

Notes on some species of *Otiorhynchus* Germar, 1822 sensu strictu, with new synonymies and a neotype designation (Coleoptera: Curculionidae)

Abstract

The unexpected finding of an *Otiorhynchus* GERMAR, 1822 sensu stricto on the Mount Amiata, central Italy, led to designate a neotype for *Curculio clavipes* BONSDORFF, 1785 and to discover several overlooked synonymies among the species group to which it belongs. The new synonymies are as follows: *Otiorhynchus clavipes* (BONSDORFF, 1785), **stat. rev.** [= *Curculio rufipes* STURM, 1792: plate 17 not *Curculio rufipes* LINNAEUS, 1758; **syn. nov.**; = *Curculio maritimus* DONOVAN, 1811: 63 not *Curculio maritimus* MARSHAM, 1802, **syn. nov.**; *Otiorhynchus substriatus* SILBERMANN, 1833: no. 7, **syn. nov.**; = *Otiorhynchus substriatus* GYLLENHAL, 1834: 563, not *Otiorhynchus substriatus* SILBERMANN, 1833, **syn. nov.**; = *Otiorhynchus lugdunensis* BOHEMAN, 1842: 268, **syn. nov.**; = *Otiorrhynchus elongatus* STIERLIN, 1861: 65 not *Otiorhynchus elongatus* HOCHHUTH, 1847, **syn. nov.**; = *Otiorhynchus francolinus* L.W. SCHAUFUSS, 1867: 22, replacement name for *Otiorrhynchus elongatus* STIERLIN, 1861: 65 not *Otiorhynchus elongatus* HOCHHUTH, 1847, = *Otiorhynchus longulus* MARSEUL, 1872: 250, unnecessary replacement name for *Otiorrhynchus elongatus* STIERLIN, 1861 not *Otiorhynchus elongatus* HOCHHUTH, 1847, **syn. nov.**; = *Otiorrhynchus dilatipes* GUILLEBEAU, 1885: 2, **syn. nov.**; = *Otiorhynchus guillebeaudi* DESBROCHERS des LOGES, 1894: 89, **syn. nov.**; = *Otiorrhynchus clavipes* ssp. *evertsi* UYTENBOOGAART, 1931: 292, **syn. nov.**; *Otiorhynchus fagi* GYLLENHAL, 1834, **resurrected name** [= *Curculio tenebricosus* HERBST, 1795: 333 not *Curculio tenebricosus* HERBST, 1784, **syn. nov.**; = *Curculio haematopus* SCHRANK, 1798: 490 not *Curculio haematopus* GMELIN, 1790, replacement name for *Curculio tenebricosus* HERBST, 1795 **syn. nov.**; = *Curculio fuscipes* OLIVIER, 1807: 372 not *Curculio fuscipes* GEOFFROY in FOURCROY, 1785, **syn. nov.**; = *Otiorhynchus erythropus* BOHEMAN, 1842: 267, **syn. nov.**; = *Otiorhynchus sanguinipes* BOHEMAN, 1842: 296, **syn. nov.**; = *Otiorhynchus waltoni* SMITH, 1869: 136, **syn. nov.**; = *Otiorhynchus fuscipes forma heynei* VOSS, 1919: 405, **syn. nov.**; = *Otiorrhynchus sanguinipes* var. *subglaber* REITTER, 1913: 50 **syn. nov.**; = *Otiorrhynchus sanguinipes* var. *stierlini* UYTENBOOGAART, 1931: 295 not *Otiorhynchus stierlini* GEMMINGER, 1871, **syn. nov.**; = *Otiorrhynchus (Otiorrhynchus) stierlinianus* UYTENBOOGAART, 1933: 229 not *Otiorrhynchus populeti* BOHEMAN, 1842 var. *stierlinianus* REITTER, 1914b: 159, replacement name for *Otiorrhynchus sanguinipes* var. *stierlini* UYTENBOOGAART, 1931, **syn. nov.**; = *Otiorhynchus olivieri* ABBAZZI & OSELLA, 1992: 294, replacement name for *Curculio fuscipes* OLIVIER, 1807 not *Curculio fuscipes* GEOFFROY in FOURCROY, 1785, **syn. nov.**], and *Otiorhynchus hungaricus* GERMAR, 1823 [= *Otiorrhynchus hungaricus* var. *hospitellensis* HUSTACHE, 1923: 54, **syn. nov.**]. A key to the close species of this group is included. An additional synonymy in the genus *Liparus* OLIVIER, 1807 is established : *Liparus tenebrioides* (PALLAS, 1781) [= *Curculio tenebricosus* HERBST, 1784, **syn. nov.**].

