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RESEARCH ARTICLE

Three new species of *Otiorhynchus* Germar, 1822 (Coleoptera: Curculionidae: Entiminae) from southern Turkey

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Abstract: Three new species, including *Otiorhynchus maximi* Davidian & Gültekin **sp. nov.**, *Otiorhynchus dudkoi* Davidian **sp. nov.** and *Otiorhynchus torosicus* Gültekin & Davidian **sp. nov.** are described from southern Turkey. *Otiorhynchus maximi* Davidian & Gültekin **sp. nov.** and *Otiorhynchus dudkoi* Davidian **sp. nov.** belong to the subgenus *Odelengus* Reitter, 1912 and closely related to *Otiorhynchus* (*Odelengus*) *aberrans* Stierlin, 1872 and *Otiorhynchus* (*Odelengus*) *heinzi* Smreczyński, 1977, respectively. Taxonomic position of *O. torosicus* Gültekin & Davidian **sp. nov.** is not clear, so it is tentatively included herein in the subgenus *Nubidanus* Reitter, 1912. Morphological differences of the subgenera *Odelengus* Reitter, 1912 and *Nubidanus* Reitter, 1912 are discussed. Colour illustrations of habitus and important morphological characters are presented.

Key words: Weevil, *Odelengus*, *Nubidanus*, taxonomy, Mediterranean Region.

Introduction

In this paper three new species of *Otiorhynchus* Germar, 1822 with widely dilated apical part of fore tibia are described from Southern Turkey. Two of them are closely related to *O. aberrans* Stierlin, 1872, *O. judaicus* Stierlin, 1875 and *O. heinzi* Smreczyński, 1970. Taxonomic position of one of the new species is not clear. It is intermediate in position between subgenera *Nubidanus* and *Odelengus* with morphological structure of the rostrum and most similar to *O. punctirostris* Stierlin, 1883 (*Nubidanus*) in structure of the female

genitalia. *Otiorhynchus phrygius* Reitter, 1912 is transferred from the subgenus *Stupamacus* Reitter, 1912 to the subgenus *Odelengus* **(new subgeneric placement)**. A key for identification of eight species of the subgenus *Odelengus* is presented.

Material and methods

The materials for this work have been studied in collections of the Entomology Museum of Atatürk University (Erzurum; AUEM) [Atatürk University, Faculty of Agriculture, Plant Protection Department, Erzurum, Turkey], Zoological Institute of the Russian Academy of Sciences (Saint-Petersburg; ZIN), Siberian Zoological Museum of the Institute of Animal Systematics and Ecology, Siberian Branch of the Russian Academy of Sciences (Novosibirsk; SZMU) and Zoological Museum of the Moscow State University (Moscow; ZMMU). Type specimen from G. Stierlin's collection from the Senckenberg Deutsches Entomologisches Institute in Müncheberg (DEI) and very interesting material from Zoologische Staatssammlung in Munchen (ZSM), including the collection of Dr. K. Daniel (Sammlung Dr. K. Daniel; SKD) were studied. Location of each type specimens and material are indicated in listing material.

Photographs of details of genitalia and terminalia were prepared with the microscope Axio Imager M-1 by Carl Zeiss in the Biological Control Laboratory All-Russian Institute of Plant Protection (St. Petersburg). The photographs of the habitus were taken with the DSLR digital camera Cannon 60D.

Length of onychium was measured without claws.

Results

Genus: *Otiorhynchus* Germar, 1822

Subgenus: *Odelengus* Reitter, 1912

Reitter, 1912: 112; Magnano, 1998: 55; Magnano & Alonso-Zarazaga, 2013: 326; Białooki, 2015: 34 (*Odelengus*=*Lengedeus* Magnano, 1998)

Otiorhynchus aberrans Stierlin, 1872 – type species.

Taxonomic notes: Originally *Odelengus* was a monotypic subgenus. Białooki (2015) established a new synonymy between *Odelengus* = *Lengedeus* Magnano, 1998 (*O. pipitzi* Stierlin, 1884 is the type species of *Lengedeus*). The same author included also *O. judaicus* Stierlin, 1875, *O. heinzi* Smreczyński, 1970 and *O. angustirostris* Smreczyński, 1977 in this subgenus as new subgeneric placement indicating these three species are from the subgenus *Nubidanus*. In fact it is not true because *O. angustirostris* belongs to the subgenus *Lengedeus* according to Magnano & Alonso-Zarazaga (2013).

We are supporting this synonymy. Undoubtedly, sculpture of pronotum, femoral tooth and hair-like elytral pubescens are very weak taxonomic features in this group of *Otiorhynchus*. However, we do not agree with the statement of Białooki (2015) that female terminalia of these species show no differences. Our investigations herein confirmed that female genital structure is the most important character. Furthermore, the vagina with sclerotized structure is a unique features for the majority the species of *Odelengus*, and this character is absent in other *Otiorhynchus* which we have already studied. For instance, the sclerotized structure in female genitalia is present in the *impexus* species group in the

subgenus *Nubidanus*. According to Davidian (2013) it is a sclerotized fragment of the transparent membrane between lamella of spiculum ventrale and coxites.

The diagnostic discriminate subgeneric characters between *Odelengus* and *Nubidanus* are insufficient. According to Białooki (2015), subgenus *Odelengus* differs from *Nubidanus* by endophallic armament in the presence of large sclerites (absent from *Nubidanus*). However, in some of the *Odelengus* species, including *O. aberrans* (type species), the male is unknown. For this reason, it is problematic to use only male genital characters in subgeneric diagnosis.

Białooki (2015) rightly points out that some species of *Odelengus* have a somewhat similar tooth on the fore femora with the subgenus *Hygrorhynchus* Białooki, 2015 [*Hygrorhynchus* was established for *Otiorhynchus curvidens* Voss, 1964 (type species), *O. armicrus armicrus* (Fairmaire, 1866), *O. armicrus barlaiensis* (Lona, 1939) and *O. emirensis* (Białooki, 2007)].

Habitus of our new species *Otiorhynchus maximi* **sp. nov.**, belonging to the subgenus *Odelengus*, is very similar to *Hygrorhynchus*. According to Białooki (2015) both *Odelengus* and *Hygrorhynchus* are characterized by similar features, such as: large hook-like tooth on the fore femora (remaining femora with a minute tooth, or unarmed); minute and hardly projecting pterygia; epistome minute and obsolete; vestiture more or less completely reduced, body covered with hardly perceptible hairs, without true broad scales and the structure of the spermatheca. It is obvious that the subgenus *Hygrorhynchus* is closely related to *Odelengus*, but differs very well in structure of the female genitalia, including coxites and ventrites.

