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# New species of the genus *Otiorhynchus* GERMAR, 1822 of the subgenera *Fondajenus* REITTER, 1912 and *Mesaniomus* REITTER, 1912 (Coleoptera: Curculionidae: Entiminae: Otiorhynchini) from Greece, Montenegro, Albania, and North Macedonia

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Abstract: The following species of the genus *Otiorhynchus* GERMAR, 1822 are described: *O. laticornis* **sp. n.**, *O. neroponticus* **sp. n.**, *O. avgonicus* **sp. n.**, and *O. frenifer* **sp. n.**, all of the subgenus *Fondajenus* REITTER, 1912 from Greece. Moreover, *O. microsquamosus* **sp. n.**, and *O. squamiventris* **sp. n.**, from Montenegro, *O. rolandi* **sp. n.** from Albania, and *O. planiventris* **sp. n.** from North Macedonia, all of the subgenus *Mesaniomus* REITTER, 1912, are described.

Key words: Coleoptera, Curculionidae, *Otiorhynchus*, new species, Greece, Montenegro, Albania, North Macedonia.

#### **INTRODUCTION**

The subgenus *Fondajenus* was established by REITTER (1912) to accommodate species with very robust antennae with the scape parallel-sided, not expanding distad, as well as with median sulcus of the rostrum wide and deep, not extended behind anterior margins of eyes. As it was already pointed out by BIAŁOOKI (2017), *Fondajenus* is a very weakly defined taxon, and more comprehensive diagnosis of this subgenus is necessary, which is beyond the scope of the present paper. The following species are now placed in a discussed subgenus: *O. stierlini* GEMMINGER, 1871 (with a subspecies *leoninus* LONA, 1939), *O. peristericus* APFELBECK, 1901, *O. forticornis* STIERLIN, 1896, *O. amplicornis* BIAŁOOKI, 2017, *O. forficulatus* BIAŁOOKI, 2017, and *O. crocotillus* BIAŁOOKI, 2017 (ALONSO-ZARAZAGA *et al.* 2023). Further four new species from Greece are hereby described.

The subgenus *Mesaniomus* described by REITTER (1912) is equally unclearly defined as *Fondajenus*. Reitter (l.c.) did not provide any diagnosis except for a single character "Rüssel gefurcht", just inserting this subgenus into the key for determination of *Otiorhynchus* 

subgenera (Reitter directly referred established taxa to as merely species-groups, although designating type species for them and providing regular Latin-like names). According to my own unpublished data, subgenus *Mesaniomus* could be sufficiently diagnosed by the structure of male and female genitalia. On the other hand, due to a generally conservative shape of aedeagus, and the female 8<sup>th</sup> sternite, as well as of the spermatheca, these genital structures are of limited help in determination of species in this subgenus. Aedeagus of *Mesaniomus* has a very short both the apex and projecting portion of endophallus with a peculiar structure of transfer apparatus. Females of *Mesaniomus* have unique structure of the 8<sup>th</sup> sternite (nearly colorless throughout, with small pigmented areas in antero-distal angles, and basally outside the arms; the arms slightly s-shaped to straight, sublateral; distal margin broadly, shallowly to fairly deeply emarginate. Moreover, the presence of a deep subapical fovea on the female last ventrite (in male the last ventrite is moderately, evenly convex) in majority of *Mesaniomus* species is unique in Otiorhynchini. Although REITTER, 1914 keyed merely three species in *Mesaniomus*, its is still too early to publish the key to this subgenus.

## **MATERIAL AND METHODS**

Body length was measured from the anterior margin of the eyes to the elytral apex. Rostrum length was measured from the anterior margins of the eyes to the anterior part of the epistome. The width of rostrum is defined as the pterygial span, i.e. the distance between the outer margins of the pterygia. The statement "pterygia projecting" means that pterygia are extending from the outline of the rostrum in dorsal view. Various areas of legs, dorsal and ventral margin/wall in particular, are described as if legs were stretched horizontally at right angle to longitudinal body axis, what allows for a precise terminology. Modified insertions of setae along ventral wall of tibiae forming usually pointed tubercles are hereby termed (tibial) spines. Enlarged terminal (proximal) end of the spiculum ventrale is named the caput in the text. Although aedeagus is defined, as generally accepted, as pedon with apodemes, the two terms i.e. aedeagus and pedon are used interchangeably, depending on the context, particularly while taking measurements. The same approach applies to the female 8th sternite, therefore terms such as "plate/lamella of 8th sternite" are rejected. The peculiar paired sclerites inside endophallus situated in orificial area are here interpreted as possibly frena (OBERPRIELER et al. 2014). Altough these structures have previously only been known in lower weevils, the striking similarity of these enigmatic structures in Otiorhynchini to the corresponding structures in lower weevils cannot simply be ignored.

Dissected genitalia are stored in a microvial with glycerine pinned under the card bearing the specimen (occasionally, damaged parts are glued to this card).

The photos were taken with JVC KYF75 digital camera attached to Leica M205C stereomicroscope and stacked using the AutoMontage software by Syncroscopy.

Acronyms: BIAL – collection of P.Z. Białooki, Sopot, Poland; LINK – collection of Andreas Link, Ansfelden, Austria; MERE – collection of Massimo Meregalli, University of Turin, Torino, Italy; USMB – collection of the Upper Silesian Museum in Bytom, Poland; WANA – collection of Marek Wanat, Museum of Natural History, University of Wroclaw, Poland (MNHW). Holotype is abbreviated as "ht".

## RESULTS

Subfamily Entiminae
Tribe Otiorhynchini
Genus Otiorhynchus GERMAR, 1822 (type species Otiorhynchus rhacusensis GERMAR, 1822)
Subgenus Fondajenus REITTER, 1912 (type species Otiorhynchus stierlini GEMMINGER, 1871)

#### Otiorhynchus (Fondajenus) laticornis sp. n.

https://zoobank.org/NomenclaturalActs/D40D78CC-C9B4-4E77-AD8C-61D69D5CAB7F

(Figs. 1–6)

*Material examined*: holotype male, dissected: 14.06.2012 C Greece, Mt. Karava SW Mouzaki 39.3271N, 21.5635E, leg. P.Z. Białooki [BIAL]\ Paratypes: data as in ht, 29 exx. [BIAL; LINK; USMB; WANA].

**Diagnosis**. Within subgenus *Fondajenus*, *O. laticornis* **sp. n.** is best diagnosed by its medium sized and largely microsculptured body (distinctly larger than *stierlini* and *peristericus*, and markedly smaller than all the remaining *Fondajenus*-species); eyes markedly reduced, flat; all femora with a well-developed tooth; extremely robust antennae; elytral disc devoid of tubercles; strial punctures large; structure of male and female terminalia. It is most similar to *O. neroponticus* **sp. n.** and these two species share elongate body, very robust antennae, large strial punctures, very narrow interstices, and similar general structure of head and rostrum. *O. neroponticus* **sp. n.** differs from *O. laticornis* in femoral teeth much smaller; body somewhat smaller; rostrum, prothorax and elytra slightly shorter; elytral declivity stronger convex; strial punctures smaller, interstices with a single row of small well-developed shiny tubercles; male last ventrite more transverse, covered with sparser punctation, with interspaces between punctures flat and shiny, and vestiture fairly weakly visible, weakly raised; antennae much less robust, with club shorter ovate; male fore tibiae slightly stronger downcurved; tarsi less robust; eyes slightly stronger convex; aedeagus  $2.1 \times longer$  than wide. For the differences between *O. laticornis* and *O. frenifer* see diagnosis of the latter species.

