Contributions to Natural History
SCIENTIFIC PAPERS FROM THE NATURAL HISTORY MUSEUM BERN

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Burgergemeinde Bern

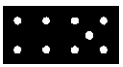
NATURHISTORISCHES MUSEUM BERN

No. 33 · 21 December 2016

Cover illustration:

Otiorhynchus charleshuberi sp. nov., Foto: C. Germann

ISSN 1660-9972



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A new *Otiorhynchus* Germar, 1822 subgenus *Tecutinus* Reitter, 1912 from Anatolia (Coleoptera, Curculionidae)

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ABSTRACT Contrib. Nat. Hist 33: 1–10

***Otiorhynchus* (*Tecutinus*) *charleshuberi* sp. nov. is described from Ak Dağları in Anatolia. The new species is easily recognizable within the subgenus based on its gracile habitus and the pointed bispinate tip of the penis. Based on morphology the new species is closest to *O.* (*Tecutinus*) *catonii* Lona, 1943 and *O.* (*Tecutinus*) *kindermanni* Stierlin, 1861. An updated key to all species of *Tecutinus* is provided.**

Keywords: Entiminae, *Otiorhynchus*, new species, Anatolia, taxonomy.

Introduction

The subgenus *Tecutinus* Reitter, 1912 comprises 24 species including the new one. The species are distributed in the Middle East, almost all in Turkey (Magnano & Alonso-Zarazaga 2013), except for three species from central Caucasus, Armenia, Lebanon and most probably Dagestan, and *O. lefkaoriensis* Germann & Colonnelli, 2015 recently discovered on Crete (Germann & Colonnelli 2015). Species of *Tecutinus* are comparatively well characterised within the exceptionally species-rich genus *Otiorhynchus* Germar, 1822 within the Entiminae. For details see Reitter (1912a, 1912b), Lona (1943), Braun (1988, 1989), Benedikt (2000) and Germann & Colonnelli (2015). The main characteristics are the very wide head with large vertex, the small protruding button-like eyes surrounded by furrows, edentate femora and metatibiae often modified (incised) on inner sides in males.

Material & Methods

Photographs were taken with a 3.15-megapixel digital camera (ProgRes CT3) on a stereomicroscope (Nikon SMZ 1000). Series of images were captured with ProgRes Capture Pro 2.8.8 for Windows and stacked with the freely available software CombineZP Image Stacking by Alan Hadley. Body length was measured from the anterior margin of the rostrum to the apex of the elytra. Usually the rostrum is not included in the body size of weevils, as the rostrum length varies considerably – also or especially between sexes in "long nosed" weevils (but not in *Otiorhynchus*). But since Braun (1988, 1989, 2000) included it, and the measurements have to be comparable, I followed this practice as an exception in this case, and all sizes are adapted to this standard. Label data is reported literally, additional remarks are set in square brackets.

Abbreviations:

NMBE	Naturhistorisches Museum der Burgergemeinde Bern;
NMSO	Naturmuseum Solothurn;
cCG	collection Christoph Germann, Thun (Switzerland).

Results

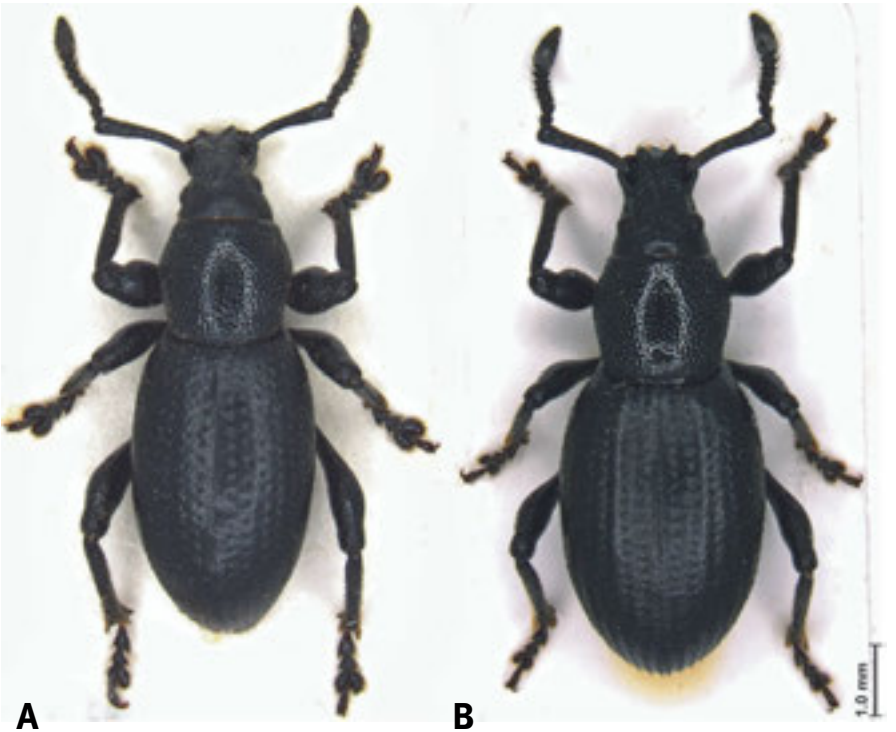
Otiorhynchus (*Tecutinus*) *charleshuberi* sp. nov. (Figs 1–3)

