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LIV.—Notes on Mallophaga.—II. By GORDON B. THOMPSON, Department of Entomology, British Museum (Natural History).

Genus PSEUDONIRMUS Mjöberg.

In his list of the genera and species of the Mallophaga, Harrison (1916) established the genus *Esthiopterum* to include all the species of *Lipeurus*, other than the circumfasciate group containing the genotype, and he designated *Lipeurus herbræus* Nitzsch (= *gruis* Linn.) as the genotype. The genus *Lipeurus* he transferred to the subfamily Goniodinæ. Unfortunately, he omitted

to make use of Mjöberg's genus *Pseudonirmus* and consequently he included the genotype and sole species *Pseudonirmus charcoti* (Neumann) in his new genus *Esthiopterum*, thus treating *Esthiopterum* as a synonym of *Pseudonirmus*. This view no longer seems justifiable. *P. charcoti* (Neumann) should be separated from the other species included in *Esthiopterum* by Harrison and with it should be associated *Lipeurus gurlii* Taschenberg. The name *Pseudonirmus* is fortunately still available for their reception.

The Esthiopterinae include a large number of heterogeneous forms, which will, no doubt, ultimately have to be split into a very considerable number of groups of generic rank. Ewing (1929) and Bedford (1929, 1930, 1931) have made a beginning by the description of such new genera as *Columbicola*, *Naubates*, *Colilipeurus*, *Harrisoniella*, *Falcolipeurus*, and *Otilipeurus*.

Bedford (1932) has used Mjöberg's genus *Pseudonirmus* and has also included *P. gurlii* (Taschenberg) in it, but without comment:—

*Pseudonirmus* Mjöberg, Arkiv f. Zool. vi. 1910, p. 149.

*Pseudonirmus* Bedford, 18th Rept. Dir. Vet. Serv. & Anim. Indust., Un. S. Africa, 1932, p. 334.

Mjöberg's genus may be re-characterized as follows:—

*General Characters.*—Forms in which the frontal bands are continuous, forming a single band across the front of the head behind the signature; clypeal region short, with definite signature; no internal bands, but modified ventral bands present; male antenna with a slight projection of the ventral border of the third segment, the two terminal articles being inserted at a small angle dorsally.

Genotype: *Pseudonirmus charcoti* (Neumann).

*Remarks.*—The genotype was described by Neumann (1907, p. 15) as a *Degeeriella* because of the absence of dimorphism in the antennæ. Neither Neumann nor Mjöberg recognised its affinities with Taschenberg's *Lipeurus gurlii*\* (1882). Mjöberg erected a new genus for its reception, chiefly, as he states, because of the absence of a penis. The genital apparatus is, however,

\* Harrison gives *gurlii* Taschenberg as a synonym of *lineare* Nitzsch, but for the present I shall retain Taschenberg's name.

similar to that of the majority of the petrel-infesting species, consisting of a simple eversible tube capable of protrusion between a pair of chitinous parameres, so that the only character adduced in Mjöberg's generic definition is of no use. The structure of the fore part of the head is quite distinctive. The two species *P. charcoti* (Neumann) and *P. gurlii* (Taschenberg) are found respectively upon the two monotypic genera *Pagodroma* and *Daption*.

*Pseudonirmus charcoti* (Neumann).

*Degeeriella charcoti* Neumann, Exp. Antaret. France, 1907, p. 15, fig. *Pseudonirmus charcoti* Mjöberg, Arkiv f. Zool. vi. 1910, p. 150, pl. iii. fig. 7.

*Esthiopterum charcoti* Harrison, Parasit. ix. 1916, p. 132.

Neumann's description and figures of this species are adequate, so nothing need be added here. His specimens were taken off *Pagodroma nivea* (Förster).

The type-host of *Pseudonirmus gurlii* (Taschenberg) is *Daption capense* (Linn.).

#### Genus TRABECULUS Rudow.

*Trabeculus* Rudow, Zeit. f. ges. Nat. xxvii. 1866, p. 466.

*Oncophorus* Rudow, Zeit. f. ges. Nat. xxxv. 1870, p. 475.

*Mackayia* Waterston, Scot. Nat. 1912, p. 251.

*Mackayia* Waterston, Ann. S. Afr. Mus. x. 1914, pp. 292–299.

*Trabeculus* Harrison, Parasit. ix. 1916, p. 144.

*Cecalymenus* Enderlein, Zool. Anz. xlix. 1917, p. 243.

*Trabeculus* Bedford, 18th Rept. Dir. Vet. Serv. & Anim. Indust., Un. S. Africa, 1932, p. 343.

Genotype: *Trabeculus schillingi* Rudow (1866).

This genus has a somewhat obscure history. Four years after its establishment (the genotype being *Trabeculus schillingi* Rudow from *Pterodroma mollis* (Gould)). the author, Rudow, without giving any reason, changed the name to *Oncophorus*, with the result that the name *Trabeculus* disappeared from the literature of Mallophaga. In 1885 Piaget claimed *Oncophorus* as his own, Taschenberg (1882) having previously removed *O. schillingi* Rudow to his newly established genus *Eurymetopus* (= *Docophoroides* Giglioli, 1864) after examining Rudow's type. In the hands of Piaget, the genus *Oncophorus* came to include a number of species from rails and hornbills, which were far removed from the petrel parasite for which the genus *Oncophorus* was originally founded. Johnston and Harrison (1911), accepting Taschenberg's

judgment that *O. schillingi* Rudow was congeneric with *Docophoroides brevis* Dufour, reduced *Trabeculus* to the status of a synonym of *Docophoroides*.

In 1912 Waterson created the genus *Mackayia* for the reception of a species from *Puffinus p. puffinus* (Brünnich), and later (*l. c.* p. 258) described a second species *Mackayia heteracanthus* Waterston from *Macronectes giganteus* (Gmelin) from S. Africa. After having re-examined Waterston's material together with additional material from *Pterodroma mollis* (Gould), I am in agreement with Harrison (1916) that *Mackayia heteracanthus* Waterston is the same as Rudow's *Trabeculus schillingi*.

Enderlein (1917), in all probability as a result of being isolated from British literature on account of the war, was unaware of Waterston's description and of Harrison's subsequent clearing up of the matter, and made *Trabeculus schillingi* Rudow the type of a new genus and species *Cecalymenus œstrelatæ* Enderlein. Enderlein's material was obtained from *Pterodroma mollis* (Gould) taken at Tristan da Cunha.

The synonymy of *Trabeculus schillingi* Rudow is therefore as follows:—

*Trabeculus schillingi* Rudow, Zeit. f. ges. Nat. xxvii. 1866, p. 467.

*Oncophorus schillingi* Rudow, Zeit. f. ges. Nat. xxxv. 1870, p. 475.

*Eurymetopus schillingi* Taschenberg, Nova Acta, Halle, xlv. 1882, p. 185.

*Mackayia heteracanthus* Waterston, Scot. Nat. 1912, p. 258.

*Mackayia heteracanthus* Waterston, Ann. S. Afr. Mus. x. 1914, p. 292, pl. xxv. fig. 8, pl. xxvi. figs. 13, 16, 18.

*Trabeculus schillingi* Harrison, Parasit. ix. 1916, p. 144.

*Cecalymenus œstrelatæ* Enderlein, Zool. Anz. xlix. 1917, p. 242.

*Trabeculus schillingi* Bedford, 18th Rept. Dir. Vet. Serv. & Anim. Indust., U.S. Africa, 1932, p. 343.

The type-host of *Trabeculus schillingi* Rudow is *Pterodroma mollis* (Gould).

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