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A new subspecies of *Sphingnotus* Perroud 1855 (Coleoptera: Cerambycidae) from West Papua, Indonesia

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Abstract. Una nuova sottospecie del genere *Sphingnotus* (Coleoptera: Cerambycidae). In accordo con le chiavi per le specie di questo genere, deve essere assegnata una sottospecie di *Sphingnotus mirabilis* Boisduval 1835. La nuova sottospecie è simile a *S. m. mirabilis* Boisduval per le variazioni dal blu-verde al viola-nero e color rame ma questa nuova sottospecie differisce per i caratteri descritti di seguito.

Abstract. A new subspecies of the genus *Sphingnotus* (Coleoptera: Cerambycidae). According to the species keys of this genus, *Sphingnotus mirabilis* Boisduval should be assigned a new subspecies, 1835. The new subspecies is more similar to *S. m. mirabilis* Boisduval, which has different variations from blue-green to purple-black and coppery color, while this new subspecies has different characteristics described below.

Key words: long-horn beetles, Lamiinae, *Sphingnotus*, taxonomy, West Papua, Indonesia

The genus *Sphingnotus* Perroud, 1855 (Coleoptera: Cerambycidae) belongs to Tmesisternini Blanchard, 1853, an insufficiently studied tribe of the subfamily Lamiinae Latreille, 1825.

Presently, this genus is presented in the world fauna by 3 species: *Sphingnotus dunningi* Pascoe, 1868, *Sphingnotus insignis* Perroud, 1855, *Sphingnotus mirabilis* Boisduval, 1835. These species include 13 subspecies which are distributed in Molucca, Misool, Aru, West Papua, Papua New Guinea, Bismarck, and the Solomon islands.

Currently, *Sphingnotus mirabilis* species (Boisduval, 1835) has six described subspecies: *S. m. admirabilis* Kriesche, 1923 from Aru island; *S. m. keyensis* Schwarzer, 1924 from Moluccas and Key islands; *S. m. mirabilis* Boisduval, 1835 from Moluccas, Aru, Misool, West Papua and Papua New Guinea islands; *S. m. mniszechi* Perroud, 1855 from Moluccas and Ambon islands; *S. m. salomonus* Breuning, 1945 from Solomon and Bougainville islands; and *S. m. splendens* Gressitt, 1984 from Geelvink and Biak island.

In this present study, a seventh new subspecies of *S. mirabilis* species from Genyum Jaya Village, Gresi province, Jayapura province, West Papua (Indonesia) is described and compared with related subspecies.

MATERIAL AND METHODS

The holotype and paratypes are deposited in the private collection of the author. All specimens have been collected in Papua New Guinea by local collectors. Some of these specimens are currently in the author's collection. In the future, they will be reassigned in different collections, named as below, and will be assigned to natural history collections. The illustrations were made using a smartphone VIVO 1727 and XTL-3400 Zoom Stereo Microscope, Photoshop CC software, and Canon 600D camera.

TAXONOMY

Key to species of the genus *Sphingnotus* Perroud, 1855

1. Elytron transversely or obliquely truncate apically, not strongly toothed.....
.....2
Elytron emarginate-truncate apically with outer angle strongly toothed; elytron disc usually green or blue, less often purplish black or reddish bronze, with many white dots largely arranged in vague bands; length 20-40 mm.....
..... *insignis*
2. Elytron usually with 3 narrow white bands (sometimes consisting of spots) starting somewhat anterior to middle, 3rd band less conspicuous and often incomplete; sometimes a few apical and/or sutural dots; length 21-39 mm.....
.....*mirabilis*
- Elytron with creamy spots or short stripes, mostly in longitudinal grooves and partly arranged in transverse or partly oblique bands covering a small to large fraction of the surface; length 23-42 mm.....*dunningi*

Sphingnotus mirabilis voitsekhovskii ssp. nov.

(Figs. 1a-b, 2,4)

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Holotype (male): [Indonesia], Irian Jaya, Jayapura province, Gresi province, Genyum Jaya Village, IX.2019, Local collector [handwritten on white label]; HOLOTYPUS: *Sphingnotus mirabilis voitsekhovskii* ssp. n., V. Voitsekhovskii descr. 2020 [handwritten on red label].

