratios of relative lengths of antennomeres 1-11 equal to: 0.52 : 0.29 : 1.00 : 0.74 : 1.04 : 0.99 : 0.94 : 0.77 : 0.72 : 0.60 : 0.73.

Pronotum black, roundly elongate, fractionally narrower than elytra in widest point, 1.7 times longer than wide at the base and 1.2 times longer than wide at the widest point (middle of pronotum), with punctuation and dense small-sized granulation, with very sparse white pubescence. Lateral margins, anterior margin and base covered by dense white pubescence (as in Fig. 8a, b). Lateral margins arcuate, anterior margin and base almost straight.

Scutellum black, triangular, with sparse and short white pubescence.

Elytra 3.6 mm long and 1.08 mm wide; black, narrow, parallel, elongate, matte, with dense small-sized punctuation, covered by black and goldenish pubescence and stripes of white pubescence (as in Fig. 8a). Apex of elytra slightly undulated. Each elytron with sharp angle on outer side of apex.

Legs long and narrow, blackish brown, with dense punctuation. Femora with sparse white pubescence, tibia with denser white pubescence. Meso- and metafemora and meso- and metatibia with distinct dark setae. Each apical half of tibia with yellowish setation in inner side. Metatibia and metafemora distinctly longer than pro- and mesotibia and pro- and mesofemora. Metatarsomere 1 1.95 times longer than metatarsomeres 2 and 3 together.

Ventral side of body black, partly covered by stripes of white pubescence (as in Fig. 8b).

Male genitalia as in Fig. 8c.

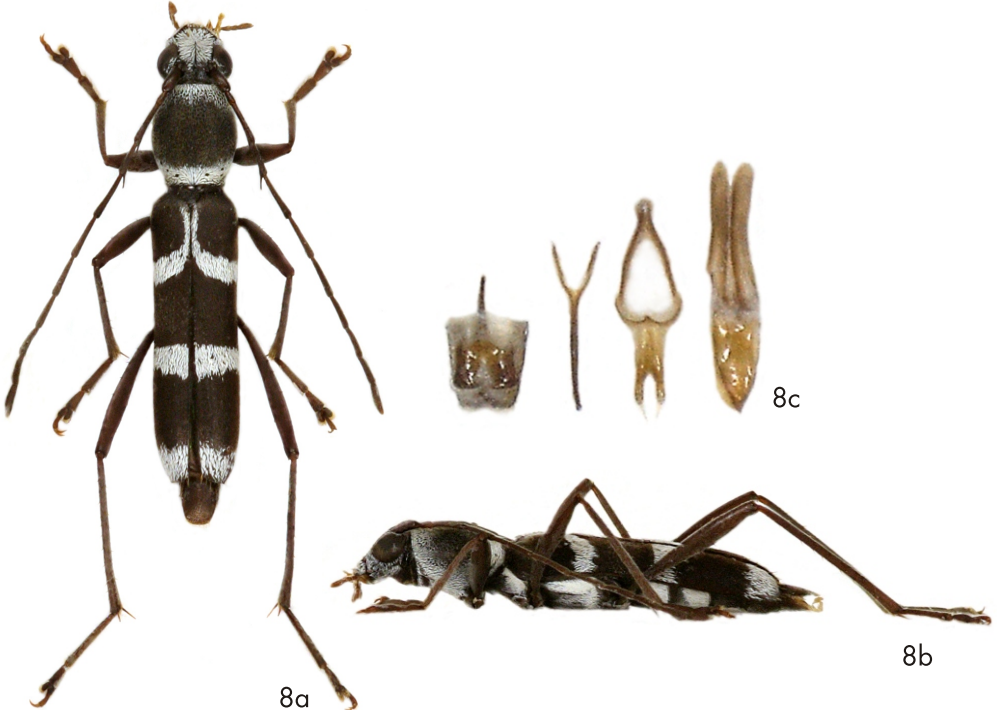


Fig. 8. *Demonax palikei* sp. nov., male holotype: a- dorsal view; b- lateral view; c- male genitalia.

**Female.** Habitus of female holotype as in Fig. 9. Body length 5.6 mm. Body wider than in male. Pronotum distinctly wider than in male, with wider strip of white pubescence near anterior margin. Dorsal surface of pronotum with dense small-sized granulation.



