

**Case 3254*****Aphodius niger* Illiger, 1798 (Insecta, Coleoptera): proposed conservation of the specific name**

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**Abstract.** The purpose of this application, in relation to Articles 57.3.1 and 59.1 of the Code, is to conserve the specific name *Aphodius niger* Illiger, 1798 for a widely distributed and endangered species of European dung beetle. At present, this nominal species is invalidly referred to as *Scarabaeus niger* Panzer, 1797 (currently *Aphodius niger* (Panzer, 1797), a senior secondary homonym of *Aphodius niger* Illiger, 1798). It is proposed that *Aphodius niger* Illiger, 1798 be conserved by suppression of the name *Scarabaeus niger* Panzer, 1797. Panzer's actual species is considered to be conspecific with *Aphodius granarius* (Linnaeus, 1767) or *Aphodius varians* Duftschmid, 1805, but not with *Aphodius niger* Illiger, 1798. A lectotype for *Aphodius niger* Illiger, 1798 is designated.

**Keywords.** Nomenclature; Coleoptera; SCARABAEIDAE; *Aphodius*; *Aphodius niger*; dung beetle; endangered species; British Red Data Book; U.K. Biodiversity Action Plan; Europe.

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1. Panzer (1797, p. 1) described and named *Scarabaeus niger*, a species of scarab beetle (family SCARABAEIDAE). As far as we know there is no extant type material (Eisinger, 1919; Horn et al., 1990, p. 295). At present, this name (which is currently used in the combination *Aphodius* (*Liothorax*) *niger* (Panzer, 1797)) is incorrectly applied (see para. 2 below) to a widespread species of European beetle that is localized within its distribution range. This invalid name (see para. 4 below) is used in all current works on European APHODIINAE (APHODIIDAE) (e.g. Paulian, 1959, p. 171;



Dellacasa, 1983, p. 281; Jessop, 1986, p. 24; Krell & Fery, 1992, p. 234; Baraud, 1992, p. 195; Bunalski, 1999, p. 103) and in the world catalogue of APHODIIDAE by Dellacasa (1986, p. 232). It is listed as 'endangered' (RDB 1) in the British Red Data Book (Shirt, 1987, p. 176) and is the subject of a Biodiversity Action Plan (Anonymous, 1995, p. 123).

2. Ádám (1994, p. 6) thought that the name *S. niger* Panzer, 1797 was being misapplied as the species currently referred to as *Aphodius* (*Liothorax*) *niger* (Panzer, 1797) did not match the description of the species named *Scarabaeus niger* by Panzer in 1797. Ádám suggested the species originally named *S. niger* by Panzer (1797) was in fact conspecific with *Aphodius varians* Duftschmid, 1805. In our opinion, Ádám's interpretation of *S. niger* Panzer is probably incorrect. However, Creutzer (1799, p. 20) correctly synonymized *S. niger* Panzer with *S. granarius* Linnaeus, 1767 (currently *Aphodius granarius* (Linnaeus, 1767)). This synonymy has been overlooked by all subsequent authors (e.g. Dellacasa, 1986, p. 382), because Creutzer's comments on Panzer's species were erroneously cited as the description of a new species '*Aphodius niger* Creutzer, 1799' by Schönherr, 1806 (p. 77), Dellacasa, 1986 (p. 168) and others.

3. Ádám (1994, p. 6) also noted that the name *Scarabaeus niger* Panzer, 1797 was in fact a junior primary homonym of *Scarabaeus niger* Giorna, 1791 (a nomen oblitum for an unidentified species of the subfamily CETONIINAE). As a result, it could not be used as the valid name for *Aphodius varians*. To avoid the homonymy, he redescribed the species that had been named *Scarabaeus niger* Panzer, 1797 and named it *Aphodius muscorum*. This replacement name has not gained wide recognition in the current literature (not even in the Hungarian literature, see Sár, 1998, p. 205; Náday & Merkl, 1999, p. 218). Only Ádám himself (1996, p. 305; 1998, p. 263) and Bordat (1999, p. 81) have used this new name (in the combination *Liothorax muscorum*).

