

A NEW SPECIES OF *TROCHILOECETES* (MALLOPHAGA:
RICINIDAE) FROM THE SAW-BILLED HERMIT, *RAMPHODON*
NAEVIUS (DUMONT) (APODIFORMES: TROCHILIDAE)¹

YOSHIKA ONIKI

and

K. C. EMERSON

Department of Biology, University of Miami,
Coral Gables, Florida 33124

560 Boulder Drive, Sanibel,
Florida 33957, U.S.A.

(With 3 text-figures)

We herewith describe and illustrate a new species of Mallophaga, the first known, from the Saw-billed Hermit (*Ramphodon naevius*). We also provide comments on a species of *Trochiloecetes* described by Carriker who reviewed (1960) the 24 species then in the genus, and added three more species in 1962. *Trochiloecetes* is a mallophagan genus which contains bloodsucking species found only on avian hosts of the family Trochilidae.

Acknowledgements - The senior author is grateful for fellowships from the National Geographic Society and from the Short-term Visitor Program of the Smithsonian Institution Office of Fellowships and Grants, which made possible the study of Mallophaga from Brazil. In the field, work was possible thanks to Mr. and Mrs. John S. Dunning, Wesley R. Silva and Juan Carlos A. Ruiz. E.O. Willis helped in the field and with the manuscript. Special thanks are due to the Director of the State Preserve of Sete Barras who provided lodging and granted permission to work within the Reserve.

RESULTS

Trochiloecetes naevius n.sp.

(Figures 1-3)

Male. External morphology and chaetotaxy as in Fig. 1. Genitalia, less sac, as in Fig. 3. Total length of 22 specimens, 2.00-2.16mm.

Female. External morphology and chaetotaxy as in Fig. 2. Total length of 43 specimens, 2.25-2.55mm.

Measurements (in mm)

| | ♂ (n=22) | | ♂ (n=43) | |
|-------------|-----------|-----------|-----------|-----------|
| | Length | Width | Length | Width |
| Head | 0.50-0.60 | 0.61-0.65 | 0.50-0.60 | 0.60-0.70 |
| Prothorax | 0.29-0.34 | 0.45-0.50 | 0.27-0.36 | 0.47-0.54 |
| Pterothorax | 0.17-0.24 | 0.83-0.93 | 0.23-0.29 | 0.92-1.05 |
| Abdomen | 0.92-1.05 | 0.95-1.08 | 1.00-1.37 | 1.03-1.32 |
| Genitalia | 0.47-0.60 | 0.17-0.19 | - | - |
| Total | 2.00-2.16 | - | 2.25-2.55 | - |

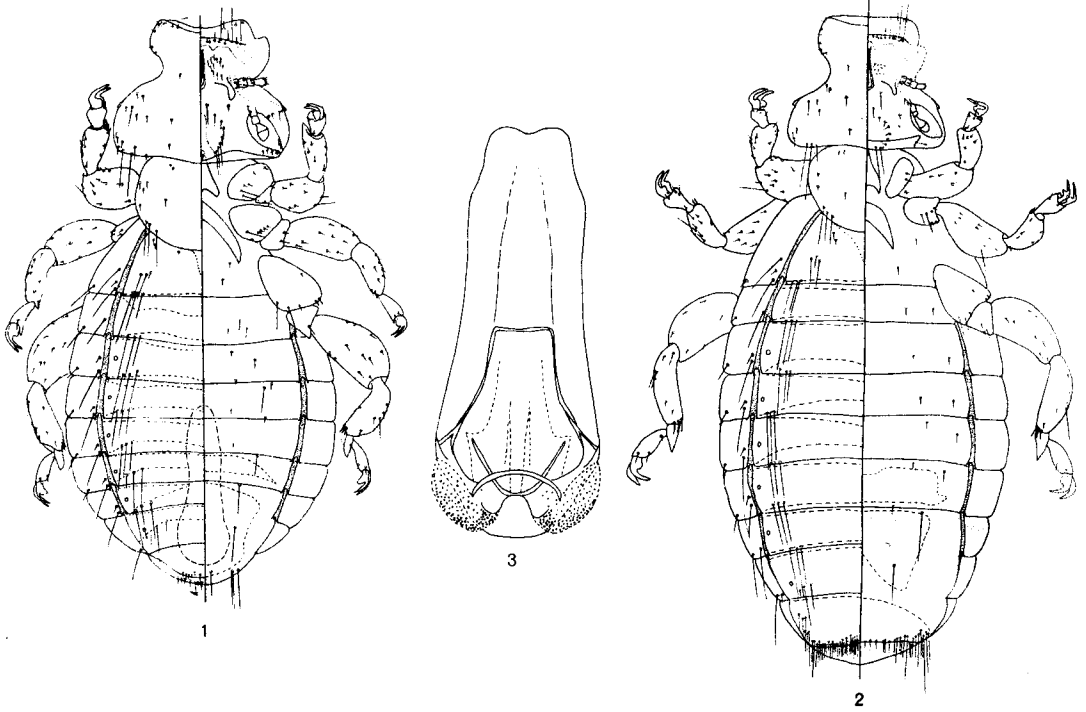
Measurements are for cleared specimens mounted on microscope slides. When collected, all specimens were soft-bodied and with expanded abdomens full of blood. Therefore, variations in body measurements are greater after mounting than would be expected for mallophagan species which are not bloodsucking.