Fig. 9. *Demonax palikei* sp. nov.: female paratype.

**Differential diagnosis.** The most similar species are *Demonax dolosus* Holzschuh, 1991, *D. planicollis* Holzschuh, 1991, *D. niveofasciatus* Viktora, 2014, *D. imperceptus* sp. nov. and *D. macer* sp. nov. *Demonax palikei* sp. nov. distinctly differs from *D. dolosus* by pronotum with lateral margins, anterior margin and base covered by dense white pubescence, while *D. dolosus* has strip of white pubescence only near pronotal base. *D. palikei* sp. nov. distinctly differs from *D. planicollis* by antennomeres 3 and 4 prolonged into very long spines in inner side of apex, while *D. planicollis* has antennomeres 3 and 4 without distinct spines. *D. palikei* sp. nov. distinctly differs from *D. niveofasciatus* by distinctly narrower body (ratio body length / body width 5.1) and narrower pronotum (ratio pronotal length / pronotal width in widest point 1.2), while *D. niveofasciatus* has ratio body length / body width 4.1, pronotum almost symmetric (ratio pronotal length / pronotal width in widest point 1.05). Female of *D. palikei* sp. nov. distinctly differs from female of *D. imperceptus* sp. nov. by pronotum with wide stripes of white pubescence near anterior margin and base, head covered by long and dense white pubescence, while *D. imperceptus* sp. nov. has pronotum and head covered by sparse white pubescence. Male of *D. palikei* sp. nov. distinctly differs from male of *D. macer* by wider body (ratio body length / body width 5.1), wider pronotum (ratio pronotal length / pronotal width in widest point 1.2), pronotum with dense small-sized punctuation and granulation, while *D. macer* has ratio body length / body

width 5.3, ratio pronotal length / pronotal width in widest point 1.25, pronotum with punctuation (punctures relatively large and sparse) and small-sized granulation.

**Etymology.** Dedicated to Mr. Palike (Kupang, Indonesia) for the selfless help in the discovery of the species.

**Distribution.** Indonesia (Savu Island).

***Demonax prodigus* sp. nov.**

(Fig. 10)

**Type locality.** Indonesia, C Moluccas, Obi Island, Seribu Mts., Tapaya village.

**Type material.** Holotype (♂): 'Indonesia, C. Moluccas' / 'Obi Isl – south, 950 m alt.' / 'MTS. SERIBU, Tapaya vill.' / 'cca 22 km N of S coast' / '22. v. - 9. vi. 2008, St. Jákl lgt.' (CPV). The type is provided with a printed red label: '*Demonax prodigus* sp. nov.' / 'HOLOTYPE' / 'P. Viktora det., 2018'.

