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REPORT UPON A COLLECTION OF INSECT ECTOPARASITES FROM AUSTRALIAN AND TASMANIAN MAMMALS.

(Diptera Pupipara. Siphonaptera)

BY G. F. FERRIS

STANFORD UNIVERSITY, CALIFORNIA

Through the kindness of Dr. F. E. Lutz I have been enabled to examine a small collection of insect ectoparasites taken from mammals in Australia and Tasmania by Mr. H. C. Raven and this collection is herewith reported upon. All the material is returned to Dr. Lutz for deposit in the collections of The American Museum of Natural History, with the exception of duplicates of *Ortholfersia tasmanica* and *Choristopsylla ochi*.

It may not be out of place to express, on behalf of entomologists in general, a word of thanks to Mr. Raven for taking the time from his activities as a collector of mammals to pursue and preserve these representatives of notoriously agile and elusive ectoparasites. It is practically only by the efforts of those who are primarily mammal collectors, and who consequently can hardly be expected to devote much time to such activities, that material in these groups can be obtained. Evidently, very few have found the necessary time.

All of the species at hand, except one, appear to be described forms. However, in the case of two species I am presenting figures and additional notes, the original descriptions not being of a very satisfactory character.

DIPTERA PUPIPARA

Hippoboscidæ

ORTHOLFERSIA Speiser

Three species have been described in this genus, all from marsupials in Australia and Tasmania. The descriptions of all are very inadequate, but of the two species present in the collection at hand one may be placed with reasonable probability in a described form. The other I am describing as new.

Ortholfersia tasmanica (Wesche)

Figures 1 and 2

Hippobosca tasmanica WESCHE, 1903, Ann. and Mag. Nat. Hist., (7) XI, p. 385, figs.

Ortholfersia tasmanica (Wesche), AUSTEN, 1903, idem, (7) XII, p. 260.

PREVIOUS RECORDS.—From *Macropus ruficollis*, Launceston, Tasmania.

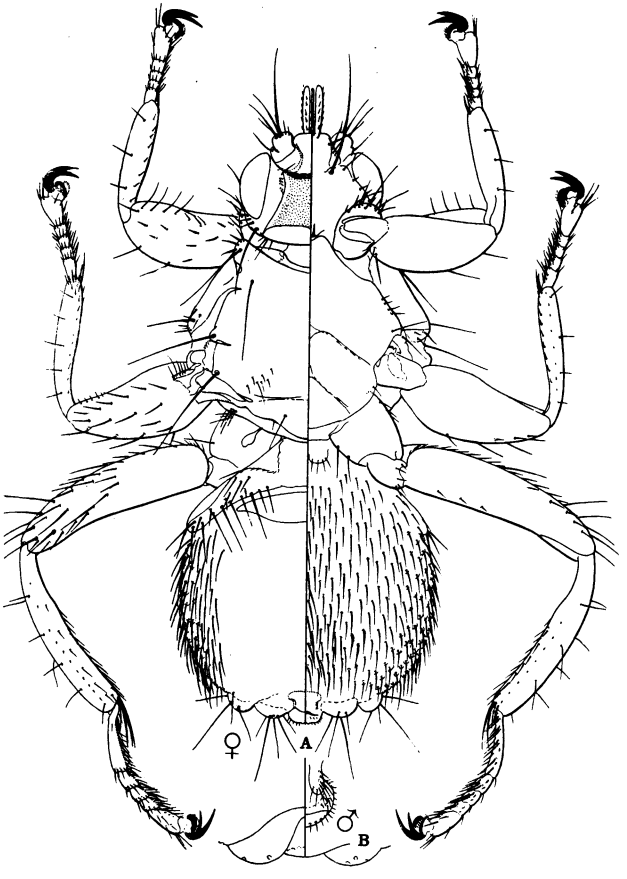

Fig. 1. *Ortholfersia tasmanica* (Wesche).—Female, with wings removed.

SPECIMENS EXAMINED.—Two males and five females from *Macropus stigmaticus*, Evelyn, North Queensland, May, 1922; three females from the same host, Ravenshoe, North Queensland.