After study material of *Otiorhynchus phrygius* Reitter, 1912, we are sure that it belongs to the subgenus *Odelengus*, too **(new subgeneric placement)**. Originally *O. phrygius* was described in the subgenus *Stupamacus* Reitter, 1912 (type species *O. russicus* Stierlin, 1883).

Thereby, the subgenus *Odelengus* includes eight species now: *O. aberrans* Stierlin, *O. judaicus* Stierlin, *O. pipitzi* Stierlin, *O. heinzi* Smreczyński, *O. angustirostris* Smreczyński, *O. phrygius* Reitter, *O. maximi* sp. nov. and *O. dudkoi* sp. nov. The male is known now for only three species, including *O. judaicus*, *O. heinzi* and *O. maximi* sp. nov.

We are currently establishing two species of *Odelengus O. aberrans* and *O. phrygius* which lack a distinct sclerotized structure in vagina proximal to coxites; another six species (*O. judaicus* Stierlin, *O. pipitzi* Stierlin, *O. heinzi* Smreczyński, *O. angustirostris* Smreczyński, *O. maximi* sp. nov. and *O. dudkoi* sp. nov.) have a large complicated sclerotized structure in the vagina.

Most species of the subgenus *Odelengus* are known only from Turkey where they are widely distributed from West to East. Only one species was found in Armenia.

Comparative diagnostic key to subgenera *Odelengus* Reitter and *Nubidanus* Reitter

1(4). Antennal scrobes situated more or less far from apical margin of rostrum. Epistomal carina vestigial unclear and epistome not separated from dorsum of rostrum. Femora with tooth or unarmed. Coxites weakly sclerotized, significantly shorter than spiculum ventrale, sometimes hardly observable.

2(3). Fore femora with large, slightly hook-like tooth, or with moderately small acute subulate tooth or tubercle, or unarmed. Outer side of tibia carinate and more or less with longitudinal strigosity. Ventrite 5 of male on dorsal side in middle of apical margin without prominence. Aggonoporium of endophallus with large sclerite. Dorsal plate of

lamella of spiculum ventrale not longer than ventral plate. Vagina proximal to coxites generally with complicated armament in form of large-sized sclerite. Membrane between lamella of spiculum ventrale and coxites without sclerotized structure. Ramus and collum of spermatheca well separated from each other……...……..***Odelengus*** **Reitter, 1912**

3(2). Fore femora with small tooth or unarmed. Outer side of tibia without longitudinal strigosity. Ventrite 5 of male on dorsal side in middle of apical margin with distinct prominence. Aggonoporium of endophallus without large sclerite. Dorsal plate of lamella of spiculum ventrale generally longer than ventral plate. Vagina without sclerotized structure. Transparent membrane between lamella of spiculum ventrale and coxites occasionally with distinct sclerotized formation…….....…….. ***Nubidanus*** **Reitter, 1912**

4(1). Antennal scrobes separated from apical margin of rostrum by fine wall. Epistome separated from rostrum dorsally by distinct epistomal carina. Femora without tooth. Coxites strongly sclerotized and longer than wide, nearly as long as spiculum ventrale. Vagina and transparent membrane between lamella of spiculum ventrale and coxites without sclerotized structure……....species group ***O. punctirostris*** **Stierlin**

The species group *punctirostris* now belongs in *Nubidanus*. It includes only two closely related parthenogenetic species *O. punctirostris* Stierlin and *O. densicollis* Reitter, 1912. As is evident from the key, the species group *punctirostris* differs distinctly from the subgenus *Nubidanus*. This question about the taxonomic position of the species group *punctirostris* needs further study.

Otiorhynchus aberrans **Stierlin, 1876** (Figs. 4, 24–27)

Stierlin, 1876: 512 (*Eurychirus*); Reitter, 1913: 112 (*Odelengus* Rtt.); Magnano, 1998: 66 (*Odelengus*); Magnano & Alonso-Zarazaga, 2013: 317 (*Odelengus*); Białooki, 2015: (*Odelengus*).

Type data: The type specimen is deposited in the DEI collection (Fig. 4) and was examined. This is a female specimen, provided with the following labels: 1) “Syrien” – hand-written; 2) “Syntypus” – printed on the red lable; 3) “*O. aberrans* Stl.” – handwriting of G. Stierlin; 4) “coll. Stierlin” – printed; 5) “coll. DEI Eberswalde” – printed; 6) “DEI Müncheberg Col – 04239” – printed.

The type corresponds completely with the original description of the species. The specimen was remounted by us on a rectangular card. Ventrites 3–5 placed in the right posterior corner of the card behind of the beetle. The genitalia placed in a drop of water-soluble fixing agent in the left posterior corner. Syntypus designated herein as lectotype.

