

HIPPOBOSCIDÆ and NYCTERIBIIDÆ (DIPTERA BRACHYCERA CYCLORRHAPHA)

BY

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Although very few specimens of parasitic Diptera were collected from birds and bats in the Parc National Albert by the Mission G. F. DE WITTE (1933-1935), they are of interest because the host species were carefully noted. I am under obligation to Mr. A. COLLART, of the « Institut royal des Sciences naturelles de Belgique », and to Dr. H. SCHOUTEDEN and Mr. P. L. G. BENOIT, of the « Musée royal du Congo Belge », for information regarding some of the birds and bats here mentioned as hosts.

HIPPOBOSCIDÆ.

Ornithoctona laticornis (MACQUART).

Ornithomyia laticornis MACQUART, 1835, Hist. Nat. Ins. Dipt., 2, p. 642; 1843, Mém. Soc. R. Sci. Agric. Arts Lille (for 1842), p. 436, Pl. 36, fig. 4 (1843, Diptères exotiques nouveaux ou peu connus, 2, pt. 3, p. 279, Pl. 36, fig. 9).

Ornithoctona (?) *laticornis* SPEISER, 1908, Denkschr. Med.-Naturw. Ges. Jena, 13, pt. 1, p. 178 (SCHULTZE, Zool. Anthropol. Ergebn. Forschungsreise Südafrika, 1, p. 178).

Ornithomyia platycera MACQUART, 1843, Mém. Soc. R. Sci. Agric. Arts Lille (for 1842), p. 436, Pl. 36, fig. 8 (1843, Diptères exotiques nouveaux ou peu connus, 2, pt. 3, p. 279, Pl. 36, fig. 8).

Ornithoctona platycera SPEISER, 1907, Wiss. Ergebn. Schwed. Zool. Exped. Kilimandjaro-Meru, 2, pt. 10, pp. 3 and 7.

Mission G. F. DE WITTE : Burunga, Ouest de Kamatembe, 2.000 m, one female, from *Poliospiza striolata kivuensis*, 16.III.1934, and one female,

from *Dioptrornis fischeri toroensis*, 10.III.1934; Kalondo, rive Ouest lac Ndalaga (lacs Mokoto), 1.750 m, one female, from *Coliuspasser axillaris phœniceus*, 26.III.1934.

This common African bird parasite has been known thus far as either *Ornithomyia platycera* or *Ornithoetona platycera*. I have recently established that MACQUART's earlier *Ornithomyia laticornis* was based on the same species, so that this older specific name must be used.

MACQUART's first description of *O. laticornis* (1835) reads : « Long. 3 lig. [= 6.6 mm]. Trompe et palpes couverts par les antennes larges, déprimées et velues. Tête ferrugineuse. Thorax brun. Pieds d'un vert obscur. Ailes grisâtres. De Cuba, ou du Cap de Bonne Espérance ». This description is repeated in 1843, but with the addition of a Latin diagnosis (« *Capite ferrugineo. Thorace fusco. Pedibus viridibus* ») and a figure of the wing. The figure, though very sketchy, clearly shows the closed anal cell of *Ornithoetona*. Thus far the type was considered lost, as it could not be found at the Paris Museum. However, while studying the *Hippoboscidae* of BIGOR's collection, now the property of Mr. J. E. COLLIN, at Newmarket, I found, standing under « *Ornithomyia laticornis* MACQUART », 4 specimens, one of which was labelled « Coll. SERVILE. C. Bon. Spei? ». This fly I regard as the last type of MACQUART's *laticornis*. It proved to be African species of *Ornithoetona*, called thus far *O. platycera* (MACQUART). The other three specimens placed with it in BIGOR's collection are labelled « New Grenada » (Colombia) and belong to *Ornithoetona erythrocephala* (LEACH).

OSTEN SACKEN (1878, *Smithson. Misc. Coll.*, No. 270, p. 213) states that MACQUART had recognized the locality « Cuba » as erroneous in an Erratum to the « *Diptères Exotiques* ». Actually MACQUART never published such a formal correction; but in the « *Tableau Général des Espèces* », appended in 1851 to the reprint of *Supplément 4* of the « *Diptères Exotiques* », he cited « Cuba » only as the locality for his *O. laticornis* ⁽¹⁾. Possibly he merely decided to cite only one of his two tentative localities, without actually knowing more about the correct origin of the type. In any case, OSTEN SACKEN clearly misquoted MACQUART's supposed correction or possibly cited it from second-hand information, as he gives no page reference.

MACQUART's original description of *Ornithomyia platycera* (1843) is as follows : « *Virescens. Antennis ferrugineis. Antennis latis, trigonis*. Semblable à l'*O. viridis*. Antennes larges, triangulaires, en forme de mandibules, ciliées extérieurement, recouvrant la trompe et les palpes. Cuisses munies de soies en-dessus, longues et arquées ». Figure 8, on Pl. 36, of the head is very crude, but shows the broadened antennæ characteristic of *Ornithoetona*, as well as the ocelli. Although no size is given, the comparison with

⁽¹⁾ This « *Tableau général* » is not included in the same *Supplément 4*, as originally published in *Mém. Soc. Nat. Sci. Agric. Arts Lille* (for 1850).

