

Case 3770 – *Musca jejuna* Fabricius, 1787 (currently *Bengalia jejuna*) and *Musca torosa* Wiedemann, 1819 (currently *Bengalia torosa*) (Insecta, Diptera, CALLIPHORIDAE): proposed conservation of prevailing usage of names by setting aside existing name-bearing types (syntypes) of both nominal species and replacing them with male neotypes

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Abstract. The purpose of the present application, under Articles 75.5 and 75.6 of the Code, is to conserve the names *Bengalia jejuna* (Fabricius, 1787) and *Bengalia torosa* (Wiedemann, 1819) in their accustomed usage for two Oriental blowflies by setting aside the three female syntypes of *Musca jejuna* Fabricius, 1787 and the male and female syntypes of *Musca torosa* Wiedemann, 1819, which are either not conforming to the prevailing usage of the names or unidentifiable, and in each case by replacing them with a male neotype.

Keywords. Nomenclature; taxonomy; Insecta; Diptera; CALLIPHORIDAE; *Musca*; *Bengalia*; *Musca jejuna*; *Musca torosa*; *Bengalia jejuna*; *Bengalia torosa*; blowfly; Oriental Region.

1. There has been confusion over the use of the names *Musca jejuna* Fabricius, 1787, *Musca torosa* Wiedemann, 1819 and *Bengalia lateralis* Macquart, 1844, in the past, but their concepts stabilized with the works of James (1966, 1977). After James's papers both *Musca jejuna* and *Musca torosa* were universally accepted, with one exception, as valid names in the genus *Bengalia* Robineau-Desvoidy, 1830, with *Bengalia lateralis* as a junior synonym of *Bengalia torosa*. This is the usage this application asks the Commission to preserve. Since the two papers by James, *Bengalia jejuna* has been used in 10 papers, the oldest from 1980, the most recent from 2018, and *Bengalia torosa* has been used in 23 papers, the oldest from 1978, the most recent from 2018. A list of the references to these papers has been deposited with the ICZN Secretary and is available upon request. The single exception is Lehrer (2005), who regarded both *Musca jejuna* Fabricius and *Musca torosa* Wiedemann as “nomina dubia, qui ne peuvent être utilisés dans la taxonomie moderne [nomina dubia, which has no place in modern taxonomy]”. Lehrer's actions were discussed by Rognes (2006).

2. Fabricius (1787: 342) described *Musca jejuna* from India, Tamil Nadu province,

Tarangambadi (as “Habitat Tranquebariae Dom. Lund.”), at the time a small Danish colony, from an unstated number of specimens of unstated sex. The species was listed in two subsequent publications (Fabricius, 1794: 312; 1805: 283).

3. In the Natural History Museum of Denmark there are three female syntypes of *Musca jejuna* Fabricius, all in good condition (Rognes, 2018: 32, fig. 126). They have been housed there since Fabricius’s time, originally as part of the collection of Ove Sehested and Niels Tønder Lund. The first syntype is labelled (1) TYPE [black print on red label]; (2) *Musca jejuna* [old large label in Fabricius’s handwriting]; (3) zmuc / 00027291 [black print on white label]. The second syntype is labelled (1) TYPE [black print on red label]; (2) zmuc / 00027292 [black print on white label]. The third syntype is labelled (1) TYPE [black print on red label]; (2) zmuc / 00027293 [black print on white label]. The second syntype (... 00027292), the rightmost specimen, is a female *Bengalia torosa*, as first proposed by Townsend (1931, as *Bengalia lateralis*). The first and third syntypes are not identifiable at the present state of knowledge, but they are not *B. torosa* (Rognes, 2018: 29).

