

THE IDENTITY OF *ONTHOPHAGUS CUPREOLUS* REITTER, 1894 (COLEOPTERA SCARABAEIDAE)

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Abstract: The synonymy between *Onthophagus cupreolus* Reitter, 1894, currently deemed a synonym of *Onthophagus (Parentius) punctatus* (Illiger, 1803), and *Onthophagus (Parentius) emarginatus* Mulsant, 1842 is established. The events that led to the status currently accorded to *O. cupreolus* Reitter, 1894 are reviewed.

Keywords: Scarabaeidae, *Onthophagus*, *Parentius*, *cupreolus*, *emarginatus*, *punctatus*, new synonymy.

Since Reitter's note of 1902, *Onthophagus cupreolus* Reitter, 1894 has been consistently deemed a synonym of *Onthophagus (Parentius) punctatus* (Illiger, 1803). Yet, that is not correct.

Further to my paper on *Onthophagus emarginatus* Mulsant, 1842 (BRANCO, 1981), I had undertaken a revision of the *Onthophagus* Latreille, 1802 of the subgenus *Parentius* Zunino, 1979. However, when I learnt that someone else was undertaking the same revision I abandoned my work on the subject, and did never publish the results I had obtained.

Within the scope of that revision, I had examined a syntype of *Onthophagus cupreolus* Reitter, 1894, kept in the Hungarian Natural History Museum, Budapest.

REITTER (1894: 301) described *Onthophagus cupreolus* on two females from Andalusia in his collection: «Andalusien; 2 & in meiner Sammlung.»

The syntype, in the Hungarian Natural History Museum, is a teneral female of *Onthophagus (Parentius) emarginatus* Mulsant, 1842. The deep punctures and smooth integument of the pygidium do not consent any confusion with *Onthophagus (Parentius) punctatus* (Illiger, 1803) nor, for that matter, with any other Palearctic species. The syntype is 5 mm long, and bears the following four labels:

- 1) White, handwritten: Sierra de Alcaraz.
- 2) White, printed: coll. Reitter.
- 3) White with red margins, printed and handwritten: Holotypus, 1894, *Onthophagus cupreolus* Reitter.
- 4) White, handwritten: *cupreolus* m. Andalus. 1894.

Reitter did not designate a holotype. The 3rd label must be a museum label, hence, without nomenclatural value. I have not seen the second syntype, and do not know in which institution is it kept or whether it has been lost. Reitter, in his description, does not make any distinction whatsoever between the two specimens, wherefore, there are no objective reason to suspect that they might not be conspecific. Consequently, I have no valid grounds to designate the syntype in Budapest as lectotype. Accordingly, we have:

Onthophagus cupreolus Reitter, 1894, type locality: Sierra de Alcaraz (Albacete, Spain), a junior synonym of *Onthophagus (Parentius) emarginatus* Mulsant, 1842 - **new synonymy**.

The type locality of *Onthophagus cupreolus* is well within the known area of distribution of *Onthophagus (Parentius) emarginatus* in Spain, so it does not add any new fact to current knowledge.

Teneral individuals, in the subgenus *Parentius* Zunino, 1979, are by no means common, but they can not be said to be exceedingly rare either. I have seen teneral individuals, although very few, of all four Western Palearctic species: *atricapillus* d'Orbigny, 1908 - 1 ♀ and 4 ♂♂ from Tetuan (Morocco), in the Natural History Museum, London; *emarginatus* Mulsant, 1842 - the syntype of *Onthophagus cupreolus* Reitter, 1894; *nigellus* (Illiger, 1803) - 1 ♀ from Montargil (Portugal), in the collection of P. Mendonça, Lisbon; *punctatus* (Illiger, 1803) - 1 ♀ from Serra de Sintra (Portugal), 1 ♀ from Muge (Portugal), 1 ♀ from Marvão (Portugal), 5 ♀♀ and 5 ♂♂ from Portalegre (Portugal) all in my collection.

My note could be ended off here. What follows is not relevant to the question of the identity of *Onthophagus cupreolus*, but it is intended for those interested in the historical facet of Entomology.

One may wonder why the synonymy between *Onthophagus cupreolus* and *Onthophagus punctatus* has been accepted until now. Apparently, recent authors have overlooked the fact that in 1902 *O. (Parentius) emarginatus* was considered by most a junior synonym of *O. (Parentius) punctatus*, hence, they did never challenge Reitter's 1902 synonymy. A review of the sequence of events involving these taxa may help to understand why.

1803 — *Copris punctata* is described from Coimbra, Portugal (ILLIGER, 1803).

1842 — *Onthophagus emarginatus* is described from Provence and Var, France (MULSANT, 1842).

1856 — The synonymy between *Onthophagus emarginatus* and *Onthophagus punctatus* is published (REICHE, 1856). Reiche does not give any explanation, he writes merely: «*Onth. emarginatus* Mulsant, Hist. nat. des Lamellicornes, 154.

