

A record of *Culicoides* (*Trithecoides*) *culiciphagus* Wirth & Hubert, 1959 (Diptera; Ceratopogonidae) from West New Guinea

by

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While examining anopheline mosquitoes as part of a research project on the effect of DDT indoor spraying in West New Guinea, I observed three little flies, each being attached to the abdomen of a female *Anopheles koliensis* Owen (Diptera; Culicidae), as follows: Arso, southeast of Hollandia (= Kota Baru), 30 May 1962, on ♀ *A. koliensis* biting human bait in the evening, 1 ♀; same



Figure 1: *C. culiciphagus* feeding on *A. koliensis* ($\pm 10 \times$). Further explanation in text.

locality, 13 July 1962, on ♀ *A. koliensis* collected in the same manner, 1 ♀; same locality, 21 August 1962, on ♀ *A. koliensis* in outlet of window trap of experimental hut, 1 ♀. The specimens have been deposited in the U. S. National Museum, Washington.

The flies appeared to have their mouthparts inserted into the mosquitoes' abdomens, just in between two tergites. They remained firmly attached in this position (see Fig. 1), even after the mosquitoes had been killed with chloroform

and mounted. The mosquito from the experimental hut was freshly gorged with blood, while the mosquitoes from the human baits were enabled to take a full bloodmeal on catching. The bodies of the flies were swollen with a white substance.

Through the kindness of Dr. LAIRD (WHO, Geneva), I got in touch with Dr. WIRTH (USNM, Washington), who identified the flies as *Culicoides (Tritbecoides) culiciphagus* Wirth & Hubert 1959 (Diptera, Ceratopogonidae). This species was originally described from Guadalcanal, Solomon Islands, where four females had been collected on *Anopheles lungae*. The present records are the first from the Papuan area, while *A. koliensis* is recorded for the first time as a host.

C. culiciphagus belongs to the *anophelis* Group to which, according to WIRTH & HUBERT (1959), *C. anophelis* and *C. baisasi* also belong. These species have all been observed to attack mosquitoes, preferably anophelines. It is generally assumed (literature in LAIRD, 1946 and WIRTH & HUBERT, op. cit.) that the midges suck second-hand blood from the mosquitoes' stomachs but that the mosquitoes do not die as a result of this. I was not able to confirm or deny these statements.

However, the contents of the midges' abdomens showing a white instead of a red substance, might suggest that either (1) the midges had sucked blood from the mosquitoes' previous bloodmeals and their ova had ripened while they had remained attached, or (2) the midges had attacked the mosquitoes prior to capture (the mosquitoes being unfed) but had sucked body fluids instead of blood.

Summary

Culicoides (Tritbecoides) culiciphagus is reported for the first time from New Guinea. Females of the species were collected while attacking female *Anopheles koliensis*.

ACKNOWLEDGEMENT

I am much indebted to Dr Willis W. WIRTH (Washington) for the identification of the midges.

Literature

- LAIRD, M., 1946, A ceratopogonid (*Culicoides anophelis* Edwards, 1922) sucking engorged blood from a mosquito (*Armigeres lacuum*, Edwards, 1922) at Palmalmal, New Britain. *Trans. roy. Soc. New Z.* 76 (2) : 158—161.
- WIRTH, W. W., & A. A. HUBERT, 1959, *Tritbecoides*, a new subgenus of *Culicoides* (Diptera, Ceratopogonidae). *Pac. Ins.* 1 (1): 1—38.

CORRIGENDUM — In my paper on *Bironella confusa* (1963, *Entom. Ber.* 23 : 137—142) it was stated that part of the material examined had been deposited in the British Museum, London. Much to my regret, this has to be recanted. Seven months after shipment of the parcel from Kotabaru (West New Guinea), I was informed by Mr. P. F. MATTINGLY that it had not yet arrived in London. The specimens must almost certainly be written off.

Those sent to the Museum for Natural History in Leyden (Holland) arrived safely.