#### Description (male).

Size range 6.2-8.7 mm (ht 6.2 mm); entirely dark brown to black (Fig. 1).

**Head** relatively small, well separated from rostrum; interocular area slightly separated from dorsal wall of rostrum, covered with well-developed microsculpture, matt, with very sparse small superficial punctures, and recumbent very sparse short hair-like brown scales; interocular fovea large; eyes lateral, moderately large, slightly convex, not projecting; temples as long as eye diameter; prementum subcircular, concave, small, leaving maxillae partially exposed; with 2 pairs of protruding setae.

**Rostrum** subisodiametric; mandibles unmodified, small; scrobes terminal; pterygia unusually large, strongly projecting, span  $1.6 \times$  broader than rostrum minimum width; anterior part of dorsal wall (before antennal insertions) very narrow, almost rectilinearly divergent anteriad, indistinctly declivous, covered with coarse punctures; epistome well-developed, triangular, sharply delimited by lateral furrows, moderately strongly hollowed; hind portion of dorsal wall rather strongly tapering, interocular distance  $1.6 \times$  longer than dorsal wall between antennal insertions; median sulcus well-developed.

Antennae very robust (Fig. 3); scape straight, not at all thickened distally, covered with dense

coarse punctation and semierect brown elongate narrow scales; first two funicle segments subequally long, almost  $1.4 \times longer$  than wide; segments 3-7 strongly transverse; club twice as long as wide.

**Prothorax** subisodiametric, broadest clearly before middle, at sides weakly rounded, base subequally wide as anterior margin; disc covered with large, strongly flattened contiguous tubercles irregular in size and shape; vestiture consisting of very sparse recumbent brown minute and weakly detectable hair-like scales.

**Elytra** elongate oval,  $1.6 \times$  longer than wide, broadest somewhat before middle, apical portion slightly more narrowly tapering than basal; longitudinally flattened, declivity slightly less than vertical; striae weakly impressed, punctures large and deep, interspaces much narrower than punctures length; interstices narrower than striae, with unclear traces of tubercles, gradually better developed towards declivity; each interstice with single row of slightly raised, narrow elongate bright-brown scales; elytra covered with unclear microsculpture, shiny.

**Legs** fairly slender; femora weakly swollen, with large somewhat outcurved tooth (fore femora with the smallest tooth); dorsal margin of fore tibia straight, ventral margin with minute spines; all tibiae with well-developed mucro; hind corbels simple; tarsi robust, second segment clearly transverse, third bilobed segment strikingly wider than the preceding one; projecting portion of onychium somewhat shorter than length of the preceding segment.

**Ventral** side of abdomen covered with fairly small rasp-like tubercles and sparse raised hair-like scales; last ventrite somewhat trapezoidal, with coarse dense punctation, slightly impressed apically.

**Aedeagus** 1.75 × longer than wide, somewhat subrectangular (Fig. 4); slightly evenly arched (Fig. 5); endophallus inside pedon with large elongate compact mass of microsclerites, transfer apparatus large; tegminal ring straight; parameres long, fairly broadly connate basally;

**Female** (Fig. 2) differs from male in a more robust body, elytra broader, stronger rounded both at humeri and apically,  $1.4 \times longer$  than wide; prothorax clearly transverse; last ventrite flat, apically evenly rounded; the 8<sup>th</sup> sternite subisodiametric, apically moderately excised, with sparse fairly short setae, arms weakly divergent; spiculum ventrale almost twice as long as the 8<sup>th</sup> sternite, caput minute; ovipositor long, slender, weakly pigmented, with small styli; spermatheca with long, very slender cornu.

Ecology. All the specimens were collected above upper forest line under stones.

**Etymology**. The name (adjective) is coined from Latin latus = wide, and cornu = horn, antenna. It refers to strongly thickened scape and funicle segments.

## Otiorhynchus (Fondajenus) neroponticus sp. n.

https://zoobank.org/NomenclaturalActs/0B39F0C3-BA3E-4BBD-9642-E582B2DE0FA8

(Figs. 7–11)

*Material examined*: holotype male dissected: 09.06.2016 C Greece, Mt. Deldimi Agrafon S Fountoto, 39.2179N, 21.5425E leg. P.Z. Białooki [BIAL]. Paratypes: data as in ht, 11 exx.\ as ht, but 11.06.2016, 15 exx. [BIAL; LINK; USMB; WANA]\ Veluchi Graecia/ Ot. sp. aff. epiroticus Ing. J. Fremuth det. 1994 [MERE].

**Diagnosis** (see that of *laticornis* above).

#### Diagnostic description (male).

Size range 5.6-7.3 mm, ht 6.5 mm (Fig. 7); black, legs and antennae largely dark-brown.

**Rostrum** subisodiametric; hind portion of epistome somewhat blurred; interocular distance  $1.75 \times \text{longer}$  than dorsal wall of rostrum between antennal insertions.

Antennae (Fig. 9) distinctly more slender than in *O. laticornis*, although club is distinctly less elongate, merely  $1.8 \times \text{longer}$  than wide.

**Prothorax** slightly broader than in *O. laticornis*,  $1.15 \times$  broader than long; basally weakly yet clearly converging.

**Elytra** (Fig. 7) visibly less elongate than in *O. laticornis*,  $1.55 \times$  longer than broad; strial punctures smaller, distinctly shallower, funnel-shaped, less clearly delimited than in *O. laticornis*; interspaces with minute well-developed tubercles; interstices broader than in *O. laticornis*, with row of small well-developed tubercles; declivity visibly stronger convex than in *O. laticornis*, vertical.

Legs as in O. laticornis, excepting all femora with much smaller tooth.

**First abdominal** ventrite covered with weakly expressed short irregular wrinkles; ventrites covered with punctation sparser than in *laticornis*, interspaces of punctures flat and shiny; last ventrite devoid of apical fovea/flattening.

Acdeagus twice as long as broad, subrectangular (Fig. 10); slightly evenly arched (Fig. 11); endophallus inside pedon with a large elongate compact mass of microsclerites; transfer apparatus large; tegminal ring straight; parameres long, connate basally.

Female (Fig. 8) with somewhat broader elytra.

**Etymology.** The specific epithet (adjective) is derived from Greek word  $v\epsilon\rho\sigma\sigma\nu\tau\eta$  [= rainstorm] based on the fact, that in the first collecting day the specimens were collected immediately before heavy rainstorm.

