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SOME DIPTERA PUIPIPARA FROM THE PHILIPPINE ISLANDS

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SEVEN TEXT FIGURES

Through the kindness of Prof. C. F. Baker a second small collection of Philippine Diptera Pupipara has become available and is here reported upon. It includes five species, of which four are from bats and were collected by Mr. Edward H. Taylor. Although these four bat-infesting species are described forms, I am here redescribing or figuring them, as the existing descriptions and figures are perhaps not readily accessible to eastern workers, and in some cases are not as satisfactory as might be desired.

A word as to the identification of species in this group may not be amiss. Almost all of the species are more or less soft-bodied, especially the female. Also, the abdomen of the female is subject to very striking, even though superficial, changes in appearance depending upon whether or not the insect is gravid. It consequently follows that care is necessary in interpreting the abdominal structures, for an insect that has but recently issued and is not full-fed may look at first glance very different from one of the same species that is full-fed or that has the abdomen distended by a fully formed larva. It is a most difficult, and in fact nearly impossible, feat to figure with any satisfactory degree of accuracy an individual in which the abdomen is shrunken and more or less telescoped. It may also be expected that forms in which the vestiture of setae is

so extraordinarily developed will show a rather high degree of variability, and apparently some do. Just how much variation may be allowed before considering that specific limits have been overstepped remains to be determined, for in the case of most of the species long series have rarely been available. These facts should be clearly recognized by anyone who attempts to work in this group.

HIPPOBOSCIDÆ

Genus ORNITHOPHILA Rondani

But a single species of this genus has been known, although it was described as long ago as 1879, and this species was described from a single specimen. The description of the genus is clear enough, but that of the genotype, *O. vagans* Rondani, is so inadequate that its identity will probably long remain in doubt, unless the type is still in existence or specimens can be obtained from near the type locality.

It is consequently of considerable interest to find a species apparently referable to this genus occurring in the Philippines. There seems to be no question that this species is really referable to *Ornithophila* and, in view of the inadequacy of the description of *O. vagans* and the very great improbability that the Philippine species can be identical with the latter, which was described from Italy, I am describing it as new.

Ornithophila maquilingensis sp. nov. Figs. 1 and 2.

Material examined.—A single female, taken in flight in the forest on Mount Maquiling. This specimen is returned to Professor Baker.

Female.—General color a rather light brown. Length, 4 millimeters. Head (fig. 1) slightly broader than long; dorsal side destitute of setæ except three along the orbit, one being at the cephalic margin, one at the center, and one at the posterior margin, these long and slender, and a few very minute setæ between the cephalic and median long setæ; ventral side with numerous small, pale setæ; antennæ small and short; anterior margin of head produced past the apices of antennæ and with a deep median emargination; palpi and rostrum of nearly equal length, three-fifths as long as the head itself, the palpi with numerous small setæ; ocelli small but distinct.

Thorax with the humeral angles strongly produced into a broad, laterally rounded prominence bearing numerous small

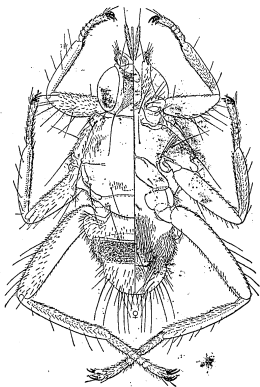


FIG. 1. *Ornithophila maculiforceps* sp. nov.

setæ and one long seta; lateral margins of mesothorax with numerous small setæ and a single long seta just in front of the wing; mesonotum with a single prealar, one postalar, and one prescutellar and one scutellar seta on each side, these long and slender, and with numbers of very small setæ cephalad of the prealar and mesad of the prescutellar setæ; scutellum broadly rounded and fringed with a few minute setæ. Ventral side with the mesosternum slightly produced between the anterior coxæ; destitute of setæ except a pair of long ones between the

anterior coxæ and a similar pair slightly farther back, a row of long setæ cephalo-laterad of the middle coxæ and numerous very small setæ along the lateral margin of the mesosternum.

Legs large and long, the claws three-toothed (fig. 2, b); all the segments on the hind tarsi margined laterally by a continuous series of small serrations (fig. 2, c), these much fewer and less conspicuous on the other legs.

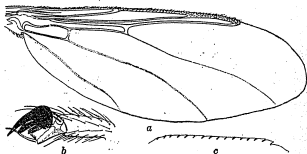


FIG. 2. *Ornithophila maquilingsensis* sp. nov.

Wings (fig. 2, a), 5 millimeters long, with but two cross veins and consequently without an anal cell; completely and uniformly covered with minute setulæ except for a very narrow marginal area behind the anal vein, these setulæ imparting a gray color to the wing. It is impractical to show these in the figure.