Paratypes: 3 males and 6 females: same data and location as holotype [handwritten on white label]; PARATYPUS: *Sphingnotus mirabilis voitsekhovskii* ssp. n., V. Voitsekhovskii descr. 2020 [handwritten on red label].

Description. Holotype male. (Fig. 1a) Length: 35.0 – 39.0 mm (measured from vertex to elytral apices), **Width:** 11.0 – 12.0 mm (measured across humeri). **Head:** dark green, narrow at the beginning of pronotum, expanding in the middle where the eyes are almost to the level of pronotum width, and then narrowing to the base of the mandibles. The head has sparse punctures on the dorsal surface and lateral ridges, stretching from the antennal insertion and are bent forward just before labrum, forming a small area after the upper eye lobes. The frontal part of the head has a central depression and rarely deep punctures. The antennae are smooth, dark green, and reach almost to the elytral apex. **Pronotum:** Shiny dark green, with deep punctures except for a smooth, small longitudinal central area, and has a somewhat broader base. The lateral ridges are bent from the base to the narrowed center and caudally expanded with a large, blunt rounding. The pronotum is wider than the head, and narrower than the elytra. **Scutellum:** Shiny dark green with deep, white punctures. **Elytra:** Dark green with a metallic gold sheen. A gold red shine is visible from the vertex to the center of the elytra, ending in a dark blue to the apex with two white bands: one in the basal third, and the second in the apical third. The first band is wider than the second band and consists of white pubescence on the elytra. The dorsal surface of the elytra has coarse, dense punctures, distinctly coarser from the vertex to the center of the elytra. The apex is rounded with two small lateral teeth. **Legs:** Shiny dark blue and smooth. The dorsal view of the protibia has a very faint yellow pubescence and the ventral view of the protibia has dense pubescence which occupies one third of the protibia. The mesotibia and metatibia have dense light-yellow pubescence which occupies a third of the dorsal and ventral views. **Thorax:** Dark-green, smooth, and shiny with rare wrinkles near the metacoxal cavity and has a rare pubescence of white color which forms a vertical band that continues to a white band of elytra. **Abdomen:** Shiny dark blue and smooth with white pubescence in the form of oblique bands at the edges near elytra of each sternite. On the second, third, and fourth sternites near the oblique bands of white pubescence are white pubescence which form small circles at the right and left.

Paratype female. (Figs. 1b, 2, 4) Length: 24.0 – 35.0 mm (measured from vertex to elytral apices), **Width:** 8.0 – 11.0 mm (measured across humeri). **Head:** Dark green, narrow at the beginning of the pronotum, and expands slightly to the middle of the eyes and then narrows to the base of the mandibles. The head has sparse punctures on the dorsal surface and lateral ridges which stretch from the antennal insertion and are bent forward to just before the labrum, comprising at least a small area after the upper eye lobes. The frontal part of the head has a central depression and some rarely deep punctures. **Antennae:** Smooth, dark green, and reaching two-thirds of the elytra. **Pronotum:** Shiny, dark green, and

completely covered with deep punctures except for a small, smooth longitudinal central area which is somewhat broader at the base. The lateral ridges are bent at the base to the narrowed center and caudally expanded with a large blunt rounding. The pronotum is wider than the head, and narrower than elytra. **Scutellum:** Shiny, dark green, and with deep, white punctures. **Elytra:** Dark green with a metallic gold sheen. A gold red shine is visible from the vertex to the center of the elytra, ending in a dark blue to the apex with two white bands: one in the basal third, and the second in the apical third. The first band is wider than the second band and consists of white pubescence on the elytra. The dorsal surface of the elytra has coarse, dense punctures, distinctly coarser from the vertex to the center of the elytra. The apex is rounded with two small lateral teeth **Legs:** Shiny, dark blue, and smooth. The dorsal view of the protibia has a very faint yellow pubescence and the ventral view of the protibia has dense pubescence which occupies one third of the protibia. The mesotibia and metatibia have dense light-yellow pubescence which occupies a third of the dorsal and ventral views. **Thorax:** Dark-green, smooth, and shiny with rare wrinkles near the metacoxal cavity and has a rare pubescence of white color which forms a vertical band that continues to a white band of elytra. **Abdomen:** Shiny dark blue and smooth with white pubescence in the form of oblique bands at the edges near elytra of each sternite. On the second, third, and fourth sternites near the oblique bands of white pubescence are white pubescence which form small circles at the right and left.