FEMALE (Fig. 1).—Length on slide 4 mm. Head slightly wider than long, clypeal region produced scarcely to the apex of the antennæ, truncate or slightly

emarginate anteriorly (Figs. 2*B*, 2*C*); ocellar area reduced to a narrow transverse band along the posterior margin of the head; dorsal side practically destitute of setæ; ventral side likewise almost nude except for small setæ along the ocular orbits and the margin of the antennal fossa and with the characteristic pair of very long setæ of which one stands at the base of each antenna.

Thorax almost bare both dorsally and ventrally except for the usual macrochætæ, the somewhat produced humeral angles with a few small setæ, the scutellum merely with a pair of small setæ. Legs with no specially distinctive characters except the relatively few setæ.

Wings (Fig. 2*A*) entirely covered with minute setulæ except for the extreme base and an anal area as indicated in the figure; veins entirely without setæ except the costa; radius with but two branches, the radial sector not divided.

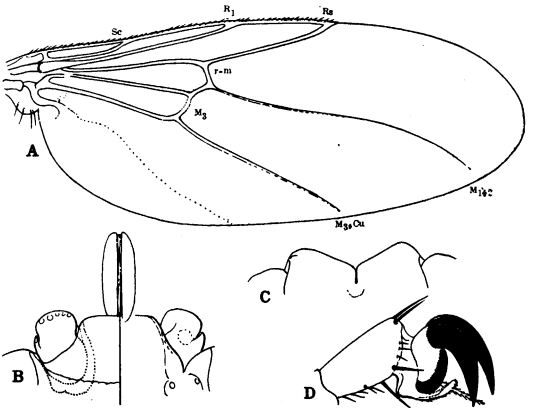

Fig. 2. *Ortholfersia tasmanica* (Wesche).—*A*, wing, setulæ not shown, the margin of the anal bare area indicated by a dotted line, venation according to the Comstock-Needham system; *B*, clypeal region of head of specimen from Evelyn; *C*, clypeal margin of specimen from Ravenshoe; *D*, claw.

Abdomen with a transverse basal tergite, which bears numerous long setæ, and caudad of this a median plate which is bare; entire median region of the dorsum bare and with faint transverse striations; lateral margins and the entire ventral side except for the extreme base and apex quite thickly beset with small, slender setæ; apex of the abdomen with two pairs of slightly chitinized lobes which bear several long setæ and with a median lobe which bears the anus and is more or less protrusible.

MALE (Fig. 1*B*).—In general identical with the female, differing in having but two apical abdominal lobes, these connected by a transverse dorsal sclerite; external genitalia represented merely by a pair of short processes bearing small setæ. I am unable to give a detailed description of the internal genitalia from the specimens available.

NOTES.—The original description and figures of this species are of no very great aid and it is possible that this determination is in error.

In the specimens from Ravenshoe there is some tendency for the clypeus to appear emarginate anteriorly (Fig. 2*C*) but I am inclined to regard this as more or less accidental, the specimens not differing from the others in any other respect. It may be noted that the other two described species of *Ortholfersia* are said to have the clypeus emarginate.

