

## LECTOTYPE DESIGNATIONS FOR THE SPECIES OF COPROMYZINAE (DIPTERA: SPHAEROCERIDAE) DESCRIBED BY COSTA AND RONDANI<sup>1,2</sup>

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**ABSTRACT:** Lectotypes are designated for *Saprobius nigriceps* (= *Crumomyia nitida*), *Borborus limbinervis* (= *Crumomyia glabrifrons*), and *Copromyza rufiventris* (= *Crumomyia glabrifrons* syn. n.). Notes on the type material of these species and *B. roserii* (= *Crumomyia roserii*) also are presented.

As part of a taxonomic revision of the sphaerocerid subfamily Copromyzinae, we are evaluating the status of the included nominal species by examining their type specimens. In this paper we report lectotype designations and notes on the types of the copromyzine species described by the nineteenth century Italian workers Camillo Rondani and Achille Costa.

Rondani (1880) described three nominal species in the genera *Saprobius* Rondani and *Borborus* Meigen in the Stirps XXV of his *Dipterologiae Italiae Prodromus* (see Sabrosky, 1961, regarding its publication), one of the most important taxonomic works on the family Sphaeroceridae in the late nineteenth century. On the basis of Rondani's descriptions, all three nominal species have been placed in the genus *Crumomyia* Macquart (Norrbom & Kim, 1985). Currently, *Borborus roserii* Rondani is recognized as a valid species of *Crumomyia*, *B. limbinervis* Rondani is considered a junior synonym of *C. glabrifrons* (Meigen, 1830), and *Saprobius nigriceps* Rondani is regarded as a junior synonym of *C. nitida* (Meigen, 1830). The types of these species, however, have not been reexamined by subsequent workers, except perhaps Villeneuve (1914), who mentioned the "*B. limbinervis* type" (actually there is a large syntypic series for this species). Through the kindness of Ms. Sarah Mascherini and Prof. B. Lanza of the Museo Zoologico de "La Specola," Firenze, which houses the Rondani collection, we have examined Rondani's type material and here confirm the above taxonomic treatment of these names.

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Specimens in the Rondani collection carry oval card labels with red numbers corresponding to names entered in the collection's catalog. At least for the sphaerocerids, the specimens rarely have additional labels.

***Saprobius nigriceps* Rondani, 1880: 10.**

This species was listed under *Borborus* as "sp. 1 *B. nigriceps* m.," but it was included in the genus *Saprobius* Rondani, erected in a footnote on page 11. The type series consists of two males and two females of the species currently known as *Crumomyia nitida* (Meigen), confirming Duda's (1923) synonymy of *nigriceps* with this name. Each of the syntypes has only an oval label with "1904." We have designated a male in good condition as lectotype. Rondani gave only "appennino Italiae superioris" [upper Italy] as the type locality.

***Borborus limbinervis* Rondani, 1880: 12.**

The type series includes eight males and eight females of the species now known as *Crumomyia glabrifrons* (Meigen) and we thus concur with Duda (1923) that *limbinervis* is a junior synonym of this name. Each syntype has an oval label with "1910." One male and one female have an additional label with "Losoner 1868.1" and "Losoner 1868.2," respectively, in writing that is not Rondani's, and a second male has a tiny rectangular label that is not decipherable. We designated a male in very good condition, with only an oval label, as lectotype. Rondani gave "tota [all] Italia" as the source of his specimens.

***Borborus roserii* Rondani, 1880: 12.**

A single male with only an oval label with "1911" is present in the Rondani collection. It is covered heavily with dust dorsally, but from its leg color, lack of an anteroventral seta on the hind tibiae, and genal pruinosity pattern, it is clearly recognizable as the species currently known as *Crumomyia roserii* (Rondani) (Norrbom & Kim, 1985). The emendation of the epithet to *roseri* by Papp (1984) is incorrect (see Ride et al., 1985, Article 31a). Rondani stated that "marem unicum observavi" [= a single male was examined], thus the above specimen should be regarded as the holotype (Ride et al., 1985, Article 73a(ii)). According to Rondani, Roser collected the type in Germany.

***Copromyza rufiventris* Costa, 1854: 88.**

Costa described only one species of Sphaeroceridae, *Copromyza rufiventris* Costa (1854). Becker (1905) listed it as a questionable synonym of *Borborus niger* Meigen (currently *Crumomyia nigra* [Meigen]), probably based on Costa's statement that the species was very similar to *nigra*. Costa also stated, however, that the wing crossveins were infuscated in *rufiventris*



("nervi neri, i due transversali . . . leggermente infumati"), a condition found in some *Crumomyia*, but not in *nigra*.

Prof. E. Tremblay of the Instituto di Zoologia, Universita degli Studi di Napoli, Portici, where the Costa Collection is housed, kindly loaned us the five specimens placed under *C. rufiventris*. Four of them are doubtful syntypes; they are *Lotophila atra* (Meigen), a species not fitting Costa's description, and are unlabelled except for one with a "Copromyza" label. A fifth specimen, however, appears to be a valid type. It is in poor condition, missing the head, abdomen, left wing, and mid- and hindlegs, but is still recognizable as a male of *Crumomyia glabrifrons* (Meigen) from its thoracic and leg pruinosity and chaetotaxy and infuscated crossveins. It bears a hand printed label with "Copromyza rufiventris, A. Cos." and "(R) Napoli?" in Costa's writing (E. Tremblay, pers. comm.), which roughly matches the locality data given by him, "assai rara nel regno" [very rare in the region (of Naples)]. Because Costa did not state the original number of syntypes, we have designated this specimen as lectotype. *C. rufiventris* Costa is thus a junior synonym of *Crumomyia glabrifrons* (Meigen), not of *C. nigra* (Meigen).

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