NOTES ON HIPPOBOSCIDAE. 20. A REVISION OF THE HIPPOBOSCIDAE OF CHILE *
(Diptera)

por

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During the fifteen years elapsed since the publication of my preliminary account of Chilean Hippoboscidae, in the Revista Chilena de Historia Natural (vol. 37, 1933, pp. 160-165), many new facts have come to light. A number of additions and corrections are called for, some of which were incorporated by Mr. Carlos Stuardo Ortiz in his most valuable "Catálogo de los Dípteros de Chile" (1946). Additional Chilean specimens, some received particularly from Father Guillermo Kuschel and others studied at the United States National Museum, seem to warrant the publication at this time of a revised account of this family of flies.

The sequence of the species is that of the 1933 article, which, moreover, was followed in the Stuardo Catalogue. References published in 1933 have not been repeated here.

Key to New World Genera of Hippoboscidae

The following key includes some changes and additions to the one I published before.

1. Wings absent or much reduced in size and non-functional .. 2
   Wings broad, of normal shape, used for flight 6
2. Without even traces of wings and without halteres. Claws seemingly bidentate. Ocelli absent. On mammals ... ... *Melophagus*
   Wings either short or very narrow, or reduced to basal stumps. Halteres present 3

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3 Claws seemingly bidentate. Ocelli present. Wings reduced to basal stumps (remnants of the more complete wings of newly hatched flies). On mammals. 4
Claws seemingly tridentate. Ocelli absent. On birds 5

4. Basal sternite of abdomen elliptical, with broadly rounded, convex hind margin ... ... *Neolipoptena*
Basal sternite of abdomen crescent-shaped, with deeply emarginate, concave hind margin ... ... *Lipoptena*

5. Wings long, very narrow, drawn out into a point. Eyes long ... ... *Crataerina*
Wings very short, about as broad as long, rounded at apex, scarcely extending beyond scutellum. Eyes short ... ... *Brachypteromyia*

6. Wings with a closed anal cell, three cross-veins being present. On birds 7
Wings with only one or two cross-veins, the anal cell always open 12

7. Third longitudinal vein running close to the costa or more or less confluent with it over its apical portion. Ocelli present. Anterior margin of thorax not curved inward to receive the head. Claws seemingly bidentate ... ... *Ornithoica*
Third longitudinal vein not confluent nor close to the costa, in which it ends at a distinct angle. Anterior margin of thorax curved inward to fit the head. Claws seemingly tridentate 8

8. Ocelli present, well developed ... ...
Ocelli rudimentary or absent 11

9. Terminal antennal process small, narrow, directed outwardly and curved down, without outer rim ... ... *Ornithomyia*
Terminal antennal process broad and long, leaf-like, the two processes with the inner margins close together 10

10. Terminal antennal process with convexly curved inner margin, the tip blunt or pointed, the process at most one-half the length of the head ... ... *Ornithoctona*
Terminal antennal process with nearly straight inner margin, more than twice as long as broad and two-thirds the length of the head ... *Ornithoctona* subg. *Ornithopertha*

11. Anterior basal cross-vein of wing placed about midway between anterior cross-vein and posterior basal cross-vein. A conspicuous two-headed pleurotergal process on each side below the scutellum ... ... *Stilbometopa*
Anterior basal cross-vein placed close to the anterior cross-vein. Pleurotergal process on each side below the scutellum small and inconspicuous ... ... *Ornithomyia* subg. *Pseudornithomyia*

12. Wings with only three distinct longitudinal veins behind the costa and one long, oblique cross-vein, eventually breaking off near the base. Ocelli present. Claws seemingly bidentate. On mammals 13
Wings present throughout life, with five or six longitudinal veins behind the costa. Claws seemingly tridentate. On birds 14

