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Mallophaga Miscellany.—No. 2.

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1.

IN the 'Zeitschrift für Parasitenkunde,' Bd. ii. Heft i. July 1939, pp. 47–57, Dr. Kéler mentions a number of generic names, giving genotypes but no descriptions. Dr. Jordan has kindly explained that these names are invalid according to Article 25 of the International Rules of Zoological Nomenclature, which states (paragraph *c*): "But no generic name nor specific name, published after December 31, 1930, shall have any status of availability (hence also of validity) under the Rules, unless and until it is published either

"(1) with a summary of characters (.....) which differentiate or distinguish the genus or the species from other genera or species:

"(2) or with a definite bibliographic reference to such summary of characters."

In order to avoid confusion, and for the sake of those authors who, like Dr. Kéler, can see no use for the International Rules, these genera will be described using, if possible, the original names.

Craspedonirmus.—Described below.

Acronirmus.—The creation of this genus for the *Bruelia* from the Swallow seems to be unjustified.

Neodocophorus.—The creation of this genus also seems unjustified. The owls are parasitized by a number of rather diverse species, but on consideration of a number of these it is apparent that the species are not generically distinct. The whole group of species are interconnected and exhibit common generic characters. The separation of the *cursor* group of species from *heteroceros* (*Strigiphilus*) is not justified merely on the absence of sexual dimorphism of the antennæ and the smaller size of segment IX of the male abdomen, nor can *ceblebrachys* (*Eustrigiphilus*) be conveniently separated, as there are intermediates which link up this rather distinctive species with the *cursor* group. It seems, therefore, to be more satisfactory to keep all these species in one genus, namely, *Strigiphilus* Mjöberg, 1910.

Aneutalus.—This is apparently a synonym of *Piconiphilus* Bedford, January 1939.

Sclarisoma.—This may prove to be a good genus.

Colpocarenum.—This is apparently a synonym of *Ardeiphilus* Bedford, January 1939.

Amblycera

2. Machærilæmus Harrison, 1915.

Machærilæmus Harrison, Parasitology, vii. 1915, p. 389. Genotype : *M. latifrons* Harrison, 1915.
Hirundœcus Ewing, Proc. U.S. Nat. Mus. vol. lxxvii. art. 20, 1930, p. 12. Genotype : *H. americanus* Ewing, 1930.

Harrison (1916) in " The Genera and Species of Mallophaga " included in *Machærilæmus* only two species ; these are distinguished, amongst other characters, by the broad head, absence of slit in front of eye, and by the presence of lateral processes on the gular plate. Malcomson Ann. Ent. Soc. Amer. vol. xxx. no. 1, 1937, p. 55) showed that *Menopon mæstum* Kellogg & Chapman should be included in *Machærilæmus*, and also described a new species, *M. complexus*, in which the gular plate has no lateral processes. It is apparent from a consideration of these species and from an examination of a male specimen from *Hirundo daurica erythropygia* and of a drawing of the ventral aspect of *Hirundœcus americanus*, kindly sent by the U.S. National Museum, that specimens

from the Hirundinidæ (*Hirundœcus* Ewing) cannot be separated generically from *Machærilæmus*. Thus specimens from the Hirundinidæ are indistinguishable from typical *Machærilæmus* in the head characters, having the gular plate as in *complexus* Malcomson, in the characters of the prosternal plate and the male genitalia, and in the absence of patches of setæ on the third femora and abdominal sternites and the presence of sternal spines.

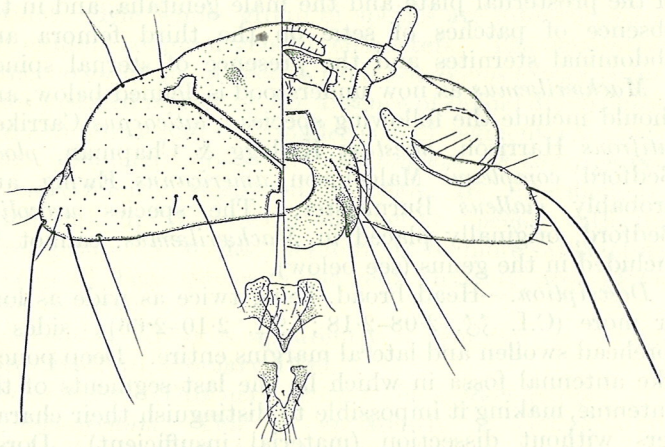
Machærilæmus as now understood is defined below, and should include the following species : *laticorpus* Carriker, *latifrons* Harrison, *mæstum* Kellogg & Chapman, *plocei* Bedford, *complexus* Malcomson, *americanus* Ewing, and probably *malleus* Burmeister. The species *urocolius* Bedford, originally placed in *Machærilæmus*, cannot be included in the genus (see below).