## Otiorhynchus (Fondajenus) avgonicus sp. n.

https://zoobank.org/NomenclaturalActs/E4D1652F-0935-4E18-81A0-F1B5BE6C44C0

(Figs. 12–16)

*Material examined*: holotype male dissected: 09.06.2022 C Greece, Mt. Avgo NE Nea Pefki 39.4861N, 21.3790E, leg. P.Z. Białooki [BIAL]. Paratypes: data as in ht, 3 exx. [including one specimen found dead, lacking most of limbs, however, with the best preserved vestiture] [BIAL].

**Diagnostic description**. The new species (Fig. 12) is very similar and probably closely related to *O. laticornis* **sp. n.** The two species share very similar, extremely robust antennae, however the club in *O. avgonicus* is less narrowly tapering (Fig. 13). *O. avgonicus* differs from *O. laticornis* in a very strongly reduced femoral teeth (hardly perceptible on fore femora, minute on middle femora, with tooth very small, and pointed on hind femora; in *O. laticornis* all femora have fairly large narrow, pointed tooth); eyes only weakly reduced, their diameter clearly longer than temples (strongly reduced, distinctly shorter than temples in *O. laticornis*); elytral declivity much less convex, distinctly less than perpendicular (subperpendicular in *O. laticornis*); sides of prothorax stronger rounded, basally converging, not parallel-sided; tubercles on pronotal disc distinctly larger and stronger flattened; elytral sculpture reduced, as a result elytra stronger shiny; ventral margin of male hind tibia subapically with a group of

large, basally fused tubercles, as a result tibia looks subapically excised (Fig. 16), somewhat resembling condition e.g. in *O. plagiator*-group and in subgenus *Tecutinus* REITTER, 1912 (male hind tibia unmodified in *O. laticornis*); and in the structure of aedeagus.

Acdeagus (Figs. 14 and 15) resembling that of *O. laticornis* due to similar shape of pedon and large aggregation of endophallic microsclerites, but differing in pedon even more regularly rectangular, and especially in enlarged basal fused portion of tegminal parameres longer than paired free lobes, and proximally almost as wide as diameter of tegminal ring.

Female unknown.

**Ecology.** All the specimens were found at altitude ca. 1800 m under not, to slightly embedded stones on a slope covered with scanty vegetation.

Distribution. O. avgonicus is only known from the locus typicus in Pindos mountains.

Etymology. The name (adjective) is toponymic, derived from Mount Avgo (2148 m).

## Otiorhynchus (Fondajenus) frenifer sp. n.

https://zoobank.org/NomenclaturalActs/B9A2F2A9-0A77-4BFE-ADEC-193D63FF8673

(Figs. 17–22)

*Material examined*: holotype male, dissected: 15-16.06.2012 C Greece, Mt. Voutsikaki SW Mouzaki > 1850 m, 39.2839N, 21.6274E leg. P.Z. Białooki [BIAL]. Paratypes: data as in ht, 31 exx. [BIAL; USMB; WANA] \ 14.06.2012 C Greece, Mt. Karava SW Mouzaki > 1900 m, 39.3119N, 21.5577E, leg. P.Z. Białooki, 1 ex. [BIAL].

**Diagnosis**. Unlike other species representing *Fondajenus*, *O. frenifer* **sp. n.** (Fig. 17) has relatively short-oval elytra (Figs. 17 and 18). It is readily determinable due to characteristic aedeagus with peculiar paired endophallic sclerites interpreted here as frena, known hitherto from a few species in the whole tribe Otiorhynchini, and best developed in the subgenus *Arnoldinus* DAVIDIAN, GÜLTEKIN & KOROTYAEV, 2017. *Transfer apparatu large and comple situated far from pedon base*. Apart from the aedeagus, *frenifer* differs from *laticornis* in less elongate elytra; larger, transverse prothorax; larger, wider head; elytra covered with well-developed minute tubercles; antennae distinctly less robust; femora unarmed or at most with hardly perceptible trace of tooth. The latter character disstinguishes *O. frenifer* also from *O. neroponticus*.

## **Description** (male).

Size range 5.9-6.9 mm (ht 6.6 mm); entirely black; vestiture strongly reduced to rows of narrow elongate weakly raised bright scales on interstices (in part arranged into unclear irregular two rows); legs and antennae in part dark brown.

**Rostrum** isodiametric; pterygia large, well projecting, terminal; anterior part of dorsal wall of rostrum moderately divergent, indistinctly declivent; epistome strongly hollowed distally; hind part of dorsal wall of rostrum narrow, weakly diverging backwards, with well-developed wide shallow median sulcus.

**Antennae** (Fig. 19) somewhat less robust than in *O. laticornis*; scape indistinctly evenly thickened distally, covered with dense oval punctures and short somewhat raised hardly arched brown setae; first funicle segment slightly longer than second; each ca.  $1.8 \times$ longer than wide; segments 3-7 moderately transverse; club irregularly fusiform,  $2.1 \times$ longer than wide.

**Head** slightly arcuate at sides, well separated from rostrum;  $1.7 \times$  broader than rostrum minimum width; interocular area weakly yet clearly separated from dorsal wall of rostrum,  $1.65 \times$  wider than dorsal wall between antennal insertions, covered with sparse minute recumbent brown hair-like scales; interocular fovea larger than surrounding punctures; eyes relatively small, slightly convex but nevertheless indistinctly projecting due to its lateral position; temples as long as eye diameter, moderately divergent.

**Prothorax** moderately transverse,  $1.2 \times$  wider than long, at sides moderately arcuate, widest in middle; disc covered with tubercles moderately large, rather weakly convex, irregular in shape and size, shiny, subcontiguous; impunctate area not expressed; lateral wall covered with much smaller tubercles; vestiture consisting of weakly perceptible sparse hair-like scales.

**Elytra**  $1.5 \times \text{longer}$  than broad, regularly oval, widest in middle (Fig. 17), longitudinally evenly weakly convex; declivity evenly arched, subperpendicular; apex slightly downcurved; striae not impressed; punctures large, funnel-like, interspaces somewhat shorter than punctures diameter, each with a single small convex shiny tubercle; interstices slightly narrower than striae, with single, in part irregular row of tubercles; vestiture consisting of short, moderately raised brown hair-like scales arising from each tubercle, on declivity semierect.

First two ventrites covered with fairly small sparse punctures and relatively subtle irregular transverse wrinkles; ventrites 3-5 covered with visibly larger punctures; last ventrite trapezoidal, slightly more transverse than in *O. laticornis*, flat, covered with moderately large punctures;

**Legs** somewhat more robust than in *O. laticornis*; all femora with hardly perceptible trace of tooth; dorsal margins of fore tibiae straight, in hind tibiae weakly upcurved apically; ventral margins with minute spines; mucro well-developed on all tibiae; fore tarsi moderately robust, second segment clearly transverse.

Acdeagus (Figs. 20, 21) exceptionally short, merely  $1.35 \times \text{longer}$  than wide, subparallelsided, apex very broadly rounded; endophallic armature inside pedon consisting of paired large frenum-like sclerites in orificial area, microsclerites absent; fairly small number of microsclerites inside projecting portion of endophallus; tegminal ring nearly straight, parameres long, connate basally.