O. viridis (the name MACQUART uses for *Ornithomyia avicularia*) shows that it is one of the smaller species of *Ornithoctona*. The locality « Afrique » is most indefinite; but since the type was collected by DE LALANDE, there can be little doubt that it came from South Africa. The type, stated to be at the Paris Museum, cannot be traced there now and is presumably lost. Fortunately there is general agreement that it is the only species of *Ornithoctona* known from tropical and South Africa. As shown above, the correct, earlier name for this species is *Ornithoctona laticornis* (MACQUART).

Although *O. laticornis* is a common and widespread parasite of many African birds, as shown by the appended list of hosts, it has been rarely recorded in print. SCHINER (1868, Reise Oesterr. Freg. Novara, Zool., 2, Abt. 1, B, pt. 1, Diptera, p. 373) reported it from the Cape of Good Hope on a species of *Muscicapidæ*; SPEISER (1907), from Mt. Kilimandjaro on *Ispidina picta* and *Lagonosticta brunneiceps*; and NEAVE (1912, Bull. Ent Res., 3, p. 311) from Northeast Rhodesia on *Turdus stormsi* and *Pratincola torquata*.

This fly is now definitely known from Abyssinia, Kenya Colony, Tanganyika Territory, Uganda, the Belgian Congo, the Cameroon and the Cape Province of South Africa. It occurs probably throughout most of continental Africa south of the Sahara and is restricted to that area. The subjoined host list, of some 47 species and races, almost entirely based on specimens I have seen during the past 25 years, will no doubt be greatly extended by future collecting. From present evidence, song-birds (*Passeriformes*) are perhaps the chief or possibly the only true breeding hosts. If such is the case, this fly fills in Africa much the same ecological host niche as *Ornithomyia avicularia* and *O. fringillina* in the Palearctic Region, *Ornithomyia fringillina* in the Nearctic Region, and *Ornithoctona fusciventris* in tropical America. The sporadic records from other types of birds, such as flamingos, wild pigeons, trogons, and kingfishers, seem to be due either to accidental straying or to *post mortem* contaminations. It is most interesting that this species has never been taken on diurnal birds of prey (*Falconiformes*) nor on owls (*Strigiformes*).

 HOST LIST OF O. LATICORNIS.

Order CICONIIFORMES.

Family **PHÆNICOPTERIDÆ.***Phœniconaias minor* (GEOFFROY). Kenya

Order ANSERIFORMES.

Family **ANATIDÆ.***Sarkidiornis melanotos* (PENNANT). Belgian Congo.

Order COLUMBIFORMES.

Family **COLUMBIDÆ.***Columba arquatrix arquatrix* TEMMINCK. Kenya.

Order TROGONIFORMES.

Family **TROGONIDÆ.***Apaloderma narina narina* (STEPHENS). Kenya.

Order CORACIIFORMES.

Family **ALCEDINIDÆ.***Ispidina picta picta* (BODDAERT). Tanganyika.

Order PICIFORMES.

Family **PICIDÆ.***Dendropicos fuscescens lepidus* (CABANIS and HEINE). Uganda.

Order PASSERIFORMES.

Family **HIRUNDINIDÆ.***Cecropis abyssinica unitatis* (SLATER and MACKWORTH-PRAED). Belgian Congo.*Hirundo angolensis angolensis* BOCAGE. Belgian Congo.Family **MUSCICAPIDÆ.**(Including **Turdidæ**).*Batis diops* JACKSON. Belgian Congo.*Batis molitor puella* REICHENOW. Belgian Congo.*Bessonornis albigularis macclounii* (SHARPE). Tanganyika.*Cossypha caffra caffra* (LINNÆUS). Cape Province.*Dioptrornis fischeri nyikensis* (SHELLEY). Tanganyika.*Dioptrornis fischeri toroensis* (HARTERT). Belgian Congo.*Myrmecocichla nigra* (VIEILLOT). Uganda.

Saxicola torquata axillaris (SHELLEY). Uganda, Belgian Congo.
Saxicola torquata robusta (TRISTRAM). N. E. Rhodesia.
Seicercus ruficapilla minullus REICHENOW. Tanganyika.
Sylvietta chapini SCHOUTEDEN. Belgian Congo.
Terpsiphone viridis ferreti (GUÉRIN). Uganda.
Turdus abyssinicus helleri (MEARNS). Kenya.
Turdus olivaceus olivaceus LINNÆUS. Cape Province.
Turdus olivaceus stormsi HARTLAUB. Northeast Rhodesia.

Family **LANIIDÆ.**

Antichromus minutus minutus (HARTLAUB). Belgian Congo.
Chlorophoneus doherityi (ROTHSCHILD). Belgian Congo.
Dryoscopus cubla cubla (SHAW). Cape Province.
Lanius collaris capelli (BOCAGE). Belgian Congo.
Lanius collaris humeralis STANLEY. Tanganyika.
Lanius collaris smithi (FRASER). Uganda.
Lanius mackinnonni SHARPE. Uganda, Belgian Congo.
Tchagra australis emini (REICHENOW). Belgian Congo.