4. Illiger (1798, p. 24) described a scarab beetle from Sweden and various parts of Germany and named it *Aphodius niger*, erroneously referring to *Scarabaeus niger* Panzer, 1797. Evidently, Illiger thought he was redescribing *S. niger* Panzer and not a new species. However, Illiger's beetle species is clearly not that described by Panzer, and is easily recognizable as a member of the subgenus *Liothorax* Motschulsky, 1859, and as the endangered species currently and invalidly known as *Aphodius* (*Liothorax*) *niger* (Panzer, 1797). According to Horn et al. (1990, p. 183), Illiger's type material has been deposited partly in the Museum für Naturkunde, Berlin, and partly in the Staatliches Naturhistorisches Museum Braunschweig. In Braunschweig, no material of *A. niger* with labels matching Illiger's handwriting was found (J. Hevers, curator, pers. comm., 27 June 2001).

5. We have inspected the specimens labelled *Aphodius niger* from the historic collection in Berlin and they are all the species currently known as *Aphodius* (*Liothorax*) *niger* (Panzer, 1797). There are seven specimens in the series, which has the reference number 25810. This is a printed label attached to the first specimen, but duplicated by the Museum on all the other specimens. The series name-label is pinned to the first specimen (a female), and its data are written in three rows, in dark brown ink. The first row reads 'niger', the second 'Pz Gyl', later altered in black ink, with the 'Pz' crossed out and 'Ill' added, and an asterisk (\*) added after 'Gyl.'. The third row reads 'Sc. Terrestris Pz'. These data match those used by Illiger in his published



description of *Aphodius niger*. The labelled female specimen lacks locality data, as do three of the other specimens. One specimen has a handwritten label 'Austria' (not given as a locality in Illiger's description of *A. niger*), and there are two males with handwritten labels 'Suec'. These Swedish specimens are the only ones whose locality is mentioned in Illiger's description, and therefore the only specimens that can be unambiguously identified as syntypes. To ensure that the type material matches the type locality of Illiger's description and thus to avoid any future nomenclatural or taxonomic confusion, we herewith designate one of the Swedish specimens from this series as the lectotype, and have labelled it as such. The other specimen from Sweden has been labelled as the paralectotype.

6. Since Illiger (1798) published the specific name *niger* in combination with *Aphodius* rather than *Scarabaeus*, his name is not a junior primary homonym of *S. niger* Panzer, 1797 (or of the nomen oblitum *S. niger* Giorna, 1791). However, it is a junior secondary homonym of *Aphodius* (*Liethorax*) *niger* (Panzer, 1797); see Articles 57.3.1 and 59.1. To ensure permanent clarification of the confusion this could cause, we propose suppression of the name *Scarabaeus niger* Panzer, 1797. The species to which Panzer actually applied this name already has the senior synonym *Aphodius granarius* (Linnaeus, 1767). In addition, suppression of *Scarabaeus niger* Panzer, 1797 will also provide protection for later names if these are considered to be synonyms of Panzer's name as has occurred for *Aphodius varians* Duftschmid, 1805.

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

- (1) to use its plenary power to suppress the name *niger* Panzer, 1797, as published in the binomen *Scarabaeus niger*, for the purposes of both the Principle of Priority and the Principle of Homonymy;
- (2) to place on the Official List of Specific Names in Zoology the name *niger* Illiger, 1798, as published in the binomen *Apodius niger* and as defined by the lectotype designated in para. 5 above;
- (3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *niger* Panzer, 1797, as published in the binomen *Scarabaeus niger* and as suppressed in (1) above.

