



RESEARCH ARTICLE

Contribution to the knowledge of the weevil subgenus *Choilisanus* Reitter, 1912, genus *Otiorhynchus* Germar, 1822 (Coleoptera: Curculionidae: Entiminae)

Genrik E. Davidian¹

Levent Gültekin²

¹All-Russian Institute of Plant Protection, Pushkin, 196608, St. Petersburg, Russia; e-mail: gdauidian@yandex.ru ²Atatürk University, Faculty of Agriculture, Department of Plant Protection, 25240, Erzurum, Turkey; e-mail: lgultekin@gmail.com

[urn:lsid:zoobank.org:pub:FAAF2019-116A-4A10-BE53-AFCA01FA1D20](https://zoobank.org/pub/FAAF2019-116A-4A10-BE53-AFCA01FA1D20)
¹[urn:lsid:zoobank.org:author:C6F2AAC4-01FF-469A-9CE1-740C56638C41](https://zoobank.org/author/C6F2AAC4-01FF-469A-9CE1-740C56638C41)
²[urn:lsid:zoobank.org:author:BF88C4D6-CD27-46DF-AF01-C0DC8A7C5B5B](https://zoobank.org/author/BF88C4D6-CD27-46DF-AF01-C0DC8A7C5B5B)

Abstract: A new species *Otiorhynchus ege* Davidian & Gültekin **sp. nov.** is described from Aegean Region of Turkey. Closely related species *Otiorhynchus balcanicus* Stierlin, 1861, *Otiorhynchus leuthneri* Smreczyński, 1977 and *Otiorhynchus latinasus* Reitter 1898 from the subgenus *Choilisanus* Reitter, 1912 are redescribed, the lectotype of *Otiorhynchus latinasus* is designated, and a key to five species which are allied to *Otiorhynchus balcanicus* is given. Colour illustration, including habitus and photos of important morphological characters are presented.

Key words: *Otiorhynchus*, *Choilisanus*, new species, taxonomy, Turkey.

Introduction

The species rich Palaearctic genus *Otiorhynchus* Germar, 1822 (Curculionidae: Entiminae) includes 208 species in Turkey (Magnano & Alonso-Zarazaga 2013). Subgenus *Choilisanus* Reitter, 1912 is one of the richest in *Otiorhynchus*. It includes totally more than 40 species, from which 21 species are known from Turkey.

In this paper, a new species from subgenus *Choilisanus* is described. It is closely related to *O. balcanicus* Stierlin, 1861 and *O. leuthneri* Smreczyński, 1977. Three known species are redescribed.

Material and methods

The material for this work have been studied in collection of Zoological Institute (ZIN RAS, St. Petersburg, Russia) and Entomology Museum of Ataturk University (AUEM) [Atatürk University, Faculty of Agriculture, Plant Protection Department, Erzurum, Turkey]. Furthermore interesting material was received for study thanks to courtesy of our colleague M. V. Nabozhenko (Rostov-on-Don). Additional material, including type specimens were studied from E. Reitter collection from Hungarian Natural History Museum in Budapest (HNHM). The holotype and one of the paratypes of the new species described here, are deposited in the collection of ZIN RAS, the second paratype is deposited in the collection of AUEM.

Photos of the 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 photos of the habitus were made with a digital camera Cannon 60D.

Results

Subgenus *Choilisanus* Reitter, 1912

= *Asphaerorhynchus* Reitter, 1912: 50; Magnano, 1998: 51.

= *Stierlinellus* Reitter, 1913: 78; Magnano, 1998: 55 (*Choilisanus* Reitter, 1912).

= *Lacocnesus* Reitter, 1912: 64; Magnano, 1998: 66; Davidian & Keskin, 2010: 61–62 (*Choilisanus* Reitter, 1912).

Type species *Otiorhynchus balcanicus* Stierlin, 1861, by original designation.

Otiorhynchus ege Davidian & Gültekin sp. nov. (Figs. 1, 2, 9, 10, 17, 18, 23, 24).

urn:lsid:zoobank.org:act:D3BD0ABA-DB44-4711-9BCE-87EA1A765555

Material: Holotype: Turkey, Aydın Province, Çobanlar env., 5–6.V.2009 (Nabozhenko M.V.), ♂; Paratypes: Denizli Prov., 20 km above Babadağ town, alpine zone, 7.V.2009 (Nabozhenko M.V.), 2 ♀♀.