Family **ZOSTEROPIDÆ.**

Zosterops scotti NEUMANN. Belgian Congo.

Family **FRINGILLIDÆ.**

Polioptila striolata kivuensis SCHOUTEDEN. Belgian Congo.
Serinus sulphuratus sulphuratus (LINNÆUS). Cape Province.
Spinus citrinelloides frontalis REICHENOW. Belgian Congo.

Family **PLOCEIDÆ.**

Coccygia quartinia kilimensis SHARPE. Kenya.
Coliuspasser ardens suahelicus (v. SOMEREN). Kenya.
Coliuspasser axillaris phœniceus HEUGLIN. Belgian Congo.
Euplectes capensis sabinjo REICHENOW. Uganda.
Lagonosticta rubricata congica SHARPE. Belgian Congo.
Lagonosticta senegala (LINNÆUS), subsepcies. Belgian Congo, Tanganyika.
Ploceus nigriceps graueri HARTERT. Uganda.

Family **STURNIDÆ.**

Cinnyricinclus leucogaster verreauxi (BOCAGE). Uganda.
Creatophora cinerea (MEUSCHEN). Kenya.
Onychognathus tenuirostris theresæ MEINERTZHAGEN. Belgian Congo.

Family **ORIIDÆ.**

Oriolus larvatus larvatus LICHTENSTEIN. Cape Province.

Family **DICRURIDÆ.**

Dicrurus adsimilis adsimilis SHARPE. Cape Province.

NYCTERIBIIDÆ.

Penicillidia bathybothyra (SPEISER).

- Basilia bathybothyra* SPEISER, 1907, Rec. Indian Mus., 1, pt. 4, p. 196 (♂).
- Penicillidia bathybothyra* SCOTT, 1925, Rec. Indian Mus., 27, pt. 5, p. 365 (♂ ♀); 1936, Jl. Linn. Soc., London, Zool., 39, No. 267, p. 487. THOMPSON, 1937, Jl. Anim. Ecol., 6, pt. 2, Table I.
- Penicillidia fletcheri* var. *pumila* SCOTT, 1914, Ann. Mag. Nat. Hist., (8), 14, p. 217; Pl. 10, fig. 5 (♂ ♀); 1917, Parasitology, 9, pt. 4, p. 606. FALCOZ, 1924, Bull. Mus Paris, 30, p. 228 (occurrence in West Africa).
- Penicillidia pumila* PHILLIPS, 1924, Spolia Zeylanica, 13, pt. 1, pp. 68 and 70.
- Penicillidia pumilla* GIL COLLADO, 1932, Eos, 8, pt. 4, p. 317 (occurrence in Spain).

Mission G. F. DE WITTE : Vitshumbi (lac Édouard), two females, on *Pipistrellus nanus*, 27.IX.1933.

P. bathybothyra was originally described from India, where it is fairly common (Calcutta, Madras, and the Bombay Presidency). The synonym *P. fletcheri* var. *pumila* was based on specimens from Ceylon. The species is, however, known to be much more widely distributed, since FALCOZ reported it from West Africa and GIL COLLADO from Spain. I have seen additional specimens from the following localities :

Burma : Myitkyiana, on *Pipistrellus coromandra*, IX.22.1945 and X.3.1945 (K. STAGER and W. L. JELLISON).

Cyprus : Limassol, on *Pipistrellus kuhlii* (G. MAVROMOUSTAKIS).

Sierra Leone : Daru near Segbwema, N. W. District, on *Pipistrellus stampflii* (T. S. JONES); Yileh near Gbap, Nomgoba Bullom chiefdom, Bonthe District, on *Pipistrellus stampflii* (T. S. JONES).

Liberia : Harbel (Firestone Plantations on the Du River), near Monrovia (J. BEQUAERT; H. A. BEATTY); Reppo's Town, on *Pipistrellus stampflii* (J. BEQUAERT).

Belgian Congo : Bamania, on *Pipistrellus nanus* (R. P. HULSTAERT); Flandria, on *Pipistrellus nanus* (R. P. HULSTAERT); Bikoro, on *Pipistrellus nanus* (H. SCHOUTEDEN).

The host of *P. bathybothyra* was originally given as « *Vespertilio muricola* » (= *Myotis muricola* HODGSON). It has since been recorded in India and Ceylon from *Pipistrellus coromandra* GRAY and *Pipistrellus mimus mimus* WROUGHTON, and in Spain from *Pipistrellus nathusii* (KEYSERLING and BLASIUS). To these hosts may now be added *Pipistrellus kuhlii* (NATTERER) in Cyprus, *Pipistrellus stampflii* (JENTINK) in Liberia and Sierra Leone, and *Pipistrellus nanus* PETERS in the Belgian Congo.