



Rediscovery of the holotype of *Trochilus maria* Gosse, 1849 (Aves: Apodiformes: Trochilidae)

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Trochilus maria Gosse, 1849, was described from a specimen obtained by Richard Hill from the “mountains of Manchester,” most likely the Don Figueroa Mountains in Manchester Parish, Jamaica (Rapkin, 1851). Gosse (1849a: 258) quoted field notes from Hill stating that the specimen “was startled from a nest in which were two young ones, and was obtained by charging some of the blossoms of the mountain-pride (*Spathelia simplex*) on which it was feeding, with minute doses of strychnine. As soon as it sucked from one of the poisoned chalices, it fluttered, and fell dead.” Gosse (1849a: 258) provided a detailed plumage description (see below) and summarized, “It is near to *Polytmus*, but differs from it in the inferior length of its beak, and in the colours of the plumage; but being apparently young, it is impossible to say what the adult condition may prove. I am happy however to fortify my own judgment by that of Mr. Gould, who on my showing it to him decidedly pronounced it new.”

The written description of *T. maria* (Gosse 1849a) was published on 1 October 1849 (Evenhuis, 2003). A color lithograph of the specimen bearing the annotation, “*Trochilus maria* Hill Ann. N.H. 1849” (Fig. 1), appeared in the *Illustrations of the birds of Jamaica* (Gosse 1849b), published in August 1849 (Thwaite, 2002). Although Gosse clearly intended to name the new species in the *Annals and Magazine of Natural History*, the name was effectively published a month earlier in the *Illustrations of the birds of Jamaica*. Gosse (1849a,b) and other early authors ascribed the authorship of this new name to Hill (Elliot, 1879; Gould, 1861a; b; Gray, 1869). By contrast, Gosse (1849b) claimed authorship of the other new species, i.e. *Elania cotta*, described in Gosse (1849a). The first person to ascribe the name *Trochilus maria* to Gosse appears to have been Salvin (1892), who did not give a reason but who has been followed by seemingly all subsequent authors.

The first relevant reference to the putative new hummingbird species after Gosse (1849a, b) was by Bonaparte (1850), who introduced confusion as a result of being unaware of Gosse (1849a) and of not having seen Gosse (1849b) first-hand. Bonaparte (1850: 72) refers to “*Polytmus* — Gosse, nov. sp. sub nomine, ni fallor, *Trochili stellati*. - Ill. B. Jam. cum fig. ex Ins. Jamaica.” The critical Latin text here may be translated as “new species under the name, if I am not mistaken.” However, Bonaparte was clearly mistaken regarding the name, and in his synonymies. Gould (1861a) compounded this error by referring to both “*Trochilus stellatus*, “Gosse,” young male?” and “*Trochilus Maria*, Hill, Ann. and Mag. 1849; Gosse, Ill. Birds of Jamaica, pl. 22.” Recognition of this is important, because Gould (1861a: 76) goes on to state that “It will be seen that I have placed the *stellatus* of Gosse as a synonym of *Polytmus*; at the same time it is only justice to state that I have never seen a second specimen in a similar state of plumage, and it may be another species. I make this remark with Mr. Gosse’s type specimen before me, it having been kindly presented to me by that gentleman.” *Trochilus stellatus* clearly has no status as a validly proposed binomial. However, Gould’s use of the name was valid (even as a synonym), which precludes its future application to some other taxon.

This account in fact refers to the type specimen of *T. maria*, and reveals both that Gosse gave Hill’s specimen to Gould and that the latter had no other immature male in his possession in 1861. In the lengthy account accompanying his colored plate (no. 98) for *Trochilus polytmus*, Gould (1861b) writes that “The plate represents two adult males, a young male, a female, and a nest, all of the natural size.” For unexplained reasons, the young male is missing from the plate, but had it been included it would clearly have been based on the type of *T. maria*. The fascicle containing the plate for *T. polytmus* was issued on 1 June 1849 (Coues, 1879). Thus, it is possible that Gould received the specimen too late to be included in the painting.

Starting with John Gould (1861a,b,c), whose prior opinion seemed to have encouraged Gosse to propose a new name for the specimen in the first place, *Trochilus maria* was soon recognized as a junior synonym of the widespread



FIGURE 1. Lithograph of *Trochilus maria* from Plate 22 of *Illustrations of Birds of Jamaica* (Gosse, 1849b).



FIGURE 2. Dorsal (left) and ventral (right) view of the holotype of *Trochilus maria* Gosse, 1849 (Natural History Museum 1890.10.14.35).