Abdomen with a large basal tergite bearing a few small setæ; behind this is an area in which the derm is practically destitute of setæ and shows a very fine and close, transverse striation; posterior third of the dorsum composed of a single large plate bearing a number of large marginal setæ and a few small dorsal setæ. Ventral side membranous, with numerous setæ over the anterior half and several long setæ laterad of the genital opening.

Notes.—The single specimen available has the abdomen much shrunken and consequently it is impossible to determine the exact arrangement of the setæ on the ventral side. An expanded individual would probably look somewhat different but should be identifiable from the description and figures given.

STREBLIDÆ

Genus NYCTERIBOSCA Speiser

Nycteribosca amboinensis (Rondani). Figs. 3 and 4.

Nycteribosca amboinensis (Rondani) SPEISER, Archiv für Naturgeschichte 66: 1 (1900) 48.

Previous records.—Amboina and Burma, from unknown hosts.

Specimens examined.—A male and several females from a bat, *Miniopterus eschscholtzii*, Tablas Island (E. H. Taylor).

Female.—A moderately dark brown and extraordinarily hairy species. Length, 3 millimeters. Head concolorous with the rest of the body, the eyes scarcely recognizable, the entire head, both dorsally and ventrally, beset with numerous setæ; palpi broad and flat, fringed with long and short setæ and with numerous short setæ on the ventral side.

Thorax almost spherical, somewhat flattened dorsally and ventrally, almost concealed from the dorsal aspect by the great numbers of long, slender setæ which beset the entire dorsum and extend to the margin of the ventral side. Ventral side thickly and uniformly beset with small setæ.

Wings (fig. 4) slightly shorter than the body, beset with many slender setæ along the costal border and with areas of setulæ as indicated in the figure; veins weak, arranged as indicated in the figure.

Legs with the femora thickly beset above with long setæ except for a basal bare area; remainder of the legs thickly beset with small setæ.

Abdomen with the basal tergite divided into two broad lobes which have the apical third beset with many long setæ. Remainder of the dorsum thickly beset with slender setæ except for a broad, median area which is entirely bare. The setæ along each side of this area are especially long. Ventral side with an inconspicuous basal plate, this and the greater part of the remainder beset with small setæ. Apex of the abdomen terminating in a median lobe which bears numerous rather long setæ.

Male.—In its general characters like the female, but with the apex of the abdomen acutely pointed. Genitalia entirely internal, very small, apparently without the two flaps seen in the male of *Nycteribosca gigantea*. It is not possible to figure them from the specimen available.

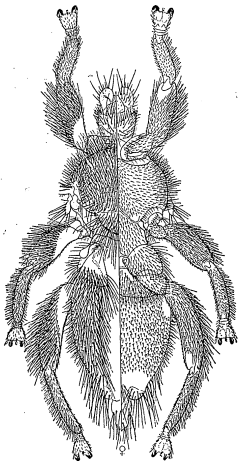
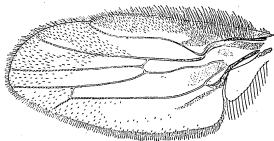


FIG. 3. *Nycteribosca amboinensis* (Randani).

Notes.—The determination of this species is based entirely upon the key given by Speiser (reference cited) but seems to be reasonably certain. The species differs very markedly from *Nycteribosca gigantea*, which I have redescribed in an earlier

FIG. 4. *Nycteribioses amboinensis* (Rondani).

paper. Apparently it can be confused only with *N. kollari* (Frauenfeld) and the somewhat doubtfully distinct *N. diversa* (Frauenfeld) which occur in the Mediterranean region. According to Speiser it differs from these in its darker color and in the fact that the "fifth vein" (M_3+Cu_1) attains the margin of the wing.

NYCTERIBIIDÆ

Genus NYCTERIBIA Latreille

Nycteribia allotopa Speiser. Fig. 5.

Nycteribia (Listropodia) allotopa SPEISER, Archiv für Naturgeschichte 67: 1 (1901) 47, tf. 1b.

Nycteribia (Listropodia) insolita SCOTT, Trans. Ent. Soc. London (1908) 364, pl. 18, figs. 9-13.

Nycteribia (Listropodia) allotopa SPEISER, Scott, Archiv für Naturgeschichte 79 (A) (1913) 97; Ann. Mag. Nat. Hist. VIII 14 (1914) 221.

Previous records.—From *Miniopterus schreibersi*, Ceylon, China, and Formosa. From undetermined host, Sumatra.

Specimens examined.—From *Miniopterus eschscholtzii*, Tablas Island, and from either the same host or *Chacrophon luzonus*, Pagsanjan Falls, Laguna Province, Luzon, all collected by E. H. Taylor.

Notes.—This species appears to be extremely abundant on bats of the genus *Miniopterus* throughout the entire Orient. The various references cited contain adequate descriptions, but I am offering figures for convenience. The species seems to occur ordinarily in company with the next, *Nycteribia parvula* Speiser, and it is somewhat difficult to associate the sexes with each other.

