

significance. Bedford (1932) has included in *Pectinopygus* species found on birds belonging to the families Phalacrocoracidae, Pelecanidae, Fregatidae, Sulidae, Phaetontidae, and Anhingidae.

An examination of Esthiopterinae derived from hosts belonging to the families Sulidae, Pelecanidae, Phalacrocoracidae, and Fregatidae leads me to the conclusion that they fall into four recognizable groups, which may be considered as representing genera. It appears necessary therefore to describe three new genera, to contain species found on Pelecanidae, Phalacrocoracidae, and Fregatidae, and to re-define *Pectinopygus* Mjöberg to contain the species found on Sulidae.

PECTINOPYGUS Mjöberg, 1910.

Arkiv f. Zool. vi. p. 95.

Generic Characters.—Robust forms, darkly coloured, with two small postero-lateral backwardly directed projections from the square signature; antennae dimorphic, third segment of male antenna carrying a projecting toothed ridge, somewhat resembling a shark's tooth; male with transverse bands of first four segments divided medianly; female with all but the eighth divided medianly; termination of abdomen in male two-pointed dorsally, the cleft between completely dividing the tergites of the ninth segment and partially those of the eighth; ventrally the ninth sternite projects as a more or less arrow-headed point between and beyond the dorsal points; three to four sheathed hairs on either side on the ventral surface of the dorsal points; termination of abdomen in female slightly emarginate dorsally, definitely two-pointed ventrally, each of the points bearing three to four sheathed hairs on its ventral surface. Male genitalia complex.

Hosts.—Sulidae.

Genotype.—*Pectinopygus bassanæ* (O. Fabricius), 1780.

Type-host.—*Sula bassana bassana* (Linn.).

EPIPELICANUS, gen. nov.

Generic Characters.—Elongate forms, darkly coloured with small postero-lateral projections from the signature, directed outwards; signature with strongly convex

IX.—*Preliminary Descriptions of Three new Genera of Mallophaga (Subfamily Esthiopterinae).* By GORDON B. THOMPSON, Department of Entomology, British Museum (Natural History).

MJÖBERG (1910) erected the genus *Pectinopygus* to contain the species *Docophorus bassanæ* Denny, of which *L. pullatus* Nitzsch is a synonym, and which occurs upon the European gannet (*Sula b. bassana* (Linn.)). The character which suggested the name, and upon which Mjöberg mainly relied for his generic distinctions, is the presence of a pair of comb-like structures upon the lateral pieces of the male genital armature. This character is found in forms from *S. b. bassana* (Linn.) (Mjöberg, 1910) and *S. bassana capensis* (Licht.) (Cummings, 1916), but, as pointed out by Waterston (1914) and Ferris (1933), does not appear in the genitalia of forms from certain other gannets. Hence the pectinate genitalia have no generic

hind-border; first segment of male antenna with a slightly bifid, wholly chitinous appendage at half its length, third segment with a long, recurved hook-like appendage; male with transverse bands of first seven and female with first eight abdominal segments divided medianly; male with pleura of eighth segment produced backwards into blunt, slightly curved processes, and those of the ninth segment bearing curved chitinous hooks projecting forwards; no sheathed hairs, but a number of small, thick conical spines on either side of fairly deep emargination of hind-border; female with hind-end slightly emarginated dorsally, two-pointed ventrally, with a pair of short sheathed hairs on either side ventrally. Male genitalia complex.

Hosts.—Pelecanidæ.

Genotype.—*Lipeurus forficulatus* Nitzsch, 1866.

Type-host.—*Pelecanus onochrolatus onochrolatus* Linn.

PHILICHTHYOPHAGA, gen. nov.

Generic Characters.—Smaller forms, darkly coloured, without projections from the signature; third segment of male antenna usually with a slight prolongation of pre-axial border; abdomen of male with transverse bands of anterior segments usually divided medianly (one in some species to three in others); with a peculiar chaetotaxy on ventral surface of last two segments, varying with species; and without sheathed hairs, though a few pustules show slightly raised rims; abdomen of female with transverse bands separated medianly through first eight segments; with tergite of ninth segment ending flatly, and bearing two pairs of sensory hairs with rimmed pustules, and with sternite of the same segment also ending flatly, cleft, by a deep, narrow, median incision, with a pair of sheathed hairs on either side. Male genitalia usually simple.

Hosts.—Phalacrocoracidæ.

Genotype.—*Lipeurus gyricornis* Denny, 1842.

Type-host.—“*Phalacrocorax carbo carbo* (Linn.).”

EPIFREGATA, gen. nov.

Generic Characters.—Elegant, long, slender forms of a clear honey colour, with dark markings; clypeus more elongate, the signature being twice as long as wide, wider

anteriorly, and drawn out posteriorly into a rounded angle; male antenna long and slender, with a slight enlargement of the pre-axial border of the third segment; male abdomen with third segment shorter than rest, and tergite narrowed to less than half length of segment; and with ninth segment ending in two conical protuberances separated by a V-shaped cleft; ventral surface of eighth segment bearing a row of inwardly directed hairs on the pleuron of each side, and two groups of small bristles, some with raised pustular rims, internal to these; female abdomen flatly emarginate dorsally, with a straight hind-border with median cleft ventrally. Male genitalia simple.

Hosts.—Fregatidæ.

Genotype.—*Lipeurus gracilicornis* Piaget, 1880.

Type-host.—*Fregata minor*.

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