Differential diagnosis.

Based on the shape and proportions of the body, the new subspecies is similar to some subspecies of *Sphingnotus mirabilis* Boisduval, 1835, but differs from it with the following characteristics:

1. This new subspecies has differences from *S. m. admirabilis* Kriesche, 1923 in that line 3 is not developed on the elytron.
2. *S. m. keyensis* Schwarzer, 1924 has less brilliant elytra and the bands are reduced to small spots or are largely lacking unlike this new subspecies.
3. The new subspecies is more similar to *S. m. mirabilis* Boisduval, 1835 except the new subspecies has the following differences: the leg protibia rarely have light-yellow pubescence in the dorsal view; the protibia in the ventral view have dense pubescence which occupies one third of the protibia (Figs. 2-3); the mesotibia and metatibia of the legs have dense light-yellow pubescence which occupies one third of the dorsal and ventral views while in *S. m. mirabilis* the leg tibia have very dense yellow pubescence which occupies two thirds of the tibia in the dorsal and ventral views. (Figs. 4-5).
4. This new subspecies has a dark-green head, dark-green ventral and legs, and dark green elytra with a metallic gold sheen. From the vertex to the center of the elytra is a golden red shine, ending in a dark blue at the apex while that in *S. m. mnischechi* Perroud, 1855 has a black head, dark

violet elytra, and violet blue ventral and legs. 5. This new subspecies has a post-median elytral band parallel to elytral suture while that in *S. m. salomonus* Breuning, 1945 has a more oblique post-median elytral band. 6. This new subspecies has two white bands while that in *S. m. splendens* Gressitt, 1984 does not have any bands on the elytra.

Distribution: Indonesia; West Papua.

Etymology.

This species is named after my father's family name, Anatoly Voitsekhovskii, who was a fighter for democracy in the Russian Federation and a well-known human rights activist at «Memorial»: An International Historical, Educational, Human Rights and Charitable Society (Moscow, Russia).

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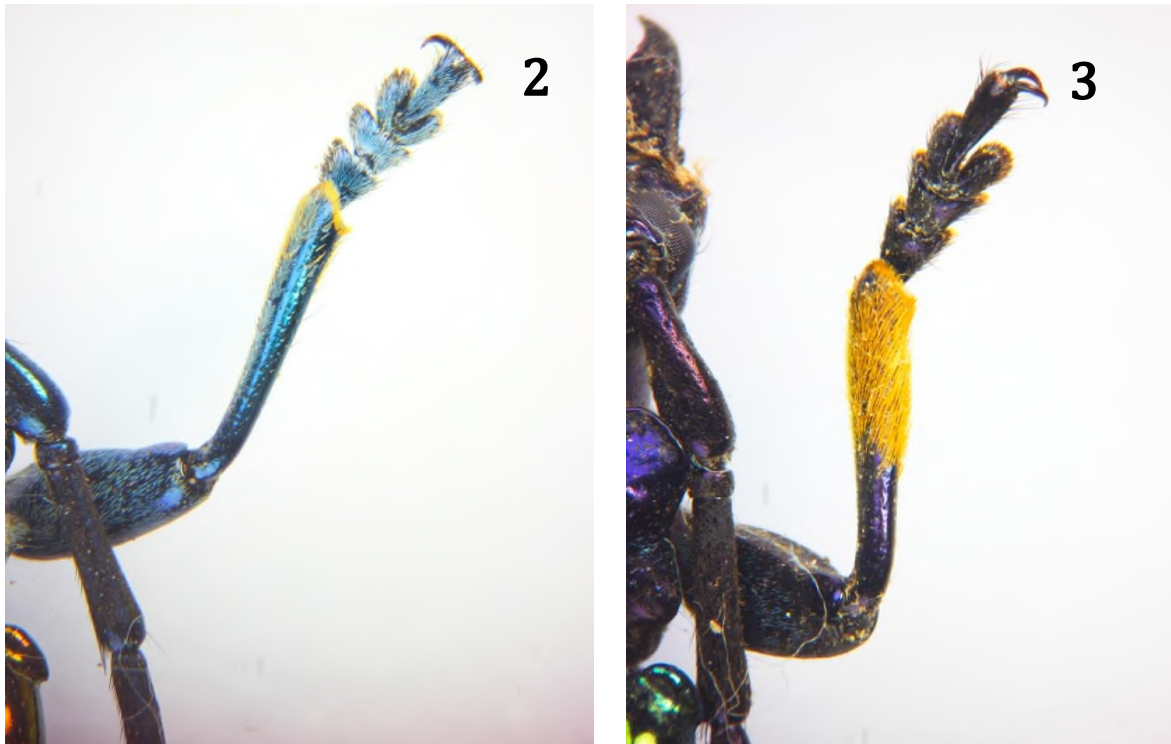
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Fig. 1a. Habitus of *Sphingnotus mirabilis voitsekhovskii*, male holotype.