13. Basal sternite of abdomen elliptical, with broadly reunded, convex hind margin ... ... *Neolipoptena*
Basal sternite of abdomen crescent-shaped, with deelpy emarginate, concave hind margin ... ... *Lipoptena*
14. Wings with only one cross-vein (the anterior cross-vein), both anal and posterior basal cells open 15
Wings with two cross-veins, the posterior basal cell at least partly closed. Ocelli absent or rudimentary 16
15. Scutellum with straight hind margin and square lateral angles. Ocelli absent ... ... *Pseudolynchia*
Scutellum with convex hind margin and broadly rounded lateral angles. Ocelli small or vestigial ... ... *Microlynchia*
16. Frons and face about evenly divided by the transverse ptilinal suture, the long lower portion (or fronto-clypeus) touching the long vertical plate (or postvertex) without intervening mediovertex ... ... *Olfersia*
Lower portion of face (or fronto-clypeus, below the ptilinal suture) much shorter than the upper portion; vertical plate (or postvertex) also short; the two separated by a long mediovertex ... ... *Lynchia*

Subfamily Melophaginae

1.— *Melophagus ovinus* (Linnaeus, 1758). The common ked of domestic sheep, originally imported by man into the New World, was first recorded from Chile by E. C. Reed. In my Monograph of the Melophaginae (1942, Entomologica Americana, XXII, p. 183). I listed Chilean specimens from Purén, Malleco (Chas. Wilhelm). I hace seen others, more recently, from Mocha Id. (D. S. Bullock); and from Castro, Chiloé id. (F. and M. Edwards, and R. E. Shannon), previously recorded in print by Edwards and Shannon (1927, Rev. Inst. Bact. Buenos Aires, IV, Nº 7, p. 658; a reference overlooked for my earlier paper).

Although *Lipoptena mazamae* Rondani is widely distributed in the Americas, it is most doubtful that it will ever be taken in Chile, since neither deer (*Odocoileus*) nor brocket (*Mazama*) occur there. *Neolipoptena* is restricted to North America.

Subfamily Ornithomyinae

2.— *Ornithomyia remota* Walker, 1849, List Dipt. Brit. Mus., IV, p. 1144. Synonyms: *Ornithomyia chilensis* E. C. Reed, 1904; *Ornithomyia paricella* Speiser, 1905. *O. remota* was described from the islets of Tristan da Cunha, in the South Atlantic, about midway between South Africa and Argentina. I have recently seen, through the kindness of Dr. F. Zumpt, two flies from the type locality and have recognized them as Walker's species. They are, however, also identical with the Chilean *O. paricella,* which therefore must be replaced by Walker's name.

There is a possibility that *Ornithomyia parva* Macquart, 1843, Mém. Soc. Sci. Lille, (for 1842), p. 436 (1843, Dipt. Exot., II, pt. 3, p. 279), described from "Brazil or Chile", may be this species also. Speiser (1902, Zeitschr. Syst. Hym. Dipt., II, p. 180) referred *parva* to the genus *Ornithoctona* on the strength of a specimen from Colombia in Bigot's collection, supposedly named by Macquart. This was, however, not Macquart's original type, said to have been at the Paris Museum. Until the true type can be examined, the matter must be left open.

In 1933 I recorded *O. remota* from Concepcion and Valparaiso, off six different species of birds. I have since seen the following additional specimens: Concon, near Valparaiso, without host (A. Wetmore); Tofo, without host (T. Hallinan); Angol, off *Turdus magellanicus* King, *Cinclodes nigrifumosus* d'Orbigny and de laFresnaye, *Diuca grisea* (Lesson) and *Zonotrichia pileata* Boddaert (D. Sd Bullock); Maquehue, Temuco, off *Sturnella militaris* (Linnaeus) (R. M. Middleton) and off *Colaptes pitiguus* Molina (Collector unknown). Some of these specimens were infested with parasitic mites; while the fly off *Colaptes pitiguus* had a Mallophagon (biting louse) attached to one side of the abdomen.