**Female** differs from male in elytra more robust, equally elongate but stronger convex at humeri and more broadly rounded apically; last abdominal ventrite somewhat longer, distally very broadly rounded. Ovipositor very short and wide, distinctly shorter than spiculum ventrale; spiculum ventrale ca.  $1.5 \times \text{longer}$  than  $8^{\text{th}}$  sternite, caput fairly wide; spermatheca (Fig. 22) with subequally slender cornu and corpus.

Distribution. O. frenifer is hitherto known from middle Pindos Mts. in central Greece.

**Ecology**. All the specimens were collected by direct observation of the ground close to remnants of snow-fields above 1900 m.

**Etymology**. The specific epithet is derived from Latin *frenum* = a bit, therefore frenifer = bearing frena; reflecting the very distinctive character of the new species, the presence of endophallic frenum-like sclerites in endophallus.

Since the only existing key to species of *Otiorhynchus* subgenus *Fondajenus* [REITTER, 1913] is dramatically insufficient, below is provided an updated key to Greek (mainland) species of subgenus *Fondajenus*:

| 1. Body small, length at most 5.5 mm | 2 |
|--------------------------------------|---|
|--------------------------------------|---|

| — Body larger, over 5.5 mm  |
|---|
| 2. Interstices with single row of short fairly weakly raised hair-like scales stierlini GEMM.   |
| — Interstices with single row of fairly long subperpendicularly raised hair-like scales   |
| 3. Antennal scape relatively slender, weakly arched, slightly clubbed distally crocotillus BIAŁ.  |
| - Scape straight, very robust, parallel-sided, not thickened distally 4   |
| 4. All femora with large to small but always distinct tooth   |
| - Profemora usually unarmed, remaining femora with weakly perceptible trace of tooth  |
| 5. All femora with fairly large, pointed slightly outcurved tooth <i>laticornis</i> sp. n.  |
| — All femora with minute yet easily traceable tooth neroponticus sp. n.   |
| <b>6</b> . Elytra weakly rounded basally, distinctly ovate; declivity much less than perpendicular; pronotal tubercles large, strongly flattened; elytral disc devoid of tubercles; ventral margin of male hind tibia with enlarged spines near distal end of tibia (Fig. 16), as a result tibia subapically excised; aedeagus without frena-like sclerites <i>avgonicus</i> sp. n. |
| — Elytra oval, basally fairly broadly rounded; declivity vertical; pronotal tubercles small, distinctly convex; elytratuber culate throughout; male hind tibiae unmodified; endophallus inside pedon with large, well-developed frena-like structures   |

Subgenus *Mesaniomus* REITTER, 1912 (type species *Otiorhynchus polycoccus* GELLENHAL, 1842)

#### Otiorhynchus (Mesaniomus) microsquamosus sp. n.

https://zoobank.org/NomenclaturalActs/EAAEA050-12B7-486C-BD41-65C4C8A737C3

(Figs. 23-29)

*Material examined*: holotype male, dissected: 27.06.2016 SE Montenegro, Mt. Planinica > 2000 m, NNE Čakor pass, 42.6849N, 20.0191E, leg. P.Z. Białooki [BIAL]. Paratpes: data as in ht, 6 exx. [BIAL]\ Montenegro E Biograd.[ska] Gora, Bendovac Mts. env. 1700-2033 m P. Jansa lgt. 28-29.V.2014, 2 exx. [LINK; BIAL].

**Diagnosis.** This new species (Fig. 24) is most similar to *O. pseudalbanicus* (BRAUN). Both species share strongly elongate, very narrow, not flattened dorso-ventrally elytra; and elongate rostrum. *O. microsquamosus* **sp. n.** differs from all hitherto known *Mesaniomus* species in body (including rostrum) fairly densely covered with minute, weakly elongate, bright, recumbent scales and bright raised hair-like scales. It moreover differs from *pseudalbanicus* in somewhat stronger convex eyes; elytral interstices covered with well-developed widely separated tubercles; pronotal tubercles more convex, distinctly separated; legs more slender; teeth on middle and hind femora narrower, hook-like; and in the shape of aedeagus and endophallic structures.

## Description (male).

Size range 8.1-9.3 mm, ht 8.6 mm; entirely black.

**Rostrum**  $1.2 \times \text{longer}$  than wide, only slightly tapering; pterygia moderately large but weakly projecting (pterygial span  $1.3 \times \text{wider}$  than rostrum minimum width); anterior part of dorsal wall of rostrum hardly declivent, moderately diverging distally, fairly narrow, shiny; hind

part clearly at angle to head, subparallel-sided, with well-developed, wide median sulcus, and thin median keel; covered with rather dense recumbent oval scales.

Antennae (Fig. 25) long and slender; scape slightly arched, covered with hardly raised moderately dense bright hair-like scales; all funicle segments distinctly elongate; club narrowly fusiform,  $2.9 \times$ longer than wide.

**Head** strongly transverse, weakly tapering, at sides weakly arched; eyes hardly elongate, strongly convex and projecting, moderately large; interocular area flat, covered with dense moderately coarse punctation (interspaces in part forming irregular longitudinal ribs), sparse subrecumbent small hair-like scales directed obliquely backwards towards body axis, and a few scattered elongate oval scales; interocular fovea well-developed, elongate.

**Prothorax** 1.2 × broader than long, disc rather weakly convex in both directions, moderately rounded laterally, broadest indistinctly before middle; anterior margin indistinctly shorter than base; disc covered with moderately large, irregular in shape and size, dense but well separated, flattened tubercles; vestiture consisting of moderately sparse short hair-like scales, and very sparse recumbent elongate scales condensed into minute unclear spots between tubercles.

**Elytra**  $1.65 \times$  longer than broad, at sides weakly evenly arched, widest slightly before middle, transversally and longitudinally evenly moderately convex, declivity subperpendicular; striae consisting of moderately large, deep funnel-like punctures, interspaces subequally long, each with single well-developed tubercle  $3-4 \times$  smaller than average pronotal tubercle; each strial puncture with a short hair-like to elongate scale; interstices somewhat wider than striae, covered with single row of tubercles; each interstice with irregular 1-2 rows of short (somewhat shorter than width of the interstice), weakly raised bright arched setae; both interstices and striae also covered with recumbent moderately dense scales similar to pronotal.

**Profemora** with moderately large, pointed tooth, middle and hind ones with distinctly larger, somewhat finger-like, obtuse tooth; protibia indistinctly downcurved apically; spines obsolete; each tibia mucronate; tarsi fairly slender, second segment weakly transverse.

Last abdominal ventrite  $1.75 \times$  wider than long, weakly evenly convex, densely punctate, interspaces of punctures devoid of clear microsculpture, shiny.

**Aedeagus** (Fig. 26) subparallelsided,  $2.75 \times \text{longer}$  than wide, apex blade-like, abruptly downcurved (Fig. 27); transfer apparatus large and complex.

**Female** (Fig. 24) differs from male in less elongate elytra ( $1.5 \times$  as long as wide); rostrum slightly shorter; first two ventrites not impressed; last ventrite evenly rounded apically; second tarsal segment of all legs subisodiametric (clearly transverse in male).