Male: Head nearly the same length as pronotum. Antennal scrobes broad. Head at the level of the eyes, slightly wider than rostrum. Rostrum transverse, nearly 1.3 times as wide as long. Widest point of the rostrum 1.4 times as wide as its narrowest part at the base of the pterygia. Rostral dorsum at the level of antennal insertion wider than frons. Epistome asymmetrically margined on either side: the right side clearly carinated with long hairs sticking along the entire length; the left side, except of the apical portion, more or less smoothed and licked outwards, with sparse hairs located mainly in the apical part. Rostral dorsum with distinct median carina from tubercle behind epistome to big elongated pit in the middle of the frons. Lateral sides of rostral dorsum quite strongly converging posteriad. Base of rostral dorsum narrower than frons. In lateral view, the basal portion of rostral dorsum clear raised above of the eyes, dorsal surface of the head with clear transverse impression at the level of posterior margin of the eyes. Eyes rather large, oval, moderately convex, not protruding beyond of the head contour. Upper margin of the eyes clearly impressed into the head capsule. Width of frons 1.47 times of the longitudinal diameter of an eye. Vertex immediately behind of the eyes with clear punctation.

Scape gradually clavately thickened apicad. 1st segment of flagellum 2.4 times as long as wide, and 1.16 times as long as 2nd segment, 2nd - 1.5 times as long as 3rd, 3-7th segments moderately elongated, conically extended apicad, 3rd of them is the longest. Club fusiform, pointed at the apex, 2.9 times as long as wide, 1.38 times as wide as flagellum, slightly shorter than last three flagellar segments together. 1st segment of the club shorter than half length of the entire club.

Pronotum dolioliform and slightly transverse, 1.12 times as wide as long, with weakly rounded sides. Disc of pronotum in double punctuation with even distribution, without median carina. The large size punctures slightly smaller than punctures in striae of elytra. Setiferous pores usually situated one by one in front of anterior margin of large punctures. Interspaces between punctures smooth and shiny, narrower than large punctures.

Dorsal surface of pronotum and elytra slightly raised above of the mesonotum. Base of elytra immediately behind mesonotum almost smooth, with a distinct single puncture at the base of the 5th elytral stria.

Elytra oblong subovate, widest anteriorly of the mid, 1.43 times as long as wide, with sloping declivity. The width of basal margin of elytra and pronotum similar, lateral sides of elytra in its basal 1/3 portion slightly convex, converging anteriorly. Striae of elytra broad in the basal 1/3 of the length, thereafter clearly narrowed apicad. Interspaces between punctures in striae lie on one surface with interstriae of elytra. Width of striae and interstriae in basal portion of elytra subequal. Surface of interstriae flat, dimly shining with reticulate microsculpture and numerous small setiferous pores.

Tergite 7 with straight apical margin. Tergite 8 (pygidium) blunted, with a transverse groove in lateral view. Ventrite 5 on dorsal side in the middle of apical margin with distinct tubercle.

Femora without tooth, fore femur noticeably thicker than middle and hind. Fore tibia straight, in preapical portion noticeably curved inward, outer apical angle not dilated. The inner margin of the fore tibia in distal 2/3 of the length with a row of slant denticles and rather long straight yellowish setae. Second segment of fore tarsus slightly elongated, the 3rd - 1.63 times as wide as 2nd. Fore tarsus of male slightly wider than that of females.

Vestiture hairlike, mostly brownish in colour, with yellow and light brown narrow scales, which are grouped in spots on pronotum and transverse bands on elytra.

Penis tube (median lobe of aedeagus) clearly shorter than apodemes of aedeagal body, in dorsoventral direction flattened, slightly and gradually curved, its dorsal wall membranous. Penis weakly narrowed from base to mid and almost parallel sided in the distal half. Lamella of penis looks like an equilateral triangle, which is rounded at the apex. Endophallus (internal sac of aedeagus) in the apical 3rd of length with two large sclerotized plates. Each of plates at the apex with a distinct and slightly curved thorn. Primary gonopore situated at the middle of apodemes, its sclerite formed by curved a slightly sclerotized plate.

The length of the holotype 5.5 mm, width - 2.45 mm.

Female: The width of frons 1.53 times of the longitudinal diameter of the eye. One of the paratypes differs by the 1st segment of antennal club, which is compressed laterally. Pronotum slightly transverse, 1.06-1.13 times as wide as long. Elytra 1.44-1.46 times as long as wide. Ventrite 5 on dorsal side in the middle of apical margin without tubercle.

Lamella of spiculum ventrale moderately transverse, medio-apically widely emarginated, manubrium almost straight. Spiculum ventrale 5.23 times of the length of lamella. Ovipositor elongated-conical, slightly sclerotized. Coxites with small distinct



Figures 1–4. *Otiorhynchus* Germar, male (1, 3, 4) and female (2) habitus. 1–2, *O. ege* sp. nov.; 3, *O. latinasus* Reitter; 4, *O. glebius* Davidian & Keskin.

subapical stylus. The armament of vagina includes long wide plates, protruding into coxites. Collum of spermatheca long, like a hook, ramus barely developed.

Length of the paratypes 5.45-6.1 mm, width 2.4-2.6 mm.

Etymology: The new species' name originates from the geographical name of its distribution Aegean region (= "Ege" in Turkish).

