Bulletin de la Société entomologique de France, **121** (4), 2016 : 461-468.

Some notes on Mediterranean Entiminae deposited in Paris Museum (Coleoptera, Curculionidae, Entiminae, Cyphicerini, Holcorhinini, Polydrusini)

by Hélène Perrin[1] & Roman Borovec[2]

[1] Muséum national d'Histoire naturelle, Département Systématique et Évolution, UMR 7205, 57 rue Cuvier, F – 75231 Paris cedex 05, France <hperrin@mnhn.fr>
[2] Sloupno 64, CZ-503 53 Smidary, Czech Republic <romanborovec@mybox.cz>

http://zoobank.org/5D02E276-A979-4317-8B02-9CDEDC43D7FF

Abstract. – *Holcophloeus numidicus* n. sp. from Algeria is described and compared with the other species of the genus. The following new synonymies are proposed: *Gyratogaster wittmeri* Pesarini, 1971, n. syn. of *Leianisorhynchus pubescens* Pic, 1927, and *Scythropus breviceps* Peyerimhoff, 1929, n. syn. of *Pachyrhinus desbrochersi* (Raffray, 1873). Lectotypes of the following species are designated (current names added in square brackets): *Scythropus desbrochersi* Raffray, 1873 [*Pachyrhinus desbrochersi* (Raffray, 1873)] and *Scythropus breviceps* Peyerimhoff, 1929 [*Pachyrhinus desbrochersi* (Raffray, 1873)]. The previously unknown male of *Gyratogaster larinoides* (Reitter, 1896) is described.

Résumé. – **À propos d'Entiminae méditerranéens déposés au Muséum national d'Histoire naturelle, à Paris (Coleoptera, Curculionidae, Entiminae, Cyphicerini, Holcorhinini, Polydrusini)**. *Holcophloeus numidicus* n. sp. d'Algérie est décrit et comparé aux espèces voisines. De nouvelles synonymies sont proposées : *Gyratogaster wittmeri* Pesarini, 1971, n. syn. de *Leianisorhynchus pubescens* Pic, 1927, et *Scythropus breviceps* Peyerimhoff, 1929, n. syn. de *Pachyrhinus desbrochersi* (Raffray, 1873). Les lectotypes sont désignés pour les espèces suivantes (leur nom actuel est précisé entre crochets): *Scythropus desbrochersi* Raffray, 1873 [*Pachyrhinus desbrochersi* (Raffray, 1873)] and *Scythropus breviceps* Peyerimhoff, 1929 [*Pachyrhinus desbrochersi* (Raffray, 1873)]. Le mâle de *Gyratogaster larinoides* (Reitter, 1896), jusqu'à présent inconnu, est décrit.

Keywords. – Taxonomy, new species, new synonyms, Palaearctic region.

This paper is a continuation of the ongoing study of Entiminae from the western part of the Palaearctic region, based on the unique material deposited in the Muséum national d'Histoire naturelle, in Paris. It gives information about type material never studied since the time of the description and brings the discovery of a new species of *Holcophloeus* Borovec & Meregalli, 2013, a recently described genus with three extremely seldom species known only from northwestern Africa.

Material and methods

The total length of the examined specimens was measured in profile from the anterior border of the eyes to the apex of the elytra, thus excluding the rostrum. Ratios between width and length of rostrum, pronotum, elytra and antennal and tarsal segments are of maximum width and length of the respective parts in dorsal view. Dissected female genitalia were embedded in Solakryl BMX (Medika, Prague); male genitalia were mounted dry. Genitalia are mounted on the same card as the respective specimen. The terminology of rostrum and genitalia follows Oberprieler *et al.* (2014). The lectotypes and paralectotypes are designated in order to stabilize the nomenclature in this genus according to Article 74.7.3 of the Code (ICZN, 1999).