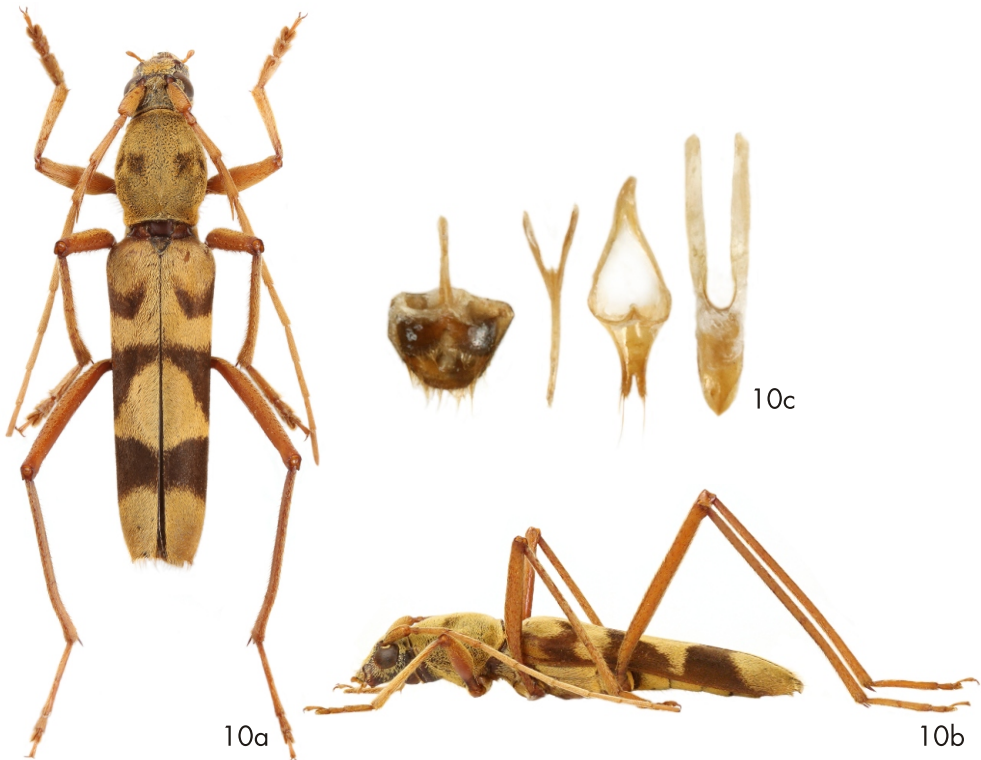


Fig. 10. *Demonax prodigus* sp. nov., male holotype: a- dorsal view; b- lateral view; c- male genitalia.

**Description.** Habitus of male holotype as in Fig. 10a, b. Body from pale brown to dark brown, elongate, narrow, parallel, punctuate, with pubescence. Body length 17.1 mm, widest in humeral part of elytra (3.7 mm), 4.6 times longer than wide.

Head dark brown, broadest across the eyes, narrow, distinctly narrower than pronotum, with

dense punctuation, long ochre yellow pubescence and a few long pale setae. Clypeus pale brown, shiny. Eyes dark brown, distinctly emarginate. Mandibles dark brown with black apex, shiny.

Maxillary palpus pale brown. Ultimate palpomere longest, drop-shaped.

Antennae filiform, pale brown, with dense punctuation and dense yellowish pubescence. Antennomeres 10-11 slightly darker than antennomeres 1-9, antennomeres 1-5 with darker lateral margins. Antennomeres 2-6 with pale setation in inner side. Antennomeres 6-10 slightly serrate. Antennomeres 3 and 4 with very long sharp spines in inner side of apex. Antennomere 2 shortest, antennomere 5 longest. Antennae reaching three quarters of elytral length. Ratios of relative lengths of antennomeres 1-11 equal to: 0.72 : 0.35 : 1.00 : 0.99 : 1.07 : 1.03 : 1.02 : 0.86 : 0.83 : 0.75 : 0.86.

Pronotum blackish brown, narrower than elytra in base, elongate, distinctly rounded in lateral margins, 1.59 times longer than wide at the base and 1.28 times longer than wide at the widest point (middle of pronotum). Pronotum with granulation, covered by ochre yellow pubescence, some places darker with sparser ochre yellow pubescence (as in Fig. 10a). Lateral margins arcuate, anterior margin slightly arcuate, base slightly excised. Dorsal surface with long and erect pale setae.

Scutellum dark brown, triangular with rounded apex, with indistinct punctuation and ochre yellow pubescence.

Elytra 11.2 mm long and 3.7 mm wide; brown, elongate, narrowing apically, with dense punctuation, covered by blackish brown and ochre yellow pubescence (as in Fig. 10a). Apex of each elytron slightly undulated with distinct thorn in outer side.

Legs long and narrow, from pale brown to brown (as in Figs. 10a, b), with dense punctuation and ochre yellow pubescence. Each apical half of tibia and tarsus with distinctly longer ochre yellow pubescence. Meso- and metafemora with distinct darker setae. Metatibia and metafemora distinctly longer than pro- and mesotibia and pro- and mesofemora. Metatarsomere 1 2.44 times longer than metatarsomeres 2 and 3 together.

Ventral side of body brown, covered by ochre yellow pubescence (as in Fig. 10b).

Male genitalia as in Fig. 10c.

**Female.** Unknown.

**Differential diagnosis.** *Demonax prodigus* sp. nov. is a unique species belonging to *Mulio*-Group according to Gressitt & Rondon (1970), which is different by ochre yellow pubescence from all known species of this group from Indonesia and near territories. Somewhat similar are (as to shape of the dark spots on the elytra) species *Demonax culicinus* Pascoe, 1869, described from Waigeo Island and *Demonax macilentoides* Dauber, 2003, described from Borneo. *D. prodigus* sp. nov. distinctly differs from *D. culicinus* and *D. macilentoides* among other things by longer and narrower pronotum and brown body colour with ochre yellow pubescence, while *D. culicinus* has wider pronotum and body darker with grey pubescence, *D. macilentoides* has body almost black with grey pubescence.