Keywords: Curculionidae, *Otiorhynchus*, synonymy, *Liparus*, species key, neotype designation

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Our friend Angelo Pennisi submitted us a female of a quite large dark rather glossy *Otiorhynchus* (*Otiorhynchus*) GERMAR, 1822 collected by himself near the summit of Mount Amiata, Tuscany, central Italy, a volcanic mountain of 1738 m above sea level, the highest of a lava domes complex lying in northern Latium and southern Tuscany regions of central Italy, complex separate from and much younger than the Apennines. We were able in 2016 to collect a long series of specimens of it near the very peak of the mountain easy accessible by road and many times explored by several entomologists, comprised our late friend Luigi Magnano, an *Otiorhynchus* specialist who lived very close to the mountain which he visited many times. Any species of the nominotypical subgenus, apart the large dull *O. caudatus* (ROSSI, 1792) and the widespread pest one *O. armadillo* (ROSSI, 1792), was hitherto known from Mount Amiata, given that only the additional five ones of the *Otiorhynchus* complex were indicated from this mountain, viz. *Dodecastichus consentaneus* (BOHEMAN, 1842), *Otiorhynchus* (*Metopiorrhynchus*) *cyclophthalmus* F. SOLARI, 1947, *O. (Metopiorrhynchus) diecki* STIERLIN, 1872, *O. (Crataegodes) crataegi* GERMAR, 1823 and *O. (Dorymerus) sulcatus* (FABRICIUS, 1775) (BARGAGLI 1876; SOLARI & SOLARI 1915; MAGNANO 1967, 1978; OSELLA & ZUPPA 1994; ABBAZZI & MAGGINI 2009). The above mentioned *Otiorhynchus* sensu stricto immediately appeared intimately related to *Otiorhynchus sanguinipes* BOHEMAN, 1842, a member of a group of taxa whose nomenclature and taxonomy is presently all but clear even after the publication of the *Otiorhynchini* part of the catalogue of Palaearctic Curculionoidea (MAGNANO & ALONSO-ZARAZAGA 2013), recently updated by ALONSO-ZARAZAGA et al. (2017). According to this catalogue, the four species of this *Otiorhynchus* complex are, in alphabetical order: *O. hungaricus* GERMAR, 1823 from central-eastern Europe with a subspecies in southeastern France, *O. lugdunensis* BOHEMAN, 1842 from western and central Europe, *O. sanguinipes* from France and Italy, and *O. tenebricosus* (HERBST, 1784) from almost all Europe and imported in North America.

The Mount Amiata *Otiorhynchus*, astonishingly close to *O. sanguinipes*, compelled us to study the more of 250 examples of it we had at hand from France, Italy and Switzerland. It was discovered that a great deal of variability occurs within this taxon, given that size, colour of legs, relative length of desmomerer, depth of elytral striae, convexity of intervals vary independently from the provenance, although in some populations prevails one form over another. For instance, specimens from Apennines have funicular antennomeres 3 to 7 not or hardly longer than wide, elytral striae usually almost obsolete on elytral declivity, and legs of the great majority of them reddish instead of dark brown to blackish, like those of most examples of the Mount Amiata population. On the other hand, it is well known that the shape of aedeagus of several *Otiorhynchus* is quite variable and almost always unusable for differentiating close species (e.g. APFELBECK 1895; MAGNANO 1969; DI MARCO & OSELLA 2001), so, contrary to what has been affirmed by PEDRONI & PESARINI (2006), it is not possible to give specific or even subspecific rank to *O. sanguinipes* versus the species thus far named *O. tenebricosus*. The identity of these two taxa was implicitly already discovered by GERMANN (2010).

Before formally establish any synonymy, it seems appropriate to clarify the confusion existing between the close species of this complex whose taxonomic status has been argument of continuous debate in a span of several years (e.g. STIERLIN 1861, REITTER 1913, UYTENBOGAART 1931, HOFFMANN 1950, FRIESER 1981) until MAGNANO (2001) considered almost all of them as referring to a single very variable taxon which he named *O. tenebricosus* (HERBST, 1784) while selecting the lectotype of this species.

Afterwards, to one or another of the names listed by MAGNANO (2001: 150) under the synonyms of *O. tenebricosus* was given back species rank (ABBAZZI & MAGGINI 2009; ABERLENC 2011; BENEDIKT et al. 2010; DELIRY 2011; MORRIS 2012; PEDRONI & PESARINI 2006; ROUAULT 2014; SILFVERBERG 2004; TELNOV 2004; WANAT & MOKRZYCKI 2018), compelling ALONSO-ZARAZAGA et al. (2017) to recognize four species in this group, namely the above mentioned *O. hungaricus*, *O. lugdunensis*, *O. sanguinipes* and *O. tenebricosus*.

Coming back to the lectotype selection of *Curculio tenebricosus* HERBST, 1784 by MAGNANO (2001), this act is invalid since it was based upon a specimen from “Styria” (Steiermark, Austria), whereas *Curculio tenebricosus* was described by HERBST (1784: 81) from “Berlin”, being in consequence obvious that the Magnano lectotype was not from the type series.