Exact label data of type material are cited: separate labels are indicated by double slash (//), separate lines by a simple slash (/); our comments are found in square brackets, using the following abbreviations: [p] – printed, [hw] – handwritten.

The material is deposited in the following collections (identified by the acronyms): **MNHN**, Muséum national d'Histoire naturelle, Paris, France; **RBSC**, Roman Borovec personal collection, Sloupno, Czech Republic.

Systematics

Tribe **Cyphicerini** Lacordaire, 1863

Subtribe **Mylacorrhinina** Reitter, 1913

Gyratogaster larinoides (Reitter, 1896) (fig. 1-4, 10, 15)

Arammichnus larinoides Reitter, 1896: 237.
Gyratogaster larinoides (Reitter): Winkler (1932: 1447); Lona (1938: 420); Borovec (2003: 6); Yunakov (2013: 275).

Type locality. – Araxesthal bei Ordubad [Turkey].

Type material examined. – The holotype was examined by Borovec (2003).

Additional material examined. – 1 ♂, Missis [30 km E of Adana] (MNHN, Pic collection).

Remarks. – This species is, apart the female holotype, known only from eight other females from north and northeastern Turkey. We present here the first male of this very seldomly collected species. The male differs from the females by the more vaulted pronotum, shorter elytra, slenderer

