

INSECTA MUNDI

A Journal of World Insect Systematics

0508

A new species of *Psalidognathus* Gray, 1831 from Peru
(Coleoptera: Cerambycidae: Prioninae)

Taketsune Noguchi
#407 2-21-3 Ebisunishi, Shibuyaku
Tokyo, Japan 150-0021

Antonio Santos-Silva
Museu de Zoologia
Universidade de São Paulo
CP 188, 90001-970
São Paulo, SP, Brazil

Date of Issue: October 21, 2016

Taketsune Noguchi and Antonio Santos-Silva
A new species of *Psalidognathus* Gray, 1831 from Peru (Coleoptera: Cerambycidae:
Prioninae)
Insecta Mundi 0508: 1–6

ZooBank Registered: urn:lsid:zoobank.org:pub:A0BF5381-D3E7-41B3-B089-15077E227953

Published in 2016 by

Center for Systematic Entomology, Inc.
P. O. Box 141874
Gainesville, FL 32614-1874 USA
<http://centerforsystematicentomology.org/>

Insecta Mundi is a journal primarily devoted to insect systematics, but articles can be published on any non-marine arthropod. Topics considered for publication include systematics, taxonomy, nomenclature, checklists, faunal works, and natural history. **Insecta Mundi** will not consider works in the applied sciences (i.e. medical entomology, pest control research, etc.), and no longer publishes book reviews or editorials. **Insecta Mundi** publishes original research or discoveries in an inexpensive and timely manner, distributing them free via open access on the internet on the date of publication.

Insecta Mundi is referenced or abstracted by several sources including the Zoological Record, CAB Abstracts, etc. **Insecta Mundi** is published irregularly throughout the year, with completed manuscripts assigned an individual number. Manuscripts must be peer reviewed prior to submission, after which they are reviewed by the editorial board to ensure quality. One author of each submitted manuscript must be a current member of the Center for Systematic Entomology.

Chief Editor: Paul E. Skelley, e-mail: insectamundi@gmail.com
Assistant Editor: David Plotkin, e-mail: insectamundi@gmail.com
Head Layout Editor: Eugenio H. Nearn
Editorial Board: J. H. Frank, M. J. Paulsen, Michael C. Thomas
Review Editors: Listed on the **Insecta Mundi** webpage

Manuscript Preparation Guidelines and Submission Requirements available on the **Insecta Mundi** webpage at: <http://centerforsystematicentomology.org/insectamundi/>

Printed copies (ISSN 0749-6737) annually deposited in libraries:

CSIRO, Canberra, ACT, Australia
Museu de Zoologia, São Paulo, Brazil
Agriculture and Agrifood Canada, Ottawa, ON, Canada
The Natural History Museum, London, UK
Muzeum i Instytut Zoologii PAN, Warsaw, Poland
National Taiwan University, Taipei, Taiwan
California Academy of Sciences, San Francisco, CA, USA
Florida Department of Agriculture and Consumer Services, Gainesville, FL, USA
Field Museum of Natural History, Chicago, IL, USA
National Museum of Natural History, Smithsonian Institution, Washington, DC, USA
Zoological Institute of Russian Academy of Sciences, Saint-Petersburg, Russia

Electronic copies (Online ISSN 1942-1354, CDROM ISSN 1942-1362) in PDF format:

Printed CD or DVD mailed to all members at end of year. Archived digitally by Portico.
Florida Virtual Campus: <http://purl.fcla.edu/fcla/insectamundi>
University of Nebraska-Lincoln, Digital Commons: <http://digitalcommons.unl.edu/insectamundi/>
Goethe-Universität, Frankfurt am Main: <http://nbn-resolving.de/urn/resolver.pl?urn:nbn:de:hebis:30:3-135240>

Copyright held by the author(s). This is an open access article distributed under the terms of the Creative Commons, Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original author(s) and source are credited. <http://creativecommons.org/licenses/by-nc/3.0/>

Layout Editor for this article: Eugenio H. Nearn

A new species of *Psalidognathus* Gray, 1831 from Peru (Coleoptera: Cerambycidae: Prioninae)

Taketsune Noguchi
#407 2-21-3 Ebisunishi, Shibuyaku
Tokyo, Japan 150-0021
insect_prodigy@hotmail.com

Antonio Santos-Silva
Museu de Zoologia
Universidade de São Paulo
CP 188, 90001-970
São Paulo, SP, Brazil
toncriss@uol.com.br

Abstract. *Psalidognathus antonkozlovi* (Coleoptera: Cerambycidae: Prioninae), a new species from Peru, is described and illustrated. The new species is included in a previous key.