Description.—Head broad, being twice as wide as long or more (C.I. ♂♂, 2·08–2·18 ; ♀♀, 2·10–2·66) ; sides of forehead swollen and lateral margins entire. Deep pouch-like antennal fossa in which lie the last segments of the antennæ, making it impossible to distinguish their characters without dissection (material insufficient). Dorsal margin of head with Y-shaped suture, the stem of which arises at the middle of the occiput, the arms running out to meet a circular uncoloured area near each side of anterior margin (fig. 1)*. Gular plate large and no tfused to chitinous framework which gives the articulation of the mandibles ; central perforation may be present or absent, and the lateral margins either have a stout, backwardly projecting process each side (*laticorpus*, *latifrons*, and *plocei*) or an irregular outline with small distal process (new undescribed species from *Aphelocoma sieberi*), or the lateral margin is somewhat swollen anteriorly, without definite process (*complexus* and *americanus*). Prothorax broad and winged ; prosternal plate characteristic (fig. 1). Mesonotum small and separated by narrow suture. Third femora without combs or patches of setæ. Abdomen broad, tergal plates entire, with a single row of marginal setæ and a few spines laterally ; paratergal plates without internal thickening. Sternal plates narrow, with two irregular rows of setæ ; there are no combs

* Figs. 5–10, 14, and 15 were drawn by Mr. R. S. Pitcher : figs. 3, 4, and 11 by Miss E. C. Humphreys ; and figs. 1, 2, 12, 13, and 16 by Miss Theresa Clay.

or patches of setæ, but sternites II–VIII have 1–6 short stout spines on the postero-lateral angles of the plates, the latter being sometimes slightly produced posteriorly.

Fig. 1.



Machærilæmus laticorpus (Carriker). ♀.

Genitalia with elongated, somewhat flattened basal plate, free paramera, and bluntly pointed mesomal plate.

Distribution.—Apparently confined to the Passeres, where it is uncommon.

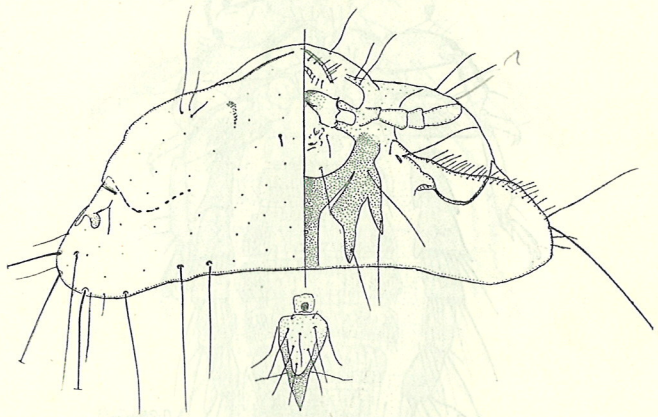
3. Colimenopon, gen. n.

Superficially this genus is similar to *Machærilæmus*, but is distinguished by the presence of a slit in the lateral margin of the head, the form of the ventral processes, and by the presence of patches of setæ on the abdominal sternites.

Description of the Genus.—Stout-bodied Menoponidæ with the following diagnostic characters :—Head broad (C.I. ♂♂, 2·00–2·10; ♀♀, 1·95–2·36), with lateral dorsal margin of head overlapping ventral continuation of temple margin to a considerable extent. Lateral corners of forehead swollen ; lateral dorsal margins with narrow slit and fold in front of eye (fig. 2) ocular blotch absent. Antennal fossæ backed up by lightly chitinized area ; antennæ four- (or possibly five-) segmented, with last segment short and capitate. Mandibles bidentate ;

pharyngeal sclerite rudimentary. Gular plate small, with central perforation (not known in Bedford, Rep. Dir. Vet. Serv. Anim. Ind. U.S. Africa, 1930, p. 157, f. 4), and is fused to chitinous framework which gives the articulation of the mandibles ; this framework is prolonged ventrally each side and gives rise to two backwardly directed processes. Prothorax large and winged, with characteristic prosternal plate. Mesonotum small. Third femora each with ventral patch of setæ. Abdomen with tergal plates entire, with a single row of marginal setæ. Paratergal plates without internal thickening. Sternites IV–VII with lateral patches of setæ. Genitalia with elongated

Fig. 2.