Type material: Holotype: ♂ "TR – Prov. [Province] Antalya Uyluk Tepes/Ak Dağları Gömbe/Elamlı 2300–2600m N 36°33,31 E 29°35,26, 8.6.2006" // Red label: Holotype *Otiorhynchus* (*Tecutinus*) *charleshuberi* sp. nov. des. Germann, 2016 (NMBE). Paratypes: 2 ♂, 2 ♀ Same data as holotype // Red label: Paratype *Otiorhynchus* (*Tecutinus*) *charleshuberi* sp. nov. des. Germann, 2016 (cCG, NMBE). 3 ♀ "TR Region Elmalı Uyluk Tepesi (Akdag) bei Gömbe 2300–2700 m 8.6.2006 [N]36°33, [E]29°35 (NMBE, NMSO). // All with red labels: Paratype *Otiorhynchus* (*Tecutinus*) *charleshuberi* sp. nov. des. Germann, 2016.

Description

Size (including rostrum): Holotype male: 7.7 mm, Paratypes males: 7.7–7.9 mm, Paratypes females: 8.1–8.5 mm.

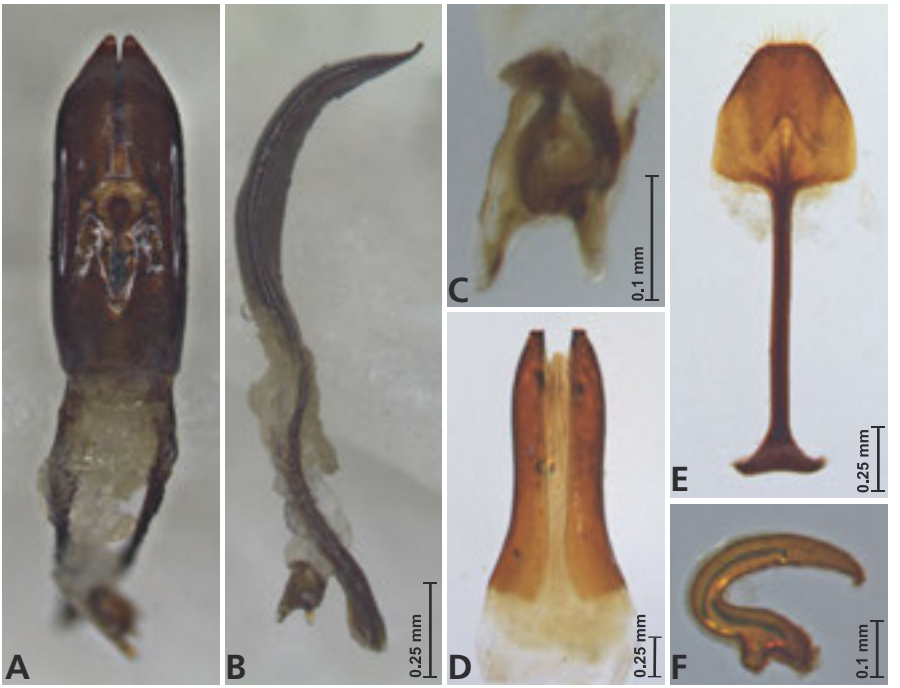
Habitus (Figs 1 A–B), body black. Head wide; eyes button-like, convex, laterally protruding from head outline, surrounded by furrows; rostrum as long as wide, rostral dorsum flat and shiny, punctate-striolate; vertex one fourth wider than rostral dorsum between insertions of antennae, with puncture-like fovea; pterygia wider than width of head at level of the eyes.



Figs 1 A–B. Habitus of *Otiorhynchus* (*Tecutinus*) *charleshuberi* sp. nov., A) holotype male. B) paratype female.