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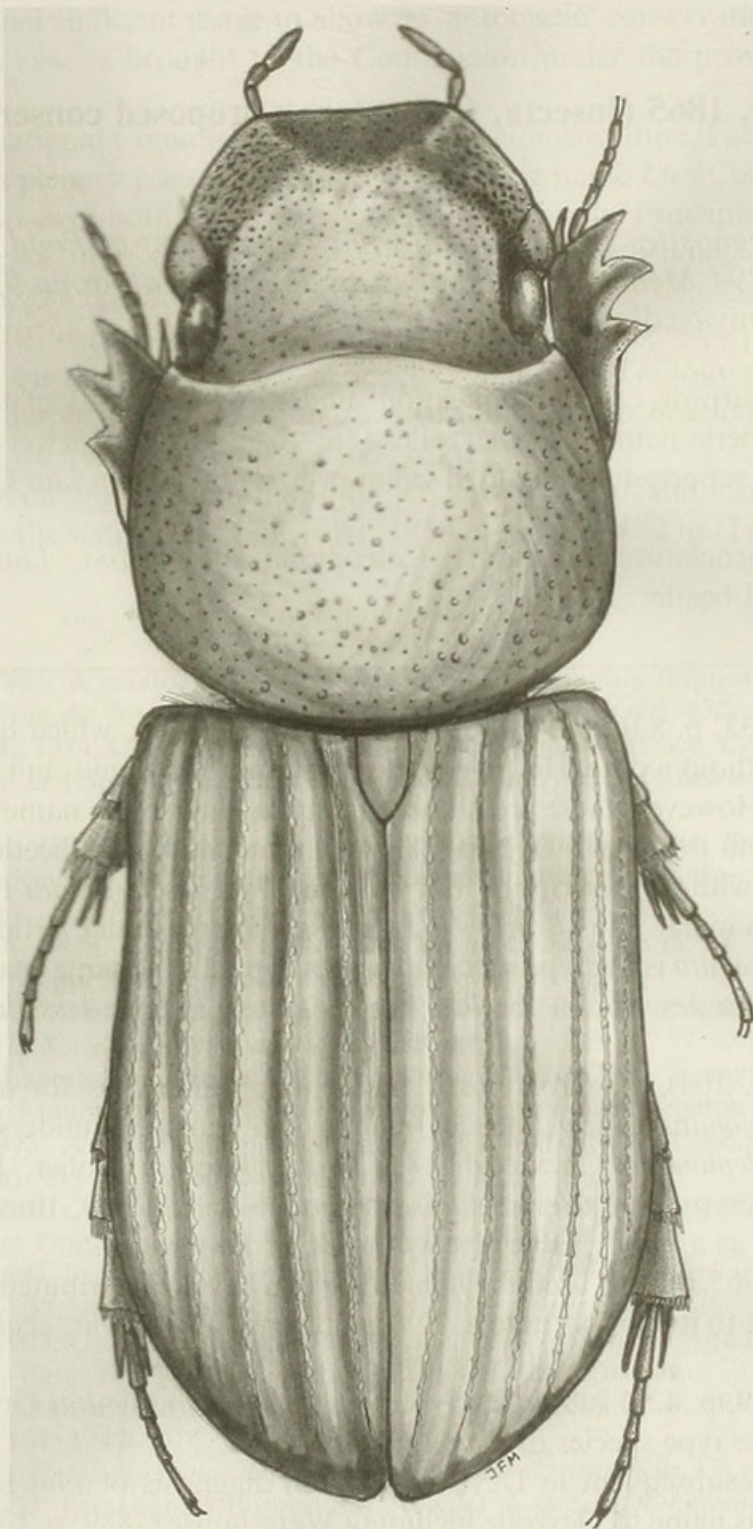
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*Aphodius niger* Illiger, 1798 Hortobagy [Hungary] NP. Ujszentmargita margital erdo fuhalozva 1974.v.28 leg. Vasarhelyi [labelled 'Aphodius muscorum Adam/Det. Adam, 1984'] Actual length: 5 mm.

Drawing by Jason F. Maté.



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