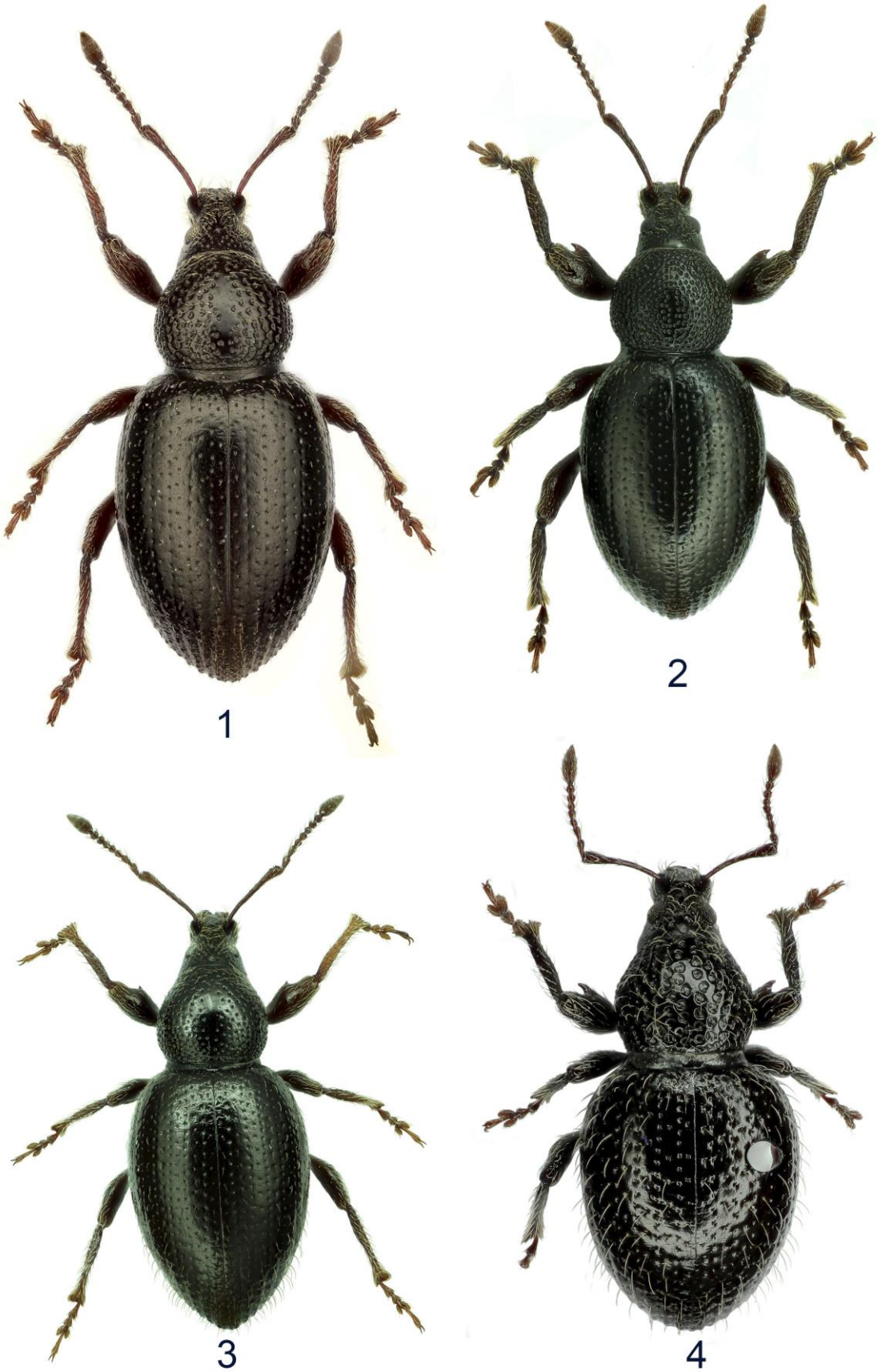
Body length of the lectotype 5.2 mm, width 2.7 mm.

Material: SW Turkey, Mugla Prov., Seki Env., 15–16.IV.2008 (M. V. Nabozhenko), 27 ♀.

Comparative diagnosis: It clearly differs from all other species of *Odelengus* by the following features: disc of pronotum with large-sized punctation; outer side of the tibiae with strong longitudinal strigosity; body covered by long erect hairs; tergite 8 in apical margin with angle-shaped sclerotization in ventral view (Fig. 24); lateral area of lamella of spiculum ventrale with distinct processes; vagina without armament.

Body length 4.0–5.2 mm, width 2.0–2.7 mm.

Male unknown.



Figures 1–4. *Otiorhynchus* Germar, habitus (**1, 3, 4** female; **2,** male). **1**, *O. pipitzi* Stierlin; **2,** *O. maximi* sp. nov.; **3,** *O. dudkoi* sp. nov.; **4,** *O. aberrans* Stierlin (lectotypus).

Distribution: Described from Syria. All material known by us originated from southern Turkey.

***Otiorhynchus judaicus* Stierlin, 1875** (Figs. 8, 12, 16)

Stierlin, 1875: 334 (*Eurychirus*); 1883: 541; Reitter, 1913: 145 (*Nubidanus*); Magnano, 1998: 66 (*Lengedeus*); Magnano & Alonso-Zarazaga, 2013: 317 (*Nubidanus*); Białooki, 2015: 35 (*Odelengus*). – *Otiorrhynchus* (*Arammichnus*) *amanus* Reitter, 1904: 159; Reitter, 1913: 145 (= *O. judaicus*).

It was described from "Gurien". Probably the type specimen was mislabeled because "Guria" is a region in the western part of Georgia in the Caucasus. In the next paper of Stierlin (1883), it was mentioned that this species is from Syria with a question mark.

Elytra widely obovate, 1.26–1.35 times as long as wide. Vagina with distinct sclerotized large structure.

Body length 4.05–5.0 mm, width 1.95–2.5 mm.

Bisexual species.

Distribution: All specimens of *O. judaicus* which we have studied were collected by Dr Bodemeyer in SE Turkey (Taurus Mt. R., northern slope of Bolkar Dağları, Env. of Karagöl).

Taxonomic notes: Most closely related to *O. heinzi* Smreczyński.

***Otiorhynchus pipitzi* Stierlin 1884** (Figs. 1, 11, 15, 19)

Stierlin, 1884: 39–40 (*Eurychirus*); Reitter, 1913: 112 (*Edelengus* Rtt.); Magnano, 1998: 66 (*Lengedeus*); Davidian & Gültekin, 2006: 490–491 (*Lengedeus*); Magnano & Alonso-Zarazaga, 2013: 317 (*Lengedeus*); Białooki, 2015: 34 (*Odelengus*).

Material: NE Turkey, Erzurum Prov., Tortum Distr., Yumaklı, 1850 m, dry mountain slope, under leaves of *Crambe orientalis* at the root crown, 18.V.1999 (L. Gültekin). 1 ♀ (AUEM).

Elytra 1.39 times as long as wide. Vagina with distinct weakly developed sclerotized large structure.

Male unknown.

Body length 4.8 mm, width 2.3 mm.

Distribution: It is known only from the Erzurum Province in NE Turkey.

***Otiorhynchus angustirostris* Smreczyński, 1977**

Smreczyński, 1977: 382 (*Edelengus*); Magnano & Alonso-Zarazaga, 2013: 317 (*Lengedeus*); Białooki, 2015: 35 (*Odelengus*).

