

New associations between *Philornis* Meinert (Diptera, Muscidae) and Thamnophilidae (Aves, Passeriformes)

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ABSTRACT. Three new associations of *Philornis* Meinert, 1890 flies and Thamnophilidae are registered: *Formicivora erythronotos* (Hartlaub) with *Philornis* sp., *Thamnophilus ruficapillus* (Vieillot) with *P. downsi* and *Thamnophilus palliatus* with *P. glaucinis*.

KEY WORDS. *Philornis*, *Formicivora erythronotos*, *Thamnophilus ruficapillus*, *Thamnophilus palliatus* (Lichtenstein), Thamnophilidae, bird.

Philornis Meinert, 1890 is a mostly neotropical genus of muscid flies with just two species occurring in the south of the United States. It has a particularly interesting biology, specially regarded to the association of their larvae with a large number of bird species, ranging from scavengers in the nests to subcutaneous bloodfeeders (GUIMARÃES *et al.* 1983; COURI 1985; SKIDMORE 1985).

During the field work carried out in Angra dos Reis (Rio de Janeiro, Brasil) as part of the MSc thesis of the senior author, three new associations of *Philornis* flies and Thamnophilidae were registered (the material on *Philornis* is deposited at Museu Nacional, Rio de Janeiro).

Formicivora erythronotos (Hartlaub, 1852): the development of eight nestlings of this endangered species was accompanied in a second-growth woodland in Mambucaba during December/97-January/98. One of them, a three-days-old nestling with 3.5 cm long, was infested in the dorsal region by a 1.0 cm subcutaneous *Philornis* sp. larva. The third instar larva was extracted two days later, when it was 1.5 cm long and the nestling 5.0 cm long (Fig. 1). Two not identified *Philornis* puparia were found in two other nests of this species. Unfortunately it was not possible to identify the species based on the larva or on the puparia.

Thamnophilus ruficapillus (Vieillot, 1816): on March, 31, 1998 one nest was collected as soon as the fledglings had abandoned it. The nest was involved in a transparent plastic sac and two days later one adult male of *P. downsi* Dodge & Aitken, 1968 emerged. The larva of this species is semi-hematophagous and is found external in the nests.

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Figs 1-2. (1) Five-days-old nestling of *Formicivora erythronotos* infested by a third instar larva of *Philornis* sp. (nestling: 5.0 cm long., larva: 1.5 cm long); (2) breeding female of *Thamnophilus palliatus* infested by a third instar larva of *Philornis glaucinis* (bird: 16.0 cm long).

Thamnophilus palliatus (Lichtenstein, 1823): on March, 31, 1998 one breeding female infested by subcutaneous *Philornis* larvae was observed (Fig. 2). Some upper left wing coverts were lost as a result of the presence of one larva and two openings probably used by other larvae. Another larva was found on internal region of the left thigh. The third instar *Philornis* larvae were extracted and deposited on the *T. ruficapillus* nest mentioned above. After a period between 10 to 13 days, two males of *P. glaucinis* hatched.

Although the associations of *Philornis* and birds are well known, these records are poor in the literature. To improve the knowledge of these associations, it is suggested to enclose the recently abandoned nests in a transparent plastic sac or put it in a cage for a couple of weeks and observe an eventual emergence of *Philornis* flies.

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