Fig. 1b. Habitus of *Sphingnotus mirabilis voitsekhovskii*, female paratype.



Figures. 2-3. Protibia and legs of *Sphingnotus mirabilis* subspecies:
2. *S. m. voitsekhovskii*, female paratype; 3. *S. m. mirabilis* Boisduval, 1835

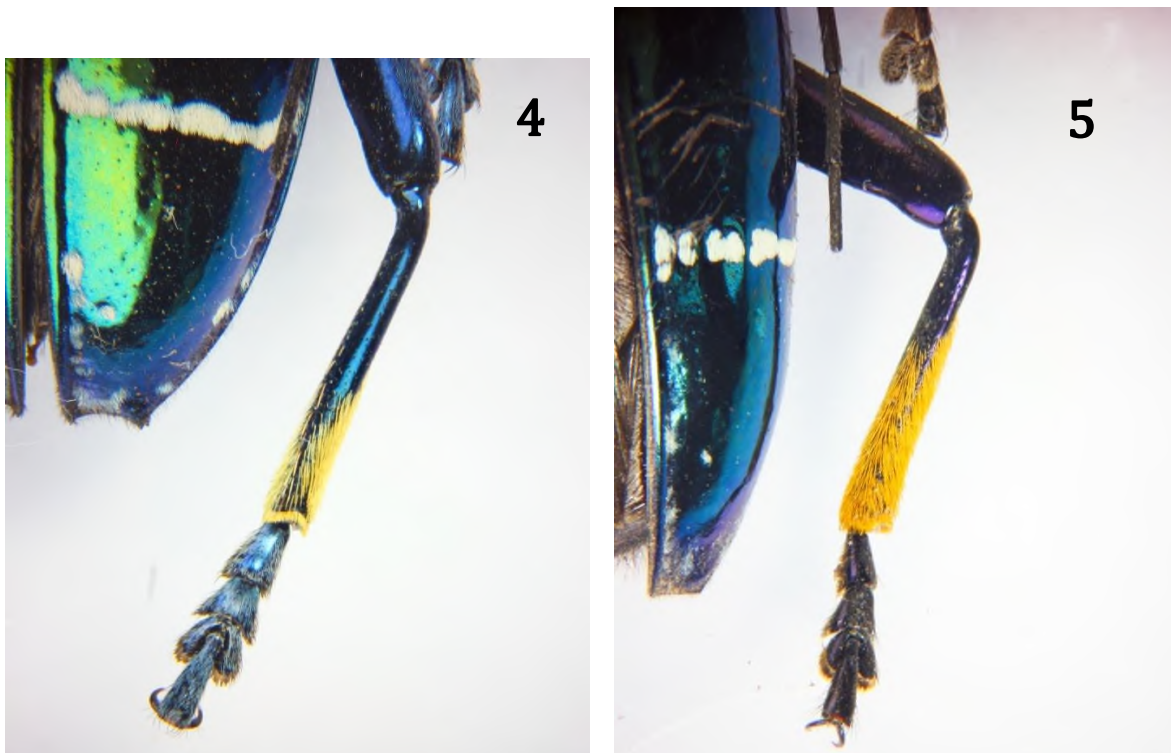


Fig. 4-5. Metatibia and legs of *Sphingnotus mirabilis* subspecies:
4. *S. m. voitsekhovskii*, female paratype; 5. *S. m. mirabilis* Boisduval, 1835



Fig. 6. Locality of *S. m. voitsekhovskii* ssp. nov. (red dot)