- Synonyme d'*Onth. punctatus* Illiger, Mag. 11[sic!]-207.»
- 1871 — The synonymy between *Onthophagus emarginatus* and *Onthophagus punctatus* is accepted by MULSANT & REY (1871). They do not credit Reiche though, but Erichson as the author of the synonymy: «Erichson qui avait sans doute sous les yeux, au musée de Berlin, l'exemplaire typique d'Illiger, a restitué à cette espèce le nom de *punctatus*». However, as far as I can ascertain, Erichson does not seem to have ever published such synonymy, and certainly not in the third volume of his *Naturgeschichte der Insecten Deutschlands* (ERICHSON, 1845-48).
- 1892 — In the *Bestimmungstabelle der Lucaniden und coprophagen Lamellicornen*, REITTER (1892) does not mention Mulsant's taxon, but records *Onthophagus punctatus* from France, Spain and Sicily. This suggests that Reitter had also endorsed the synonymy between *emarginatus* and *punctatus*.
- 1894 — *Onthophagus cupreolus* is described from Andalusia (REITTER, 1894).
- 1898 — However a competent entomologist as he certainly was, D'ORBIGNY (1898) in his *Synopsis des Onthophagides paléarctiques* mixes things up. He characterizes *O. punctatus* (Illiger, 1803) by a ventral and dorsal black pilosity: «Dessus et dessous à pubescence noire.», and records it from Portugal and Morocco: «Portugal: Coïmbre [sic!] (d'après Illiger); Maroc: Tanger (coll. Bedel! Coll. H-W. Bates!)».
- In the same work, d'Orbigny characterizes *Onthophagus emarginatus* Mulsant, 1842, by a pale yellowish ventral and dorsal pilosity: «Dessus et dessous à pubescence d'un jaunâtre clair», and records it from France, Spain, Portugal and Sicily: «France: Compiègne (Bedel!), Evreux (Dr. Régimbart), environs de Paris!, Fontainebleau (!), Moulins!, Montluçon (des Gozis), Provence!, Languedoc!, Collioure!; Espagne: Sierra Nevada (Dr. Ch. Martin!); Portugal: Monchique (Dr. Ch. Martin!); Sicile (d'après Reitter)».
- D'Orbigny did not examine *Onthophagus cupreolus* Reitter, 1894 but retains it as a good species: «Espagne: Andalousie, deux exemplaires &. - (D'après la description de Reitter)».
- 1902 — *Onthophagus cupreolus* is downgraded to the status of colour variation of *Onthophagus punctatus* by Reitter himself: «609. *Onthophagus cupreolus* Reitt. W. 1894. 301 aus Anadalousien = eine metallisch gefärbte Varietät des *O. punctatus* Illig.» (REITTER, 1902).
- 1907 — In his 4th monograph on the Portuguese Scarabaeoidea, SEABRA (1907) remarks that amongst the many specimens he had examined of *Onthophagus punctatus* from Portugal, he could not find a single one with the black pilosity described by d'Orbigny: «Segundo H. d'Orbigny este insecto é revestido pela parte superior e inferior de pubescencia preta. Não contestamos a afirmação do illustre entomologista, mas o facto é que tal não succede nem com os exemplares determinados pelo Dr. Paulino, e que podemos observar e estudar no Museu de Coimbra, nem com aquelles que obtivemos nas regiões acima mencionadas e de onde trouxemos perto de uma centena de individuos dos dois sexos.»
- 1908 — Alerted by Seabra's remark, D'ORBIGNY (1908) describes *Onthophagus atricapillus* for the Moroccan specimens he had previously interpreted as belonging to Illiger's taxon: «J'ai déjà indiqué (in L'Abeille, XXIV, p. 157, Syn. Onth. pal.) les principaux caractères de cette espèce que je croyais être le *punctatus* Illiger (1803, Mag., II, p. 208), décrit du Portugal». Further down d'Orbigny credits Seabra for this change of opinion: «M. de Seabra (1907, Estud. anim. ut. e nociv. a agricult., IV, Coprini, p. 116), dit avoir étudié près d'une centaine d'exemplaires du *punctatus*, provenant de diverses parties du Portugal, sans en trouver un seul qui eût la pubescence noire».
- Then, he too adheres to the proposed synonymy between *Onthophagus emarginatus* and *Onthophagus punctatus*: «Il paraît certain qu'elle (*O. atricapillus*) ne se trouve pas en Portugal, et l'espèce décrite par Illiger est la même que l'*emarginatus* Mulsant (1842, Lamell., 1^{re} éd., p. 154), décrit de France.»
- 1978 — *Onthophagus cupreolus* is not included in Zunino's review of Reitter's types (ZUNINO, 1978).
- 1979 — The subgenus *Parentius* is created, to include *O. punctatus* (Ill.) as type species, *O. nigellus* (Ill.), *O. atricapillus* d'Orb. and *O. punctator* Reitt. (ZUNINO, 1979).
- 1981 — *Onthophagus emarginatus* Mulsant, 1842 is restored to the status of good species (BRANCO, 1981).
- 1982 — In a footnote to *Onthophagus punctatus*, PAULIAN & BARAUD (1982) write: «Dans un travail en cours T. Branco montre que le vrai *punctatus*, décrit du Portugal, n'existe pas en France; ceci amènera à réhabiliter *emarginatus* Muls., déjà retenu comme espèce par d'Orbigny». In his synopsis of 1898, D'ORBIGNY does indeed retain Mulsant's name as valid. However, as pointed out above, that was because he mistook the Moroccan species for *Onthophagus punctatus*.
- 1986 — In a revision of the Palearctic species of the subgenus *Parentius* Zunino, 1979, MARTÍN-PIERA (1986) records "*Onthophagus (Parentius) punctatus* ab. *cupreolus* Reitter, 1894" as a synonym of *O. (Parentius) punctatus*.
- 1992 — In *Coléoptères Scarabaeoidea d'Europe*, BARAUD (1992) considers *cupreolus* Reitter, 1894 a colour aberration of *O. (Parentius) punctatus*.
- 2000 — In volume 14 of *Fauna Iberica*, MARTÍN-PIERA & LÓPEZ-COLÓN (2000) list "*Onthophagus (Parentius) punctatus* ab. *cupreolus* Reitter, 1894" as a synonym of *Onthophagus (Parentius) punctatus*.

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