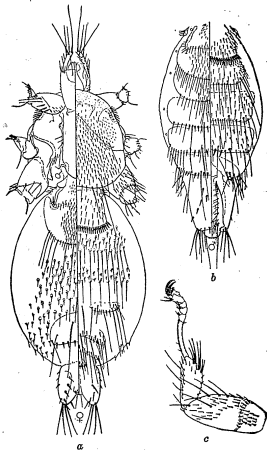


FIG. 5. *Nycteribia allotopa* Speiser.

As far as I have been able to see, the males and females may be correlated chiefly by the form and extent of the abdominal ctenidium. In *N. allotopa* this ctenidium contains from 34 to 40 setæ and those on the meson are distinctly shorter than the others,

while in *N. parvula* it contains from 40 to 44 teeth, which are more nearly of equal length throughout.

Nycteribia parvula Speiser. Fig. 6.

Nycteribia (Listropodia) parvula SPEISER, Archiv für Naturgeschichte 67: 1 (1901) 48.

Nycteribia (Listropodia) sauteri SCOTT, Trans. Ent. Soc. London (1908) 366, pl. 18, figs. 14-18.

Nycteribia (Listropodia) parvula SPEISER, Scott, Archiv für Naturgeschichte 79 (A) (1914) 98; Ann. Mag. Nat. Hist. VIII 14 (1914) 222.

Previous records.—From *Miniopterus schreibersi*, Ceylon and Formosa. From undetermined host, Sumatra.

Specimens examined.—From *Miniopterus eschscholtzii*, Tablas Island, and from the same host or *Chaerophon luzonus*, Pagsanjan Falls, Laguna Province, Luzon, all collected by E. H. Taylor.

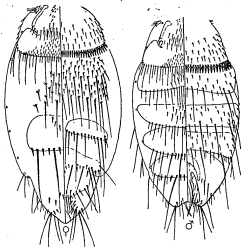


FIG. 6. *Nycteribia parvula* Speiser.

Notes.—This species, like the preceding, has been very adequately described, but I am presenting new figures. In the characters of the head and thorax it is practically identical with *Nycteribia allotopa*, so nearly so that I have not figured this portion of the body, but the abdomen is very different in both sexes and the legs are slenderer. The short terminal seg-

ment of the male and the very small, weak, and pale claspers are especially distinctive.

Genus *PENICILLIDIA* Kolenati

Penicillidia jenynsi (Westwood). Fig. 7.

Penicillidia jenynsi (Westwood) SPEISER, Archiv für Naturgeschichte 67: 1 (1901) 38.

Penicillidia jenynsi (Westwood) SCOTT, Trans. Ent. Soc. London (1908) 360, pl. 18, figs. 1-8; Archiv für Naturgeschichte 79 (A) (1914) 95; Ann. Mag. Nat. Hist. VIII 14 (1914) 213.

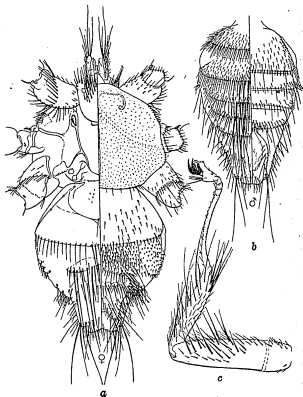


FIG. 7. *Penicillidia jenynsi* (Westwood).

Previous records.—From *Miniopterus schreibersi*, Ceylon. From China, Formosa, and Sumatra without indication of host.

Specimens examined.—From *Miniopterus eschscholtzii*, Tablas Island, and from the same host or *Chaerophon luzonus*, Pagsanjan Falls, Laguna Province, Luzon, all collected by E. H. Taylor. There are at hand also a single female from *Miniopterus tristis*, Lubang, Mindoro Province, and one from *Rhinolophus arcuatus*, Irisan, a barrio in Benguet Subprovince, both from alcoholic bats in the United States National Museum.

Notes.—The descriptions in the various references cited are sufficiently complete, but as in the case of the other species herein recorded I am presenting new figures. The species presents some variation, and in the specimen from *Miniopterus tristis* there is a conspicuous cluster of long setæ at the apex of the first abdominal tergite, but the essential specific characters remain constant.

ILLUSTRATIONS

TEXT FIGURES

- FIG. 1: *Ornithophila maquilangensis* sp. nov.; wings removed.
2. *Ornithophila maquilangensis* sp. nov.; a, wing (to same scale as fig. 1); b, claws of middle leg; c, serrations of lateral margin of segment 5, hind tarsus.
3. *Nycteribesca amboinensis* (Rondani); wings removed.
4. *Nycteribesca amboinensis* (Rondani); wing (to same scale as fig. 3).
5. *Nycteribia allotopa* Speiser; a, female; b, abdomen of male; c, anterior leg.
6. *Nycteribia parvula* Speiser; abdomen of male and of female.
7. *Penicillidia jenyasi* (Westwood); a, female; b, abdomen of male; c, anterior leg.