The species was described with two females from the Central Black Sea Region of Turkey: Ilgaz-Dağı Mt., 1700 m, 30.VI.1969 (leg. Dr. Osella). In the original description, geographic name was erroneously given as: "Ilazdag". Smreczyński believed that *O. angustirostris* is the closest species to *O. pipitzi* (at that time in the subgenus *Edelengus* Rtt.).

Material: Armenia, Gukasyan [Ashotsk] District, Saryan Vill. Env., in burrow of Small ground squirrel, 22.VI.1966 (Gontcharov leg.), 1 ♀ (ZIN); Turkey, Sivas Prov., Yeşilırmak

Valley, 9.5 km NE of Kızıldağ, 2075 m, 40°11′25″ N / 36°59′00″ E, 17.VII.2007 (G. E. Davidian), 2 ♀♀ (ZIN).

Two specimens mentioned from the Sivas Prov. are the remains of dead beetles which were found without head and pronotum. Together with specimen from Armenia they correspond well with the original description of the *O. angustirostris*.

Elytra widely obovate, 1.20–1.24 times as long as wide. Vagina with distinct weakly developed large sclerite.

Male unknown.

Body length 5.2 mm, width 2.8 mm (specimens from Sivas are smaller with elytral width 2.25–2.30 mm).

Distribution: Armenia and Eastern Turkey.

Otiorhynchus heinzi Smreczyński, 1970

Smreczyński, 1970: 124 (*Nubidanus*); Magnano & Alonso-Zarazaga, 2013: 325 (*Nubidanus*); Białooki, 2015: 35 (*Odelengus*).

Material: Turkey: "Asia min., Erdschias-Gebiet., [19]02 (Penther)", 1 ♂, 1 ♀ (SKD in ZSM); "Türkei, Ercyas Dağ, 20–21.V.1983 (H. & L. Freude)", 1 ♀ (ZSM); ibid., 2000 m, 16–18.V.1985 (H. & L. Freude), 2 ♂♂ (ZSM); "Kayseri, Erdschias-Dagh, 13.VI.[19]67 (Seidenstücker)", 1 ♂ (ZSM).

Erciyes Dağı in Turkey is type locality of *O. heinzi.*

Elytra widely obovate, 1.31–1.36 times as long as wide. Elytral sutural interstriae in apical declivity covered by 2–3 irregular rows of tiny tubercles. Vagina with distinct sclerotized large structure.

Bisexual species.

Body length 4.6–5.55 mm, width 2.2–2.8 mm.

Taxonomic notes: It is closely related to *O. judaicus*.

Otiorhynchus phrygius Reitter, 1912

Reitter, 1912: 139 (*Stupamacus*); Magnano & Alonso-Zarazaga, 2013: 341 (*Stupamacus*).

Material: Turkey: "Anatolien, Ak-Chehir, 1900 (Korb)" – printed; "Sultan Dagh" – hand-written; "Sammlung Dr. K. Daniel" – printed; 3 ♀♀ (SKD in ZSM); ibid., 11–13.V.1966 (leg. A. Richter), 1 ♀ (ZSM) ; Içel (Mersin) Prov., Bolkar MtR, SE of Saybaşi, 12 km of Çamliyayla (Namrun), 2400–2600 m, 37°15′ N / 34°30.05′ E, 10–11.V.2009 (R. Yu. Dudko, I. I. Lyubechanskij, A. A. Stekolnikov), 2 ♀♀ (SZMU).

One of the specimens from SKD is provided with a handwritten label of Dr K. Daniel: "*phrygius* Daniel".

Ak-Chehir [Akşehir] in Turkey is type locality of *O. phrygius*. Two specimens from Çamlıyayla differ from topotypes by larger femoral tooth and less transverse pronotum.

Elytra widely obovate, 1.26–1.31 times as long as wide. The vagina is membranous, without sclerotized formation.

Male unknown.

Body length 4.8–5.8 mm, width 2.5–2.9 mm.

Taxonomic notes: Originally *O. phrygius* was described in the subgenus *Stupamacus* Reitter, 1912:65 (type species *O. russicus* Stierlin, 1883). Herein it is transfered to the subgenus *Odelengus*.

***Otiorhynchus maximi* Davidian & Gültekin sp. nov.** (Figs. 2, 5–7, 10, 14, 18)

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Material: Holotype: Turkey, [Mersin] Içel Province, above Arslanköy, 37°02′24.2″ N / 34°17′19.1″ E, 1800 m, 16.IV.2007 (leg. M. V. Nabozhenko), ♂ (ZIN). Paratypes: 2 ♂♂, 4 ♀♀ were collected together with the holotype in the same location (ZIN, AUEM, ZMMU).

Male. Head weakly narrowed to pterygia. Rostrum slightly transverse, 1.04–1.08 times as wide as long, base of rostrum on ventral surface without transverse sulcus. Pterygia weakly convex, widest part of rostrum 1.17–1.22 times as wide as its narrowest part at base of pterygia. Dorsum of rostrum most narrow slightly proximal to antennal insertion, from that place dilated basad and apicad. Pterygia as long as or slightly longer than longitudinal diameter of eye. Antennal scrobes situated not far from apical margin of rostrum. Epistomal carina vestigial inconspicuous, epistome not separated from dorsum of rostrum. Frons barely impressed, as wide as dorsum of rostrum at level of antennal insertion. Upper area of head with rostrum flat, slightly swollen proximal to antennal insertion, rather densly and coarsely punctate, basal half of dorsum of rostrum with weak median carina. Eyes rather large, dorsolateral, oval, moderately convex, slightly protruding beyond of the head contour. Antennal scape slightly curved, rather strongly clavately thickened apically. First funicular segment 2.25 times as long as wide and 1.50 times as long as 2nd segment; 2nd segment 1.71 times as long as wide, slightly narrower than 1st; 3rd and 4th slightly elongated, 5–7th moniliform. Club broadly ovate, 1st club segment shorter than half length of entire club.

Pronotum about 1.13–1.19 times as wide as long. Disc of pronotum with dense small punctation with very narrow smooth median line.

Elytra narrow obovate. Interstriae on disc of elytra smooth, in apical declivity with row of clearly visible large flattened granules. Hairs on disc of elytra usually adpressed, in apical declivity semierect, and slightly longer.

Fore femora moderately thickened with large, slightly hook-liked, curved tooth. Mid and hind femora narrower than fore femora, without tooth or with only small tubercle. Fore tibiae somewhat curved inward, inner margin S-shaped sinuate with long slanting semierect pale hairs, without denticles. Outer side of fore tibiae with carina and weak longitudinal strigosity, inner apical angle of fore tibiae with tooth directed inward, outer apical angle not dilated.