Comparative diagnosis: The new species is most similar to *O. balcanicus* and *O. leuthneri*. Together they clearly differ from all species of the subgenus *Choilisanus* by the epistome which is asymmetrically margined. The new species is distinguishable from *O. balcanicus* and *O. leuthneri* by the following features: disc of pronotum with a double punctations, granules strongly flattened or absent; the basal part of elytra immediately behind of mesonotum with a single puncture at the beginning of the 5th elytral stria; scapus with flagellum thinner; ovipositor elongated-conical. From *O. leuthneri* it also differs by the large size of the eyes and the slightly elongated second segment of the fore tarsus.

The armature of the endophallus of the new species most similar to *O. latinus*, from which it differs also by the slender and elongated body, the simple anterior wall of the antennal scrobes and the shape of the aedeagus.

Ecology: We observed that the new species, as well as *O. balcanicus* and *O. leuthneri*, is associated with trees and shrubs. The *O. balcanicus* species group can be distinguished from the majority of the steppe and mountain steppe species of the subgenus *Choilisanus* by the epistomal plate, which is deeply medio-apically emarginated.

Otiorrhynchus balcanicus Stierlin, 1861 (Figs. 7, 8, 15, 16, 21, 22).

Stierlin, 1861: 305.

The species is widespread in the Eastern Mediterranean, Crimean-Caucasian and the Armenian-Anatolian zoogeographical regions. The material shown below, includes only available specimens from Turkey.

Material: NE Turkey: SE of Trabzon, Gümüşhane, basin of Sobran Riv., 1500–1800 m, 5–6.VI.1996 (Davidian), 3 ♀♀; Lazistan MtR, N of Sarıgöl, Yüksekoba env., from 40°59'39.0" N/ 41°26'19.8" E to 41°03'26.4" N / 41°26'34.2" E, 1733 m, 10.VII.2003 (Davidian), 1 ♀; Tokat Prov., 14 km SSE of Almus county, Karadere, N slope, 40°16'10" N/ 36°58'00" E, 1130 m, 13.VII.2007 (Davidian), 3 ♀♀; Denizli Prov., 20 km above Babadağ town, alpine zone, 7.V.2009 (Nabozhenko M.V. and S.V., Keskin B.), 3 ♀♀; Aydın Province, Çobanlar env., 5–6.V.2009 (Nabozhenko M.V. and S.V., Keskin B.), 4 ♀♀; Konya Prov. Akşehir, 15.V.2010 (Nabozhenko M.V. and S.V., Keskin B.), 1 ♀♀; Kayseri Prov., Erciyes Dağı – Kayseri Hwy, 1885 m, oak stand, leaf litter and among grass, 18.IX.2010 (Marusik Yu.M.), 1 ♀; Tunceli Prov., Pülümür Distr., Sansa, roadside, N slope, forest, 39°33'16" N/ 40°02'43" E, 1302 m, 8.VI.2014 (Korotyaev B.A., Gültekin L., Davidian G.E.), 1 ♀.

Female: Head quite large, slightly longer than pronotum. Epistome shaped almost as an equilateral triangle which is margined asymmetrically on either side: its right side clearly contoured by thin carina with long hairs sticking along the entire length; the left side more or less smoothed licked outwards, usually with sparse hairs located mainly in the apical part. Apical wall of antennal scrobes not flattened, situated considerably posteriad to the level of epistomal angles. Eyes large, moderately convex, width of the frons 1.14-1.2 times the

longitudinal diameter of an eye. Vertex behind of the eyes dull, in small poorly distinguishable punctations.

Antennal scape markedly thickened apicad, approximately equally thickened on majority of the length, at apical part slightly clavate, in basal part rather abruptly narrowed to the point of antennal insertion. Segments of flagellum almost equally broad, nearly subcylindrical: 1st segment 2.1 times as long as wide and almost 1.2 times as long as 2nd segment, 3rd- and 7th-segments clearly, 4-5th weakly elongated. Antennal club small, fusiform, pointed toward apex, distinctly shorter than the last three segments of flagellum together, 1.33 times as wide as 7th segment. 1st segment of the club slightly shorter than half length of the entire club.

Pronotum weakly transverse, dolioliform, 1.14-1.16 times as wide as long, widest slightly posteriad of the middle, its lateral sides weakly rounded. Sculpture of the disc of pronotum formed by merging coarser matt oval punctures and small granules on the interspaces, which are smaller in size than punctures. Sculpture of pronotum often obscured by moderately dense vestiture.

Elytra oblong suboval, 1.37-1.48 times as long as wide. Striae of elytra strongly tapering distad approximately from anterior third of elytra. Base of elytra immediately behind of mesonotum with four clear punctures, which are usually hidden under the base of pronotum. (Fig. 8 position of the punctations indicated by arrows). These punctations are a continuation of the 2-5th striae of elytra.

Fore tibia distinctly curved inward in preapical part, its outer apical angle chamfered.

Body vestiture mostly brown in colour, with yellow and light brown narrow scales which are grouped in spots on pronotum and transverse bands on elytra.