Key Words. Prionini, South America, taxonomy

Introduction

Currently, *Psalidognathus* Gray, 1831 encompasses 10 species distributed from Costa Rica to northern South America (Monné 2016). The species can be included in two groups: the “modestus” group, species without a spine at the apex of the basal antennomeres; and the “friendii” group, species with a spine at the apex of the basal antennomeres. Santos-Silva and Komiya (2012) published a provisional study of the species of the “modestus” group, considering seven species in it. The key to species of *Psalidognathus* by Quentin and Villiers (1983), although useful to separate both species groups, encompasses some problems as, for example, the length and color of the antennae, and pronotal pubescence.

The study of a large series of specimens from Peru (mainly males) allowed describing a new species in the “modestus” group.

Materials and Methods

Photographs were taken with a Canon EOS Rebel T3i DSLR camera, Canon MP-E 65mm f/2.8 1-5X macro lens, and successive images assembled by Zerene Stacker AutoMontage software. Measurements were taken in “mm” using a micrometer ocular Hensoldt/Wetzlar - Mess 10 in the Leica MZ6 stereomicroscope, also used in the study of the specimens.

The collection acronyms used in this study are as follows:

AKPC – Anton Kozlov Private Collection, Moscow, Russia
MZSP – Museu de Zoologia, Universidade de São Paulo, São Paulo, Brazil
TNPC – Taketsune Noguchi Private Collection, Tokyo, Japan
NDPC – Norbert Delahaye Private Collection, Plaisir, France
EGLR – Erick Germán Lequera Rojas Collection, Loreto, Peru

Description

Psalidognathus antonkozlovi sp. nov.
(Fig. 1–7)

Male. Integument dark brown, blackish on head, mandibles, scape, prothorax, and scutellum; mouthparts light reddish brown; pedicel dark brown; antennomere III dark brown with distal area gradually

reddish brown; antennomeres IV–XI reddish brown (gradually lighter toward distal segments); elytra blackish on base, gradually reddish brown toward apex; dorsal side of basal quarter of profemora dark brown, gradually reddish brown toward apex; ventral margins of meso- and metafemora black, with remaining surface dark reddish brown (darker toward apex); protibiae dark brown on basal third, gradually reddish brown toward apex; meso- and metatibiae reddish brown except dark brown base; tibial spurs black; tarsi reddish brown except small darkened area on center of dorsal surface of tarsomeres I and II, and entire apex of tarsomere V; claws mostly dark brown with some reddish regions.