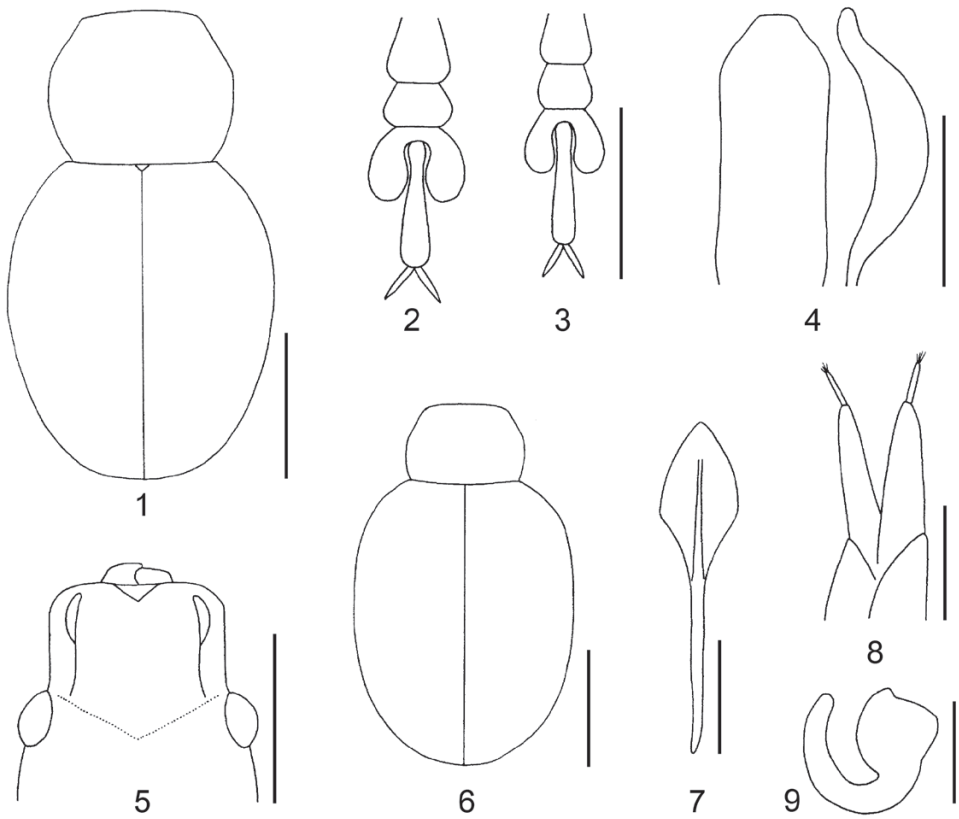

Fig. 1-9. – Entiminae, morphological details. – 1-4, *Gyratogaster larinoides* (Reitter): 1, pronotum and elytra, dorsal view (scale = 1.00 mm); 2, ♂, protarsus; 3, ♂, metatarsus (scale = 0.50 mm); 4, penis ventral and lateral view (scale = 0.50 mm). – 5-9, *Holcophloeus numidicus* n. sp.: 5, head and rostrum, dorsal view (scale = 0.50 mm); 6, pronotum and elytra, dorsal view (scale = 1.00 mm); 7, ♀, sternite VIII (scale = 0.50 mm); 8, gonocoxites (scale = 0.50 mm); 9, spermatheca (scale = 0.125 mm).

rostrum and mainly by the distinctly more robust tarsi. Elytra in male (fig. 1) 2.06× as long as pronotal length (females have elytra 2.19-2.24× as long as pronotal length), rostrum 1.12× as wide as long (1.21-1.24× as wide as long in females). Protarsi in male (fig. 2) with segment 2 1.6× as wide as long, segment 3 1.2× as wide as long and 1.5× as wide as segment 2, onychium 0.8× as long as segment 3; metatarsi in male (fig. 3) with segment 2 1.2× as wide as long, segment 3 1.2× as wide as long and 1.5× as wide as segment 2, onychium 1.1× as long as segment 3 (protarsi in females with segment 2 1.1× as wide as long, segment 3 1.3× as wide as long and 1.5× as wide as segment 2, onychium 1.2× as long as segment 3; metatarsi in females with segment 2 1.1× as wide as long, segment 3 1.2× as wide as long and 1.4× as wide as segment 2, onychium 1.4× as long as segment 3). Penis (fig. 4) short and wide, ventrally subparallel-sided with slightly concave sides, apex shortly obtuse, weakly concave before tip; laterally weakly and regularly curved with tip shortly lengthened, moderately wide; by obtuse tip clearly different from penis of all other species of *Gyratogaster*.

Leianisorhynchus brunnescens Pic, 1905 (fig. 11, 16)

Leianisorhynchus brunnescens Pic, 1905: 179. Winkler (1932: 1451); Lona (1938: 421); Borovec (2003: 15); Yunakov (2013: 276).

Type locality. – No locality in the description, only "Turquie d'Asie" in the title of the publication.

Type material examined. – Holotype: ♀ (MNHN, Pic coll.), "Adana / Boyadjan [hw] // type [hw] // *Leianisorhynchus* [hw] // *L. brunnescens* / Pic [hw] // *Holc. tomentosus* / Dsbr sans doute / même espèce / immature [Dsbr (for Desbrochers) probably / the same species / not mature] [hw] // type [p, red] // Muséum Paris / Coll. M. Pic [p] // holotypus ♀ / *Leianisorhynchus* / *brunnescens* Pic, 1905 / Perrin & Borovec vid. 2016 [p, red] // MNHN / EC7510 [p]".

Remarks. – *Leianisorhynchus brunnescens* was described based on a single specimen. Borovec (2003) did not examine the holotype in his revision of *Leianisorhynchus*, and we can here confirm that the holotype of *L. brunnescens* fits the concept of the species used in the revision. It is a very seldomly collected species, known only from four females, including the holotype.

Leianisorhynchus pubescens Pic, 1927 (fig. 12, 17)

Leianisorhynchus pubescens Pic, 1927: 2. Yunakov (2013: 276).

Syn. *Gyratogaster wittmeri* Pesarini, 1971: 144, **n. syn.** Pesarini (1975: 45). Type locality: Tekir (Turchia, regione del Tauro centrale) (Turkey, Central Taurus region).

Leianisorhynchus wittmeri (Pesarini): Borovec (2003: 6); Borovec (2007: 3); Yunakov (2013: 276).

Type locality. – Asie M^re^ [Asia Minor].