Apical margin of tergite 7 almost straight. Ovipositor very narrow, 3.79 times as long as wide. Vagina armed inside with long sclerotized plates, which are strongly protruding into coxites. Coxites with a distinct preapical stylus. Lamella of spiculum ventrale approximately as long as wide, medio-apically emarginated.

Male: In most of geographic range *Otiorhynchus balcanicus* is known as parthenogenetic species. Amphimictic populations of this species occurs in İzmir Province of Western Turkey (Keskin & Çevik, 2007). Unfortunately male of *O. balcanicus* is unknown for us.

Remarks: Shows a considerable intrapopulation dimensional variability. The body length: 4.0-7.0 mm, width: 1.9-3.0 mm.

Comparative diagnosis: Most similar to *Otiorhynchus leuthneri* and *O. ege* sp. nov. Differs from *O. leuthneri* by dense vestiture of the body, large eyes and sculpture on pronotal disk. From *O. ege* sp. nov. it differs by the following features: head distinctly larger than pronotum, vertex posteriad of the eyes is dull, with poorly distinguishable punctures, antennae thicker, club slightly shorter, base of elytra posteriad of mesonotum with four clear punctures, body vestiture denser, consists of more short and thickened peg-like scales which are pointed to the apex.

Ecology: All specimens were collected by us in deciduous woodlands. Above the Sarıgöl village, in the vicinity of the village Yüksekoba (NE Turkey), they were collected at night with the sweeping net from the foliage of the aspen (*Populus tremula* L.); in Crimea, weevils were collected at night by beating the branches of the oak and plum (*Quercus* sp., *Prunus* sp.).

Otiorrhynchus leuthneri Smreczyński, 1977 (Figs. 5, 6).

Smreczyński, 1977: 377–378 (in the subgenus *Asphaerorrhynchus*).

Type data: The holotype was examined, deposited in the HNHM collection. The female specimen is provided with the following labels: 1) "Dr. F. Leuthner Djebel Akrab, 85, N. Syrien" – printed; 2) "Holotypus" – printed on red paper; 3) "*O. megareus* Reitt. Coll. Reitter"; 4) "*Otiorrhynchus megareus* Rtt. det. Csiki, 1944"; 5) "*Otiorrhynchus leuthneri* m. Smreczyński, det., 1975"; 6) "Holotypus *Otiorrhynchus leuthneri* Smrecz." – museum label in red edging.

The type corresponds completely with the original description of the species. The 4-7th segments of the right antennal flagellum with club, right fore tibia with tarsus, right middle leg, and 3–5th ventrites are missing. Vestiture on disk of elytra erased. The specimen was remounted by us on a rectangular card. The genital organs were placed in a drop of water-soluble fixing agent in the left posterior corner behind of the holotype.

Body length of the holotype 5.3 width 2.51 mm.

Redescription of the holotype: Body almost black, slightly brownish, antennae and legs reddish. Head capsule widely conical. Rostrum transverse, 1.28 times as wide as long. The widest point of rostrum 1.26 times as wide as the narrowest point at the base of pterygia.

Antennal scrobes rather broad. Apical margin of antennal scrobes situated considerably posteriad to the level of epistomal angles. Epistomal plate with deep, almost rectangular medio-apically emargination. Epistome on either side asymmetrically margined: its right side clearly contoured by carina with long hairs sticking along of entire length; the left side more or less smoothed and licked outwards, usually with sparse hairs located mainly in the apical part. Head at the level of the eyes wider than rostrum. Rostral dorsum in basal part almost parallel sided, in the distal half clearly broadened anteriorly; on the apical part 1.13 times as wide as frons. Rostral dorsum longitudinally flattened, frons with distinct transverse impression. Rostral dorsum rather roughly punctated, in its distal half punctations composed of thin longitudinal grooves. The median carina clear between of the weak flattened tubercle behind epistome to rather big pit on the frons, bordered laterally by thin grooves. Eyes small, impressed into head capsule especially on their dorsal margin. Width of frons 2.0 times the longitudinal diameter of an eye. Vertex with clear punctation.

Antennal scape gradually thickened from base to apex. 1-6th flagellum segments with subequal width. 1st segment 1.96 times as long as wide and slightly longer than 2nd segment, 2nd segment 1.54 times as long as 3rd, 3-6th segments roughly subequal, 1.18 times as long as wide, 7th segment slightly wider and longer than the 6th. Club 2.62 times as long as wide, slightly shorter than 5–7th segments of flagellum together, 1st segment of club slightly longer than half length of club.