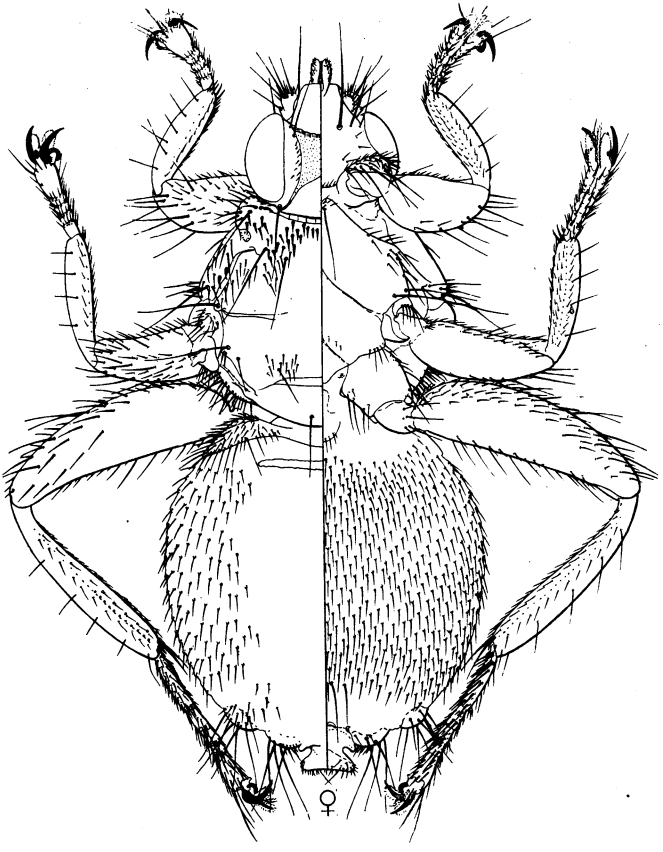

Fig. 3. *Ortholfersia raveni*, new species.—Female, with wings removed.

Ortholfersia raveni, new species

Figures 3 and 4

SPECIMEN EXAMINED.—A single female from *Macropus* sp., Glen Ferneigh, New South Wales, October, 1921.

FEMALE (Fig. 3).—Length on slide 7.5 mm. Head slightly wider than long, the clypeal region produced slightly past the apices of the antennæ and truncate anteriorly;

oeellar area large and triangular; dorsal side with many small and two larger orbital setæ; ventral side with the characteristic pair of very large setæ and with small orbital setæ.

Thorax dorsally with the usual characteristically arranged macrochætæ and on the anterior half with large numbers of short setæ of various sizes, some being quite stout, and with a number of small pre-scutellar setæ; scutellum merely with a pair of small setæ; ventral side almost bare except for a number of setæ along the margin of the mesosternum. Legs with no striking characters except the noticeably greater abundance of setæ than in *O. tasmanica* and the presence on the posterior tibiæ of a series of circular pits that are probably sensory in function and which appear to be absent in *O. tasmanica*.

Wings (Fig. 4) differing sharply from those of *O. tasmanica* in the presence of three radial branches and a distinct anal vein; apical half of R_{4+5} beyond the cross-vein with small setæ; entire wing thickly beset with minute setulæ except for an anal area as indicated in the figure.

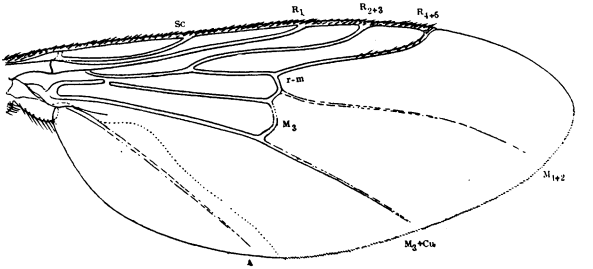

Fig. 4. *Ortholfersia raveni*, new species.—Wing, setulæ not shown, the margin of the anal bare area indicated by a dotted line, venation according to the Comstock-Needham system.

Abdomen with a very narrow basal tergite which is quite thickly beset with small setæ; caudad of this is a very narrow median plate, this and the entire dorsal median region being bare; lateral areas and entire venter except for the extreme base and apex thickly beset with small setæ; apex with two pairs of chitinized lobes which bear several long setæ and with a more or less protrusible median lobe which bears the anus.

NOTES.—I am unable to connect this species with any of the described forms. It differs very markedly from *O. tasmanica* in the character of the wings especially.

Nycteribiidæ

Cyclopodia pteropus (Rainbow)

Figure 5

Nycteribia pteropus RAINBOW, 1904, Records Australian Museum, V, pp. 78–9, Pl. IX.

PREVIOUS RECORDS.—From *Pteropus gouldi*, Mapoon Mission Station, mouth of the Batavia River, Gulf of Carpentaria.