Antennae scape short and robust, weakly widening towards tip, of about twice its width at base; first and second funicular segments of equal size, 1.2 times longer than wide; third to seventh transverse, club fusiform. Pronotum transverse (length/width: 0.81–0.86), widest behind first third, sides irregularly rounded, anterior margin as wide as posterior one. Disc of pronotum densely punctured, surface shining, without microsculpture; sides with flat umbilicate tubercles. Short bowed brownish bristles arise from punctures and tubercles. Elytra (length/width males: 1.6; females: 1.48–1.5) elongate oval, widest in the middle, without shoulders and regularly rounded towards base. Striae with shallow regular punctures, from part of them arise tiny

bowed bristles. Intervals flat with irregularly standing fine punctures, from which short and bowed, mainly brownish bristles arise. Anterior margins of punctures towards the sides of elytra somewhat elevated, thus appearing as sharp microscopic tubercles. Surface of elytra chagrinated, thus appearing duller than the shiny pronotum. Legs very robust, femora unarmed, protibiae not dilated outwards, male hind tibiae not incised on inner side at apex; tarsi very strong. Genitalia penis subparallel-sided from base up to apical fourth, from there on narrowed towards the characteristic bispinate apex (Figs 2 A–B). Internal sac consisting of four twisted sclerites (Fig. 2 C).



Figs 2 A–F. Genitalia of holotype male (A–C) and paratype female (D–F) of *Otiorhynchus* (*Tecutinus*) *charleshuberi* sp. nov. A) penis dorsal B) ditto lateral C) internal sac D) ovipositor E) spiculum ventrale F) spermatheca.

Ovipositor rather simple, very robust and strongly sclerotized, pear-shaped (Fig. 2 D). Apex without styli or bristles. Spiculum ventrale very robust and entirely strongly sclerotized, plate trapezoid, apical margin straight and set with hairs (Fig. 2 E). Spermatheca with long bowed cornu, short globular nodulus and short but thick ramus (Fig. 2 F).

Sexual dimorphism: Elytra of males narrower than in females; legs in males stronger, tarsi – especially third bilobed segment – broader, at least twice as

big as in females; pro- and mesotarsi in males more robust than metatarsi. Antennae more robust in females; funicular segments of antennae shorter, thus more transverse (Figs 1 A–B).

Diagnosis: The new species is morphologically close to *O. catonii* Lona, 1943 and *O. kindermanni* Stierlin, 1861 based on the pointed apex (although elongated tongue-like in these two) of the penis, and the bare and elongate elytra. The chagrinated surface of the elytra is shared with *O. catonii* and the four species *O. salbakosanus* Lona, 1943, *O. karagolensis* Smreczyński, 1970, *O. brevicornis* Boheman, 1842 and *O. staveni* Braun, 2000.

Otiorhynchus charleshuberi sp. nov. is the fourth member of the *O. catonii*-group sensu Braun (although the placement of *O. lefkaoriensis* from Crete Island is at best preliminary, as the species differs substantially from any other member of *Tecutinus*; Germann & Colonnelli 2015). Interestingly, regarding the general habitus of *O. charleshuberi* sp. nov., there is a superficial similarity with members of the subgenus *Phalanthorrhynchus* Reitter, 1912 such as *O. arcticus* Fabricius, 1780, *O. johannis* Stierlin, 1881 and especially *O. praecellens* Stierlin, 1886. Where the last shows the same chagrinated elytral surface and a shiny pronotum. However, the following characters typical for *Tecutinus* allow an unambiguous differentiation: the very wide head, the apically conical narrowed rostral dorsum, the small, button-like protruding eyes surrounded by furrows and – especially characteristic in the present new species – the very strong antennae with transverse funicular segments.

Derivation of name: The new species is named after Dr. Charles Huber, curator of the insect collection at the NMBE from 1987 to 2015, esteemed colleague and renowned Carabidologist. Among other projects, he initiated the hopefully ongoing revision and digital registration of currently more than one million invertebrates at the NMBE, where the author had the opportunity of being involved from 2003 to 2016 with at present 20.000 databased Curculionoidea.

Ecology: The new species was collected together with similarly black and shiny Carabidae using an exhaustor under stones on Alpine meadows above 2300 m a.s.l. altitude.

Key to species (males are required; the characters of *O. crassicornis* Gyllenhal, 1839 are based on Stierlin's redescription (1861)). For distribution see Fig. 3.