Moreover, description and illustration of this species by HERBST (1784: 81 and fig. 27 on table 24) are in no way those of an *Otiorhynchus*, but of a surely mislabelled specimen of *Liparus (Trysibius) tenebrioides* (PALLAS, 1781), to the description of which Herbst himself makes reference (HERBST 1784). Since no such shaped large black weevil with strong elytral striae lives in Germany, we have no doubts in proposing the new synonymy: *Liparus tenebrioides* (PALLAS, 1781) (= *Curculio tenebricosus* HERBST, 1784, **syn. n.**), basing on the illustration and description by HERBST (1784). With regards of mislabelling of specimens, in the same paper HERBST (1784: 81) described from “Berlin” a *Curculio major* which is currently named *Xanthochelus major* (HERBST, 1784), a lixine distributed in the southeastern Palaearctic and in the adjoining Oriental regions (MEREGALLI & FREMUTH 2013, ALONSO-ZARAZAGA et al. 2017).

Subsequently, the same author (HERBST, 1795: 333) employed the identical name of *Curculio tenebricosus* for a species of *Otiorhynchus* from Germany, a primary homonym name which of course cannot be used, and that SCHRANK (1798: 490) rightly replaced with *Curculio haematopus*, unfortunately again a homonym name.

Meanwhile, BONSDORFF (1785) had illustrated and described *Curculio clavipes* BONSDORFF, 1785 upon specimen(s) collected by the naturalist Pehr Osbeck at Hålanda in Västergötland, Sweden, an *Otiorhynchus* quoted as *O. lugdunensis* BOHEMAN, 1842 by SILFVERBERG (2004). Any news is reported (HORN et al. 1990) about the fate of the insect collection of father Osbeck who was primarily a botanist who travelled in south China (OSBECK 1757), and whose botanical collections are partly preserved in the Naturhistorisch Rijksmuseum Stockholm, Sweden and in the Linnean collection in London, England (HANSEN & MAULE 1973). Actually, we studied examples from Hässelby near Stockholm almost perfectly corresponding to the description of *Otiorhynchus clavipes*.

The Bonsdorff collection was destroyed during the 1827 Turku great fire (ARGELANDER 1831), and we searched in vain for insect specimens in Helsinki where the few spare natural objects previously belonging to the heavily damaged Imperial Academy of Turku were transferred to. Afterwards, we asked for a possible surviving insect specimen collected by Osbeck where are preserved botanical exiccata from Osbeck, namely in Uppsala, Stockholm, Copenhagen natural history museums, and in the Linnean collection in London, but in all these institutions any Osbeck weevil specimens exist anymore. As type(s) had been lost for sure, it became necessary to designate a neotype (ICZN 1999, art. 75) for unequivocally fix the name with the purpose of clarifying its taxonomic status. The selected specimen is a male, preserved in the general collection of the Museo Civico di Zoologia, Rome, Italy, labeled (slash separate different lines of the same label): “Sweden / Uppland / Hässelby / 12.V.2013 – Rolf Röber leg.”, “Neotypus ♂ / *Curculio / clavipes* Bonsdorff, 1785 / R. Casalini & E. Colonnelli des., 2019” [red], and *Otiorhynchus / clavipes* (Bonsdorff, 1785) / R. Casalini & E. Colonnelli det., 2019”. This male fits almost all the features described by Bonsdorff (1785), being 11 mm (without rostrum) long, having elongate antennomeres, dark red legs, elytra with minute elytral spots of hairlike scales, and last ventrite with deep fovea bordered at base by strong keels (figs 1 and 2).

Additional species of *Otiorhynchus* of the same complex were described as *Curculio* LINNAEUS, 1758 between the end of the 18th and the beginning of 19th century by STURM (1792), OLIVIER (1807) and DONOVAN (1811), like this: *Curculio rufipes* STURM, 1792, *C. fuscipes* OLIVIER, 1897, *C. maritimus* DONOVAN, 1811. However, all of these names are primary homonyms and cannot be employed. Other names (see MAGNANO & ALONSO-ZARAZAGA 2013, ALONSO-ZARAZAGA et al. 2017) have subsequently been proposed under the genus *Otiorhynchus* for species of this complex distributed in northern, western and central Europe, which appear to belong only to three taxa.

The first one is the above discussed *Otiorhynchus clavipes* (BONSDORFF, 1785), whose main features are elongate antennomeres, rather shallow elytral striae, and male fifth ventrite with large striae and quite deep posterior impression at apex, and the complete synonymy of which will be precised below.

The second species is *Otiorhynchus hungaricus* GERMAR, 1823 from central-eastern Europe, clearly different from *O. clavipes* by its elytra with rather strong striae, comparatively finely uniformly striate last ventrite of male showing a shallow fovea on its apical

Fig. 1: *Otiorhynchus clavipes* (BONSDORFF, 1785), male neotype from above. Size 11 mm excluding rostrum. Photo by Maurizio Gigli.