SPECIMENS EXAMINED.—Four males and two females from *Pteropus conspicilatus*, Babinda Creek, Queensland, November, 1921.

NOTES.—The original description of this species permits a reasonably certain determination but I am presenting new figures and certain notes. The distinctive characters of the female, as compared with the more closely related members of the genus, are apparently the presence of four

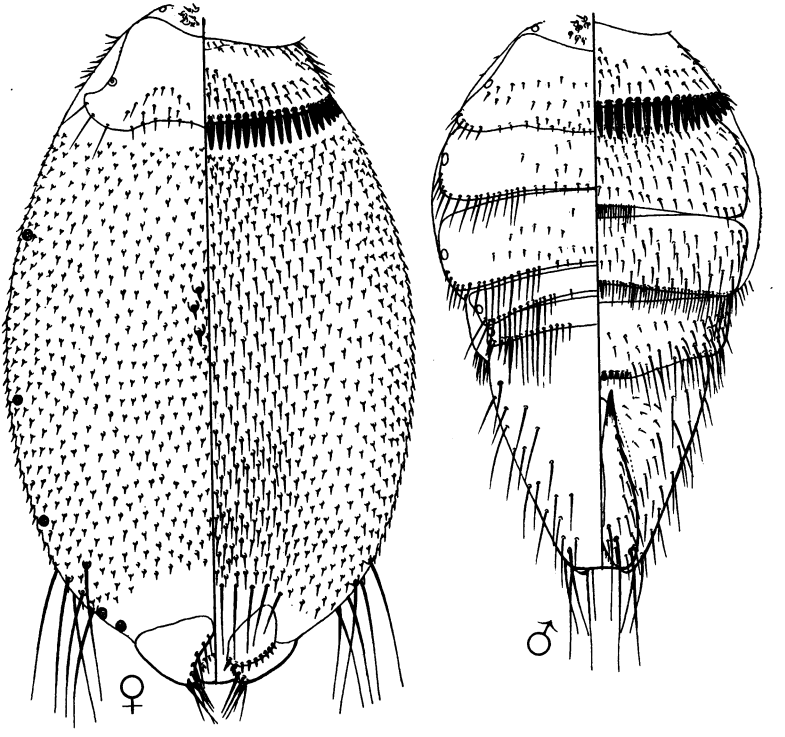

Fig. 5. *Cyclopodia pteropus* (Rainbow).—Abdomens of male and female.

to six short, stout setæ borne upon tubercles in the middle of the dorsum of the abdomen and of merely a small lateral cluster of long setæ near the apex of the abdomen. The male, as is the case in many of the species of this family, presents but little in the way of distinctive features. It approaches very closely the male of what I take to be *C. similis* Speiser and, in fact, I am not at all certain that they can be definitely separated. From the male of *C. sykesi* (Westwood) it differs chiefly in the broader and less tapering anal segment and the broader claspers. The females of these species appear to be readily separable.

SIPHONAPTERA

All of the fleas belong to described forms, which, thanks to the labors of the late N. C. Rothschild, are readily recognizable. I am, however, giving the records, as some of them may be of interest.

Macropsylla hercules Rothschild

SPECIMENS EXAMINED.—A single female from *Phascologale flavipes*, Glen Ferneigh, New South Wales, September 22, 1921.

Bradiopsylla echidnæ (Denny)

SPECIMENS EXAMINED.—One male and one female from *Tachyglossus setosa*, Arve River, Tasmania, October 16, 1922.

Choristopsylla ochi (Rothschild)

SPECIMENS EXAMINED.—Several males and females from *Trichosurus vulpecula*, Arve River, Tasmania, October 18, 1922.

Acanthopsylla pavida (Rothschild)

SPECIMEN EXAMINED.—A single male from *Phascologale flavipes*, Glen Ferneigh, New South Wales, September 22, 1921.

NOTE.—There is some possibility of doubt as to this determination, for the males of some of the species of this genus have not been described, but as far as may be judged from the very clear descriptions and figures given by Rothschild the specimen at hand belongs with the species indicated.