4. Wiedemann (1819: 21) described *Musca torosa* based on an unstated number of females from “Bengalia. Maio”. “Bengalia” refers to the area around Calcutta (India, West Bengal) where the Danish merchant Bernt Wilhelm Westermann lived and collected insects from 1801 to 1811 (see Pont, 1995: 151). This was also a small Danish colony (“Frederiksnagore” / “Serampore”). All the species described by Wiedemann (1819) were based on Westermann’s material now housed in the Natural History Museum of Denmark.

5. In the Natural History Museum of Denmark Rognes (2018: 54) recently found and dissected a hitherto unrecognized male syntype of *Musca torosa* Wiedemann. The labels read (1) “Mus. / Westerm.” [printed]; (2) “M: jejuna / Fab: / Bengal / May 1809.” (Rognes 2018: 52, fig. 222). The terminalia, including the ST5 flap, reveal that it is a specimen of *Bengalia martinleakei* Senior-White, 1924 (Rognes, 2018: 54).

6. Wiedemann (1830: 386) synonymized *M. torosa* under *M. jejuna*. In his explanation for this act, he added a note at the bottom of p. 386, from which it is clear that material of *torosa* “aus Bengalen” was present in Westermann’s as well as in his own collection (“in Westermann’s und meiner Sammlung”) (Rognes, 2018: 53). Wiedemann’s collection is now in Naturhistorisches Museum Wien (NMW). It is thus evident that *M. torosa* was based on at least two syntypes. Note also that Wiedemann’s synonymy of *M. torosa* with *M. jejuna* is in conflict with the prevailing usage of *M. torosa*.

7. In the Naturhistorisches Museum Wien, Rognes (2018: 54) found a hitherto unrecognized second syntype of *Musca torosa*. It is a female labelled (1) “Bengalia” [handwritten]; (2) “jejuna F.” [a very long and thin letter] “Wd.” [handwritten] / “Coll. Winthem” [printed] (Rognes, 2018: 52, fig. 224), and is the first in a series of eight specimens placed under *Bengalia lateralis*. However, being a female, its identity is unknown, although it certainly is not *Bengalia torosa*, since it lacks the concavity in the hind margin of the eye as seen in profile. The specimen is on the same type of pin (pin head, thickness, length, colour) as the male syntype in Copenhagen and was possibly given to Wiedemann as a duplicate from Westermann’s collection. It is placed in the NMW collection under “*Bengalia lateralis*” [= *Bengalia torosa*] and not under *Bengalia jejuna*, in spite of the text on the label.

8. The identity of the single identifiable syntype of *Musca jejuna* Fabricius, 1787 as a specimen of *Bengalia torosa* (Wiedemann, 1819) (para. 3 above) is not in taxonomic accord with the prevailing usage and threatens the stability and universality of the latter name (Article 75.6 of the Code). Likewise, the currently unidentifiable two other female

syntypes of *Musca jejuna* (para. 3 above) threaten to upset stability (Art. 75.5.) when or if their identity is resolved. To follow the principle of priority and adopt the name *Bengalia jejuna* for the species now known for a long time under the name *Bengalia torosa* would cause tremendous confusion and revert to the nomenclature adopted before James (1966, 1977) [i.e., by Bezzi (1913), Senior-White (1923a, 1923b, 1924, 1926, 1930) and Senior-White et al. (1940)].

9. The identity of the male syntype of *Musca torosa* Wiedemann, 1819 as a specimen of *Bengalia martinleakei* Senior-White, 1924 (para. 5 above) is not in taxonomic accord with the prevailing usage and threatens the stability and universality of the latter name (Art. 75.6). Considering *Bengalia torosa* as a valid senior synonym of *Bengalia martinleakei* would result in tremendous confusion. The latter nominal taxon is relatively rare, has hardly been understood correctly, occurs only in India, and is connected to a small body of literature. On the other hand, *B. torosa* is common, widely distributed in the Oriental Region, and connected to a large body of literature (Rognes, 2018). Likewise, the currently unidentifiable female syntype of *Musca torosa* in Vienna (para. 7 above) threatens to upset stability (Art. 75.5) when or if its identity is resolved.