Type material examined. – *Leianisorhynchus pubescens.* Holotype: ♀ (MNHN, Pic coll.), "Tarsous [W of Adana, Turkey] [hw] // *Leianisorhynchus* / *pubescens* / n. sp. [hw] // Muséum Paris / Coll. M. Pic [p] // holotypus / *Leianisorhynchus* / *pubescens* Pic, 1927 / Perrin & Borovec vid. 2016 [p, red] // MNHN / EC7511 [p]".

Gyratogaster wittmeri. Holotype and paratype were examined by Borovec (2003).

Remarks. – *Leianisorhynchus pubescens* was overlooked in the catalogues (Winkler, 1932; Lona, 1938) and it was also missing in the last revision of the genus (Borovec, 2003). The holotype of *Leianisorhynchus pubescens* is conspecific with the later described *Gyratogaster wittmeri* Pesarini, 1971, which is thus a subjective younger synonym of it.

Tribe **Holcorhinini** Desbrochers des Loges, 1898

The recently described genus *Holcophloeus* Borovec & Meregalli, 2013, *in* Borovec *et al.* (2013), contains three species: *H. cruciatus* (Seidlitz, 1868), described originally under the name *Trachyphloeus* Germar, 1817, and known from Algeria, and two recently described species:

H. laurae Borovec & Meregalli, 2013, from Morocco and *H. weilli* Borovec & Meregalli, 2013, from Libya. The currently discovered historical specimen of a new species from Algeria suggests the possibility that this genus includes more species in northwestern Africa.

***Holcophloeus numidicus* n. sp.** (fig. 5-9, 13, 18)

http://zoobank.org:act:B27AF3FD-8CDC-43C0-8728-14EA2AD2F51F

Holotype: ♀, "[Algeria, Batna] tondu [lgt.] / Aïn-Touta [p] // Museum Paris / Coll. M. Pic [p] // holotypus / *Holcophloeus* / *numidicus* n. sp. ♀ / Perrin & Borovec det. 2016 [p, red] // MNHN / EC7509 [p]" (MNHN, Pic coll.).