Head. Frons finely rugopunctate except transverse, smooth, narrow area close to clypeus (centrally triangularly projected upward); with moderately long, sparse, erect, yellowish setae. Vertex coarsely, rugopunctate, smoother on narrow area close to upper eye lobes; with moderately long, erect, yellowish setae, more abundant laterally; cephalic carinae rugopunctate starting at level of posterior ocular margin, slightly divergent toward its apex, gradually elevated toward subconical, slightly elevated apex placed at about middle of area between eyes and prothorax; area between antennal tubercles and cephalic carinae slightly longitudinally depressed. Tempora with large, conical tubercle placed at about level of middle of lower eye lobes; area behind upper eye lobes with sculpture as on vertex, with moderately long and sparse yellowish setae; area between tubercle and eye with small granules and moderately long, sparse yellowish setae; area behind lower eye lobes finely transversely rugose close to eye, with abundant minute granules on remaining surface, moderately long, sparse yellowish setae in rugose area, and abundant short yellowish setae on remaining surface (not obscuring integument). Genae coarsely, confluent punctate toward ventral side, nearly smooth centrally, finely, confluent punctate toward antennal socket (except narrow, smooth area close to eye); apex projected, somewhat flattened dorsoventrally, slightly curved laterally; with long, sparse yellowish setae toward ventral side, glabrous in smooth region, with row of moderately long and closely spaced yellowish setae in finely punctate region; glabrous on apex. Antennal tubercles coarsely, confluent punctate on base, gradually finer toward smooth apex; with minute, sparse yellowish setae. Longitudinal sulcus distinct from clypeus to prothoracic margin. Clypeus subhorizontal in basal half (somewhat concave, with anterior margin slightly elevated), distinctly vertical at center of distal half, inclined at sides of distal half; finely, abundantly punctate in basal half and sides of distal half, smooth in center of distal half; with short, sparse yellowish setae in punctate regions. Labrum distinctly concave, nearly smooth, with anterior margin widely emarginate; with moderately long, sparse yellowish setae laterally, and abundant long yellowish setae close to apex. Gulamentum nearly smooth between metatentorial pits, moderately finely rugopunctate toward mentum (more transversely carinate near anterior margin); central area slightly depressed close to elevated anterior margin; with abundant long, erect yellowish setae (mainly laterally on anterior area), not obscuring integument. Mandibles curved downward; in lateral view distinctly widened at base, gradually flattened toward apex; in dorsal view wide, inclined toward inner margin; inner margin multidentate from base to distal tooth; distal tooth of left mandible forming part of distal inner plate, that of right mandible not forming part of distal plate; moderately finely, densely punctate (mainly in basal third) except in smooth band along ventral and dorsal inner margins (widened toward apex, mainly ventrally); with short, sparse yellowish setae, mainly laterally in basal third. Labial palpomere I 0.35 times as long as II; III 0.9 times as long as II. Maxillary palpomere I 0.4 times as long as II; III 0.7 times as long as II; IV 1.1 times as long as II. Distance between upper eye lobes 0.8 times length of scape; distance between lower eye lobes in ventral view 2.1 times length of scape. Antennae 1.3 times as long as elytra, almost reaching elytral apex; scape moderately finely, abundantly punctate on base of dorsal and lateral surfaces, gradually sparser toward apex; antennomere III subcylindrical in basal half, gradually flattened in distal third of ventral side, with sensorial area occupying most of this area; antennomeres IV–V dorsally convex; antennomeres IV–X ventrally depressed, entirely occupied by sensorial area; ventral sensorial area of antennomeres VII–XI longitudinally divided by central carina (more elevated after IX); outer side of antennomere IV with narrow, elongated sensorial area occupying distal third; outer side of antennomere V with narrow, elongated sensorial area in basal quarter and another occupying distal half; outer and inner sides of antennomere VI with sensorial area occupying entire surface (narrowly divided at middle of inner side); outer and inner sides of antennomere VII with sensorial area occupying entire surface, and dorsal surface with sensorial area in distal half; antennomeres VIII–XI with sensorial area occupying ventral, dorsal and lateral sides; apex of antennomeres unarmed; antennal formula (ratio) based on antennomere III: scape

= 0.45; pedicel = 0.07; IV = 0.62; V = 0.56; VI = 0.51; VII = 0.51; VIII = 0.47; IX = 0.44; X = 0.39; XI = 0.51.

Thorax. Anterolateral angles of pronotum projected forward, with large, flattened, triangular tooth fused with another flattened, triangular tooth placed at basal third; basal third with long conical tooth; posterolateral angles with small rounded projection; disc with three large gibbosities, one circular on each side and one central in basal half followed by narrow carina reaching front margin; area between gibbosities and anterior quarter distinctly depressed; anterior and posterior margins sinuate; surface coarsely, densely rugopunctate, with abundant long, erect yellowish-brown setae throughout. Prosternum moderately finely, abundantly striate-punctate, with abundant long, erect yellowish-brown setae. Prosternal process with three longitudinal sulci, one on each side and one central, with abundant long, erect yellowish-brown setae (mainly near apex). Metepisternum and metasternum minutely, densely punctate, with abundant short, decumbent yellowish-brown setae. Scutellum finely, moderately sparsely punctate, with sparse short, decumbent yellowish-brown setae.

Elytra. Distinctly tapering toward apex; coarsely rugopunctate throughout; epipleura explanate in basal half; humerus slightly projected, but not spiny; apex rounded at outer side, with small projection at sutural angle.