10. In order to preserve nomenclatural stability Rognes (2018: 33) proposed that all syntypes of *Musca jejuna* Fabricius, 1787, i.e., two unidentifiable syntypes (Art. 75.5) and one syntype not conforming to prevailing usage (Art. 75.6) (para. 3 above), be set aside and replaced with a neotype. The specimen herewith proposed as neotype of *Musca jejuna* Fabricius, 1787 is the specimen in the Natural History Museum of Denmark which carries a yellow label with a double-lined black frame, with handwritten (not by Westermann) text as follows: “Madras / Galatea / Jejuna / F.” (Rognes, 2018: 32, fig. 129). It is a male and I have dissected it. The terminalia conform to the current concept of *Bengalia jejuna* (Malloch, 1927; James, 1977). “Madras” is the old name for the city of Chennai, capital of the Tamil Nadu province of India. “Tranquebar” [now Tarangambadi] is located on the coast of the Tamil Nadu province, 150 km south of Chennai. “Galatea” on the label refers to the Danish corvette *Galathea* (sometimes spelt *Galatea*), used during the first *Galathea* expedition (1845–1847) around the world. Tranquebar was reached in October 1845. This specimen is the one closest to the type locality of the *Bengalia jejuna* material available to me (Rognes, 2018) (cf. Art. 75.3.6).

11. In order to preserve nomenclatural stability Rognes (2018: 33) proposed that the known male and female syntypes of *Musca torosa* Wiedemann, 1819 (para. 5 and 7 above) be set aside and replaced with a neotype conforming to the current concept of *Musca torosa* as a senior synonym of *Bengalia lateralis* Macquart, 1844. The specimen herewith proposed as neotype for *Musca torosa* Wiedemann is a male specimen in the Natural History Museum of Denmark that carries a handwritten (not by Westermann) label with a black double-lined frame reading “Bengala / Galatea / Lateralis / Macq.” (Rognes, 2018: 52, fig. 226). It has been identified as *Bengalia torosa* by Kurahashi (Rognes, 2018: 52, fig. 229). “Galatea” refers to the ship of that name that took part in the first Danish *Galathea* expedition in 1845–47 (para. 9). It was collected in November 1845 in “Bengala” (now represented by the West Bengal province of India and Bangladesh), i.e., during the visit of the corvette *Galathea* to Calcutta, the purpose of which was to transfer sovereignty of the Danish colony “Frederiksnagore” to the British East India Company. This locality is precisely where Westermann, who lived there from 1801–1811, collected the male syntype of *Musca torosa* Wiedemann, 1819 (Pont, 1995) in May 1809. Thus, the selection of the “Bengala / Galatea / Lateralis / Mcq” specimen as neotype ensures conformity with Art.

75.3.6 by satisfying the provision that the “neotype came as nearly as practicable from the original type locality ...”.

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

- (1) to use its plenary power;
 - (a) to set aside the name-bearing type (three female syntypes) of *Musca jejuna* Fabricius, 1787: 342, and to designate as neotype the male specimen in the Natural History Museum of Denmark, as detailed in para. 10 above;
 - (b) to set aside the name-bearing type (one male and one female syntypes) of *Musca torosa* Wiedemann, 1819: 21 and to designate as neotype the male specimen in the Natural History Museum of Denmark, as detailed in para. 11 above;
- (2) to place the following names on the Official List of Specific Names in Zoology:
 - (a) *jejuna* Fabricius, 1787, as published in the binomen *Musca jejuna* and as defined by the neotype designated in (1)(a) above; and
 - (b) *torosa* Wiedemann, 1819, as published in the binomen *Musca torosa* and as defined by the neotype designated in (1)(b) 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 Secretariat, ICZN, Lee Kong Chian Natural History Museum, 2 Conservatory Drive, Singapore 117377, Republic of Singapore (e-mail: iczn@nus.edu.sg).