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Source: The Bulletin of Zoological Nomenclature, 78(1) : 30-34

Published By: International Commission on Zoological Nomenclature

URL: https://doi.org/10.21805/bzn.v78.a008

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Case 3835 – *Charopus rotundatus* Erichson, 1840 (Coleoptera, Melyridae, Malachiinae): proposed conservation of current usage by designation of a neotype

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http://zoobank.org/urn:lsid:zoobank.org:pub:4CB00480-FBB4-437C-B9F5-8A580BA45AD4
http://dx.doi.org/10.21805/bzn.v78.a008

Abstract. The purpose of this application, under Article 75.6 of the Code, is to conserve the current usage of the name *Charopus rotundatus* Erichson, 1840 for a species of soft-winged flower beetle from Sardinia and North Africa by setting aside all previous type fixations for this nominal species and designating a neotype. One of the two existing syntypes is in fragmentary condition and the other is not in taxonomic accord with the prevailing usage of the species name because it belongs to another taxon of the same family, *Troglops brevis* Erichson, 1840. Stability and universality are threatened unless the existing type series for *C. rotundatus* is set aside and a neotype conforming to the original and current species concept is designated.

Keywords. Nomenclature; taxonomy; Insecta; Coleoptera; Melyridae; Malachiinae; *Charopus rotundatus*; *Troglops brevis*; Sardinia; North Africa; syntypes; neotype; soft-winged flower beetles.

1. Erichson (1840: 119) described the soft-winged flower beetle genus *Charopus*. The type species, subsequently designated by Thomson (1859), is *Malachius pallipes* Olivier, 1790. In the same work, Erichson (1840: 125) described another genus, *Troglops*, with the type species *Cantharis albicans* Linnaeus, 1767 fixed by subsequent designation by Jacquelin du Val (1859: 47). Both generic names were accepted by the taxonomic community and are still used as valid today.

2. Among the species originally included in *Charopus,* Erichson (1840) described *Charopus rotundatus* from Sardinia (p. 121), with a description that still fits the accepted concept of this nominal species as exemplified by, e.g., Küster (1847, 1849), Fairmaire (1875), Peyron (1877), Costa (1883), Abeille de Perrin (1885, 1890–1891), Pic (1893), Uhagón (1900–1901), Sahlberg (1903), Porta (1929), Normand (1935) and Plata-Negrache & Santiago Hernández (1990). The earliest illustration found applicable to *C. rotundatus* is in plate 4 of Uhagón (1879), under the name *C. multicaudis*, currently treated as junior synonym of *C. rotundatus* (Mayor, 2007). Erichson (1840) wrote that the specimens of *C. rotundatus* he studied were communicated to him by Gené under the name *Malachius charopus*. The specific name "*charopus*" was thus proposed in synonymy. Because there is no evidence of this name having been treated before 1961

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Fig. 1. Syntype of *Charopus rotundatus* Erichson, 1840. Museum für Naturkunde, Berlin.

as an available name for a taxon or as a junior homonym, it is unavailable under Article 11.6 of the Code.

3. Erichson (1840) did not indicate the number of specimens he had examined while describing *Charopus rotundatus*, but there must have been at least two because he described characters of both sexes. The Erichson collection is preserved in the Museum für Naturkunde, Berlin, Germany. A search there for the type series yielded only two apparent syntypes with labels "*Charopus rotundatus* / *Mal. charopus* Gené / Sard. Gené (handwritten) // SYNTYPE / Charopus rotundatus / Erichson, 1840 / labelled by MFNB 2019 (printed, red) // Hist. Coll. (Coleoptera) / Nr. 32359 / Charopus rotundatus / Sardin, Gené / Zool. Mus. Berlin (printed)". One specimen (Figure 1) is a female of *Troglops brevis* Erichson, 1840. This syntype can be safely assigned to this genus, on account of its wide head, pronotum constricted at base and sparse pubescence ("tenuiter vestitum" in the original description) (Evers, 1979), and to this species on account of its provenance, *brevis* being the only black *Troglops* occurring in Sardinia (Wittmer, 1984; Pasqual & Angelini, 2001). This specimen notably differs from Erichson's (1840) description of *C. rotundatus* in both colour (black instead than black-greenish) and aspect (glossy instead than matte). The second specimen is just a fragment of a middle leg, so of no use to taxonomists except potentially for molecular bar-coding to establish whether it is also *T. brevis* or the actual *C. rotundatus*.