Ovipositor somewhat shorter than spiculum ventrale, coxites well pigmented; styli (sub) terminal, with several long protruding hairs; 8<sup>th</sup> sternite distinctly transverse (Fig. 28); distal margin broadly, relatively deeply emarginate, with long hairs; hairs reduced along mesal colorless excised part of distal margin; spiculum ventrale ca. twice as long as sternite; caput small, fan-shaped; spermatheca with cornu distinctly longer than corpus (Fig. 29).

**Ecology.** All the specimens from locus typicus were beaten from conifers (junipers and *Pinus* sp.) at the altitude above 2000 m in a cloudy day.

Distribution. Hitherto known exclusively from two localities in south-eastern Montenegro.

**Etymology**. The specific epithet (adjective) refers to the minute, recumbent, true scales (including median sulcus of the rostrum), a rare condition in the subgenus *Mesaniomus*.

## Otiorhynchus (Mesaniomus) rolandi sp. n.

https://zoobank.org/NomenclaturalActs/8DBE63A7-DFD9-4643-9739-9CCD0D5A04BB

(Figs. 30–35)

*Material examined*: holotype female dissected: 05.06.2018 SW Albania, Mt. Kendrevicës > 1800 m [Gribës mountains] W Tepelene 40.2854N, 19.8657E leg. P. Z. Białooki [BIAL]. Paratypes: data as in ht, 4 exx.\ 02.06.2018 S Albania Frashërit Mts. E Gjirokaster, 1600 m 40.0793N, 20.0636E leg. P.Z. Białooki, 5 exx.\ same, but 10.06.2021, 4 exx. [BIAL; USMB; WANA].

**Diagnosis**. Otiorhynchus rolandi **sp. n.** (Fig. 30) is instantly distinguishable from all *Mesaniomus* species (excepting *planiventris* **sp. n.**) by the female terminal ventrite evenly and very weakly convex, devoid of any trace of apical fovea. Female *O. rolandi* differs from *O. planiventris* in elytra distinctly narrower, strongly convex transversally, not flattened dorso-ventrally; upper portion of declivity less convex; apex less downcurved; all femoral teeth visibly larger; vestiture on whole body much less developed; tubercles on elytral disc obsolete. Males of *rolandi* differ from *planiventris* in more robust legs, tibiae in particular; dorsal margin of fore tibiae visibly stronger downcurved apically, ventral margin with much better developed spines; second antennal funicle segment less elongate.

#### Description (male).

Size range 7.9-9.4 mm; black, legs and antennae in part dak brown; vestiture weakly developed, at first glance body seems bald (Fig. 30).

**Rostrum** subisodiametric; pterygia large, moderately projecting; basally weakly tapering; epistome well-developed although posteriorly somewhat blurred; anterior part of dorsal wall of rostrum longitudinally wrinkled, shiny; hind part of dorsal wall of rostrum weakly tapering, with fairly well-developed moderately wide and deep, microsculptured median sulcus with a weakly visible trace of superficial median keel; lateral portions punctate, shiny; vestiture consisting of sparse, recumbent moderately bright brown hair-like scales.

**Antennae** (Fig. 32) long and slender; scape gradually widened distally, covered with weakly raised bright hair-like scales; first two funicle segments strongly elongate, second 1.3 × longer than first; segments 3-7 subisodiametric to weakly elongate; club narrowly fusiform, basally indistinctly pedunculate.

**Head** with moderately convex, fairly strongly projecting eyes; temples distinctly shorter than eye diameter; interocular area striato-punctate, median fovea large and deep.

**Prothorax** weakly transverse, sides moderately arched; widest in middle; disc covered with fairly small dense, irregularly sized and shaped, well-developed yet distinctly flattened tubercles; vestiture consisting of fairly sparse, moderately long (subequally long as average diameter of tubercles), brown, recumbent, weakly visible hair-like scales.

**Elytra** (Fig. 30) strongly elongate, a little over  $1.6 \times$  longer than broad; longitudinally weakly evenly convex; declivity weakly convex, slightly less than vertical; transversally strongly convex, not the slightest trace of flattening; striae consisting of moderately large well delimited deep punctures; interspaces evidently shorter than punctures diameter, at most with a small unclear tubercle (on declivity tubercles are better developed); interstices subequally wide as striae, with single row of weakly convex unclear tubercles becoming gradually stronger convex towards apex; vestiture consisting of fairly sparse, almost uniformly distributed (single rows of scales along interstices poorly marked), variously long (majority of them markedly longer than pronotal ones), weakly raised, brown hair-like scales; close to apex with single bright, indistinctly wider hair-like scales.

All femora with subequally small, well-developed, pointed tooth; protibiae slightly downcurved apically; all tibiae mucronate, spurs 1-1-1, easily detectable.

Ventral part of body covered with moderately sparse, brown, weakly raised hair-like scales; first two abdominal ventrites deeply impressed; last ventrite distally very broadly rounded, covered with longer scales than on the remaining part of abdomen.

**Aedeagus** (fig. 33) 2.35 × longer than broad, parallel-sided; apex abruptly downcurved (Fig. 34).

**Female** (Fig. 31) differs from male in distinctly broader elytra; somewhat more robust rostrum and head; straight protibiae; first two abdominal ventrites not impressed; last ventrite somewhat longer, distally markedly narrower rounded.

Ovipositor weakly pigmented, with minute subapical styli; the 8<sup>th</sup> sternite nearly colorless throughout; distal margin very shallowly emarginate; spermatheca with fairly thick, weakly arched cornu; gland-lobe weakly pronounced (Fig. 35).

**Ecology**. Collected either under stones or beaten from junipers (during the day) at altitude over 1600 m.

**Distribution**. Hitherto known from two mountain ranges (Mali i Frashërit and Mali i Gribës) in southern Albania.

**Etymology**. I dedicate this new species, with a great pleasure, to Dr. Roland Dobosz, a well-recognized specialist in Neuroptera, and the curator in the Upper Silesian Museum in Bytom, Poland.

#### Otiorhynchus (Mesaniomus) squamiventris sp. n.

https://zoobank.org/NomenclaturalActs/A56C4732-8E89-42C1-9640-88B3ABF47553 (Figs. 36–41)

*Material examined*: holotype male, dissected: 12.06.2017 E Montenegro, Mt Zljeb ca. 2200 m, SE Rožaje, 42.3889N, 19.7199E, leg. P.Z. Białooki [BIAL]. Paratypes: data as in ht, 49 exx. [BIAL; LINK; USMB; WANA].

**Diagnosis**. This new species (Fig. 36) is instantly distinguishable from all the other *Mesaniomus* species by dense scales on lateral parts of metaventrite in both sexes, forming a well contrasing spot well visible in lateral view (Fig. 37). Except for this spot the whole body is covered with dark, weakly visible hair-like scales (venter in part with sparse bright scales). *O. squamiventris* is moreover best diagnosed by a relatively strongly transverse prothorax; last abdominal ventrite in female with a large and deep apical fovea; aedeagus markedly constricted in middle; all femoral teeth relatively short. It differs from *O. albanicus* APFELBECK also in well-developed tubercles throughout elytra; significantly better developed vestiture; elytra wider and unequivocally ovate. Female of *squamiventris* **sp. n.** has its last abdominal ventrite more transverse than in *albanicus*, while male has different pedon and endophallic armature; all tibiae more slender; and elytral apex stronger downcurved.

