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***Haematobia* or *Hoematobia*? A close look at early 19th century italicized ligatures of æ and œ reveals a surprise**

NEAL L. EVENHUIS 

J. Linsley Gressitt Center for Research in Entomology, Bishop Museum, Honolulu, Hawai'i 96817-2704, USA; email: NealE@bishopmuseum.org

THOMAS PAPE 

Natural History Museum Denmark, Universitetsparken 15, 2100 Copenhagen, Denmark. E-mail: TPape@snm.ku.dk

Abstract. The ligatures æ and œ in the *Encyclopédie Méthodique* regarding the muscid genus *Haematobia* are researched and characters given to distinguish between the two. The original spelling of the nominal genus is found to be *Hoematobia*, but *Haematobia* is the correct original spelling via prevailing usage. In addition, a list of available and unavailable names and spellings used in the literature referring to *Haematobia* is given.

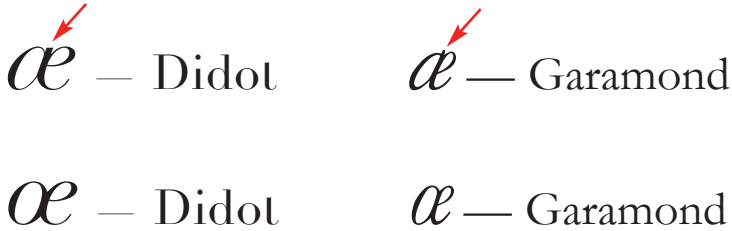
In checking some generic names of Diptera in the *Encyclopédie Méthodique* (*EM*), we were particularly struck by the spelling of the muscid genus *Haematobia* Lepeletier & Audinet-Serville, 1828 as it appeared to be spelled as *Hoematobia* (see Fig. 1). All works we could find referring to the original spelling of the name in this work are as *Haematobia*. Apparently no one had previously noted this alternate spelling, which was most likely due to the close similarity of the italicized ligatures æ and œ. A paper by David & Dickinson (2016) noted the problem of distinguishing between these two italicized ligatures and, when they surveyed the bird names proposed by the French ornithologist Vieillot in the *Nouveau Dictionnaire des Sciences Naturelles*, they gave features to distinguish the two ligatures and listed the correct original spellings of each name found in the works of Vieillot from 1816–1819 in that *Dictionnaire*.

These two ligatures when in plain roman (æ, œ) or when capitalized (Æ, Œ), are easily distinguished. However, the italicized typeface for them (æ, œ) shows extreme similarity resulting in difficulty in distinguishing between the two, especially when set in small font sizes.

HISTORY AND DISTINGUISHING FEATURES OF THE LIGATURES Æ AND Œ

Before we discuss *Haematobia*, we present the situation in 19th century printing in France and the ways to distinguish the italicized versions of each ligature. The most common typeface used in the 1820s and 1830s in France (when and where the *EM* was published) was Didot (Wlassikoff 2025). The Didot typeface first appeared in 1784, and its inventor, printer Firmin Didot (1764–1836), was appointed by Napoleon as Imperial Printer in 1811, which heavily influenced its commonality of usage for more than a century thereafter. Since another typeface, Garamond, was also used in some early 19th century French

works, but to a much lesser degree, we tested both to see which matched best. When matching typefaces to the printing in many of the French scientific works of that era including the *EM*, Didot matched, while Garamond did not. Below are examples of each typeface in current font suites in word processing. They have not changed much if at all from the 1800s.



The two main characteristics distinguishing the italicized æ from œ are: (1) a tiny stem between the “a” and the “e” at the top of the æ ligature (see red arrows above) (this stem absent in the œ ligature); and the slimmer oval of the “a” in the æ ligature (the “o” being more rounded in the œ ligature). These can be seen in the above two examples (which are enlarged to 24 point), but when smaller-sized fonts are used, the distinguishing features are not as discernable. See also DPWiki (https://www.pgdp.net/wiki/Æ_and_œ_ligatures) for characteristics distinguishing these two ligatures.

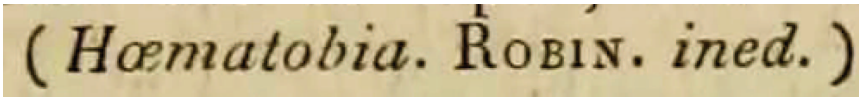


Figure 1. *Hoematobia* as it appears in Lapeletier & Audinet-Serville (1828: 499).