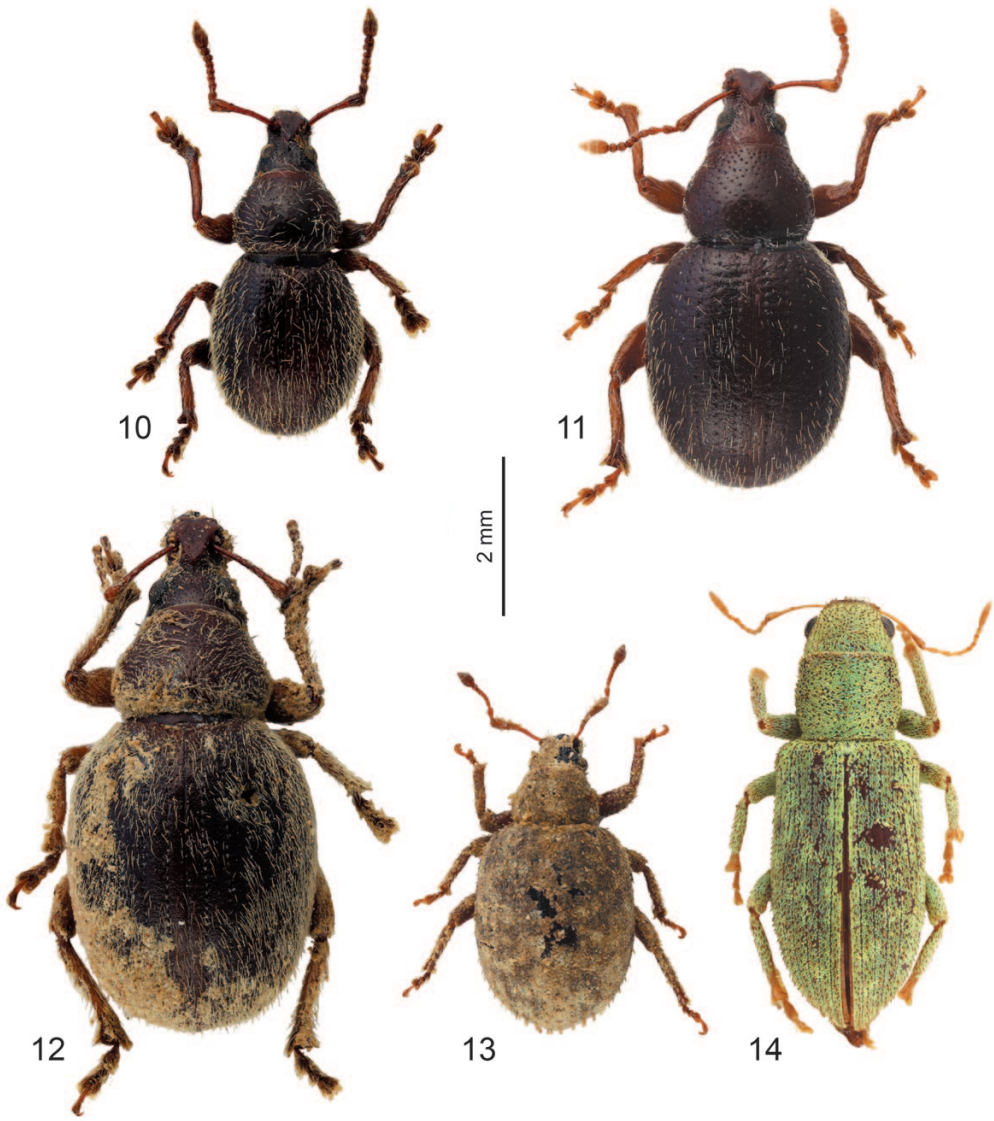

Fig. 10-14. – Entiminae, habitus. – 10, *Gyratogaster larinoides* (Reitter), ♂. – 11, *Leianisorhynchus brunnescens* Pic, ♀ holotype. – 12, *Leianisorhynchus pubescens* Pic, ♀ holotype. – 13, *Holcophloeus numidicus* n. sp., ♀ holotype. – 14, *Pachyrhinus desbrochersi* (Raffray), lectotype.

Description. – Body length 3.19 mm. Body dark brownish, antennae and legs paler, rusty reddish. The whole body, except of antennal funicles, clubs and tarsi, densely covered with dense appressed scales; scales in dorsal part of body moderately large, rounded, finely longitudinally striate, imbricated, 4-5 across one elytral interval. Elytral interval with one regular row of semierect setae, setae subspatulate, widest at apical part, longer and wider at posterior part than on disc, at posterior declivity about as long as half the width of one interval and slightly narrower than diameter of one appressed scale, distance between two setae about 3-4× longer than length of one seta. Pronotum and head with rostrum with similar semierect setae, irregularly densely scattered. Antennal scapes, femora and tibiae with imbricated appressed rounded scales, smaller than those on body, with semierect, slender setae; funicles and tarsi with semierect piliform, whitish, inconspicuous setae; clubs finely setose.

Head. Rostrum (fig. 5) very short, 1.57× as wide as long, subparallel-sided with straight sides, at base 1.03× as wide as at apex; laterally distinctly vaulted, not separated from head. Epifrons wide and flat, weakly tapered anteriad with almost straight sides, at base weakly narrower than space between anterior margin of eyes, posteriad with slender inconspicuous V-shaped stria, hidden by scales. Epistome very small, V-shaped, indistinctly carinate posteriad. Scrobes in dorsal view visible in anterior half, slender, furrow-shaped; in lateral view triangular, glabrous, distinctly enlarged posteriad, directed above eyes, dorsal border subparallel with dorsal border of rostrum, ventral border directed towards middle of eyes. Eyes moderately large, dorsally distinctly vaulted and prominent from outline of head; laterally placed near ventral border of head. Head wide, regularly vaulted, short, distance between eyes and anterior margin of pronotum equal to diameter of eyes.