Fig. 2: Detail of the last ventrite of the neotype of *Otiorhynchus clavipes* (BONSDORFF, 1785). Photo by Roberto Casalini.



fourth, and scrobes limited to anterior middle of rostrum. *O. hungaricus*, according to ALONSO-ZARAZAGA et al. (2017), is known from France, Germany, Slovakia, Hungary, Romania, Bulgaria, Bosnia-Herzegovina, Croatia, Serbia, Moldova, western European Russia and Ukraine. We studied a series of specimens of *O. hungaricus hospitellensis* HUSTACHE, 1923 from its type locality of Sospel, France (HUSTACHE 1923), and we found them conspecific with the typical ones. Thus we establish the following synonymy: *Otiorhynchus hungaricus* GERMAR, 1923 (= *Otiorhynchus hungaricus* var. *hospitellensis* HUSTACHE, 1923; **syn. nov.**). In this we follow the opinion by HOFFMANN (1950), incorrectly disregarded by ALONSO-ZARAZAGA et al. (2017). Probably, the French population originated by a past outbreak of *O. hungaricus* from some more eastern locality in Europe, like that recently happened (PELLETIER 1986) for *O. gemmatus* (SCOPOLI, 1763).

The third species of the complex is the one distributed in the hills and mountains of Spain, France, Switzerland, Germany, Austria, Liechtenstein, Italy, Slovenia, Croatia, Slovakia, Czech Republic, Poland, Hungary, Romania and Ukraine (ALONSO-ZARAZAGA et al. 2017), whose antennomeres are obviously shorter, and whose male fifth ventrite is devoid of apical impression and has numerous thin striae. The first available name for this taxon is *Otiorhynchus fagi* GYLLENHAL, 1834, and to it must be referred several species about the already ascertained synonymies of which we have no doubt, and that are listed below. In addition, we establish here the following synonymy: *Otiorhynchus fagi* GYLLENHAL, 1834 (= *Otiorhynchus sanguinipes* BOHEMAN, 1842; **syn. nov.**).

Due to the wide range of variation, and to easy anthropogenic establishment of those polyphagous insects with rhizophagous larvae in countries other than their native ones, it is sometimes difficult to separate particularly females, especially if a possibility of limited introgressive events may be admitted. At any rate, since it is almost always easy to identify them (see e.g. RHEINHEIMER & HASSLER 2010) using for example the key provided by FRIESER (1981), it seems correct to give back them the species rank, as generally done prior of the MAGNANO (2001) paper. Their synonymy is as follows, format as in COLONNELLI & CASALINI (2014), names of countries in alphabetical order.

Otiorhynchus clavipes (BONSDORFF, 1785), **stat. rev.**

Curculio clavipes BONSDORFF, 1785: 40

Curculio rufipes STURM, 1792: plate 17 not *Curculio rufipes* LINNAEUS, 1758; **syn. nov.**

Curculio maritimus DONOVAN, 1811: 63 not *Curculio maritimus* MARSHAM, 1802; **syn. nov.**

Otiorhynchus substriatus SILBERMANN, 1833: no. 7; **syn. nov.**

Otiorhynchus substriatus GYLLENHAL, 1834: 563, not *Otiorhynchus substriatus* SILBERMANN, 1833; **syn. nov.**

Otiorhynchus lugdunensis BOHEMAN, 1842: 268; **syn. nov.**

Otiorrhynchus elongatus STIERLIN, 1861: 65 not *Otiorhynchus elongatus* HOCHHUTH, 1847; **syn. nov.**

Otiorhynchus francolinus L.W. SCHAUFUSS, 1867: 22, replacement name for *Otiorrhynchus elongatus* STIERLIN, 1861: 65 not *Otiorhynchus elongatus* HOCHHUTH, 1847; **syn. nov.**

Otiorhynchus longulus MARSEUL, 1872: 250, replacement name for *Otiorrhynchus elongatus* STIERLIN, 1861 not *Otiorhynchus elongatus* HOCHHUTH, 1847; **syn. nov.**

Otiorrhynchus dilatipes GUILLEBEAU, 1885: 2; **syn. nov.**

Otiorhynchus guillebeaudi DESBROCHERS des LOGES, 1894: 89; **syn. nov.**

Otiorrhynchus (*Otiorrhynchus*) *clavipes* ssp. *evertsi* UYTENBOOGAART, 1931: 292; **syn. nov.**

Europe: Belgium, Denmark, Estonia, Great Britain, Germany, Ireland, France, Latvia, Luxembourg, Netherlands, Poland, and Sweden

Type locality. Hålanda in Västergötland, Sweden.

Otiorhynchus fagi GYLLENHAL, 1834, **resurrected name**

Curculio tenebricosus HERBST, 1795: 333 not *Curculio tenebricosus* HERBST, 1784; **syn. nov.**

Curculio haematopus SCHRANK, 1798: 490 not *Curculio haematopus* GMELIN, 1790, replacement name for *Curculio tenebricosus* HERBST, 1795; **syn. nov.**

Curculio fuscipes OLIVIER, 1807: 372 not *Curculio fuscipes* GEOFFROY in FOURCROY, 1785; **syn. nov.**

Otiorhynchus fagi GYLLENHAL, 1834: 563

Otiorhynchus erythropus BOHEMAN, 1842: 267; **syn. nov.**

Otiorhynchus sanguinipes BOHEMAN, 1842: 296; **syn. nov.**

Otiorhynchus waltoni SMITH, 1869: 136; **syn. nov.**

Otiorhynchus fuscipes forma *heynei* VOSS, 1919: 405; **syn. nov.**

Otiorrhynchus (*Otiorrhynchus*) *sanguinipes* var. *subglaber* REITTER, 1913: 50; **syn. nov.**