First segment of fore tarsus slightly elongated, 2nd moderately transverse 1.50–1.57 times as wide as long, 3rd segment large, barely transverse, 1.71 times as wide as 2nd; onychium 1.57 times as long as 3rd and 0.91 times as long as 2nd combined with 3rd segments.

All ventrites combined 1.23–1.26 times as long as wide. Ventrites 1 and 2 clearly impressed in middle part, with denser puctation than 5th.

Lamella of penis gradually narrowed apicad and blunted on end. Ventral wall of penis weakly sclerotized along midline. Internal sac of aedeagus at level of preapical and basal portions of penis with large internal sclerites.

Figures 5–19. *Otiorhynchus* Germar (**5–7, 10, 14, 18,** *O. maximi* sp. nov.; **8, 12, 16,** *O. judaicus* Stierlin; **9, 13, 17,** *O. dudkoi* sp. nov.; **11, 15, 19,** *O. pipitzi* Stierlin). **5, 6,** aedeagus (dorsal and lateral view); **7,** spiculum gastrale; **8–11,** complex of coxites (indicated with arrow), vagina with sclerotized structure and spiculum ventrale; **12–15,** spiculum ventrale (separately); **16–19,** spermatheca.

Female. Rostrum 1.06–1.14 times as wide as long. Widest part of rostrum 1.10–1.19 times as wide as own narrowest part at base of pterygia. Pronotum about 1.23 as wide as long. Outer apical angle of fore tibiae distinctly dilated. All ventrites combined, 1.07–1.24 times as long as wide.

Body length 4.22–5.2 mm, width 1.93–2.45 mm, in holotype 5.2 mm and 2.4 mm respectively.

Comparative diagnosis: *Otiorhynchus maximi* **sp. nov.** is most closely related to *O. dudkoi* **sp. nov.** It differs by dense punctation on disc of pronotum, large-sized femoral tooth, distinctly transverse 2nd segment of fore tarsus, shorter 2nd antennal segment and somewhat in the structure of large sclerite inside vagina.

Etymology: The new species was named in honor of Maxim V. Nabozhenko who has collected very interesting weevils in Turkey.

Habitat: The samples were collected from forest habitat (Fig. 28).

***Otiorhynchus dudkoi* Davidian sp. nov.** (Figs. 3, 9, 13, 17)

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Material: Holotype: Turkey, Adana, 25 km NNE of Pozantı, Ala Dağlar, NW of Karanfil, Mt., 1800–2000 m, 37°37′ N / 35°00′– 35°02′ E, 1.V.2009 (R. Yu. Dudko, I. I. Lyubechanskij, A. A. Stekolnikov), 1 ♀ (SZMU). Paratypes: 2 ♀♀ were collected together with the holotype in the same location (ZIN, AUEM); Antalya Prov., 20 km SSE of Elmalı, Bey Mt. R., 6 km WSW of Kızlarsivrisi Mt., 2100–2300 m, 36°35′ N / 30°03′ E, 25–26.IV.2009 (R. Yu. Dudko, I. I. Lyubechanskij, A. A. Stekolnikov), 1 ♀ (ZMMU).

Female. Head weakly narrowed to pterygia. Rostrum slightly transverse, 1.08–1.12 times as wide as long, base of rostrum on ventral area without transverse sulcus. Pterygia weakly convex, widest part of rostrum 1.11–1.18 times as wide as its narrowest part at base of pterygia. Dorsum of rostrum narrowest slightly proximal to antennal insertion, from there dilated apicad and basad. Pterygia as long as or slightly longer than longitudinal diameter of eye. Antennal scrobes beginning rather far from apical margin of rostrum. Epistomal carina vestigial, inconspicuous; epistome not separated from dorsum of rostrum. Frons barely impressed, as wide as dorsum of rostrum at level of antennal insertion, or slightly wider. Upper side of head with rostrum flat, slightly swollen proximal to antennal insertion, rather densly and coarsely punctate, basal half of dorsum of rostrum with weak median carina. Eyes rather large, dorsolateral, oval, weakly convex, not protruding beyond surface of head contour. Antennal scape slightly curved, clavate, rather strongly thickened apically. First funicular segment 2.20 times as long as wide and 1.11–1.17 as long as 2nd segment; 2nd segment 1.87 times as long as wide, barely narrower than 1st; 3rd segment 1.28 times as long as wide; 4th barely elongated, 5–7th moniliform. Club broadly ovate, about 2 times as long as wide; 1st club segment shorter than half length of entire club.

Pronotum about 1.05–1.09 times as wide as long, widest somewhat posteriad of middle. Disc of pronotum in central part with scattered small punctuation, smooth median part more than 5 times as wide as diameter of punctures.

Elytra narrow obovate, 1.42–1.43 times as long as wide. Interstriae on disc of elytra smooth, in apical declivity with row of clearly visible large flattened granules. Hairs on disc

of elytra usually adpressed, in apical declivity semierected, strongly protruding beyond elytral contour, about 1.5–2.0 times as long as hairs on disc.

Fore femora with moderately small acute subulate tooth, mid- and hind femora unarmed. Inner margin of fore tibiae S-shaped sinuate with long slanting semierect pale hairs, without denticles. Outer side of fore tibiae with carina and weak longitudinal strigosity. Inner apical angle of fore tibiae with tooth directed inward, outer apical angle distinctly dilated.

First segment of fore tarsus slightly elongated, 2nd weakly transverse 1.20 times as wide as long, 3rd segment 1.44 times as wide as 2nd; onychium 1.83–1.85 times as long as 3rd.

All ventrites combined, 1.13–1.17 times as long as wide. Ventrites 1 and 2 clearly flat.

Male unknown.

Body length 4.3–5.2 mm, width 2.0–2.43 mm, in holotype 5.0 and 2.3 mm respectively.

Comparative diagnosis: Most closely related to *O. maximi* **sp. nov.** It differs by scattered punctation on disc of pronotum, small-sized femoral tooth, slightly transverse 2nd segment of fore tarsus, longer 2nd antennal segment and somewhat in structure of large sclerite inside vagina.

Etymology: The newly described species is dedicated to Roman Yu. Dudko, one of the collectors of the type material.