1. Tip of penis pointed and elongated tongue-like 2
– tip of penis pointed, cut or rounded 3

2. Disc of pronotum densely punctured, pronotum transverse; interspaces on elytra leather-like, finely punctured, striae shallow. Rostrum short, rectangular, pterygia narrow; antennae thicker; metatibiae in males less deeply incised, margin not carinate (6.8–7.5 mm). Lebanon [Pass between Ainata and Becharré; Mount Sannin above Beyrouth]..... ***kindermanni*** Stierlin, 1861
– disc of pronotum tuberculate, tubercles flat, irregular and intermixed with punctures; rostrum longer than wide; elytra chagrinated; antennae slenderer; metatibiae of males more deeply incised on inner side before apex, margin granulate (7.0–9.5 mm). Monte Salbakos [=Karci Dağları]..... ***catonii*** Lona, 1943
3. Tip of penis pointed..... 4
– tip of penis cut or rounded 5
4. Habitus robust with broad elytra, strongly tuberculate pronotum and simply pointed tip of penis (8.5–10.3 mm). Crete Island ..... ***lefkaoriensis*** Germann & Colonnelli, 2015
– habitus gracile, elytra elongate oval, disc of pronotum punctured, tip of penis pointed and bispinate (7.7–8.5 mm). Ak Dağları ..... ***charleshuberi*** sp. nov.
5. Elytra with fine grey hairs..... 6
– elytra without fine grey hairs 10
6. Small species (6.2–6.5 mm); vestiture of elytra consisting of evenly distributed dense short grey hairs. Giresuni Dağları ..... ***torulensis*** Benedikt, 2000
– bigger species (>8.5 mm); vestiture not homogenous but patchy or intermixed with dark bristles 7
7. Vestiture of elytra with patches of grey hairs without dark bristles; inner sides of protibiae in males scabrous and with tooth in the middle (9–10 mm). Eskişehir..... ***escherichi*** Reitter, 1898
– vestiture with grey hairs and dark bristles; inner sides of protibiae in males without tooth in the middle 8
8. Pronotum transverse with shiny tubercles, laterally strongly rounded; rostrum longer, rostral dorsum strongly furrowed (size not known). "Persia occidentalis" [most likely Dagestan]..... ***crassicornis*** Gyllenhal, 1839
– pronotum less transverse with flattened dull tubercles, laterally less rounded; rostrum shorter, rostral dorsum flat 9
9. Rostral dorsum short and well separated from head, rostrum forming an equilateral triangle; metatibiae in males less deeply incised on inner margin before apex (8.5–9 mm). Bulgar Maaden [= Bolkar Dağları]..... ***crinitellus*** K. Daniel & J. Daniel, 1902

- head less separated from rostrum, rostrum longer, forming an acute triangle; metatibiae in males more deeply incised on inner margin before apex (9–10.5 mm). Iskilib ..... ***paracrinitellus*** Braun, 1989

10. Striae on elytra with coarse grooves 11
– striae not groove-like deepened 13
11. Grooves very broad and irregular, overlapping in first two rows and in rows 3 and 4, therefore first and third interspaces not visible; disc of pronotum densely set with flat tubercles, not punctured; metatibiae of males strongly incised on inner margin before apex; apex of fore tibiae clearly protruding outwards in both sexes (8.3–10.3 mm). Mihaliccik .... ***heinzianus*** Braun, 1988
– grooves on elytra small, standing in regular rows, first and third interspaces visible; disc of pronotum punctured; apex of fore tibiae straight or weakly protruding outwards 12
12. Pronotum narrow; meso- and metatibiae in males only weakly broadened, metatibiae inconspicuously incised (7.5–9.5 mm). "Gebirge Armeniens" [from NE Turkey (Artvin) to central Caucasus, Armenia] .... ***cribripennis*** Hochhuth, 1851
– pronotum broader; meso- and metatibiae in males strongly broadened towards apex, inner sides of metatibiae strongly incised before apex (8.5–10 mm). "Amasia" ..... ***pseudocribripennis*** Braun, 1988
13. Elytral striae strong, pronounced 14
– elytral striae shallow or hardly visible 17
14. Disc of pronotum and sides mainly with flattened tubercles, only scarce and isolated punctures in between 15
– disc of pronotum mainly punctate, small tubercles towards sides of pronotum 16
15. Antennae short and thick with transverse funicular segments; smaller species (<8 mm); pronotum broad, laterally strongly rounded; tip of penis somewhat narrowed towards tip, with straight fore margin (7.8–8 mm). Ikisdere ..... ***ikisderensis*** Smreczyński, 1970
– antennae slenderer with funicular segments less transverse; bigger species (>9 mm); pronotum narrower, laterally less rounded; penis rounded (not cut) at tip (9–10.5 mm). Sivas Kizildag Gecidi .... ***riedeli*** Braun, 1989
16. Antennae slenderer, funicular segments less transverse; metatibiae in males less deeply incised on inner margin before apex; penis more rounded at tip (8.2–8.5 mm). Cesarea [Erciyas Dagi] .... ***caesareus*** K. Daniel, 1906
– antennae thicker, funicular segments more transverse; metatibiae in males

more deeply incised on inner side before apex; penis cut, almost angular and faintly divergent just before tip (7.1–8 mm). Soganli Dagi ..... ***soganliensis*** Smreczyński, 1977