Otiorrhynchus (*Otiorrhynchus*) *sanguinipes* var. *stierlini* UYTENBOOGAART, 1931: 295 not *Otiorhynchus stierlini* GEMMINGER, 1871; **syn. nov.**

Otiorrhynchus (*Otiorrhynchus*) *stierlinianus* UYTENBOOGAART, 1933: 229 not *Otiorrhynchus* (*Advenardus*) *populeti* BOHEMAN, 1842 var. *stierlinianus* REITTER, 1914b: 159, replacement name for *Otiorrhynchus* (*Otiorrhynchus*) *sanguinipes* var. *stierlini* UYTENBOOGAART, 1931; **syn. nov.**

Otiorhynchus (*Otiorhynchus*) *olivieri* ABBAZZI & OSELLA, 1992: 294, replacement name for *Curculio fuscipes* Olivier, 1807 not *Curculio fuscipes* GEOFFROY in FOURCROY, 1785; **syn. nov.**

Europe: Austria, Croatia, Czech Republic, France, Germany, Hungary, Italy, Liechtenstein, Poland, Romania, Slovakia, Slovenia, Spain, Switzerland, Ukraine, and introduced in North America.

Type locality. "Germany".

Otiorhynchus hungaricus GERMAR, 1823

Otiorhynchus hungaricus GERMAR, 1823: 351

Otiorrhynchus hungaricus var. *hospitellensis* HUSTACHE, 1923: 54; **syn. nov.**

Europe: Bosnia-Herzegovina, Croatia, Bulgaria, France, Germany, Hungary, Moldova, Romania, western European Russia, Serbia, Slovakia, and Ukraine

Type locality. "Hungaria".

The following key will help to distinguish the three close *Otiorhynchus* species of the here named *clavipes* group. *Otiorhynchus clavipes* appears twice in the key for its vestiture is easily rubbed off.

- 1 Elytra with more or less evident and sometimes confluent patches of grey hairs. Funicular segments elongate. Pronotum and elytra rather densely punctured, quite opaque. Analsternite of ♂ with relatively strong striae, more or less deeply foveate on its posterior third, its posterior margin lifted and with yellowish setae 2
- 1' Elytra indistinctly setose, appearing glabrous or nearly so 3
- 2 Scrobe prolonged posteriorly by a very shallow depressions approaching or even arriving to anterior margin of eyes. Elytra with fine or even almost wanting striae. Analsternite of ♂ in the middle twice strongly striate than at sides, and with quite deep fovea posteriad of middle. Size 11-13 mm..... *clavipes* (Bonsdorff)
- 2' Scrobe deeper and at most arriving to middle of rostrum posteriorly. Elytra with rather strong striae. Analsternite of ♂ comparatively finely uniformly striate, fovea on apical fourth shallow. Size 11-14 mm..... *hungaricus* Gyllenhal
- 3 Segments 3-6 of funicle less than 1.5 times longer than wide. Analsternite of ♂ with fine striae, without impression on posterior half and lacking of comb of yellowish hairs on posterior margin. Size 8-13 mm. *fagi* Gyllenhal
- 3' Segments 3-6 of funicle nearly twice longer than wide. Analsternite of ♂ strongly striate, with a quite deep impression on posterior half and with comb of yellowish hairs on posterior margin. Size 11-14 mm. *clavipes* (Bonsdorff)