## **Description** (male).

Size range 7.7-9.8 mm; black; vestiture consisting of weakly visible brown hairs and true narrow recumbent greyish scales.

Rostrum distinctly elongate, fairly weakly tapering; pterygia moderately projecting,

span 1.35 × longer than rostrum minimum width; anterior par of dorsal wall of rostrum indistinctly declivous, moderately strongly diverging, covered with punctures of various size, their interspaces strongly shiny; epistome shallowly hollowed, lateral margins well defined, reaching antennal insertions; its hind portion somewhat blurred; hind part of dorsal wall of rostrum distinctly converging, interocular distance  $1.65 \times$  broader than dorsal wall of rostrum between antennal insertions; median sulcus basally shallow but perceptible, gradually vanishing distally; only trace of median keel is visible; vestiture consisting of brown hairs.

**Head** well separated from rostrum; interocular fovea large and deep; vestiture as on basal part of rostrum; eyes moderately large (two-thirds of interocular distance), strongly convex and projecting; temples slightly shorter than eye diameter.

Antennae long and slender (Fig. 38); scape gradually thickened distally, covered with recumbent bright hairs; first funicle segment  $2.3 \times \text{longer}$  than wide; second  $3.85 \times \text{longer}$  than wide and  $1.8 \times \text{longer}$  than first; segments 3-7 weakly elongate; club  $2.5 \times \text{longer}$  than wide, basally distinctly narrowing.

**Prothorax** clearly transverse,  $1.25 \times$  broader than long; sides almost evenly, moderately rounded; broadest slightly before middle; disc covered with fairly weakly, evenly convex, fairly small, subcontiguous, irregularly shaped, strongly shiny tubercles; vestiture consisting of short (shorter than average diameter of tubercles) brown, fairly weakly perceptible hardly raised hair-like scales; transitional area between disc and each latero-ventral walls with a broad unclear band consisting of sparse bright true recumbent narrow elongate scales of various shape (lanceolate, oval, truncate etc).

**Elytra**  $1.55 \times$  longer than broad, narrowly ovate, apically narrowly tapering; longitudinally very weakly evenly convex, only close to apex vertical; striae not impressed, weakly recognizable, consisting of poorly delimited punctures surrounded both in striae and interstices by well-developed but completely irregularly shaped, convex shiny tubercles; vestiture consisting of indistinctly raised sparse hair-like scales (elytra seems bare at first glance); single weakly perceptible true bright scales on declivity and outer interstices.

**Profemora** with small yet well-developed tooth; hind femora with the largest but still fairly small tooth; fore tibiae straight; mucro well-developed on all tibiae, but obscured by the vestiture; tibial spurs 1-1-1, well visible; protarsi moderately robust, second segment moderately transverse; projecting portion of onychium slightly shorter than strongly bilobed third tarsite.

Ventral part of body covered with fairly sparse dark hair-like scales; lateral parts with true recumbent bright scales forming well contrasting spot on metaventrite, otherwise sparse; first two abdominal ventrites deeply impressed, last ventrite almost  $1.8 \times$  broader than long, broadly rounded, distally (sub)truncate; evenly fairly weakly convex.

Aedeagus (Figs. 39, 40) fairly weakly arched; distal part of apex weakly downcurved.

**Female** (Fig. 36) differs from male in rostrum more robust, shorter; elytra somewhat broader, much stronger convex longitunally and transversally (Fig. 37); first two ventrites not impressed; last ventrite regularly broadly rounded.

Ovipositor distinctly shorter than spiculum ventrale, moderately, evenly pigmented, styli minute, with several long protruding hairs; spermatheca with weakly arched cornu (Fig. 41).

**Ecology**. The vast majority of specimens of *O. squamiventris* were beaten or just picked out from *Veratrum* sp. (during the day), often in an open landscape significantly far away from the nearest bushes or trees. This is a very surprising observation since all other *Mesaniomus* species are unequivocally connected with shrubs and trees. However, feeding on any plant species was not observed.

**Etymology**. The name (adjective) is coined from Latin *squama* [= scale] to reflect unique character of the new species i.e. scaled spots on metaventrite.

## Otiorhynchus (Mesaniomus) planiventris sp. n.

https://zoobank.org/NomenclaturalActs/7EDB9A58-0E6F-4B5D-BF78-C6AD48831044 (Figs. 42–46)

*Material examined*: holotype male dissected: 13.06.2015 SW NMKD [North Macedonia], Galicica Nat. Park, Mt. Magaro > 1900 m, 40.9387N, 20.8269E, leg. P.Z. Białooki [BIAL]. Paratypes: data as in ht, 32 exx. [BIAL; USMB; WANA]\ as in ht but 09.06.2014, 1 ex.[BIAL].

**Diagnosis**. *O. planiventris* **sp. n.** differs from majority of *Mesaniomus* species in having nearly flat female last abdominal ventrite, and elytra densely covered with true recumbent broad scales accompanied with well visible hair-like scales arranged into single rows along interstices (Fig. 42). *O. planiventris* shares with *O. microsquamosus* the elytra covered with dense recumbent scales, but differs in flat female last abdominal ventrite; elytra much wider, stronger rounded basally, distinctly flattened dorso-ventrally; and in elytral recumbent scales much more elongate, apically predominantly pointed.

## Description (male).

Size range 7.8-9.4 (ht 9.2 mm); black, vestiture greyish, in part bright-brown.

**Rostrum** 1.1 × longer than wide, moderately tapering; pterygia fairly large but relatively weakly projecting (Fig. 44); anterior part of dorsal wall of rostrum slightly declivous, covered with moderately large dense punctures and sparse hair-like scales; epistome well delimited, hollowed only anteriorly, its hind narrow portion convex; hind part of dorsal wall of rostrum distinctly convergent anteriorly, interocular distance  $1.65 \times$  wider than dorsal wall between antennal insertions; median sulcus hardly marked, median keel very thin.

Antennae long and slender; all funicle segments elongate; club fusiform,  $2.3 \times longer$  than wide.

**Head** fairly strongly tapering, separated from rostrum; interocular fovea large, deep, elongate, much larger than surrounding punctures; eyes of normal size, rather strongly convex, well projecting.