To determine correct orthography of *Haematobia*/*Hoematobia* using either an æ or œ ligature, we surveyed other names and words used in the *EM*. A few examples follow. Figure 1 shows the original publication of *Hoematobia* (in Lapeletier & Audinet-Serville 1828: 499) with a lack of the tiny stem at the top and a rounded “o”.

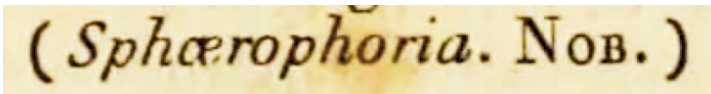


Figure 2. *Sphaerophoria* as it appears in Lapeletier & Audinet-Serville (1828: 513).

Figure 2 shows the original publication of *Sphaerophoria* by the same authors (Lapeletier & Audinet-Serville, 1828: 513), but it is difficult at first glance to discern whether an æ or œ was intended.



Figure 3. Enlargement of the æ ligature in *Sphaerophoria* in Lepeletier & Audinet-Serville (1828: 513). Red arrow points to stem at top.

An enlargement of the ligature in *Sphaerophoria* (Fig. 3) gives a somewhat better depiction of the æ ligature with the tiny stem at the top present, but blurred because of the inking of the font.

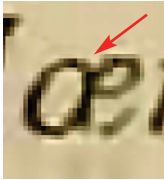


Figure 4. Enlargement of the œ ligature in *Hoematobia* in Lepeletier & Audinet-Serville (1828: 499). Note lack of stem at red arrow.

Comparing it to the enlargement of the œ ligature in *Hoematobia* (Fig. 4) the latter shows a clear lack of the stem at the top and a rounded o.

Another example [from the 1811 *Mouches* article in the *EM* (Manuel 1811: 13)] (Fig. 5) shows uses of intended æ and œ ligatures on the same page.

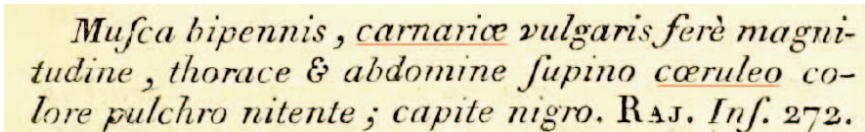


Figure 5. Portion of page 13 of Manuel (1811) in the *Encyclopédie Méthodique* showing words with the æ and œ ligatures (underlined).

If we examine an enlarged version (Fig. 6) of the ligature in the word *carnariæ* [NB: all Latin endings are -ae and never -oe, so this is another distinguishing character], we can see that an æ is intended with the narrow a, although the tiny stem on top is blurred due to ink (see red arrow). In contrast, the ligature œ in the word *cœruleo* when enlarged (Fig. 7) shows a much more rounded o in the ligature and clearly no stem on top in between the two letters of the ligature.



Figure 6. Enlargement of the æ ligature in the word *carnariæ* in Manuel (1811: 13). **Figure 7.** Enlargement of the œ ligature in the word *cœruleo* in Manuel (1811: 13).

Our study of the ligatures in the *EM* leads us to conclude that the original spelling by Lepeletier & Audinet-Serville was *Hoematobia* and not *Haematobia*; with the latter being an incorrect subsequent spelling. However, all is not lost for the spelling *Haematobia*. A provision in the ICZN *Code* (Article 33.3.1) (I.C.Z.N. 1999) stipulates that “when an incorrect subsequent spelling is in prevailing usage and is attributed to the publication of the original spelling, the subsequent spelling and attribution are to be preserved and the spelling is deemed to be a correct original spelling”. *Haematobia* of Lepeletier & Audinet-Serville, 1828 is by far in prevailing usage (62 hits on Google Scholar since 1971; 32 since 2011) vs *Hoematobia* Lepeletier & Audinet-Serville, 1828 (0 hits since 1971). So, *Haematobia* should be used with its authorship as Lepeletier & Audinet-Serville, 1828.