Falcoz' supposed *Ornithomyia avicularia* from Chile was certainly misidentified and most probably *O. remota.*

In addition to the hosts listed above, *O. remota* was previously recorded from *Muscisaxicola macloviana* Garnot, *Agriornis livida* (Kittlitz), *Mimus thenca* (Molina), and *Glaucidium nanum* (King). This makes a total of 10 known hosts, 9 being Passeriformes and one a nocturnal bird of prey, all from Chile.

O. remota occurs also on Tristan da Cunha and in southern Argentina. I have seen a specimen from Valle del Lago Blanco, Chubut, without host (J. Koslowsky).

3.— *Ornithomyia biloba* Dufour, 1827. To this species belongs the specimen from near Valparaiso, off *Turdus falklandicus* Quoy and Gaimard (E. P. Reed Coll.), which I referred in 1933 by error to *Ornithomyia anchineuria.* I have reëxamined this specimen most carefully, and I am unable to find a tangible difference from European specimens of *O. biloba,* a species which has been often misunderstood or ignored. There is as yet no other record of the species from the New World. The Chilean host is also most unusual, since *O. biloba* is in Europe a fairly parasite of swallows. Possibly the Chilean host was indicated by error. A careful search for Hippoboscidae should be made on swallows and swifts in Chile to clear up the matter.

4.— *Ornithoctona erythrocephala* (Leach, 1817). As I do no longer regard *Ornithoctona bellardiana* (Rondani, 1878) and *Ornithoctona haitiensis* (Bigot, 1885) as specifically distinct from *erythrocephala,* Falcoz' record from Valparaiso may be referred definitely to this species.

5.— *Ornithoctona fusciventris* (Wiedemann, 1830). It is no lon-

ger doubtful to me that *Ornithomyia chilensis* Guérin (1835) and *O. chiliensis* Macquart (1843) are identical with Wiedemann's species, as Speiser first recognized.

6.— *Olfersia bisulcata* Macquart, 1847. Although this species was originally described from Chile, it has never again been recorded from there. It is, however, a common South American parasite of vultures and other diurnal birds of prey.

7.— *Olfersia fossulata* Macquart, 1843. To the previous record, from Santiago, may now be added: Valparaiso (E. P. Reed); Tofo, off *Pelecanus thagus* Molina (T. Hallinan); Arica, without host (G. Kuschel); Lluta (Rosario), Arica, without host (O. Barros).

8.— *Microlynchia pusilla* (Speiser, 1902). An interesting addition to the Chilean fauna, based upon a female from Arica, off a wild pigeon, *Columbigallina cruziana* (Prévost) (O. Barros).

9. — *Crataerina segugy* Falcoz, 1930. El Recreo, without host (A. Faz; at U. S. N. M.); Putre, Orica, 3550 m, off the swallow *Pygochelidon cyanoleuca patagonica* (Lafr. et D'Orb.) (O. Barros). Another addition to the Chilean list.

Stilbometopa, Ornithopertha, Pseudornithomyia, Pseudolynchia and *Lynchia* are all as yet unknown from Chile, although some of these genera certainly occur there.

Subfamily Ornithoicinae

10.— *Ornithoica vicina* (Walker 1849). I have now seen at the U. S. National Museum the specimen from Valparaiso which Reed recorded as *Ornithoica confluenta.* I have shown recently that Say's specific name *confluenta* has been generally misapplied. It should be used only for an uncommon species found on large wading birds; whereas the proper specific name for the common *Ornithoica* of passerine and other birds in the Americas is Walker's *vicina.*

SUMARIO

El autor estima conveniente volver sobre los *Hippoboscidae* chilenos tratados en 1933, a raíz de nuevos hallazgos y de algunas correcciones. Presenta de nuevo la clave de los géneros del Nuevo Mundo con algunas modificaciones y cita las especies chilenas aduciendo sólo los nuevos datos.