Colimenopon from *Colius macrourus pulcher*.

basal plate, lightly chitinized paramera, flattened mesosomal plate, and sac with teeth.

Genotype : *Machærilæmus urocolius* Bedford, 1930.

Type-host : *Colius indicus lacteifrons* (*C. i. transvaalensis*).

This genus appears to be restricted to the bird-genus *Colius*.

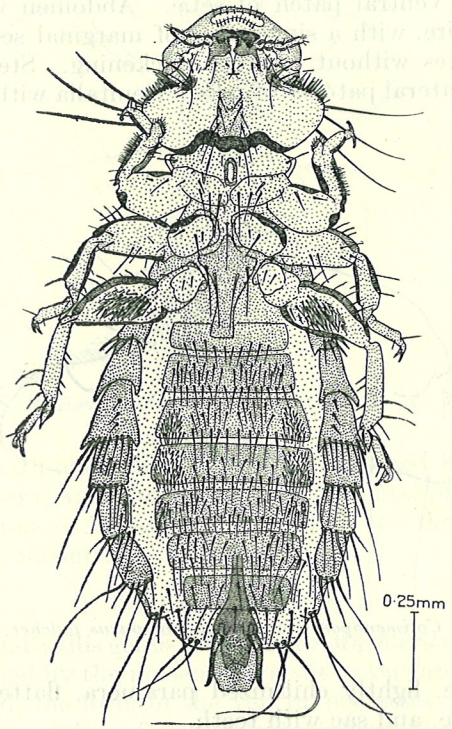
4. Meromenopon, gen. n.

This genus is distinguished by the characters of the head, paratergites, and ventral chætotaxy.

Description of the Genus.—Somewhat elongated Menoponidæ with the following diagnostic characters :—Anterior

margin of head somewhat flattened centrally, with slight concavity before the swollen lateral corners of the forehead ; lateral dorsal margin with ocular emargination and small slit in front of well-developed eyes. Temples not greatly expanded and somewhat angular, the lateral margins being reclined towards occiput. Ocular blotch

Fig. 3.

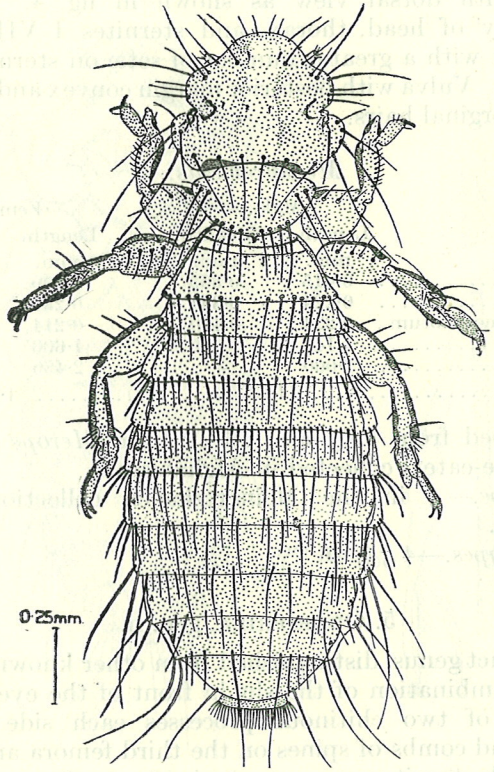


Meromenopon meropis, sp. n. ♂.

faint ; gular plate narrow, with small central perforation. Antennæ apparently 5-segmented, with the third segment small and the fifth capitate. Mandibles bidentate ; pharyngeal sclerite rudimentary. Prothorax winged ; prosternal plate with large central perforation. Mesonotum small and separated from metanotum by a distinct suture ; metasternal plate pointed anteriorly and narrowly

prolonged posteriorly. Third femora with closely set patch of setæ ventrally. Abdomen with tergal plates entire and with a single row of setæ. Paratergites without internal thickening and with posterior ventral corner of paratergites II–IV prolonged posteriorly as pointed processes. Sternal plates narrow, with many setæ ; sternites

Fig. 4.