Fig. 15-19. – Labels. – 15, *Gyratogaster larinoides* (Reitter). – 16, *Leianisorhynchus brunnescens* Pic, holotype. – 17, *Leianisorhynchus pubescens* Pic, holotype. – 18, *Holcophloeus numidicus* n. sp., holotype. – 19, *Pachyrhinus desbrochersi* (Raffray), lectotype.

Antennae slender; scapes in basal third weakly S-shaped, then evenly enlarged apicad, at apex 0.8× as wide as clubs; segments 1 and 2 long, slender, conical; segment 1 2.4× as long as wide and 1.6× as long as segment 2, which is twice as long as wide; segments 3-5 1.1× as wide as long; segment 6 1.3× as wide as long; segment 7 1.5× as wide as long, clubs 1.6× as long as wide.

Pronotum (fig. 6) 1.39× as wide as long, widest at basal third, with distinctly rounded sides, more tapered anteriad than posteriad, behind anterior margin weakly constricted; disc regularly vaulted; in lateral view almost flat; anterior margin obliquely subtruncated towards anterior border of procoxae.

Elytra (fig. 6) oval, 1.28× as long as wide, widest at midlength with rounded humeral calli and broadly rounded apicad; striae narrow, hidden by vestiture; intervals wide and flat.

Legs. Femora edentate. Protibiae straight, inner side weakly sinuate; apex narrow, rounded, weakly enlarged inside, with fringe of 8-9 slender, sparse, fine, translucent yellowish setae, mucronate. Metatibiae without corbels, with apical surface narrow, glabrous, laterally fringed by short and fine, translucent setae, mucronate. Tarsi slender; segment 2 1.6× as wide as long; segment 3 1.3× as wide as long and 1.5× as wide as segment 2; onychium 1.7× as long as segment 3; claws fused at base, then divorced.

Male genitalia unknown.

Female genitalia. Sternite VIII (fig. 7) with umbrella-shaped plate with developed apical and basal margin; apodeme about 1.5× as long as plate, widest at midlength, terminated inside the plate. Gonocoxites (fig. 8) tapered apicad, large, flat with slender and long styli with a group of setae. Spermatheca (fig. 9) with regularly curved cornu; corpus large and rounded; ramus subtriangular, slightly wider than long; nodulus very small, hump-shaped.

Etymology. – The name refers to "Numidie", a region including Constantine (Batna) and a part of Tunisia.

Distribution. – Known from northern Algeria (Batna).

Differential diagnosis. – *Holcophloeus numidicus* n. sp. is similar to *H. laurae* in protibiae and outer margin of metatibiae fringed by 8-9 slender and fine translucent setae (while *H. cruciatus* and *H. weilli* have 5-6 short and wide spines), semierect setae at posterior elytral declivity at most as long as half the width of one interval (distinctly longer than half the width of one interval in *H. cruciatus* and *H. weilli*) and long and slender styli on gonocoxites (microscopic, indistinct in *H. cruciatus* and *H. weilli*). *H. numidicus* n. sp. can be distinguished from *H. laurae* by the following set of characters.

– Rostrum 1.76-1.88× as wide as long. Epifrons distinctly tapered anteriad, at base as wide as space between anterior margin of eyes. Distance between eyes and anterior margin of pronotum about twice as long as diameter of eyes. Apical part of scapes 1.2× as wide as clubs. Elytra with weakly rounded sides, 1.31-1.34× as long as wide ..... ***Holcophloeus laurae*** Borovec & Meregalli

– Rostrum 1.57× as wide as long. Epifrons weakly tapered anteriad, at base slightly narrower than space between anterior margin of eyes. Distance between eyes and anterior margin of pronotum equal to diameter of eyes. Apical part of scapes 0.8× as wide as clubs. Elytra with distinctly rounded sides, 1.26× as long as wide ..... ***H. numidicus*** n. sp.