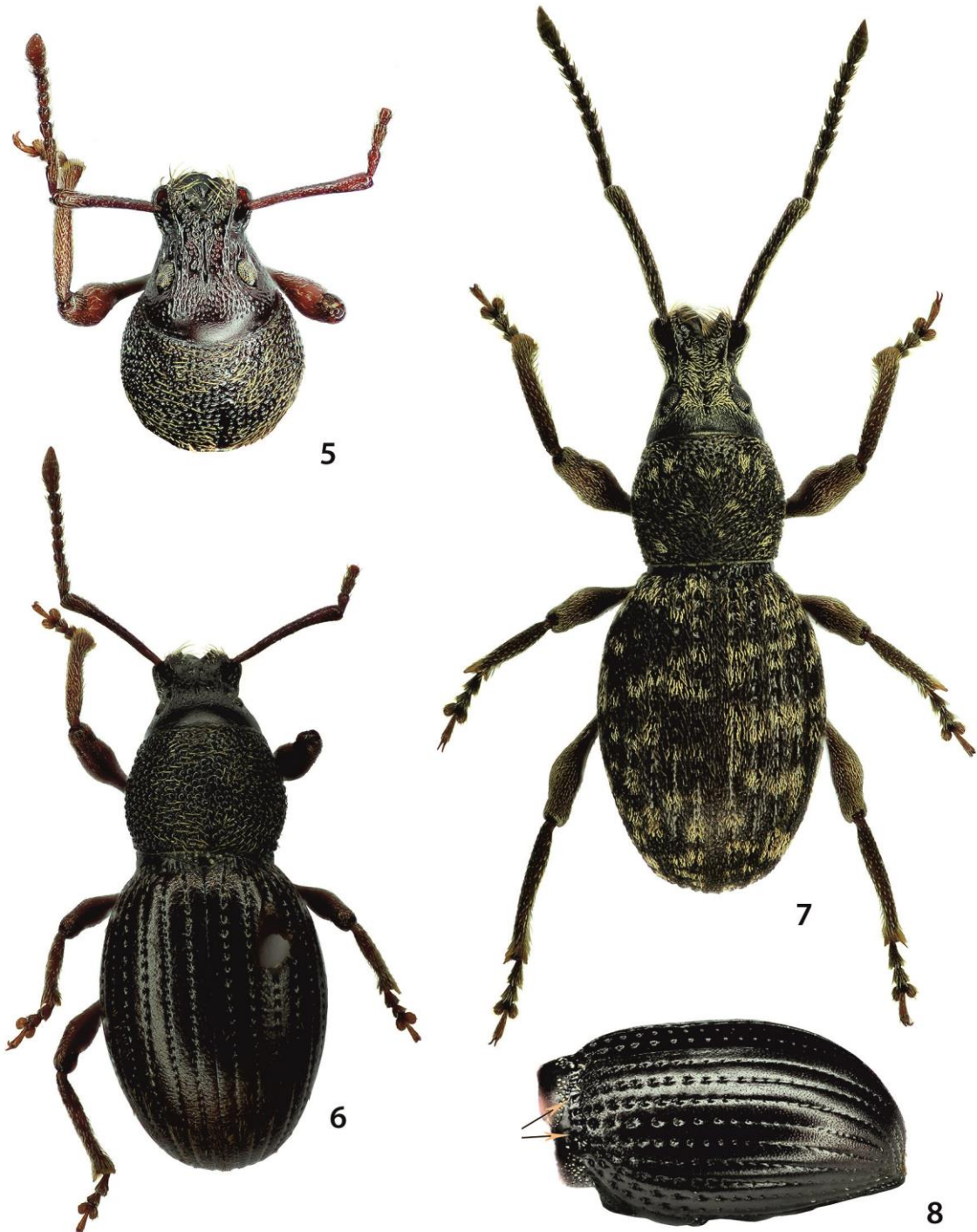
Pronotum transverse dolioliform, 1.26 times as wide as long, widest slightly basad of the middle. Disc of pronotum densely covered with round setiferous granules, the interspaces between granules narrow, like a line. The median carina of pronotum sinuous, barely developed.

Elytra elliptical, almost equally narrowed anteriorly and posteriorly, 1.4 times as wide as pronotum. Elytral declivity bent downward. Base of elytra immediately behind mesonotum with four clear punctures and longitudinal wrinkles on either sides of scutellum. Striae clearly narrowed posteriorly in the distal half of elytra.

Fore tibia slightly curved inward in preapical part, its outer apical angle chamfered, inner edge of tibia in the distal half with row of weakly visible tubercles. 2nd segment of the fore and middle tarsus barely transverse, on hind tarsus - as long as wide. Portion of the claw-

segment of fore tarsus protruding from a bilobed 3rd segment slightly longer than length of the 3rd segment.

Vestiture of the body not continuous, consisting of hairlike appressed scales. Setae on pronotum longer than on the elytra.



Figures 5–8. *Otiorrhynchus* Germar, head (5), female habitus (6, 7), elytra (8) lateral view. **5–6,** *O. leuthneri* Smreczyński (holotypus); **7–8,** *O. balcanicus* Stierlin.