Meromenopon meropis, sp. n. ♀.

IV and V with lateral patches of closely set setæ. Genitalia with short basal plate, free paramera, and flattened mesosomal plate.

Genotype : *Meromenopon meropis*, sp. n.

Species of this genus have been examined from three species of the bird-genus *Merops* (Bee-eaters).

Meromenopon meropis, sp. n.

Description of Male.—With characters as given for genus and with ventral view as shown in fig. 3. Dorsal chætotaxy as in female, but the abdominal tergites tend to have a greater number of marginal setæ.

Description of Female.—Similar in general appearance to male but somewhat larger. Characters as given for genus, with dorsal view as shown in fig. 4. Ventral chætotaxy of head, thorax, and sternites I–VIII as in male, but with a greater number of setæ on sternites VII and VIII. Vulva with posterior margin convex and bearing 24–26 marginal hairs.

Measurements.

	Male.		Female.	
	Length.	Breadth.	Length.	Breadth.
	mm.	mm.	mm.	mm.
Head	0·415	0·555	0·430	0·600
Pronotum	0·224	0·384	0·236	0·415
Meso- and metanotum	0·224	0·480	0·214	0·600
Abdomen	1·140	1·600	1·600	1·020
Total	2·000	—	2·480	—
C.I.	1·33		1·39	

Described from 5 ♂♂ and 16 ♀♀ from *Merops apiaster* Linn. (Bee-eater) collected in Afghanistan.

Holotype.—♂ in the Meinertzhagen collection, slide no. 10086.

Paratypes.—4 ♂♂, 16 ♀♀.

5. Odoriphila, gen. n.

A distinct genus, distinguished from other known genera by the combination of the slit in front of the eye, in the presence of two chitinous processes each side of the mouth, and combs of spines on the third femora and third and fourth sternites.

Description of the Genus.—Somewhat stout Menoponidæ with the following diagnostic characters :—Lateral margins of head without ocular emarginations but with narrow slit in front of well-developed eyes. Ocular blotch present ; gular plate faintly chitinized. Antennal fossæ backed by chitinized area ; antennæ five-segmented, third short and fifth capitate. Mandibles bidentate ; labial palpi short ; pharyngeal sclerite rudimentary.

Two pairs of backwardly directed pointed processes arise near base of palpi, similar in character to the single pair found in *Menacanthus*. Prothorax winged ; prosternal plate well developed. Mesonotum small and separated from metanotum by a suture ; meso- and metasternal plates small. Third femora with two ventral combs.

Fig. 5.

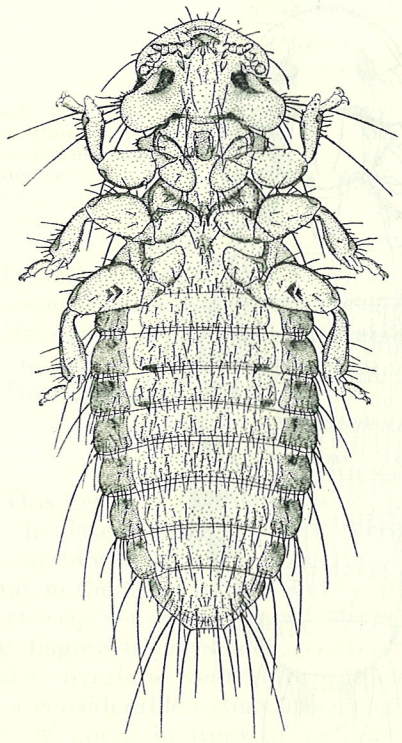


Fig. 6.

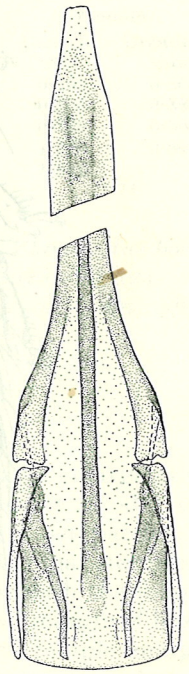


Fig. 5.—*Odoriphila phœniculi*, sp. n. ♂.
Fig. 6.—Ditto. ♂ genitalia.

