

SHORT COMMUNICATION

**On the taxonomic status of *Nephochaetopteryx calida* (Wiedemann)
(Diptera, Sarcophagidae)**

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ABSTRACT. On the taxonomic status of *Nephochaetopteryx calida* (Wiedemann) (Diptera, Sarcophagidae). Based on analysis of the holotype of *Nephochaetopteryx calida* (Wiedemann) it was concluded that this species does not belong to *Nephochaetopteryx*. The holotype is a female partly damaged and it was not possible to place it in one of Sarcophaginae genera, remaining as *Sarcophaga calida* Wiedemann, 1830, *incertae sedis*.

KEYWORDS. fly; holotype; Insecta; Oestroidea; Sarcophaginae.

The family Sarcophagidae is cosmopolitan in distribution and is one of the largest families of Oestroidea, containing 3,094 recognized species in nearly 173 genera (Pape *et al.* 2011). It has been generally agreed that this family is a natural assemblage of species, supported by phylogenetic studies based on morphological (Rognes, 1997; Pape 1992; Pape & Arnaud 2001) and molecular data (Kutty *et al.* 2010).

As the genus- and species-level identification of Sarcophagidae is based mainly on features of male terminalia, some species that were described based only on females initially in the genus *Sarcophaga*, are now treated as generically unplaced species or tentatively placed in some recognized genus.

One of these is *Nephochaetopteryx calida*, described originally as *Sarcophaga calida* by Wiedemann (1830) based on a female from "Brazil". Later, Wulp (1887) considered it as a species of his new genus *Sarcophagula* Wulp, 1887 and Brauer & Bergenstamm (1891) placed it under *Sarcophagula occidua* (Fabricius, 1794). Based only in the body length and color pattern presented in the original description, Lopes (1936) transferred *S. calida* to *Nephochaetopteryx*, but curiously the author did not include this species in the identification key to the species of *Nephochaetopteryx*. Additionally, there is no mention that *S. calida* has fully bristled vein R₁ in the description of Wiedemann (1830), which is one of the synapomorphies imputed to *Nephochaetopteryx* (Lopes 1990).

According to Dodge (1968), disagreeing with Lopes (1936), *N. calida* does not belong to *Nephochaetopteryx*, because it does not show the diagnostic features of the ge-

nus. On the other hand, in the Catalogue of the Diptera of the Americas south of the United States, Lopes (1969) kept this species in *Nephochaetopteryx*. However, it is possible that at that time, when Dodge's work was being published, Lopes' catalogue was already in the editorial process, since some new species described by Dodge (1968) were not cited in this catalogue (Lopes 1969). Lastly, in the catalogue of the Sarcophagidae of the world, Pape (1996) also treated *calida* as a species of *Nephochaetopteryx*.

During the revision of the species of *Nephochaetopteryx*, we had the opportunity to examine the holotype of *N. calida*, housed in the Senckenberg Research Institute and Natural History Museum Frankfurt, Frankfurt, Germany. This specimen has vein R₁ bare in the dorsal surface and thus cannot be treated as a species of *Nephochaetopteryx*. In addition, it is not a specimen of *Tricharaea* (*Sarcophagula*) *occidua* (Fabricius, 1794), as suggested by Brauer & Bergenstamm (1891), since it has a setose postallar wall. As the holotype is a partly damaged female, its fragile condition did not allow us to prepare and examine the genitalia. Thus, it is difficult to determine the genera of this species and *Sarcophaga calida* remains as an *incertae sedis* species.

Type-material examined. Holotype female of *Sarcophaga calida*, deposited in Senckenberg Research Institute and Natural History Museum Frankfurt, labeled as follows: "Brasilia/Freireiss" [white label with printed data]; "256" [green label with dark border, with handwritten data]; "Typus" [red label with dark border, with printed data]; "Nephochaetopteryx/♀ calida (WIEDEM.)" [white label with printed data]. Specimen partly damaged covered by dead fungal hyphae, with right anterior and left posterior legs missing.

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