Legs. Profemora densely, coarsely granulose on sides (granules forming small spines on inferior side of margins); ventral surface depressed. Mesofemora finely, sparsely punctate, with sparse small spines at inferior margins of sides. Metafemora very finely, densely transversely striate. Protibia in dorsal view gradually enlarged in proximal third, slightly gradually narrowed at inferior margin to about midlength, then slightly gradually enlarged at inferior margin to base of distal sixth, then gradually distinctly enlarged toward apex; ventral sulcus present from base to apex, gradually enlarged from base to apex of proximal third, but not distinctly densely setose in proximal third; in dorsal view moderately coarsely, abundantly punctate, gradually sparser toward apex, mainly in distal sixth; in ventral view with abundant small spines. Ventral side of mesotibia with ventral sulcus similar to that of protibia, but narrower, distinctly setose in distal half; sculpture similar to that of protibia, but short spines less abundant. Metatibia without ventral sulcus; short spines sparser, shorter than on mesotibiae. Apex of lobes of meso- and metatarsomere V spiny (mainly on metatarsomere).

Abdomen. Ventrites I–IV moderately coarsely, abundantly punctate (mainly on ventrite I) except smooth distal region (widened centrally); ventrite I with moderately abundant long, decumbent yellowish-brown setae in punctate region; ventrites II–IV with sparse long, decumbent yellowish-brown setae, more abundant laterally and along area close to smooth region. Ventrite V finely, moderately sparsely punctate in basal half, abundantly coarsely punctate in distal half; distal margin widely emarginate; basal half with sparse moderately short, suberect yellowish-brown setae; distal half with abundant long, suberect yellowish-brown setae.

Variation in Male. Blackish area of elytra distinctly surpassing basal third; dorsal sides of meso- and metafemora dark brown; longitudinal depression on vertex moderately deep; apex of cephalic carinae plate-shaped; antennae from almost reaching elytral apex to distinctly surpassing it by the last antennomere.

Female. Dorsal surface of head almost glabrous; cephalic carinae similar to those in male. Mandibles similar to that in male, proportionally shorter. Antennae as long as 1.2 times elytral length, almost reaching elytral distal fifth. Scape slender, longer than in male. Prothorax very similar to that in male, but almost glabrous. Elytra distinctly widened centrally, distinctly more vermiculate than in male, mainly in basal half. Metepisterna glabrous. Metasternum shorter than in male; minutely, moderately abundantly punctate laterally, interspersed with fine punctures, smooth centrally; glabrous. Abdominal ventrites minutely, sparsely punctate, interspersed with fine (mainly on ventrite V), sparse punctures; apex of ventrite V sub-rounded. Protibia gradually enlarged from base to apex, more distinctly in distal sixth.

Dimensions (holotype male/paratype males/paratype females). Total length (including mandibles) 74.0/44.5–63.0/44.3–53.2; length of prothorax centrally 7.7/4.5–6.5/5.3–7.1; width of prothorax between apices of anterior angles 19.9/11.1–17.5/13.8–16.5; width of prothorax between apices of posterior angles 14.5/8.0–13.0/9.2–11.1; humeral width 23.2/14.3–18.4/14.3–17.9; elytral length 45.2/29.2–37.6/28.3–33.5.

Etymology. The new species is named after Anton Olegovich Kozlov, who first recognized the species as new.

Type Material. Holotype male from PERU, *Piura*: Pampa Minas (Canchaque, Huancabamba; 1800-2000 m), I.2016, V. L. Guerrero col. (MZSP). Paratypes – 130 males, 9 females, same data as holotype (1 female, MZSP; 130 males, 8 females, TNPC); *Piura* region, 1 male, III.2016, local collector (NDPC); Canchaque (Huancabamba; 2000 m), 4 males, II.2016, local collector (EGLR); 11 males, 1 female, II.2016, local collector (AKPC).