17. Surface of elytra without chagrination, leather-like with tiny sharp tubercles on interspaces towards sides and declivity 18
– elytral surface chagrinated (inconspicuous only in *karagolensis*), with tiny tubercles or punctures on interspaces 21
18. Frons deepened; body shorter; pronotum more gracile, much smaller than elytra; protibiae almost straight, only weakly granulated; metatibiae in males deeply incised on inner side before apex (7–9.9 mm). Ilgaz Gecidi ..... ***fremuthi*** Braun, 1989
– frons vaulted; body massive, oval to broad oval; pronotum stronger; metatibiae in males either deeply incised on inner side before apex (*tmolosensis*) or only moderately incised 19
19. Eyes strongly protruding; apex of protibiae only weakly protruding outwards; metatibiae of males on inner margin deeply incised before apex; elytra at disc flattened, declivity less steep (10.5–11 mm). Tmolos Dağları [=Boz Dag]..... ***tmolosensis*** Lona, 1943
– eyes less protruding; apex of protibiae strongly protruding outwards (*Arammichnus*-like); elytra at disc convex; declivity steeper 20
20. Eyes smaller; protibiae emarginate on inner side with several tooth-like tubercles along the middle, apex protruding outwards (8–9.5 mm). Sultan Dağlar..... ***gymnopterus*** K. Daniel & J. Daniel, 1902
– eyes bigger; protibiae without tooth-like tubercles on inner side, only weakly granulate (8–9.6 mm). Tarsus [= Mersin]; Camliyayla..... ***latifrons*** Stierlin, 1890
21. Bigger species (>10 mm) with massive body; metatibiae of males broadened but not cut on inner side before apex (10–10.5 mm). Monte Salbakos [= Karci Dağları]..... ***salbakosanus*** Lona, 1943
– smaller species (<8.5 mm); body less massive..... 22
22. Antennae short and thick; funicular segments transverse; microsculpture of elytra less apparent; metatibiae with long spur-like apex on inner side (6.7–8.5 mm). Giresun Dağları..... ***karagolensis*** Smreczyński, 1970
– Antennae slenderer, only some funicular segments transverse; microsculpture of elytra more apparent; metatibiae without spur 23
23. Antennae with funicular segments from fourth on transverse; elytra oval; apex of metatibiae in males moderately incised on inner side before apex (6.2–7.8 mm). "Constantinopolis" [Bithynian Olymp; Uludag]..... ***brevicornis*** Boheman, 1842

– funicular segments globular, segments six and seven slightly transverse; elytra short oval, stout; apex of metatibiae in males almost straight and inconspicuous (6.3–7.2 mm). Gümüshane; Kostandagi Gecidi .....
.....***staveni*** Braun, 2000

Fig. 3. Map providing an overview on all *Otiorhynchus* (*Tecutinus*) species described so far: 1) *brevicornis* Boheman, 1842; 2) *caesareus* K. Daniel, 1906; 3) *catonii* Lona, 1943; 4) *crassicornis* Gyllenhal, 1839; 5) *cribripennis* Hochhuth, 1851; 6) *crinitellus* K. Daniel & J. Daniel, 1902; 7) *escherichi* Reitter, 1898; 8) *fremuthi* Braun, 1989; 9) *gymnopterus* K. Daniel & J. Daniel, 1902; 10) *heinzianus* Braun, 1988; 11) *ikisderensis* Smreczyński, 1970; 12) *karagolensis* Smreczyński, 1970; 13) *kindermanni* Stierlin, 1861; 14) *latifrons* Stierlin, 1890; 15) *lefkaoriensis* Germann & Colonnelli, 2015; 16) *paracrinitellus* Braun, 1989; 17) *pseudocribripennis* Braun, 1988; 18) *riedeli* Braun, 1989; 19) *salbakosanus* Lona, 1943; 20) *soganliensis* Smreczyński, 1977; 21) *staveni* Braun, 2000; 22) *tmolosensis* Lona, 1943; 23) *torulensis* Benedikt, 2000; 24) *charleshuberi* sp. nov. (copyright by Google).

Acknowledgements

The specimens of the new species were accidentally collected together with larger series of carabid beetles during a project of Antalya University in collaboration with the NMBE in 2005–2006. I cordially thank Elsa Obrecht (Küttigkofen) for checking the English, and the referees for their helpful remarks on an earlier draft of the manuscript.

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