**Etymology.** From Latin *prodigus* (prodigal).

**Distribution.** Indonesia (Obi Island).



***Demonax pupillus* sp. nov.**  
(Fig. 11)

**Type locality.** Indonesia, C Moluccas, Obi Island, Seribu Mts., Tapaya village.

**Type material.** Holotype (♀): 'Indonesia, C. Moluccas' / 'Obi Isl – south, 950 m alt.' / 'MTS. SERIBU, Tapaya vill.' / 'cca 22 km N of S coast' / '22. v. -9. vi. 2008, St. Jákl lgt.' (CPV). The type is provided with a printed red label: '*Demonax pupillus* sp. nov.' / 'HOLOTYPE' / 'P. Viktora det., 2018'.



Fig. 11. *Demonax pupillus* sp. nov., female holotype: a- dorsal view; b- lateral view.

**Description.** Habitus of male holotype as in Fig. 11a, b. Body blackish brown, elongate, narrow, parallel, punctate, with pubescence. Body length 14.00 mm, widest in humeral part of elytra (3.04 mm), 4.6 times longer than wide.

Head blackish brown, broadest across the eyes, narrow, distinctly narrower than pronotum, with dense punctuation, long yellow pubescence and long pale setae. Frons in middle with narrow longitudinal furrow. Eyes dark brown, distinctly emarginate. Clypeus and mandibles blackish brown, shiny.

Maxillary palpus blackish brown, with pale setation. Ultimate palpomere longest, drop-shaped, with slightly paler apex.

Antennae filiform, with distinct punctuation and dense pale pubescence. Antennomeres 2-5 with pale setation in inner side. Antennomeres 1-7 blackish brown, antennomeres 8-11 pale ochre yellow. Antennomeres 3 and 4 with very long rounded spines in inner side of apex. Antennomere 2 shortest, antennomere 5 longest. Antennae reaching over three quarters of elytral length. Ratios of relative lengths of antennomeres 1-11 equal to: 0.78 : 0.31 : 1.00 : 1.00 : 1.28 : 1.16 : 1.17 : 1.02 : 0.93 : 0.85 : 0.90.

Pronotum blackish brown, only slightly narrower than elytra in basal part, distinctly rounded in lateral margins, 1.54 times longer than wide at the base and 1.15 times longer than wide at the widest point (near middle of pronotum). Pronotum with reticulation, covered by yellow pubescence, with black spot in the middle (as in Fig. 11a). Dorsal surface with long and erect pale setae. Lateral margins distinctly arcuate, anterior margin slightly arcuate, base almost straight.

Scutellum blackish brown, roundly triangular, with punctuation, covered by yellow pubescence.

Elytra 9.37 mm long and 3.04 mm wide; blackish brown, elongate, almost parallel, with dense punctuation, covered by black, goldenish and yellow pubescence (as in Fig. 11a). Apex of each elytron slightly undulated with thorn in outer side.

Legs long and narrow, blackish brown, with dense punctuation and long yellow pubescence.

Ventral side of body blackish brown, covered by yellow pubescence (as in Fig. 11b).

**Male.** Unknown.

**Differential diagnosis.** *Demonax pupillus* sp. nov. is a unique species belonging to *Mulio*-Group according to Gressitt & Rondon (1970), which is different by yellow pubescence from all known species of this group from Indonesia and near territories. Somewhat similar are (as to shape of the dark spots on the elytra) species *Demonax angustatus* Pic, 1943, described from Borneo, *Demonax celebensis* Aurivillius, 1922, described from Sulawesi, and *Demonax parallelus* Aurivillius, 1922, described from The Philippines (Mindanao Island). *D. prodigus* sp. nov. distinctly differs from above mentioned species among other things by yellow pubescence and shorter pronotum with lateral margins distinctly arcuate, while *D. angustatus*, *D. celebensis* and *D. parallelus* have grey pubescence and pronotum narrower with lateral margins only slightly arcuate.

**Etymology.** From Latin *pupillus* (orphan).

**Distribution.** Indonesia (Obi Island).

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