Comparative diagnosis: Closely related to *Otiorrhynchus balcanicus* based on the following features: epistomal plate medio-apically deeply emarginated, the left side of epistomal carina

in basal portion more or less smoothed and licked outwards, flagellum segments broad and subcylindrical, elytra almost elliptical, the basal portion of elytra behind mesonotum with 4 clear punctures, fore tibia slightly curved inward in preapical part, its outer apical angle chamfered. The differences from related species are shown in the key.

Distribution: Type locality of *Otiorrhynchus leuthneri* – Djebel Aqrab (=Djebel Akrab) is located in north-western Syria eastward of Tartus, probably on the eastern slopes of Jabal Ansari.

Taxonomic notes: We suppose that *Otiorrhynchus arabicus* Mazur, 1983 is a junior synonym of *O. leuthneri*. The original description *O. arabicus* corresponds completely with the holotype *O. leuthneri*. The type of *O. arabicus* unfortunately is not available for study. It is known that *O. arabicus* described from the north-western Syria (Djebel El-Ansariya). According to its coordinates, the type locality of this species is not far from the state border with Turkey. Mazur (1983) reasonably compares *O. arabicus* with *O. balcanicus*, but he does not mention about *O. leuthneri*.

Ecology: Ecological data about of *O. leuthneri* is absent. However it is known that the type specimens of *O. arabicus* were collected by sifting of litter in a deciduous forest dominated by oak, maple and beech.

***Otiorrhynchus glebius* Davidian & Keskin, 2010** (Figs. 4, 13, 14, 19).

Davidian & Keskin, 2010: 62–65.

It is known for us only by the type specimens.

***Otiorrhynchus latinasus* Reitter, 1898** (Figs. 3, 11, 12, 20, 25, 27).

Reitter, 1898: 354; 1912: 123; Davidian & Gültekin, 2006: 491; Davidian & Keskin, 2010: 62.

Material: Turkey: Eski-Chehir [= Eskişehir] (Bodemeyer), 4 ♂♂, 3 ♀♀ (Budapest), 3 ♂♂ (ZIN); Erzurum Prov.: Tortum Distr., Yumaklı Vill. env., 1850 m, under *Crambe orientalis*, 18.V.1999 (L. Gültekin), 2 ♀♀; 2–3 km S of Tortum, 1650 m, 21.IX.2003 (L. Gültekin), 2 ♀♀; Hamamderesi, under *Crambe orientalis*, 27.VI.1999 (L. Gültekin), 4 ♀♀; Erzurum, Atatürk University Campus, 1850 m: 10.VI.1999 (L. Gültekin), 1 ♀; ibid, under *Centaurea solstitialis*, 19.V.2004 (L. Gültekin), 2 ♀♀; ibid, under *Artemisia* sp., 6.VI., 19.VI.2014 (Korotyaev B.A., Gültekin L. & Davidian G.E.), 10 ♀♀; Nenehatun, 1950 m, under *Crambe orientalis*, 17.VI.1998 (L. Gültekin), 2 ♀♀; Muş Prov., Hwy 955, 9.5 km NE of Varto, 39°11'58.0" N / 41°33'22.7" E, 2001 m, 14.VI.2006 (Korotyaev B.A.), 4 ♀♀; Karaman Prov., Bolkar Dağları, 7 km S of Berendi, 19.IV.2008 (Nabozhenko M.V.), 2 ♀♀.

Type material: The species was described based on material from the Konya Province of Turkey, which was collected by Dr K. Escherich. We studied 4 males and 7 females from the HNHM. We suppose that only one female from this material can definitely be attributed to the type. This type specimen is equipped with the following labels: 1) "Konia Kleinasien Escherich" - apparently handwriting of Reitter; 2) "*O. latinasus* m."- handwriting of Reitter; 3) "Coll. Reitter"- printed; 4) "Holotypus 1898 *Otiorrhynchus latinasus* Reitter" - a museum type's label in red edging. This specimen is designated here as lectotype. The lectotype is in satisfactory preservation: the elytra cracked and the vestiture on the dorsal side is abraded.

Length of the lectotype 6.3 mm, width 3.0 mm, pronotum 1.11 times as wide as long, elytra 1.42 times as long as wide.

The other 10 specimens are not correspond with type material: 7 of them were collected by Dr Bodemeyer and 3 - by Dr Korb. Material from Dr Bodemeyer includes 4 males and 3 females, equipped with geographical labels "Asia minor Eski-Chehir v. Bodemeyer" and "Dorylaion" (this geographical name is not mentioned in the description). Three males from Dr Bodemeyer are kept in the ZIN, too. The material from Dr Korb includes 3 females with geographical label "Anatolien Konia 1899 Korb". It is obvious that these beetles were collected later of the date of the species description.