**Prothorax**  $1.1 \times$  wider than long, widest in middle (Fig. 42), sides evenly moderately arched; anterior margin somewhat shorter than base; disc covered with fairly large, subcontiguous, well-developed not flattened, strongly shiny tubercles, each bearing moderately long (predominantly longert than tubercle diameter) very thin dark-brown hair-like scale; interspaces of tubercles with subequally long but strikingly wider, elongate, apically pointed, weakly raised scales condensed into minute densely arranged but weakly delimited, unclear maculae;

**Elytra**  $1.55 \times$  longer than broad (Fig. 42), widest in middle; striae slightly impressed, punctures rather small, unclearly delimited, interspaces subequally long as punctures diameter; interstices much broader than striae, with single row of large, flattened tubercles irregular in size and shape, somewhat narrower than width of interstices; elytral vestiture well-developed, moderately dense although leaving integument largely visible, consisting of recumbent greyish lanceolate scales in part condensed into small irregular unclear maculae; except for broad scales, elytra evenly covered throughout with strikingly narrower sparse recumbent brown hair-like scales.

Ventral part of body covered with vestiture similar as on dorsal side, but the scales sparser and narrower; first two abdominal ventrites deeply impressed; the last ventrite subtrapezoidal, evenly fairly strongly convex.

**Profemora** with small but well-developed tooth; middle femora with large, hind with even larger, somewhat outcurved tooth; protibiae moderately robust, dorsal margin straight (Fig. 46); all tarsi subequally robust, relatively slender, the second tarsite subisodiametric.

Aedeagus quite similar to that in *O. microsquamosus*, in profile moderately evenly arched, apex abruptly downcurved, very thin.

**Female** (Figs. 43, 45) differs from male in rostrum slightly less elongate; prothorax smaller; elytra much broader, with their apex stronger downcurved; first two abdominal ventrites nearly flat, the last ventrite much less convex, apically rounded, with superficial apical impression.

Ovipositor weakly sclerotized, short and very wide; subapical styli minute, short and wide, bearing several short protruding hairs; spermatheca with somewhat swollen corpus; cornu long and slender; the 8<sup>th</sup> sternite weakly transverse, apically deeply widely excised, spiculum ventrale almost twice as long as the sternite.

**Ecology**. All the specimens were collected from junipers just above the forest line at the altitude ca. 1800 m.

**Distribution**. Hitherto known only from the locus typicus in south-western North Macedonia (Galičica National Park).

Etymology. The specific epithet (adjective) refers to the nearly flat female last ventrite.

## ACKNOWLEDGEMENTS

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## REFERENCES

- ALONSO-ZARAZAGA M.A., BARRIOS H., BOROVEC R., BOUCHARD P., CALDARA R., COLONNELLI E., GÜLTEKIN L., HLAVAČ P., KOROTYAEV B., LYAL C.H.C., MACHADO A., MEREGALLI M., PIEROTTI H., REN L., SÁNCHEZ-RUIZ M., SFORZI A., SILFVERBERG H., SKUHROVEC J., TRÝZNA M., VELÁZQUEZ DE CASTRO A.J., YUNAKOV N.N. 2023, 2<sup>nd</sup> Edition. Cooperative Catalogue of Palearctic Coleoptera Curculionoidea. *Monografias electrónicas de la Sociedad Entomológica Aragonesa* 14: 780 pp.
- BIAŁOOKI P.Z. 2017. On new taxa of *Otiorhynchus* GERMAR, 1822 (Coleoptera: Curculionidae: Entiminae: Otiorhynchini) from Greece and Turkey. *Polish Journal of Entomology* 86: 347–426.
- OBERPRIELER R., ANDERSON R.S., MARVALDI A.E. 2014. 3 Curculionoidea LATREILLE, 1802: Introduction, Phylogeny, 285-300, In: LESCHEN R.A.B., BEUTEL R.G. (Eds.), Handbook of Zoology, Arhropoda: Insecta, Coleoptera Beetles, Vol. 3: Morphology and Systematics (Phytophaga), De Gruyter, Berlin/Boston, 675 pp.
- REITTER E. 1912. Übersicht der Untergattungen und Artengruppen des Genus Otiorrhynchus GERM. (Bestimmungstabelle nr. 66). Wiener Entomologische Zeitung 31: 45–67.
- REITTER E. 1913. Bestimmungs-Tabellen der Europäischen Coleopteren. LXIX Heft 69. Curculionidae. Die ungezähnten Arten der Gattung *Otiorhynchus. Wiener Entomologische Zeitung* 32(2–3): 25–118.
- REITTER E. 1914. Bestimmungs-Tabellen der Europäischen Coleopteren. LXX Heft (70). Die gezähnten Arten der Gattung *Otiorhynchus* GERM.: *Dorymerus* und *Tournieria. Verhandlungen der naturforschenden Vereins in Brünn* 52: 1–123.

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Fig. 1. O. laticornis, sp. n., male.



Fig. 2. O. laticornis sp. n., female.

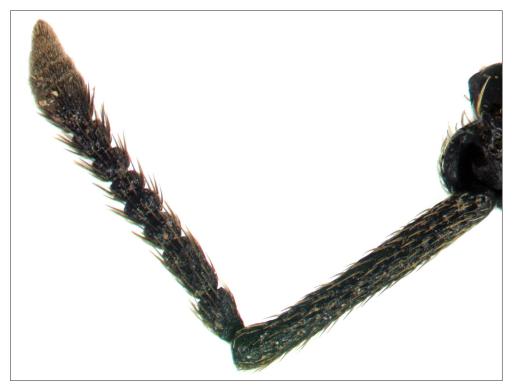


Fig. 3. O. laticornis, **sp. n.**, male antenna.

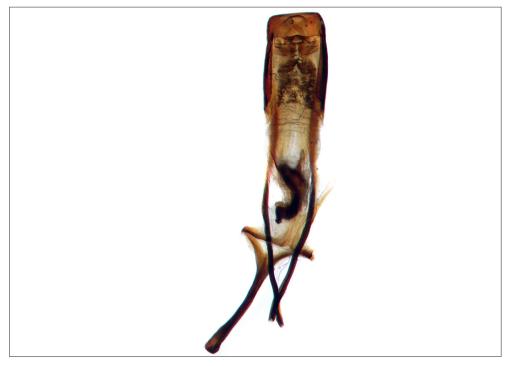


Fig. 4. O. laticornis, sp. n., aedeagus dorsal view.



Fig. 5. O. laticornis, sp. n., aedeagus lateral view.



Fig. 6. *O. laticornis*, **sp. n.**, spermatheca.



Fig. 7. O. neroponticus, sp. n., male.

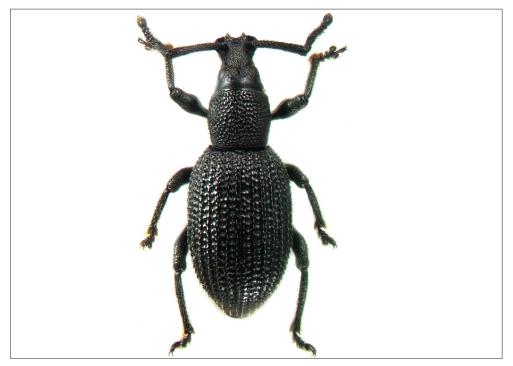


Fig. 8. O. neroponticus, sp. n., female.



Fig. 9. O. neroponticus, sp. n., male antenna.



Fig. 10. O. neroponticus, sp. n., aedeagus dorsal view.