Comparative diagnostic key to species of the subgenus *Odelengus* Reitter

1(12). Fore femora with large or distinct small-sized tooth.

2(7). Fore femora with large, slightly hook-like tooth, or with moderately small acute subulate tooth.

3(4). Disc of pronotum covered with large-sized punctation. Midline of pronotum with fewer than 10 punctures. Interstriae of elytra with subregular row of the long erect hairs. Hairs on elytral disc as long as width of interstriae. In ventral view, apical margin of tergite 8 with angle-shaped sclerotization. Vagina entirely membranous, without distinct sclerotization. Lamella of spiculum ventrale with distinct lateral processes……..……..***O. aberrans*** **Stierlin**

4(3). Disc of pronotum covered with fine punctation. Midline of the pronotum with at least 13 punctures. Disc of elytra with adpressed or slightly erect hairs, hair length distinctly less than width of interstriae. Hairs on apical elytral declivity distinctly erect and longer than discal hairs. In ventral view, apical margin of tergite 8 simply rounded. Vagina with distinctly sclerotized large structure. Lamella of spiculum ventrale without lateral processes.

5(6). Disc of pronotum densely punctate, smooth narrow median line not wider 3 punctures combined. Midline of pronotum with about 17 punctures. Hairs on elytral apical declivity slightly longer than hairs on elytral disc. Outer apical angle of fore tibia not dilated in male but dilated in female. Lamella of penis gradually narrowing apicad and blunted on end, with lateral margins subrectilinear. Internal sac of aedeagus at level of preapical and basal portions of penis with large internal sclerites……...***O. maximi*** **Davidian & Gültekin sp. nov.**

6(5). Disc of pronotum sparsely punctate. Smooth median portion not narrower than 5 punctures combined. Midline of pronotum with about 13–14 punctures. Hairs on apical

elytral declivity about 1.5–2.0 times longer than discal hairs……..***O. dudkoi*** **Davidian sp. nov.**

7(2). Fore femora with moderately small acute subulate tooth or tubercle, occasionally only with very weak projection.

8(9). Disc of pronotum finely and densely punctate, midline of pronotum with more than 17 punctures. Interspaces between punctures subequal to or slightly smaller than with punctures. Punctures on disc of pronotum subequal to or smaller than punctures in elytral striae. Fore femora with small tubercle or with very weak projection. Inner margin of fore tibia with row of small denticles, larger than femoral tooth. Hairs on apical elytral declivity about as long as hairs on disc and weakly protruding beyond contour of elytra. Hairs on abdomen significantly shorter than length of ventrites 3 and 4 combined. Outer apical angle of fore tibia in male clearly dilated. Lamella of penis narrower than penis, sides subparallel, about as long as wide, slightly curved upward. Vagina with distinct, sclerotized, large structure…..……..……***O. heinzi*** **Smreczyński**

9(8). Disc of pronotum finely and densely punctate, midline of pronotum with fewer than 15 punctures. Punctures on disc of pronotum subequal to punctures in elytral striae. Fore femora with small acute subulate tooth, occasionally in form of tubercle. Inner margin of fore tibia without distinct small denticles or occasionally with barely visible tubercles. Hairs on abdomen as long as ventrites 3 and 4 combined, or slightly longer. Hairs on apical elytral declivity strongly erect, 1.5–2.0 times as long as hairs on disc. Vagina with distinct sclerotized large structure or not.

10(11). Elytra narrow obovate 1.42–1.43 times as long as wide. Punctures on disc of pronotum usually smaller than punctures on interspaces. Fore femora with small acute subulate tooth. Hairs on apical elytral declivity 1.5–2.0 times as long as hairs on disc. Midline of pronotum with 13–14 punctures. Vagina with distinct sclerotized large structure…….…..……***O. dudkoi*** **Davidian sp. nov.**

11(10). Elytra widely obovate 1.28–1.31 times as long as wide. Punctures on disc of pronotum usually wider than interspaces and slightly larger than in striae. Fore femora with small acute subulate tooth or with tubercle. Hairs on apical elytral declivity slightly shorter than discal hairs. Vagina without sclerotized structure…….……***O. phrygius*** **Reitter**

12(1). Fore femora unarmed.

13(16). Disc of pronotum punctate, without granules. Interstriae on disc of elytra smooth, without granules. Vagina with distinct, moderately large, sclerotized structure.

14(15). Disc of pronotum finely punctate. Punctures on disc of pronotum subequal to interspaces and to punctures in elytral striae. Elytra widely obovate, 1.26–1.35 times as long as wide. Lamella of penis narrowed to apex, sides concave. Vagina with distinct sclerotized structure…….…….……***O. judaicus*** **Stierlin**

15(14). Disc of pronotum densely punctate. Punctures on disc of pronotum larger than interspaces and punctures in elytral striae. Elytra narrowly obovate, 1.39 times as long as wide. Vagina with weakly sclerotized structure…….……...……***O. pipitzi*** **Stierlin**

16(13). Disc of pronotum densely granulate. Interstriae on disc of elytra with more or less clearly visible row of setiferous tubercles. Elytra widely obovate, 1.20–1.24 times as long as wide. Vagina with distinct, very weakly sclerotized structure…….***O. angustirostris*** **Smreczyński**

Subgenus: *Nubidanus* Reitter, 1912

***Otiorhynchus torosicus* Gültekin & Davidian sp. nov.** (Figs. 6, 12, 13, 15, 21)

urn:lsid:zoobank.org:act:361289C9-347C-465B-9359-51B6A5755E02

Material: Holotype: Turkey (TR-33), Gülnar-Demirözü, 1200 m, 15.IV.2014 (Emre Deniz Sarı leg.), 1♀ (AUEM). Paratypes: 10♀♀ were collected together with the holotype in the same location [7.IV.2014, 1♀; 10.VII.2014, 1♀; 19.VII.2014, 2♀♀; 2.IV.2014, 2♀♀; 24.IV.2014, 2♀♀ (AUEM); 1200 m, 24.IV.2014, 2 ♀, (ZIN)]; TR15-16, Mersin Province, E of Mut, artificial *Pinus* forest, 36 41′44″ N / 33 31′18″ E, 939 m, 9.V.2015 (L. Gültekin leg.), 2 ♀♀ (AUEM, ZIN).