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Literatur

- ABBAZZI P. & MAGGINI L., 2001: Elenco sistematico-faunistico dei Curculionoidea italiani, Scolytidae e Platypodidae esclusi (Insecta, Coleoptera). *Aldrovandia*, 5: 29-216.
- ABBAZZI P. & OSELLA G., 1992: Elenco sistematico-faunistico degli Anthribidae, Rhinomaceridae, Attelabidae, Apionidae, Brentidae, Curculionidae italiani (Insecta, Coleoptera: Curculionoidea), prima parte. *Redia*, 75(2): 267-414.
- ABERLENC H.-P., 2011: Les coléoptères de l'Ardèche: inventaire commenté des espèces, 103 pp. Available from: <http://www.aberlentomo.fr>, accessed february 27, 2019.
- ALONSO-ZARAZAGA M.A., BARRIOS H., BOROVEC R., BOUCHARD P., CALDARA R., COLONNELLI E., GÜLTEKIN L., HLAVÁČ P., KOROTYAEV B., LYAL C.H.C., MACHADO A., MEREGALLI M., PIEROTTI H., REN L., SÁNCHEZ-RUIZ M., SFORZI A., SILFVERBERG H., SKUHROVEC J., TRÝŽNA M., VELÁZQUEZ DE CASTRO A.J. & YUNAKOV N.N., 2017: Cooperative catalogue of Palaearctic Coleoptera Curculionoidea. *Monografías electrónicas de la Sociedad Entomológica Aragonesa*, 8: 1-729.
- APFELBECK V., 1895: Monographische Bearbeitung der zwölfstreifigen *Otiorrhynchus*-Arten (*Dodecastichus* Stirl.) (Mit zwei Tafeln). *Wissenschaftliche Mittheilungen aus Bosnien und der Hercegovina*, 3: 626-656 + 2 pls.
- ARGELANDER F.W.A., 1831: *Observationes astronomicae in specula Universitatis Litterariae Fennicae factae*, 2: 1-110.
- BARGAGLI P., 1876: Ricordi di una escursione entomologica al Monte Amiata. Coleotteri ordinati da P. Bargagli. (*Vedi Bull. Soc. Ent. anno 1875 p. 122*). *Bullettino della Società entomologica italiana*, 7[1875](3): 257-265.
- BENEDIKT S., BOROVEC R., FREMUTH J., KRÁTKÝ J., SCHÖN K., SKUHROVEC J. & TRÝŽNA M., 2010: Komentovaný seznam nosatcovitých brouků (Coleoptera: Curculionoidea bez Scolytinae a Platypodinae) České republiky a Slovenska. 1. díl. Systematika, faunistika, historie výzkumu nosatcovitých brouků v České republice a na Slovensku, nástin skladby, seznam. Komentáře k Anthribidae, Rhynchitidae, Attelabidae, Nanophyidae, Brachyceridae, Dryophthoridae, Eirrhinidae a Curculionidae: Curculioninae, Bagoinae, Baridinae, Ceutorhynchinae, Conoderinae, Hyperinae. Annotated checklist of weevils (Coleoptera: Curculionoidea excepting Scolytinae and Platypodinae) of the Czech Republic and Slovakia. Part 1. Systematics, faunistics, history of research on weevils in the Czech Republic and Slovakia, structure outline, checklist. Comments on Anthribidae, Rhynchitidae, Attelabidae, Nanophyidae, Brachyceridae, Dryophthoridae, Eirrhinidae and Curculionidae: Curculioninae, Bagoinae, Baridinae, Ceutorhynchinae, Conoderinae, Hyperinae. *Klapalekiana*, 46: 1-363.
- BOHEMAN C.H., 1842: *Otiorrhynchus erythropus* (p. 267). In: SCHOENHERR C.J. *Genera et species curculionidum, cum synonymia hujus familiae. Species novae aut hactenus minus cognitae, descriptionibus a Dom. L. Gyllenhal, C. H. Boheman, O. J. Fahraeus, et entomologiis aliis illustratae. Tomus septimus. Pars prima. Supplementum continens. Roret, Paris; Fleischer, Lipsiae, [II] + 479 pp.*
- BONSDORFF G., 1785: *Historia naturalis Curculionidum Sveciae cujus partem secundam, consent. experient. facult. med. examini offerunt auctor Gabriel Bonsdorff, philosoph. magist. & medic. doctor. et respondens Petrus Ant. Norlin, stockholmiensis. Edman, Upsaliae*, pp. 19-42 + 1 pl.