Male: Head slightly shorter than pronotum. Antennal scrobes wide. Rostrum transverse, greatly expanded anteriorly, the width of the head at the level of the eyes less than the width of the rostrum at the level of pterygia. Epistome on each side symmetrically carinated. Apical wall of antennal scrobes strongly flattened and protrudes anteriorly of the epistomal angles. Rostral dorsum in the basal third almost parallel sided, greatly dilated apically. In lateral view, rostral dorsum slightly convex, frons without transverse impression. Base of the rostral dorsum slightly narrower than frons. Eyes oval, not protruding beyond the contours of the head, situated in the same distance from the dorsal and ventral sides of the head. Rostrum on the ventral side at the base of the pterygia with transverse sulcus, clearly visible in lateral view.

First segment of antennal flagellum 1.9 times as long as wide, and 1.09 times as long as the 2nd segment, 2nd - 1.28 times longer than 3rd, 3rd weakly elongated, 4-7th with subequal length and width, or slightly elongated, 7th - noticeably wider than preceding. Club pointed to apex, 2.2 times as long as wide, distinctly shorter than the last 3 segments of flagellum together.

Lateral sides of pronotum and elytra strongly rounded. Pronotum transverse, at the posterior margin broader than anterior. Disc of pronotum with a wide flattened median carina, in rather rough slightly elongated punctation.

The basal portion of elytra immediately behind of mesonotum almost smooth, with a distinct single puncture at the beginning of the 5th elytral stria, interspace between scutellum and that puncture with short wrinkles.

Femora without tooth, fore tibia thicker than middle and hind. Fore tibia straight, with strong dilated outer apical angle, the inner edge of tibia in apical 3/5 of length with row of slant denticles. The inner side of hind tibia in apical 2/5 widely impressed.

Tergite 7 with straight apical margin, tergite 8 markedly blunted, medio-apically emarginated, in lateral view with transverse groove. The first 2 ventrites flat, ventrite 5 on dorsal side in the middle of apical margin with distinct triangular tubercle.

Apodemes of aedeagus significantly longer than tube of the penis. Parameres narrow, dilated to tegmen and fused in basal part. Penis gradually curved in dorsoventral direction, lamella almost triangular in shape, rounded at the apex, slightly constricted laterally. Dorsal wall of the penis membranous. Endophallus with 2 preapical large size curved sclerotized plates, each of them with short dorsal thorn. Primary gonopore with a weakly sclerotized curved plate.

Vestiture appressed hairlike, without golden shine. The inner margin of the tibiae with long obliquely sticking setae.

Body length 5.9-6.2 mm, width 2.8-2.95.

Female: Ventrite 5 on dorsal side of the apical margin without tubercle. Body length 5.0-7.4 mm, width 2.4-3.4 mm.



Figures 9–26. *Otiorynchus* Germar, aedeagus dorsal (9, 11, 13) and lateral (10, 12, 14) view; spermatheca (15–20); ovipositor (21, 23, 25); spiculum ventrale (22, 24, 26). **9, 10, 17, 18, 23, 24, O. ege sp. nov.;** **11, 12, 20, 25, 27, O. latinasus** Reitter; **13, 14, 19, O. glebius** Davidian & Keskin; **15, 16, 21, 22, O. balcanicus** Stierlin.

Variability: Specimens from Bolkar Dağ differs by the shiny surface of elytra with faint sculpture.

Comparative diagnosis: From the all species of the subgenus *Choilisanus*, it differs by strongly flattened and dilated apical wall of antennal scrobes. By the head structure and fore tibia dilated apicad is most similar to *O. glebius*, from which differs by a broader body, punctured disc of pronotum and large sclerotized plates in armature endophallus and vagina. From *O. balcanicus*, *O. leuthneri* and *O. ege* sp. nov. is distinguishable by the following features: lateral sides of epistome symmetrically marginated, apical margin of the tergite 7 of female clearly emarginated.

Distribution: Widely distributed in Turkey, perhaps finding in Transcaucasia. In most of the range it is parthenogenetic, the males are known to us only from the Eskişehir Province.

Ecology: All specimens were collected by us in open treeless areas and are mainly associated with herbaceous vegetation from cruciferous (Brassicaceae) and compositae (Asteraceae).

Key to species of the subgenus *Choilisanus* allied to *O. balcanicus*

1(6). Apical wall of antennal scrobes not flattened. Epistome on each side asymmetrically marginated: the right side – carinated, the left - more or less smoothed and licked outwards. Epistomal plate medio-apically deeply emarginated. Frons with clear transverse impression. Fore tibiae in the preapical part distinctly curved inward, with a chamfered outer apical angle.

2(5). Disc of pronotum in the central part distinctly granulated. The basal part of elytra immediately behind of mesonotum with 4 distinct punctures. 3-7th segments of the antennal flagellum subcylindrical.