Fig. 11. O. neroponticus, sp. n., aedeagus profile.



Fig. 12. O. avgonicus, sp. n., male.



Fig. 13. O. avgonicus, sp. n., male antenna.

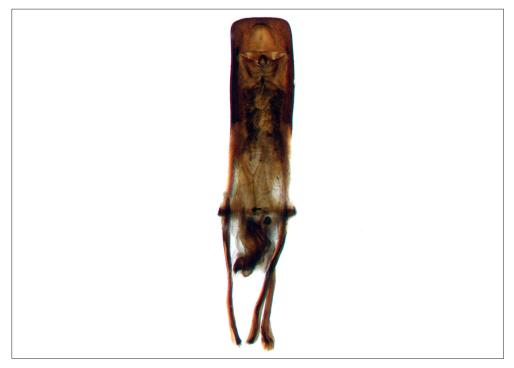


Fig. 14. O. avgonicus, sp. n., aedeagus dorsal view.



Fig. 15. O. avgonicus, sp. n., aedeagus profile.



Fig. 16. *O. avgonicus*, **sp. n.**, male hind tibia.



Fig. 17. O. frenifer, sp. n., male.



Fig. 18. O. frenifer, sp. n., female.

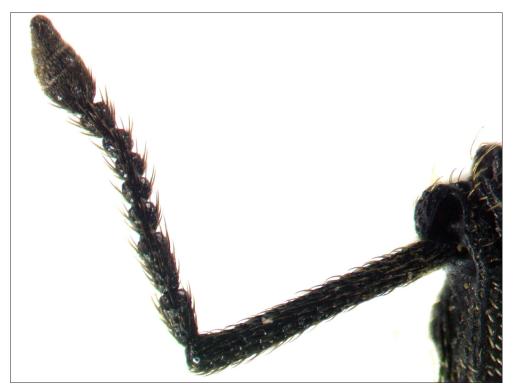


Fig. 19. O. frenifer, sp. n., male antenna.



Fig. 20. O. frenifer, sp. n., aedeagus dorsal view.



Fig. 21. O. frenifer, sp. n., aedeagus lateral view.



Fig. 22. O. frenifer, sp. n., spermatheca.



Fig. 23. O. microsquamosus, sp. n., male.

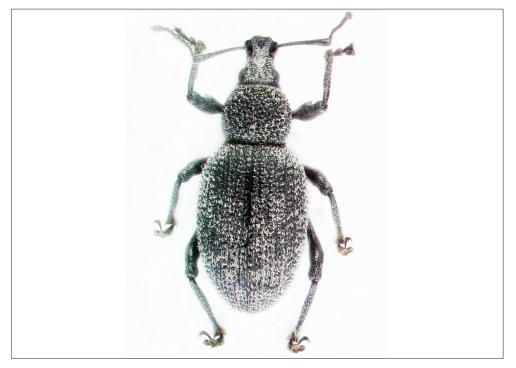


Fig. 24. O. microsquamosus, sp. n., female.



Fig. 25. O. microsquamosus, sp. n., male antenna.

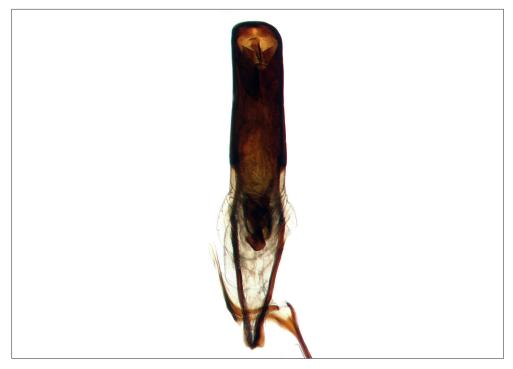


Fig. 26. O. microsquamosus, sp. n., aedeagus dorsal view.



Fig. 27. O. microsquamosus, sp. n., aedeagus lateral view.



Fig. 28. O. microsquamosus, sp. n., female 8th sternite.



Fig. 29. O. microsquamosus, sp. n., spermatheca.



Fig. 30. O. rolandi, sp. n., male.

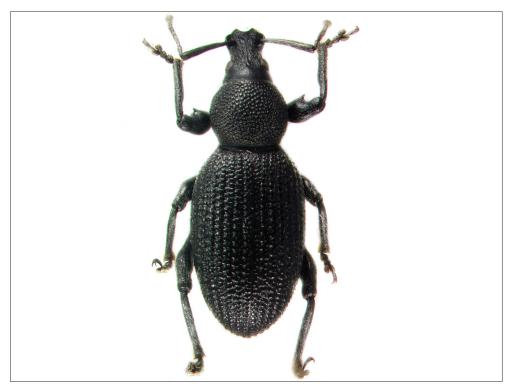


Fig. 31. O. rolandi, sp. n., female.

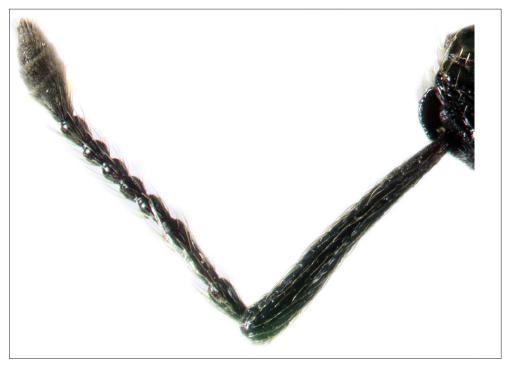


Fig. 32. O. rolandi, sp. n., male antenna.



Fig. 33. O. rolandi, sp. n., aedeagus dorsal view.



Fig. 34. O. rolandi, sp. n., aedeagus profile.



Fig. 35. O. rolandi, sp. n., female terminalia.



Fig. 36. O. squamiventris, sp. n., female.



Fig. 37. O. squamiventris, sp. n., female profile.



Fig. 38. O. squamiventris, sp. n., male antenna.



Fig. 39. O. squamiventris, sp. n., aedeagus dorsal view.



Fig. 40. O. squamiventris, sp. n., aedeagus profile.



Fig. 41. O. squamiventris, sp. n., female terminalia.



Fig. 42. O. planiventris, sp. n., male.

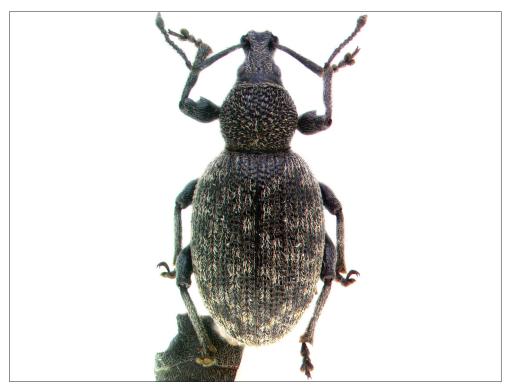


Fig. 43. O. planiventris, sp. n., female.



Fig. 44. O. planiventris, sp. n., male head.



Fig. 45. O. planiventris, sp. n., female profile.



Fig. 46. *O. planiventris*, **sp. n.**, male protibia.