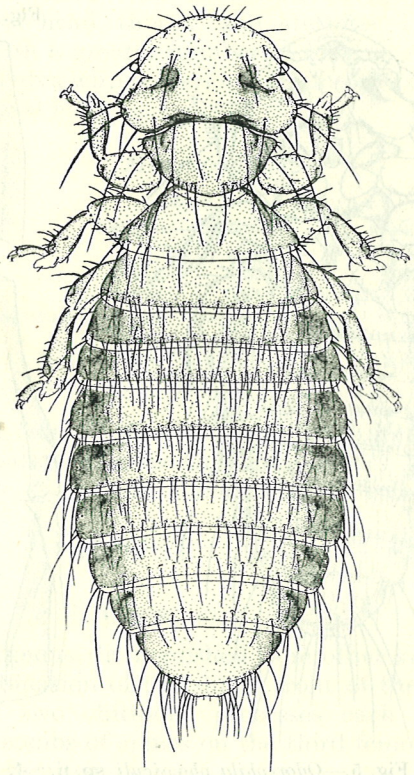
Abdomen with tergal plates entire and more heavily chitinized along the antero-lateral margins ; each tergite with a single row of marginal setæ, and anterior to these there may be a few lateral setæ. Paratergal plates with internal thickening. Sternites III and IV with a single lateral marginal comb each side. Male genitalia with

elongated rod-like basal plate; free paramera; mesosomal plate with straight posterior margin and rod-like structure present associated with sac.

Genotype: *Odoriphila phœniculi*, sp. n.

Specimens of this genus have been examined from two species of *Phœniculus* (Wood Hoopoe).

Fig. 7.



Odoriphila phœniculi, sp. n. ♀.

Odoriphila phœniculi, sp. n.

Description of Male.—With characters as given for genus and with ventral view as shown in fig. 5. Dorsal chætotaxy as in female. Male genitalia with elongated rod-like basal plate reaching to the first abdominal segment (fig. 6).

Description of Female.—Similar in general appearance to male but somewhat larger. Characters as given for genus, with dorsal view as shown in fig. 7. Ventral chætotaxy of head, thorax, and of sternites I–VII as in male; sternite VIII has a greater number of setæ than in male. Vulva with posterior margin convex and bearing 12–16 setæ each side of mid-line.

Measurements.

	Male.		Female.	
	Length. mm.	Breadth. mm.	Length. mm.	Breadth. mm.
Head	0·292	0·490	0·292	0·500
Pronotum	0·184	0·384	0·200	0·384
Meso and metanotum	0·200	0·490	0·220	0·550
Abdomen	1·060	0·645	1·220	0·800
Total	1·740		1·840	
C.I.	1·67		1·71	

Described from 38 ♂♂ and 37 ♀♀ from *Phœniculus bollei jacksoni* (Sharpe) (Wood Hoopoe) collected in Kenya.

Holotype.—♂ in the Meinertzhagen collection, slide no. 6251.

Paratypes.—37 ♂♂ and 37 ♀♀.

6. Gruimengpon, gen. n.

This genus is distinguished by the slight emargination in the lateral margin of the head, absence of slit and ocular blotch, and the presence of closely set patches of setæ on the third femora and fourth abdominal sternite.

Description of the Genus.—Menoponidæ with the following diagnostic characters:—Lateral dorsal margin of head, which overlaps ventral continuation of temple margin to a considerable extent, has a slight emargination but no slit or notch in front of well-developed eye. Antennal fossa backed up by chitinous area; ocular blotch absent, but there is a small dark area near the anterior end of the ventral continuation of temple margins and a pear-shaped clypeal blotch present each side of head. Antennæ five-segmented, with the third segment small. Mandibles bidentate; pharyngeal sclerite rudimentary. Gular plate not developed. Prothorax winged; prosternal plate rudimentary. Mesonotum small and not separated from metanotum by a definite suture. Third femora each with

a closely set patch of setæ ventrally. Abdomen with tergal plates entire and with a single row of marginal setæ ; paratergal plates more heavily chitinized than tergal plates and without internal thickening. Sternite IV with lateral patch of thickly set setæ each side. Last sternal plate of female abdomen apparently characteristic in having a deep median indentation. Male genitalia complicated, without elongated basal plate (fig. 9).

Fig. 8.