Comparison. *Psalidognathus antonkozlovi* sp. nov. is similar to *P. erythrocerus* Reiche, 1840 in general appearance and shape of cephalic carinae, but differs as follows: male scape less coarsely punctate; male pronotum setose; humerus not spiny (both sexes); center of scutellum not rugose (both sexes); male protibia not distinctly sulcate and setose in proximal third. In *P. erythrocerus*, the male scape is coarser punctate, the male pronotum is not setose, the humerus is distinctly spiny in both sexes, the central area of the scutellum is rugose in both sexes, and the male protibiae is distinctly sulcate and setose from base to apex. The new species can be separated from *P. cerberus* Santos-Silva and Komiya, 2012 by the male scape less coarsely punctate, the male pronotum distinctly setose (not so in *P. cerberus*), the humerus of either sex is not spiny, and the inferior side of male protibia widened only in proximal third (widened throughout length in male of *P. cerberus*). The new species differs from *P. reichei* Quentin and Villiers, 1983 mainly in having the cephalic carinae slightly divergent toward apex and not ending in a conical projection in both sexes (notably divergent toward apex and ending in a conical projection in both sexes of *P. reichei*), by the mandibles of large males notably different more flattened, wider centrally, and not curved laterally (in large males of *P. reichei* they are less flattened, narrower centrally, and notably curved laterally), by the distance between upper eye lobes shorter than length of scape in male (larger than length of scape in male of *P. reichei*), and by the female antennae notably surpassing midlength of elytra (slightly surpassing in female of *P. reichei*). Finally, *P. pubescens* Quentin and Villiers, 1983 differs in having the mandibles of large males notably rounded laterally and not flattened, the cephalic carinae of both sexes distinctly divergent and ending in a conical projection, the female antenna only slightly surpassing midlength of elytra, and the lateral teeth of male pronotum shorter.

For comparisons, photographs of the types of *P. erythrocerus*, *P. pubescens*, *P. cerberus*, and *P. reichei* are available in Santos-Silva and Komiya (2012), Bezark (2016), and Pirkl (2016).

The new species belongs to the “modestus” species group and can be included in the alternative couplets “2” of Santos-Silva and Komiya (2012):

- 2'(1). Ventral sulcus of protibia wide and very distinctly setose from near base **3**
 – Ventral sulcus of protibia not wide and not distinctly setose in proximal third **2**
- 2(2'). Pronotum of male distinctly setose; humerus of either sex not spiny; inferior side of male protibia (dorsal view) widened only in proximal third. Peru ***P. antonkozlovi* sp. nov.**
 – Pronotum of male with short and sparse setae; humerus spiny in both sexes; inferior side of male protibia (dorsal view) widened throughout length. Colombia
 ***P. cerberus* Santos-Silva and Komiya, 2012**

Acknowledgments

We express our sincere thanks to Anton Olegovich Kozlov, Norbert Delahaye, and Erick Germán Lequera Rojas for sending specimens of the new species for study; to Gérard L. Tavakilian and Gabriel Biffi for photographs of the neotype of *Psalidognathus erythrocerus* used in this study. We especially appreciate careful reviews of the manuscript by Norbert Delahaye, Larry G. Bezark, and Jiri Zidek.

Literature Cited

- Bezark, L. G. 2016.** A photographic Catalog of the Cerambycidae of the New World. (Available at ~ <https://apps2.cdfa.ca.gov/publicApps/plant/bycidDB/wsearch.asp?w=n/>. Last accessed June 2016.)
- Monné, M. A. 2016.** Catalogue of the Cerambycidae (Coleoptera) of the Neotropical Region. Part III. Subfamilies Lepturinae, Necydalinae, Parandrinae, Prioninae, Spondylidinae and Families Oxypeltidae, Vesperidae and Disteniidae. (Available at ~ <http://www.cerambyxcat.com/>. Last accessed June 2016.)
- PirkI, J. 2016.** Prioninae of the World. (Available at ~ <http://www.prioninae.eu/>. Last accessed June 2016.)
- Quentin, R. M., and A. Villiers. 1983.** Note sur les *Psalidognathus* Gray. Description de quatre formes nouvelles; désignation d'un néotype et de lectotypes (Col., Cerambycidae, Prioninae). Annales de la Société Entomologique de France (n.s.) 19(4): 441–446.
- Santos-Silva, A., and Z. Komiya. 2012.** Contribution toward the knowledge of *Psalidognathus* Gray, 1831 (Coleoptera, Cerambycidae, Prioninae). Insecta Mundi 247: 1–28.

Received August 26, 2016; Accepted September 15, 2016.
Review editor Jiri Zidek.