- COLONNELLI E. & CASALINI R., 2014: On the type specimen of *Otiorrhynchus (Dodecastichus) ambrosii* Bertolini, with a catalogue of *Dodecastichus* (Coleoptera: Curculionidae). *Fragmenta entomologica*, 46(1/2): 11-17.
- DELIRY C., 2011: Essai de liste des coléoptères de France. *Histoire Naturelle*, (16): 1-330.
- DESBROCHERS DES LOGES J., 1894: Tableau dichotomique des espèces françaises du genre *Otiorrhynchus*, appartenant à la 2^e section de M. le docteur Stierlin: Bestimmungstabellen [sic!] europäischer Coleoptern (Curculionidae) *fuscipes* et congénères. *Le Frelon*, 3[1893/1894](10): 85-94.
- DI MARCO C. & OSELLA G., 2001: Gli *Otiorrhynchus* Germar, 1824 ed i generi ad esso strettamente affini: *Dodecastichus* Stierlin, 1861, *Limatogaster* Apfelbeck, 1898 e *Cirorrhynchus* [sic!] Apfelbeck, 1899 dell'Appennino abruzzese-molisano (Coleoptera, Curculionidae). *Memorie del Museo Civico di Storia Naturale di Verona (II serie). Sezione Scienze della Vita*, (15): 1-116.
- DONOVAN E., 1811: *The natural history of British insects; explaining them on their several states, with the periods of their transformations, their food, œconomy, together with the history of such a minute insects as require investigation by the microscope. The whole illustrated by coloured figures, designed and executed from living specimens. Vol. XV. London*, 83 pp. + plates DV-DXI + [6, indexes] pp.
- FRIESER R., 1981: 7. Unterfamilie: Otiorrhynchinae (pp. 184-240). In: FREUDE H., HARDE K.W., LOHSE G.A. (Eds). *Die Käfer Mitteleuropas. Band 10. Bruchidae, Anthribidae, Scolytidae, Platypodidae, Curculionidae. Goecke & Evers, Krefeld*, 309 pp.
- GERMANN C., 2010: Die Rüsselkäfer (Coleoptera, Curculionoidea) der Schweiz – Checkliste mit Verbreitungsangaben nach biogeografischen Regionen. *Mitteilungen der Schweizerischen Entomologischen Gesellschaft*, 83: 41-118.
- GERMAR E.F., 1823: *Insectorum species novae aut minus cognitae, descriptionibus illustratae. Volumen primum. Coleoptera. Cum tab. aen. II. Hendel & Sons, Halle, [1824], XXIV + 624 pp. + 2 pls.*
- GUILLEBEAU F., 1885: Descriptions de quelques nouvelles especes de coléoptères (suite). *L'Echange*, 1(8): 2.
- GYLLENHAL L., 1834: *Otiorrhynchus fagi*, *Otiorrhynchus substriatus* (pp. 563-564). In: Schoenherr C.J. *Genera et species curculionidum, cum synonymia hujus familiae. Species novae aut hactenus minus cognitae, descriptionibus a Dom. Leonardo Gyllenhal, C. H. Boheman, et entomologis aliis illustratae. Tomus secundus. Pars secunda. Roret, Paris; Fleischer, Lipsiae*, pp. 329-669 [+ 3 pp., Corrigenda].
- HANSEN C. & MAULE A.F., 1973: Pehr Osbeck's collections and Linnaeus's *Species Plantarum* (1753). *Botanical Journal of the Linnean Society*, 67: 189-212 + 6 pls.
- HERBST J.F.W., 1784: *Kritisches Verzeichniss meiner Insektensammlung. Archiv der Insektengeschichte*, 5(1): 73-151 + 6 pl.
- HERBST J.F.W., 1795: *Natursystem aller bekannten in- und ausländischen Insekten, als eine Fortsetzung der von Buffonschen Naturgeschichte. Der Käfer sechster Theil. Mit 38 illuminirten Kupfertafeln. Pauli, Berlin, XXIV + 520 pp.*
- HOFFMANN A., 1950: *Faune de France. 52. Coléoptères curculionides (Première partie) (Avec 304 figures).*