A LITANY OF MISSPELLINGS FOR *HAEMATOBIA*

A number of workers have spelled *Haematobia* with various orthographies and some of these variant spellings have been deemed to be emendations; others have been deemed to be incorrect subsequent spellings. In our review of genus-group names of Robineau-Desvoidy (Evenhuis *et al.* (2010), we treated *Haematobia* Robineau-Desvoidy, 1830 and an alleged emendation of it by Bigot (1892); and in our review of Rondani genus-group names (O’Hara *et al.* 2011) we treated a Rondani (1856) spelling as an emendation of *Haematobia*. These two works have here been found to be in error with the assumptions of those emendations. Pont & Evenhuis (2026) gave a detailed list of synonyms and misspellings of *Haematobia*. We have since found a few more names. Below is a corrected list of the available and unavailable genus-group names deriving from *Haematobia*.

Hoematobia Lepeletier & Audinet-Serville 1828: 513 (incorrect original spelling of *Haematobia*).

Haematobia Lepeletier & Audinet-Serville, 1828: 513 [as *Hoematobia*; *Haematobia* deemed the correct original spelling by prevailing usage (ICZN *Code* Art. 33.3.1)]. Type species: *Conops irritans* Linnaeus, 1758 (by designation of ICZN Opinion 1008 (I.C.Z.N. 1974; with *Haematobia* Lepeletier & Audinet-Serville, 1828 put onto the Official List of Generic Names in Zoology).

In proposing the name, Lepeletier & Audinet-Serville attributed it to Robineau-Desvoidy, but the latter’s publication of the name did not appear until 1830 (see below). Before publishing, Robineau-Desvoidy submitted his manuscript to the Academie des Sciences and a *Rapport* of it by Blainville *et al.* appeared in 1826. Some names proposed by Robineau-Desvoidy were given characters to make them available in the *Rapport*, and if accepted would have threatened stability of nomenclature and taxonomy for a number of Diptera taxa. Sabrosky (1988) applied to the ICZN to suppress the work, which was done in Opinion 1601 (ICZN 1990). Lepeletier and/or Audinet-Serville must have had access to Robineau-Desvoidy’s manuscript to have known about his *Haematobia* as it was not listed in Blainville *et al.*’s (1826) *Rapport*. Since Robineau-Desvoidy was only listed by Lepeletier & Audinet-Serville as the author of the name and did not provide characters, priority and authorship goes to Lepeletier & Audinet-Serville (1828) and not Robineau-Desvoidy (1830).

Haematobia Robineau-Desvoidy, 1830: 388 (preoccupied by Lepeletier & Audinet-Serville, 1828). Type species: *Haematobia ferox* Robineau-Desvoidy, 1830 [= *Conops irritans* Linnaeus, 1758], by subsequent designation of Evenhuis *et al.* (2010: 85).

- Hematobia* Macquart, 1850: 529 (unjustified emendation of *Haematobia* Robineau-Desvoidy, 1830; cf. Evenhuis *et al.* 2016: 69).
- Hoematobia* Rondani, 1856: 211 (incorrect subsequent spelling of *Haematobia* Robineau-Desvoidy, 1830. Not an emendation as in O'Hara *et al.* (2011: 97). [NB: the spelling *Hoematobia* in O'Hara *et al.* 2011: 97 is a typographical error].
O'Hara *et al.* (2011: 97) listed this spelling by Rondani (1856: 211; incorrectly as *Hoematobia*) as an emendation by virtue of similar changes in the work from ae- to oe. However, a re-check here shows that Rondani (1856: 92) also used the spelling *Haematobia*. As such, the usage of *Hoematobia* as an emendation in Rondani (1856) is equivocal and we thus invoke ICZN *Code Art.* 33.5 here in treating all uses of *Hoematobia* in Rondani (1856) as an incorrect subsequent spelling of *Haematobia* Robineau-Desvoidy, 1830.
- Hemathobia* Rondani, 1862: 230 (unjustified emendation of *Haematobia* Robineau-Desvoidy, 1830; see O'Hara *et al.* 2011: 95).
- Hoematobia*: Bigot 1892: 192 (incorrect subsequent spelling of *Haematobia* Robineau-Desvoidy, 1830). Not an emendation as listed in Evenhuis *et al.* (2010: 85).
A recheck here of Bigot (1892) showed that criteria making this name available as an emendation were not fulfilled in this work.
- Haemathobia*: Neave 1939: 545 (incorrect subsequent spelling of *Haematobia* Lepeletier & Audinet-Serville, 1828).
- Hoematobia*: O'Hara *et al.* 2011: 97 (incorrect subsequent spelling of *Haematobia* Robineau-Desvoidy, 1830; a typographical error of *Hoematobia* Rondani).

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