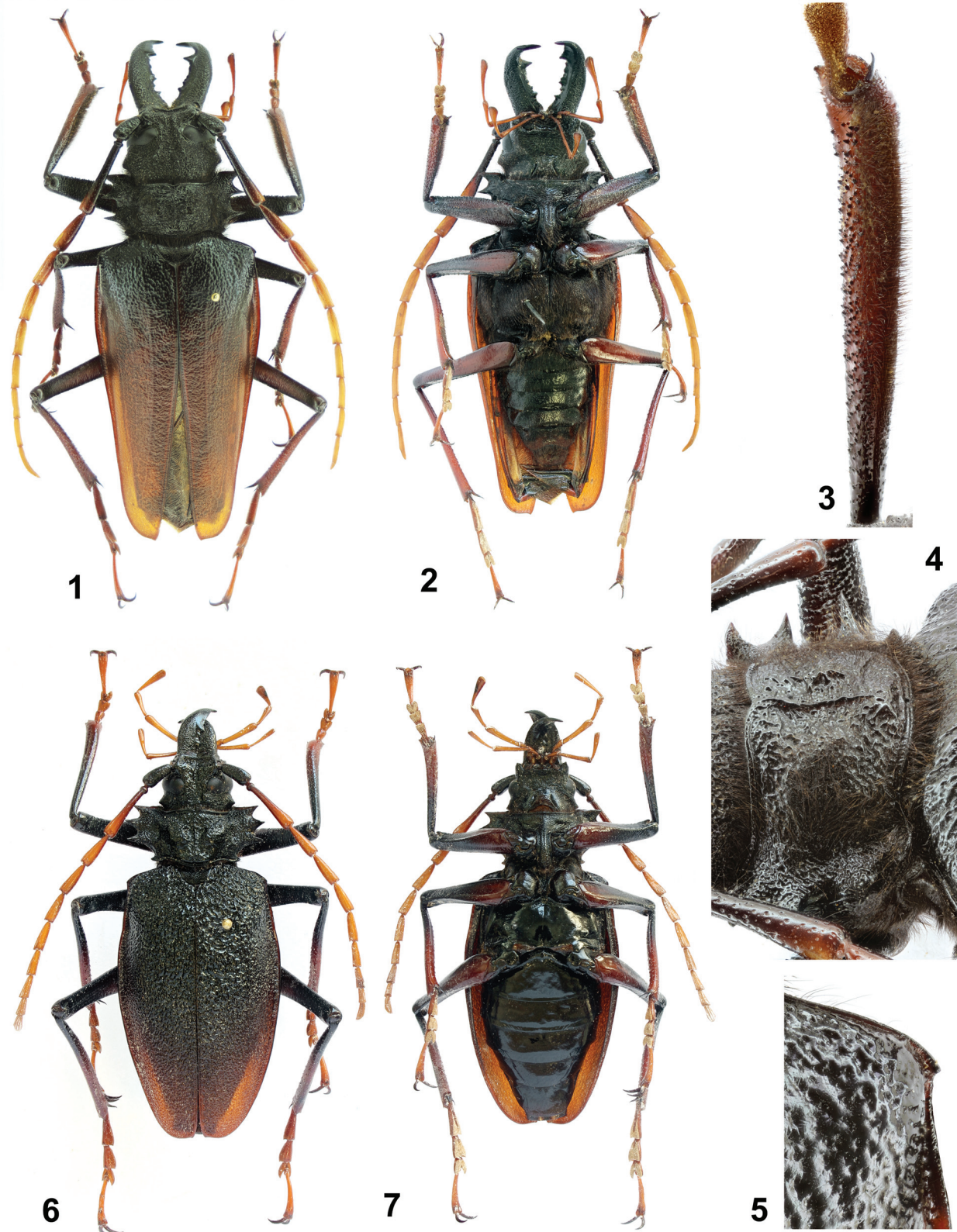


Figure 1–7. *Psalidognathus antonkozlovi* sp. nov., holotype male (1–5), paratype female (6–7). 1) Dorsal habitus. 2) Ventral habitus. 3) Protibia. 4) Pronotum. 5) Humerus. 6) Dorsal habitus. 7) Ventral habitus.