

Case 3665***Musca purpurascens* Walker, 1836 (Insecta, Diptera, CALLIPHORIDAE): proposed conservation of prevailing usage of name by setting aside the unidentifiable female holotype and replacing it with a male neotype**

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Abstract. The purpose of the present application, under Article 75.5 of the Code, is to conserve the name *Lucilia purpurascens* (Walker, 1836) in its accustomed usage for a common Neotropical blow fly by setting aside the existing unidentifiable female holotype and replacing it with a male neotype.

Keywords. Nomenclature; taxonomy; Insecta; Diptera; CALLIPHORIDAE; *Musca*; *Lucilia*; *Musca purpurascens*; *Lucilia purpurascens*; *purpurescens*; blow fly; Neotropical Region.

1. Walker (1836, p. 355) described and named *Musca purpurascens* from Brazil, Santa Catarina (as 'St. Catherine's'). The female holotype is in the Natural History Museum, London and Whitworth (2014, p. 22, figs. 35–36) published photographs of it and its labels.

2. Aubertin (1933, p. 426) assigned *Musca purpurascens* to the genus *Lucilia* Robineau-Desvoidy. The type species of *Lucilia* is *Musca caesar* Linnaeus, 1758, by subsequent designation of Macquart (1835, p. 251). Aubertin also provided a detailed description of both sexes and included a figure of the phallus and male genitalia (Aubertin, 1933, p. 426, figs. 30a, b). She also noted '[*M. purpurascens*] is a striking and easily recognizable species'. The male genitalia for this species as figured by Aubertin (1933, p. 426, fig. 30b) are distinctive according to Whitworth (2014, p. 42).

3. Hall (1948) provided an even more detailed description and figures of *M. purpurascens* (Hall, 1948, Plate 25, figs. C, D) following Aubertin's interpretation of Walker's species. He assigned it to the nominal genus *Phaenicia* Robineau-Desvoidy (now considered a synonym of *Lucilia*).

4. Subsequent authors have followed Aubertin's concept of *Musca purpurascens*: Hall (1948, p. 254; the species name was misspelled as '*purpurescens*' and most subsequent authors followed this incorrect spelling); James (1970, p. 11); Baumgartner & Greenberg (1985, p. 584); Mariluis (1989, p. 75); Carvalho & Riberio (2000, p. 170; name spelled correctly in key but incorrectly as '*purpurescens*' in

summary); Kosmann et al. (2013, p. 77). This concept was also employed in the recent monograph on Neotropical *Lucilia* by Whitworth (2014, p. 42).

5. In his monograph on Neotropical *Lucilia* Robineau-Desvoidy, Whitworth (2014, p. 42) pointed out that the holotype was unidentifiable, that the name *Musca purpurascens* was a nomen dubium and that an application to replace the holotype with a neotype would be forthcoming.

6. The holotype female of *Musca purpurascens* was examined by Whitworth (2014). It was intact, but had a heavy layer of dust adhering to the cuticle which could not be cleaned off without risking destruction. It is difficult to be certain about the exact microtomentum patterns on the thorax and abdomen which are important to confirm species identity. Characters which might reveal the identity of the specimen are obscured. Repeated efforts to confirm this specimen's identity with certainty have failed. Whitworth (2014) stated that, even with good specimens, a lone female *Lucilia* without matched males in the Neotropical Region could be difficult to identify positively.

7. Aubertin's description does not match the holotype of *M. purpurascens*. Whitworth (2014, p. 42, cf. figs. 35–38) compared females conforming to Aubertin's concept of *M. purpurascens* with Walker's holotype and found significant differences. For specimens conforming to Aubertin's concept, the frons width averages 0.28 of head width at narrowest, whereas it measures 0.25 of head width at narrowest in the holotype; the dorsum of thorax in the former has heavy whitish microtomentum, whereas in the holotype only the anterior edge of pronotum has whitish microtomentum; the abdominal tergite T4 in the former is mostly polished or only microtomentose on the anterior edge, whereas in the holotype most of T4 is microtomentose; the gena is all dark brown in the former specimens, whereas in the holotype the anterior edge of the gena is orange; the upper and lower calypters are dark brown with dark brown rims in the females corresponding to Aubertin's concept, whereas in the holotype the upper and lower calypters are light tan, the rim of the upper calypter brown, the rim of the lower calypter pale. There are other less obvious differences as well.

8. The holotype of *Musca purpurascens* was collected from Santa Catarina, in southeast Brazil. It is not clear if this was from the nearby island of that name or somewhere else in the state of Santa Catarina, but according to the detailed distributional records published by Whitworth (2014) specimens matching Aubertin's concept of *purpurascens* have not been found anywhere near this location.

9. The taxonomic identity of the nominal species-group taxon *Musca purpurascens* Walker, 1836 cannot be determined from its existing name-bearing type. The stability and universality of the accustomed usage of the name is threatened thereby. We therefore propose to set aside the existing unidentifiable female holotype and replace it with a male neotype in accordance with prevailing usage of the name *purpurascens*. We propose as neotype a male in perfect condition collected in Costa Rica with the following labels: (1) COSTA RICA Pnts / 1400m, Coton, Las / Alturas 5.IX.91 / P. DeVries M. Wood; (2) Neotype ♂ / *Musca purpurascens* / Walker, 1836: 355 / T.L. Whitworth 2014. 'Pnts' is an abbreviation for Puntarenas Province, 'Coton' is a river near the town of Las Alturas. The neotype has the genitalia partly exposed. It is housed in the Canadian National Collection of Insects, Arachnids and Nematodes, Ottawa, Canada. It keys out easily by using Whitworth's (2014) key. Photographs of



Figs. 1–4: 1–2. Left lateral and dorsal view of neotype; 3. Location label; 4. Neotype label.

the neotype and its labels are shown in Figs 1–4. If a neotype is not designated under the plenary power then everyone will still be free to interpret the name *Musca purpurascens* Walker as he or she pleases, not being bound by Aubertin's and Hall's interpretations. Such a lack of action will contribute to further confusion about the identity of this species.

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

- (1) to use its plenary power to set aside all previous type fixations for the nominal species *Musca purpurascens* Walker, 1836 and to designate as neotype the male specimen in the Canadian National Collection of Insects, Arachnids and Nematodes, detailed in para. 9 above;
- (2) to place on the Official List of Specific Names in Zoology the name *purpurascens* Walker, 1836, as published in the binomen *Musca purpurascens* and as defined by the neotype designated in (1) above.

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).



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