3(4). Eyes large, width of the frons 1.14-1.2 times the longitudinal diameter of the eye. Vertex immediately behind of the eyes matt, in poorly distinguishable punctations. 1st segment of the club noticeably shorter than half length of the club. Disc of pronotum in dense and large merging punctations, the interspaces between them are very narrow with small granules. 2nd segment of the fore tarsus is usually slightly elongated.....*O. balcanicus* Stierlin

4(3). Eyes small, width of the frons about 2 times the longitudinal diameter of the eye. Vertex immediately behind the eyes distinctly punctured. 1st segment of the club longer than half length of the club. Disc of pronotum entirely covered with rather large round setiferous granules. 2nd segment of the fore tarsus is barely transverse.....*O. leuthneri* Smreczyński

5(2). Disc of pronotum in the central part in a distinct double punctations, interspaces between punctures are wide and shiny, granules strongly flattened or absent. Basal part of elytra immediately behind of mesonotum with a single puncture at the beginning of the 5th elytral stria. 3-7th segment of the antennal flagellum conically enlarged apicad. 1st segment of the club noticeably shorter than half length of the club.....*O. ege* sp. nov.

6(1). Apical wall of antennal scrobes clearly flattened and enlarged. Epistome on each side symmetrically marginated. Epistomal plate medio-apically weakly emarginated. Frons without transverse depression. Fore tibiae straight, with a distinct extended outer apical angle.

7(8). Apical margin of the wall of antennal scrobes distinctly protruding anteriorly of the epistomal apical angles. Disc of pronotum in the central part punctured, without granules. Endophallus and vagina armed with large sclerotized plates.....*O. latinasus* Reitter

8(7). Apical margin of the wall of antennal scrobes situated slightly posteriad of the epistomal apical angles. Disc of pronotum covered in dense setiferous granules. Endophallus and vagina without large sclerotized plates.....*O. glebius* Davidian & Keskin

Acknowledgements

The authors would like to thank M. V. Nabozhenko (Southern Scientific Centre, Russian Academy of Sciences, Rostov-on-Don) for allowing to study his interesting materials, as well as B. A. Korotyaev (ZIN RAS) and O. Merkl (HNHM) kindly provided the opportunity to work with the collection of museums holdings. We would like to express our best thanks for two anonymous reviewers for their contributions. This study was supported with a joint international project supported by the Russian Foundation for Basic Research (RFBR) (Project No: 14-04-91373) and The Scientific and Technological Research Council of Turkey (TUBITAK) (Project No: 213O014).

References

- Davidian G. E. & Keskin B. 2010.** To the knowledge of the weevil genus *Otiorhynchus* Germar, 18124, subgenus *Choilisanus* Reitter, 1912 (Coleoptera: Curculionidae). *Russian Entomological Journal* 19(1): 61–65. (in Russian)
- Davidian G. E. & Gültekin L. 2006.** Contribution to the knowledge of the weevil genus *Otiorhynchus* (Coleoptera, Curculionidae) from northeastern Turkey and Transcaucasia. *Zoologicheskii Zhurnal* 85(4): 479–492. (in Russian)
- Keskin B. & Çevik I. E. 2007.** İzmir İli *Otiorhynchus* (Germar, 1822) (Coleoptera: Curculionidae: Enriminae) cinsi faunası üzerinde araştırmalar. *Türkiye Entomoloji Dergisi* 31(3): 225–239. (in Turkish)
- Magnano L. & Alonso-Zarazaga M. A. 2013.** Otiorhynchini, p. 302-347. – In: Löbl I. & Smetana A. (eds): *Catalogue of Palaearctic Coleoptera. Curculionoidea II*. Volume 8. Leiden, Brill, 700 pp.
- Mazur M. 1983.** Neue *Otiorhynchus*-Arten aus Bulgarien, Syrien und der Türkei (Coleoptera, Curculionidae). *Reichenbachia* 21: 27–34.
- Reitter E. 1912.** Bestimmungstabellen der Untergattungen: *Arammichnus* Gozis und *Tyloderes* Schönh. des Genus *Otiorrhynchus* Germ. aus der palaearktischen Fauna. *Wiener Entomologische Zeitung* 31: 109–154.
- Reitter E. 1913.** Bestimmungstabellen der *Otiorrhynchus*-Arten mit ungezähnten Schenkeln aus der palaearktischen Fauna. *Wiener Entomologische Zeitung* 32: 25–118.
- Smreczyński S. 1977.** Neue *Otiorhynchus*-Arten aus der Türkei (Coleoptera, Curculionidae). *Acta Zoologica Cracoviensia* 22: 373–385.
- Stierlin W. G. 1861.** Revision der europäischen *Otiorhynchus*-Arten. *Berliner Entomologische Zeitschrift* 5: 1–344.

Correspondence: Genrik E. Davidian, e-mail: gdavidian@yandex.ru

Received: 12.02.2015 Accepted: 07.03.2015 Published: 10.03.2015

Cite paper: Davidian G. E. & Gültekin L. 2015. Contribution to the knowledge of the weevil subgenus *Choilisanus* Reitter, 1912, genus *Otiorhynchus* Germar, 1822 (Coleoptera: Curculionidae: Entiminae). *Journal of Insect Biodiversity* 3(4): 1–13.

<http://dx.doi.org/10.12976/jib/2015.3.4>

<http://www.insectbiodiversity.org>