- Lechevalier, Paris, pp. 1-486.
- HORN W., KAHLE I., FRIESE G. & GAEDIKE R., 1990: *Collectiones entomologicae*. Akademie des Landwirtschaftswissenschaften, Berlin, 573 pp.
- HUSTACHE A., 1923: Curculionidae gallo-rhénans. *Annales de la Société entomologique de France*, 92: 1-148.
- INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE, 1999: *International Code of Zoological Nomenclature*. Fourth edition adopted by the International Union of Biological Sciences. International Trust for Zoological Nomenclature, London, XXIX + 306 pp.
- MAGNANO L., 1967: Ricerche sulla fauna appenninica. XCII. Descrizione di tre nuove specie di *Otiorhynchus* del gruppo del *vernalis* Stierlin e considerazioni sistematiche su altre poco conosciute (Coleoptera Curculionidae) (XI contributo alla conoscenza dei curculionidi). *Memorie del Museo Civico di Storia Naturale, Verona*, 15: 139-158.
- MAGNANO L., 1969: Ricerche sulla fauna appenninica. CIII. Descrizione di tre nuove specie di *Otiorhynchus* s. str. (sensu Reitter, 1913) e osservazioni sulla sistematica del gruppo. (XII contributo alla conoscenza dei curculionidi). *Memorie del Museo Civico di Storia Naturale, Verona*, 16[1968]: 345-366.
- MAGNANO L., 1978: Appunti sulla razza anfigonica e partenogenetica dell'*Otiorhynchus (Dorymerus) sulcatus* (F.) (XV contributo alla conoscenza dei curculionidi). *Bollettino del Museo Civico di Storia Naturale, Verona*, 5: 97-110.
- MAGNANO L. 2001: Designation of lectotypes for species of *Cirrorhynchus* Apfelbeck, 1898, *Dodecastichus* Stierlin, 1861, *Limatogaster* Apfelbeck, 1898, *Otiorhynchus* Germar, 1822 and *Tylotus* Schoenherr, 1823, in the Germar and Herbst collections (Coleoptera Curculionidae). *Memorie della Società Entomologica Italiana*, 80: 139-158.
- MAGNANO† L. & ALONSO-ZARAZAGA M.A., 2013: Tribe Otiorhynchini Schoenherr, 1826 (pp. 302-347). In: LÖBL I., SMETANA A. (eds.). *Catalogue of Palaearctic Coleoptera*. Volume 8. Curculionoidea II. Brill, Leiden-Boston, 700 pp.
- MARSEUL S.A. de, 1872: Remarques synonymiques sur diverses espèces d'otiorhynchides. *Annales de la Société entomologique de France*, (5)1[1871]: 247-252.
- MEREGALLI M., FREMUTH J. 2013: Subfamily Lixinae tribe Cleonini Schoenherr, 1826 (pp. 437-456). In: LÖBL I., SMETANA A. (eds.). *Catalogue of Palaearctic Coleoptera*. Volume 8. Curculionoidea II. Brill, Leiden-Boston, 700 pp.
- MORRIS M.G., 2012: 102. Family Curculionidae Latreille, 1802 (pp. 100-112). In: DUFF A.G. (ed.). *Checklist of beetles of the British Isles*. 2nd edition. With an introduction by D. A. Lott and a chapter on fossil beetles by P. I. Buckland & P.C. Buckland. Pemberley Books, Iver, 171 pp.
- OLIVIER A.G., 1807: *Entomologie, ou histoire naturelle des insectes, avec leur caractères génériques et spécifiques, leur description, leur synonymie, et leur figure enluminée*. Coléoptères. Tome cinquième. Desray, Paris, [2] + 612 pp. + 59 pl.
- OSBECK P. 1757: *Dagbok öfwer en ostindisk resa åren 1750, 1751, 1752*. Med anmärkningar uti naturkunnigheten, främmande folkslags språk, seder, hushållning, m.m. På fleras åstundan utgifwen. Jämte 12 tabeller och afledne skepps-predikanten Toréns bref. Grefing, Stockholm, [6] + 376 + [16, register] pp. + 12 pls.
- OSELLA G. & ZUPPA A.M. 1994: Gli *Otiorhynchus* Germar, 1824 del Monte Nerone e montagna viciniori (Appennino umbro-marchigiano) (Coleoptera, Curculionidae). *Biogeographia*, 17[1993]: 367-397.
- PELLETIER J., 1986: Une nouvelle espèce de curculionide pour la faune de France: *Otiorhynchus gemmatus* Scopoli. *L'Entomologiste*, 42(4): 226.
- PEDRONI G. & PESARINI C., 2006: Coleotteri Apionidae e Curculionidae oltre il limite altitudinale del bosco nell'Appennino Tosco-Emiliano (Coleoptera Apionidae, Curculionidae). *Redia*, 88[2005]: 67-78.
- REITTER E., 1913: Bestimmungstabellen der *Otiorrhynchus*-Arten mit ungezählten Schenkeln aus der palaarktischen Fauna. *Wiener Entomologische Zeitung*, 32(2/3): 25-118.
- RHEINHEIMER J. & Hassler M., 2010: *Die Rüsselkäfer Baden-Württembergs*. Verlag Regionalkultur, Bruchsal, 944 pp.
- ROUAULT E., 2014: Tribu Otiorhynchini Schoenherr, 1826 (pp. 695-700). In: Tronquet M. (ed.). *Catalogue des coléoptères de France*. Association Roussillonnaise d'Entomologie, Perpignan, [2] + 1052 pp.
- SCHAUFUSS L.W., 1867: Entomologische Notizen. *Coleopterologische Hefte*, 2: 17-22.
- SCHRANK F. DE PAULA, 1798: *Fauna boica*. Durchgedachte Geschichte in der Baiern einheimischen und zahmen Thiere. Erster Band zweyte Abtheilung. Stein, Nürnberg, pp. 295-720.
- SILBERMANN G., 1833: Descriptions d'espèces nouvelles. Gen. *Othiorhynchus* Schoenherr. *Substriatus*, Schoenherr. *Revue Entomologique*, 1(2): no. 7, plate V.
- SILFVERBERG H. 2004: Enumeratio nova Coleopterorum Fennoscandiae, Daniae et Baltiae. *Sahlbergia*, 9: 1-111.
- SMITH F., 1869: On *Otiorhynchus fuscipes*, Walton. *The Entomologist's Monthly Magazine*, 6: 135-136.
- SOLARI A. & SOLARI F., 1915: Note sugli *Otiorrhynchus* italiani del sottogenere *Dodecastichus* Stierlin. *Annali del Museo Civico di Storia Naturale di Genova*, (3)4[46]: 281-289.
- STIERLIN G., 1861: Revision der europäischen *Otiorhynchus*-Arten. *Berliner Entomologische Zeitschrift*, 5, Beiheft, 344 pp.
- STURM. J., 1792: *Insecten Cabinet, nach der Natur gezeichnet und gestochen*. IV-tes Stück. Nürnberg, 25 pl.
- TELNOV D. (ed.), 2004: *Compendium of Latvian Coleoptera*. Volume I. Check-list of Latvian beetles (Insecta: Coleoptera). Second edition. Entomological Society of Latvia, Riga, 114 pp.
- UYTTENBOOGAART D.L., 1931: Vergelijkende studie over de soorten van het Genus *Otiorrhynchus* s. str. (Col. Curc.) behoorende tot Reitter's 4^e en 5^e Rotte. *Tijdschrift voor Entomologie*, 74(2/3): 281-298.
- UYTTENBOOGAART D.L., 1933: Die Arten der 5^{ten} und 5^{ten} Rotte (im Sinne Reitter's) des Subgenus *Otiorrhynchus* s. str. (Col. Curc.). *Tijdschrift voor Entomologie*, 76(3/4): 217-276.
- VOSS E., 1919: Beitrag zur Kenntnis der palaarktischen Curculioniden. (Col.). (Mit 2. Abbildungen.). *Deutsche Entomologische Zeitschrift*, 1919(3/4): 405-406.
- WANAT M. & MOKRZYCKI T., 2018: The checklist of the weevils of Poland (Coleoptera: Curculionoidea) revisited. *Annales Zoologici*, 68(1): 1-48.

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