Tribe **Polydrusini** Schoenherr, 1823

Pachyrhinus desbrochersi (Raffray, 1873) (fig. 14, 19)

Scythropus desbrochersi Raffray, 1873: 382. Winkler (1932: 1467); Dalla Torre *et al.* (1936: 67); Normand (1937: 244).
Pachyrhinus desbrochersi (Raffray): Yunakov (2013: 366).
Syn. *Scythropus breviceps* Peyerimhoff, 1929: 38, **n. syn.** Winkler (1932: 1467); Dalla Torre *et al.* (1936: 72). Type locality: Maknassy (Tunisie méridionale).
Pachyrhinus breviceps (Peyerimhoff): Yunakov (2013: 366).

Type locality. – Boghari [Algérie].

Type material examined. – *Scythropus desbrochersi.* Lectotype (**here designated**): sex not identified without dissection (MNHN, Fairmaire coll.), "*Desbrochersi* [hw] // museum paris / Collection Léon Fairmaire / 1906 [p] // type [p, red script] // *Scythropus* / *Desbrochersii* /

Alger. Fairm. [hw] // LECTOTYPUS / *Scythropus* / *desbrochersi* Raffray, 1873 / Perrin & Borovec desig. 2016 [p, red] // *Pachyrhinus* / *desbrochersi* (Raffray) / Perrin & Borovec det. 2016 [p] // MNHN / EC7514 [p]"; PARALECTOTYPES: 3 ex. (MNHN, Fairmaire coll.), same data as lectotype, only the fourth label is missing and the fifth bears "PARALECTOTYPUS".

Scythropus breviceps. LECTOTYPE (**here designated**): sex not identified without dissection (MNHN, Peyerimhoff coll.), "Maknassy Tun. / 2.VI.1927 / *Jun. phoenicea* / *C. Dumont* [hw] // *Scythropus* / (*Diachelus*) / *breviceps* Peyerh. / - types - [hw, yellowish brown label] // LECTOTYPUS / *Scythropus* / *breviceps* Peyerimhoff, 1929 / Perrin & Borovec desig. 2016 [p, red] // *Pachyrhinus* / *desbrochersi* (Raffray) / Perrin & Borovec det. 2016 [p]"; PARALECTOTYPES: 2 ex. (MNHN, Peyerimhoff coll.), same data as lectotype; 2 ex. (MNHN, Peyerimhoff coll.), same data as lectotype, but "Tunisie sud / 20.VI.1927". All four specimens bear a label "PARALECTOTYPUS".

Additional material examined. – 1 ex., Algeria, Batna (MNHN, Fairmaire coll.); 56 ex., Tunisia bor. or., Hammamet env., 30.V.1999, *Juniperus sp*., *R. Borovec lgt.* (MNHN, RBSC); 12 ex., Tunisia bor. occ., Le Kef prov., 6 km N of Le Kef, 1.VI.2005, *S. Kadlec lgt.* (RBSC).

Remarks. – We recognize that *P. breviceps* (Peyerimhoff, 1929) is a junior synonym of *P. desbrochersi* (Raffray, 1873).

ACKNOWLEDGEMENTS. – This project (FR-TAF-4641) received support — for the second author — from SYNTHESYS (http://www.synthesys.info/) which is financed by the European Community – Research Infrastructure Action under the FP7 "Capacities" Specific Programme. Thanks to the referees for their corrections for a better English language, and to Antoine Mantilleri for his excellent photos and help to organize them.

REFERENCES

BOROVEC R., 2003. – Revision of genera *Gyratogaster*, *Leianisorhynchus* and *Altonomus* (Coleoptera: Curculionidae: Entiminae: Cyphicerini). *Klapalekiana,* **39** : 1-30.