4. The identity of the leg fragment representing the second syntype cannot be confirmed by morphological observation, but the proof presented here that the intact first syntype is actually a specimen of *Troglops brevis* means that *Charopus rotundatus* and *T. brevis* may have to be regarded as subjective synonyms. In the absence of any illustrations accompanying Erichson's (1840) original description of *C. rotundatus*, the alternative to designating this taxonomically wrong specimen as lectotype would be to designate the other specimen, the leg fragment, as lectotype, which would

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leave *C. rotundatus* a *nomen dubium*. Because both nominal species were described simultaneously in the same work (Erichson, 1840), a first reviser would have to decide which name should have priority. I elect not to do this now because any choice will be disruptive to current taxonomic usage of both binomina; both have been widely used in the literature concerning MELYRIDAE: e.g. Küster (1849), Gaubil (1849), Peyron (1877), Desbrochers des Loges (1897–1898), Abeille de Perrin (1890-1891), Uhagón (1900–1901), Sahlberg (1903), Sainte-Claire Deville (1914), Luigioni (1929), Porta (1929), Greiner (1937), Wittmer (1984) and Mayor (2007). In all of these cited works, the respective species concepts are in accordance with the original descriptions, and *Charopus* and *Troglops* have been universally accepted as separate genera (Mayor, 2007).

5. In order to maintain the current concept of *Charopus rotundatus* and therefore preserve stability and universality in the usage of the name, it is necessary to replace the original type series with a neotype under Article 75.6 of the Code. In the genus *Charopus*, it is important that name-bearing types be, or at least include, male specimens that display all the secondary sexual characters, which are essential for proper identification of species in the genus (Abeille de Perrin 1890–1891: 246). Therefore, I nominate for designation as the neotype of *Charopus rotundatus* a male specimen, labeled as follows, "IT Sardegna OR / Tresnuraghes 2.IV.2019 / 40°14′32″N 8°28′32″E / A.&G. Franzini leg. // Neotypus / Charopus rotundatus / Erichson 1840 / G. Franzini des. 2020 (red, handwritten)". The specimen exhibits the characters described by Erichson that differentiate male *C. rotundatus* from males of other species of the genus: pronotum entirely dark, tibiae entirely dark, elytra dark with pale apex and a thorny appendage, apex not prolonged in a tail-like rounded lobe (Abeille de Perrin, 1890–1891: 246). It came as nearly as practicable from the original type locality, as Erichson stated it only in general terms ("Aus Sardinien"). It will be deposited in the collection of the Museum für Naturkunde, Berlin, Germany. This institution maintains a research collection, with proper facilities for preserving name-bearing types, and makes them accessible for study.

6. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power to set aside all previous type fixations for the name *rotundatus* Erichson, 1840, as published in the binomen *Charopus rotundatus*, and to designate as the neotype the specimen (Figure 2) labeled "IT Sardegna OR / Tresnuraghes 2.IV.2019 / 40°14′32″N 8°28′32″E / A.&G. Franzini leg. // Neotypus / Charopus rotundatus / Erichson 1840 / G. Franzini des. 2020 (red, handwritten)" deposited in the collection of the Museum für Naturkunde, Berlin, Germany; and

(2) to place on the Official List of Specific Names in Zoology the name *rotundatus* Erichson, 1840, as published in the binomen *Charopus rotundatus* and as defined by the neotype designated in (1) above.

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Fig. 2. Proposed neotype of *Charopus rotundatus* Erichson, 1840. Deposited in Museum für Naturkunde, Berlin (bar = 1 mm)

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Acknowledgement of receipt of this application was published in BZN 77: 114.

Comments on this case are invited for publication (subject to editing) in the Bulletin; they should be sent to the Secretariat, International Commission on Zoological Nomenclature, c/o Lee Kong Chian Natural History Museum, 2 Conservatory Drive, Singapore 117377, Republic of Singapore (e-mail: iczn@nus.edu.sg).

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