Female. Body with antennae dark brown, legs reddish. Integument of body mainly with tiny granulated sculpture. Head moderately strongly narrowing to pterygia, at eye level clearly wider than rostrum. Rostrum weakly transverse, 1.03–1.06 times as wide as long. Widest part of rostrum 1.21–1.26 times as wide as narrowest part at base of pterygia. Eyes rather large, weakly convex, not protruding beyond head contour. Longitudinal diameter of eye about 2 times as long as the distance between eye and base of pterygia. Frons weakly transversely impressed, slightly narrower than dorsum of rostrum at level of antennal insertion. Antennal scrobes situated rather far from apical margin of rostrum, clearly shorter than longitudinal diameter of eye. Epistomal carina vestigial and not visible, apical epistomal angles clearly elevated. Dorsum of rostrum rather densely and coarsely punctate, sides in basal half subparallel, in middle part with distinct median carina, flanked with thin furrows. Antennal scape moderately curved, clavately thickened apicad. First funicular segment 1.67–1.83 times as long as wide, 2nd – 1.33–1.50 times respectively. 3 th and 4th segments combined subequal to 2nd or shorter, 5th about as long as wide, 6th and 7th transverse. Club widely ovate or oval, about 1.90 times as long as wide, 1st segment of the club shorter than half length of entire club.

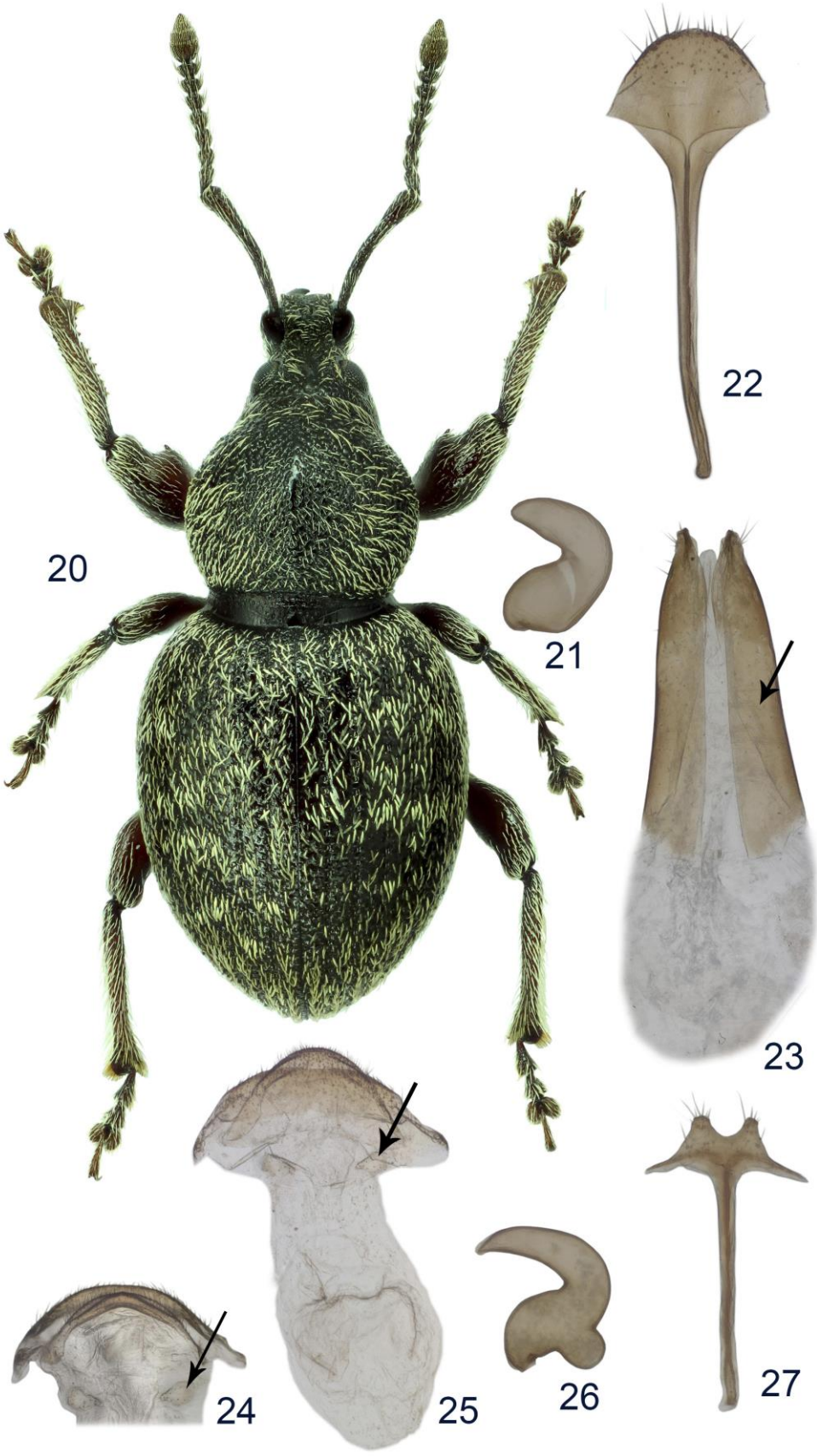
Pronotum transverse, 1.10–1.17 times as wide as long, widest near middle or slightly basad to middle, sides broadly rounded with distinct subapical constriction. Disc of pronotum convex, densely covered by fine granules, in middle part with delicate median carina. Interspaces between granules narrower than granules.

Elytra widely obovate, 1.31 times as long as wide, apical declivity of elytra nearly steep or slightly bent downward. Elytral striae narrow rather weak with granules between punctures. Interstriae about 3 times as wide as striae, covered with 3 irregular rows of granules. Sutural interstriae in apical declivity not swollen.