—— 2007. – A supplement to the revision of genera *Gyratogaster*, *Leianisorhynchus* and *Altonomus*, with description of new species *Altonomus rahmei* sp. n. from Syria (Coleoptera: Curculionidae: Entiminae: Cyphicerini). *Klapalekiana,* **43** : 1-7.

BOROVEC R., MENARDO F. & MEREGALLI M., 2013. – A new genus of Entiminae from North Africa, supported by a phylogenetic analysis (Coleoptera: Curculionidae: Entiminae). *Zoological Journal of the Linnean Society,* **167** : 243-258.

DALLA TORRE K.W. VON, EMDEN M. VAN & EMDEN F. VAN, 1936. – Curculionidae, Brachyderinae I. Pars 147 (p. 133-196). *In* : Schenkling S. (ed.), *Coleopterorum Catalogus auspiciis et auxilio W. Junk.* Gravenhage : W. Junk.

ICZN, 1999. – *International Code of Zoological Nomenclature,* 4th edition. London : International Trust for Zoological Nomenclature, XIX + 306 p.

LONA C., 1938. – Curculionidae, Otiorhynchinae III. Pars 162 (p. 413-600). *In* : Schenkling S. (ed.), *Coleopterorum Catalogus auspiciis et auxilio W. Junk*. Gravenhage : W. Junk.

NORMAND H., 1937. – Contribution au Catalogue des Coléoptères de la Tunisie (12me Fascicule). *Bulletin de la Société d'Histoire naturelle de l'Afrique du Nord,* **28** : 232-269.

OBERPRIELER R. G., ANDERSON R. S. & MARVALDI A. E., 2014. – 3. Curculionoidea Latreille, 1802: Introduction, Phylogeny (p. 285-300). *In* : Leschen R. A. B. & Beutel R. G. (eds.), *Handbook of Zoology, Arthropoda : Insecta; Coleoptera, Beetles, Volume 3 : Morphology and systematics (Phytophaga)*. Berlin/Boston : Walter de Gruyter, 675 p.

PESARINI C., 1971. – Otiorhynchinae nuovi o interessanti raccolti da Walter Wittmer in Turchia e in Libano (con descrizione di tre nuove specie). *Bolletino della Società Entomologica Italiana,* **103** : 143-148.

—— 1975. – Su alcuni Curculionidi Paleartici nuovi o poco conosciuti. *Memorie della Società Entomologica Italiana,* **53** [1974] : 39-55.

PEYERIMHOFF P. DE, 1929. – Nouveaux Coléoptères du Nord-Africain. *Bulletin de la Société entomologique de France,* **34** : 37-41.

Pic M., 1905. – Espèces et variétés nouvelles de Coléoptères de France et Turquie d'Asie. *L'Échange,* **21** : 177-179.

—— 1927. – Notes diverses, descriptions et diagnoses (suite). *L'Échange,* **43** : 1-3.

Raffray A., 1873. – [new taxa]. *In* : Fairmaire L., Raffray A.: Coléoptères du nord de l'Afrique. *Revue et Magasin de Zoologie pure et appliquée,* (3) **1** : 331-385.

Reitter E., 1896. – Abbildungen mit Beschreibungen zehn neuer Coleopteren aus der palaearctischen Fauna. *Wiener Entomologische Zeitung,* **15** : 233-240.

Winkler A., 1932. – *Catalogus Coleopterorum Regionis Palearcticae. Rhynchophora. Curculionidae. Pars 12*. Wien : A. Winkler, 1375-1698.

Yunakov N. N., 2013. – Cyphicerini (p. 268-282); Polydrusini (p. 364-375). *In* : Löbl I. & Smetana A. (eds), *Catalogue of Palaearctic Coleoptera,* **8**. Leiden : Brill, 700 p.