Red-billed Streamertail (*Trochilus polytmus* Linnaeus, 1758) by the principal authorities (Brewster & Bangs, 1901; Cory, 1886; Ridgway, 1911; Salvin, 1892). It is probable that taxonomic opinions offered by the American authors were based solely on the published description (Gosse, 1849a) and on the lithograph (Fig. 1) in *Illustrations of the Birds of Jamaica* (Gosse, 1849b). The type of *Elania* (now *Myiopagis*) *cotta* Gosse, 1849, described in the same paper as *Trochilus maria*, was presented directly by Gosse to what was then the British Museum and is currently held in the Natural History Museum (NHM) bird type collection. However, the type of *Trochilus maria* is not listed in the museum's catalogs (Salvin, 1892; Warren, 1966). Salvin (1892), however, did list a number of *Aithurus polytmus* specimens collected by "J. Hill," including three adult males and an immature male from the Gould and Sclater collections and an adult male from the Salvin-Godman collection. *Aithurus* Cabanis & Heine (1860) is a junior synonym of *Trochilus* (Linnaeus, 1758).

A recent search of the main series of hummingbird skins in the NHM revealed an uncataloged specimen (Fig. 2) that we believe represents the immature male mentioned by Salvin (1892) and the type of *Trochilus maria* Gosse, 1849. Two paper labels are attached to the specimen, the smaller of which is annotated "Aithurus Maria Hill" on the obverse and

“*Aithurus polytmus*” on the reverse (Fig. 2). “Gould coll.” is imprinted on the obverse of the larger label with “*Aithurus polytmus*” and “Jamaica and J. Hill” written in script. We assume that “J. Hill” is a *lapsus calami* for “R. Hill.” When discovered, the specimen was unregistered. A catalog number (1890.10.14.35), part of a series of catalog numbers relating to Gould hummingbirds, has now been applied to the latter label. No other specimen of *Trochilus polytmus* (including *T. scitulus*) in the Natural History Museum carries the name *Trochilus maria*.

X-radiographs revealed the specimen to be a mummy complete with skeleton (Fig. 3). A small amount of cotton or fibrous batting was inserted in the throat and into the lower abdominal cavity. The radiopacity of the batting suggests that it may have been treated with arsenic or mercury compounds. The distal half of the maxilla is missing. The remaining portion of the maxillary ramphotheca is brownish-black with numerous wrinkles or striations, indicative of immaturity (Graves, 2009). The lower jaw is fractured at the midpoint but the tip is still attached. The mandibular ramphotheca is brownish-yellow (red or pinkish-red in life), narrowly tipped with dark brown. Bill length from the anterior extension of feathers on the upper mandible to the tip of the lower mandible is 14.2 mm. Remnants of feather sheaths are present at the base of the outer remiges on both wings (right wing chord = 62.0 mm; left wing chord = 61.4 mm) and at the bases of the outermost rectrices (R5). The next pair of rectrices (R4) is missing. The specimen is nearly identical in appearance to a recently fledged male *Trochilus polytmus* photographed in Trelawny Parish, Jamaica (cf. Fig. 2 of Graves 2009).



FIGURE 3. X-radiograph of the holotype of *Trochilus maria* Gosse, 1849 (Natural History Museum 1890.10.14.35).

With the exception of the broken bill, the specimen (Fig. 2) differs in no important details from the hummingbird illustrated in the lithograph (Gosse 1849b) or the description of *Trochilus maria* (Gosse 1849a: 258):

“Beak (in a dry state) black brown above, buff below, with the tip black...Crown dull black, each feather tipped with a spangle of green and bronze, the spangles having a tendency to form longitudinal rows: nape and sides of the neck blackish, beset with spangles less numerous, but larger and more golden than on the crown: back and shoulders of wings richly bronzed with a ruddy golden hue, slightly tending to green in some lights; rump and upper tail-coverts more decidedly golden green; tail black, glossed with golden green, principally towards the tips of the feathers, the uropygials having more of the metallic luster than the rest; wing quills and greater coverts purplish black, the innermost coverts and the winglet tipped with golden: throat, breast and belly emerald green, not scaly, the tips of the feathers only being metallic and showing the brownish black bases between them: vent and under tail-coverts black. The specimen appears to be an immature male.”

In summary, data on the specimen labels and the resemblance of the specimen to Gosse’s lithograph and plumage description support the hypothesis that the specimen (now Natural History Museum 1890.10.14.35) represents the missing type of *Trochilus maria* Gosse, 1849, and confirms that that name has been correctly regarded as a junior subjective synonym of *Trochilus polytmus* Linnaeus (1758).

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