DISCUSSION

T. naevius is slightly smaller, in all measurements than *T. rupunani* Carriker, 1962 found on *Phaethornis superciliosus* (Linnaeus), the Long-tailed Hermit. Differences in chaetotaxy between males of the two species are insignificant. The male genitalia of *T. naevius*, as shown in Fig. 3, is unique and differs in all structures from that of *T. rupununi*. Chaetotaxy of the terminal abdominal segments of the female of *T. naevius* contains twice as many setae as are found on *T. rupununi*.

Carriker (1962) noted "the female (of *T. rupununi*) may be recognized at once by the

¹ Received October, 27, 1980.



Trochiloecetes naevius n.sp. Fig. 1 – dorsal-ventral view of male; fig. 2 – dorsal-ventral view of female; fig. 3 – male genitalia. Figures 1 and 2 drawn to the same scale.

peculiar, tube-like projection from the tip of abdomen”. We have examined, before and after mounting, many specimens of *Trochiloecetes* and found that the “tube-like projection” in the female, mentioned by Carriker, occurs whenever too much pressure is applied to the specimen during preparation of the microscope slide. It results from forcing a portion of the lower part of the gut out the anus.

Type material. Holotype male, allotype female and 64 paratypes off *Ramphodon naevius* (Dumont) (host collection numbers 879, 902, 903, 909, 935, 944, 965, 979, 982, 996, 1021, 1034, 1053, and 1055), collected July 11-12-13-14-15-16-17 and 18, 1979, State Reserve of Sete Barras, São Paulo, Brazil. Holotype and allotype deposited in Museu de Zoologia, Universidade de São Paulo. Paratypes in collections of the authors, U.S. National Museum, and other leading museums. In addition to the type material mentioned above 50 immature specimens of all stages were collected from the same hosts.

The Host

In the State Reserve of Sete Barras, *Ramphodon naevius* were abundant, especially in

an abandoned plantation of seeded bananas. Pollen was collected mainly on the under side of the lower mandible, sometimes from near the nostrils. This hummingbird was also seen visiting flowers of other species of bananas next to the main road and farm houses.

In this reserve, most hummingbirds captured in mist nets between 11 and 18 July 1979 had eggs and adults of *Trochiloecetes*. This large mallophaga was found attached to feathers from the back of the neck down to the upper part of the back; none was found elsewhere or wandering. Often there was an egg attached near the base of a feather and above it a female with a male on her. (Males are buff colored and females are whitish, conspicuously lighter than the male and larger). This may be the oviposition and copulation site for the species.

Of 7 individuals of *Ramphodon naevius* captured from 27 to 29 July 1979 at the Experimental Station of Ubatuba, only one individual had a few dried egg cases of mallophaga on the back of the neck but adults were not found; others did not have egg cases or adults.

RESUMO

A espécie *Trochiloectes naevius* n.sp. (Mallophaga: Ricinidae) é descrita de espécimens provenientes do beija-flor *Ramphodon naevius* (Dumont) (Apodiformes: Trochilidae) coletados na Reserva Estadual de Sete Barras, São Paulo, Brasil. Esta é a primeira espécie de Mallophaga conhecida de *Ramphodon naevius*.

SUMMARY

Trochiloectes naevius n.sp. (Mallophaga: Ricinidae) is described from specimens collected

off *Ramphodon naevius* (Dumont) (Apodiformes: Trochilidae) taken at the State Reserve of Sete Barras, São Paulo, Brazil.

REFERENCES

- CARRIKER, M.A., 1960, Studies in Neotropical Mallophaga, XVII: A New Family (Trochiliphagidae) and a new genus of the lice of Hummingbirds. *Proc. U.S. Nat. Mus.*, 112: 307-342.
- CARRIKER, M.A., 1962, On some Mallophaga from Trinidad, W.I. and British Guiana in the collections of the British Museum (Natural History). *Ann. Mag. Nat. Hist.*, Ser. 13, 5: 449-483.