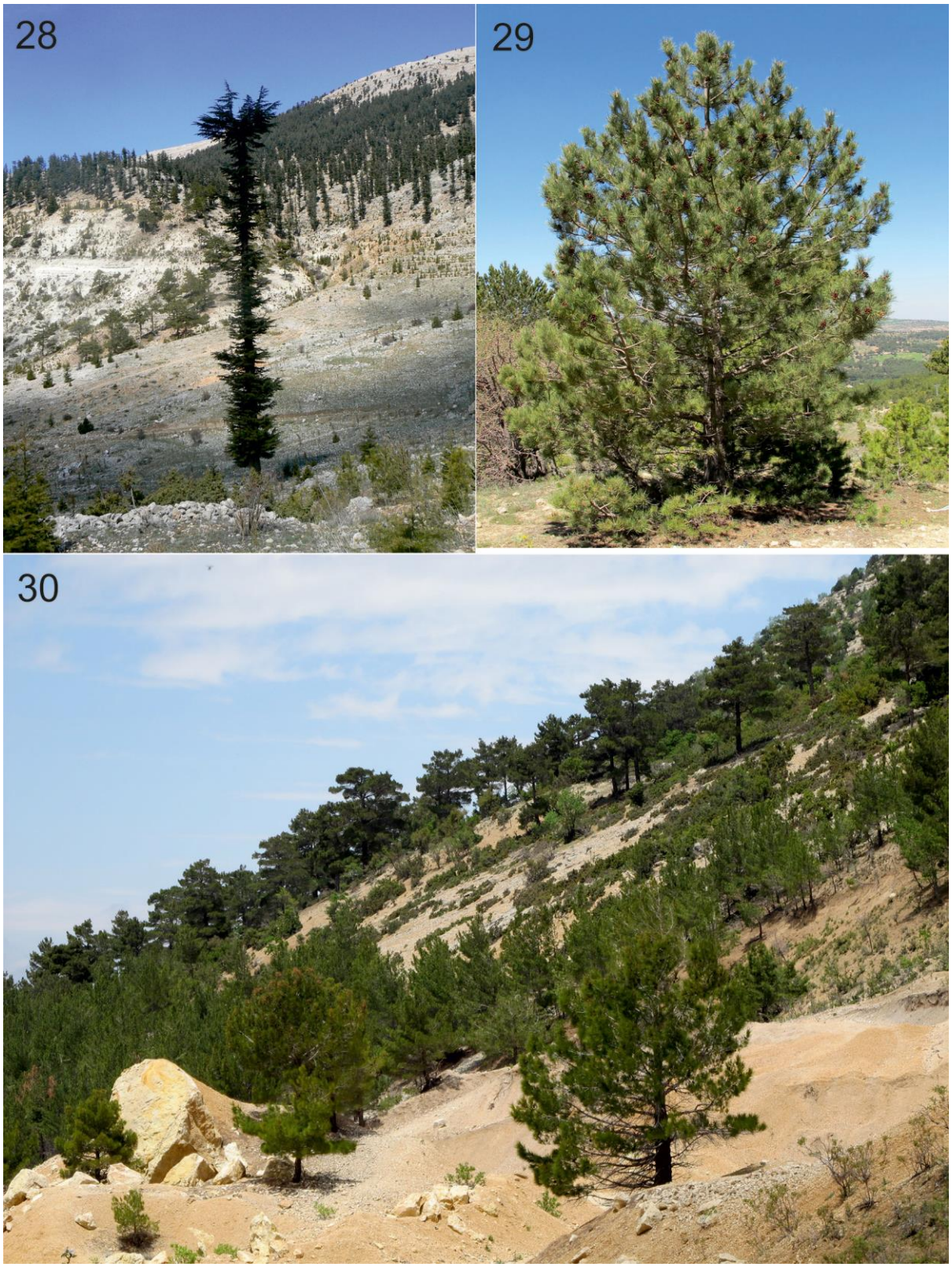
Fore femora with acute subulate slightly curved tooth, mid femora with tiny tooth, hind femora unarmed. Outer margin of fore tibiae covered with distinct tubercles, inner margin with row of rather strong slanted denticles, latter subequal in size to tooth on fore femora. Inner apical angle of fore tibiae with moderately large tooth, outer apical angle distinctly dilated and widely rounded. First segment of fore tarsus slightly elongated, 2nd tarsomere as wide as long, or 1.25 times wider, 3rd tarsomere 1.53 times as wide as long, onychium 1.67–1.87 times as long as 3rd.

Apical margin of tergite 7 emarginate. All ventrites combined 1.20–1.25 as long as wide.

Vestiture moderately dense, not continuous, yellowish adpressed. Vestiture of head and pronotum hair-like, on elytra consisting of elongate fusiform apically pointed seta-like scales. Punctures of elytral striae with minute hair, about as long as diameter of puncture.



Figures 20–27. *Otiorhynchus* Germar (**20–23** *O. torosicus* sp. nov.; **24–27,** *O. aberrans* Stierlin). **20,** habitus (female); **21, 26,** spermatheca; **22, 27,** spiculum gastrale; **23, 25,** complex of 7th, 8th tergites and coxites (indicated with arrow) with vagina; **24,** 7th and 8th tergites (ventral view).



Figures 28-30. Habitat and food plants of *Otiorhynchus maximi* sp. nov. and *Otiorhynchus torosicus* sp. nov. **28,** forest habitat of *O. maximi* sp. nov.; **29,** *Pinus brutia*, food plant of *O. torosicus* sp. nov.; **30,** habitat of *O. torosicus* sp. nov.

Coxite strongly sclerotized, rather large, about as long as spiculum ventrale. Vagina membranous without sclerites. Ramus and collum weakly protruding.

Male unknown.

Body length 5.95–6.6 mm, width 2.9–3.3 mm, in holotype 6.25 mm and 3.02 mm respectively.

Comparative diagnosis: *Otiorhynchus torosicus* Gültekin & Davidian **sp. nov.** is tentatively included in the subgenus *Nubidanus*. The new species is similar to all species of *Odelengus* and most species of *Nubidanus* subgenera by vestigial epistomal carina and antennal scrobes situated rather far from the apical margin of the rostrum. In the structure of the head it is more similar to the species group *impexus* (*Nubidanus*). The new species differs from *Odelengus* by the following features: apical declivity of elytra is slightly sloped or bent downward; vestiture of body is moderately dense and yellowish color; coxites are large-sized and elongate; ramus and collum of spermatheca are weakly protruding; vagina is membranous without sclerites. The new species is also similar to the species group *punctirostris* (*Nubidanus*) by the structure of female genitalia but differs by vestigial epistomal carinae.

Etymology. The new species is named after its place of collection, located in the Taurus Mountains in Southern Turkey (= "Toros Dağları" in Turkish).

Habitat and food plant: Two samples of the new species were collected feeding on *Pinus brutia* (Fig. 29) in the habitat of *Pinus* forest (Fig. 30).

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