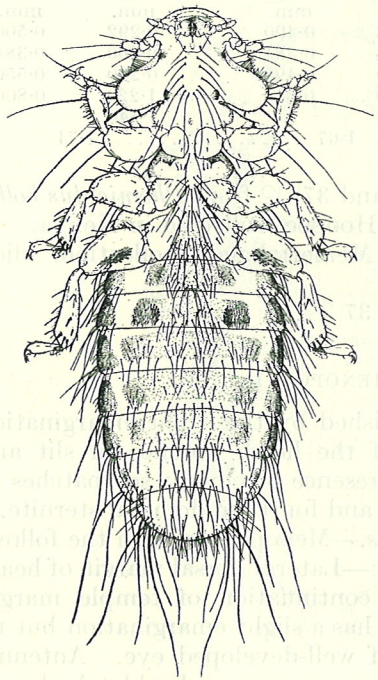


Fig. 9.

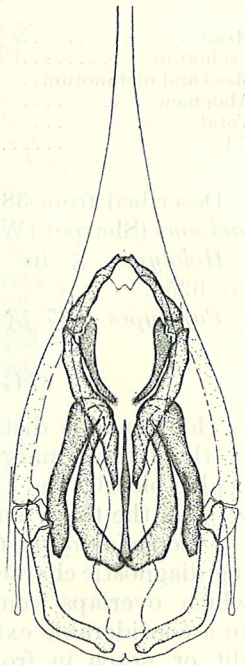
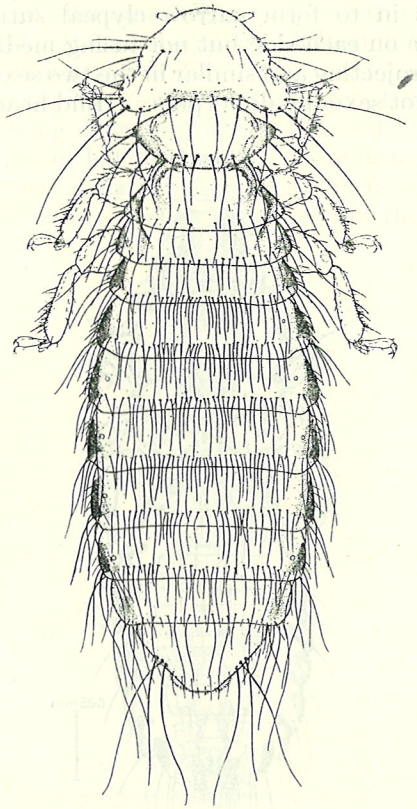


Fig. 8.—*Gruimenopon longum*. ♂.
Fig. 9.—Ditto. ♂ Genitalia.

Genotype : *Menopon longum* Giebel, 1874. Host : *Megalornis grus*.

This genus has been examined from the following genera of the Gruidæ : *Anthropoides*, *Megalornis*, and *Balearica*. From the description, the species here figured (figs. 8–10), from *Megalornis grus*, appears to be *Menopon longum* Giebel. As the type, if still in existence, is in the Halle

Fig. 10.



Gruimenopon longum. ♀.

Museum, it is at the moment impossible to obtain any information about it.

Ischnocera Kellogg.

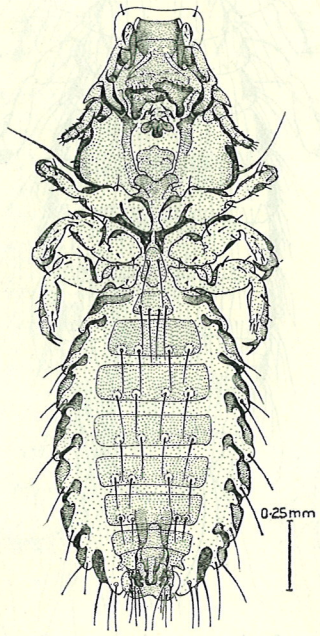
7. Craspedonirmus *, gen. n. (Fig. 11.)

This genus is distinguished by the characters of the clypeal region and abdomen.

* See p. 342.

Description of the Genus.—Stout, rather elongated Philopteridæ with the following diagnostic characters :—Head large, with hyaline margin arising at level of clypeal suture ; clypeal signature large and flask-shaped ; antennal bands pass in to form narrow clypeal suture posterior to signature on each side but not fusing medianly. Clavi large and projecting and similar in the two sexes ; antennæ short and not sexually dimorphic. Hind head with dorsal

Fig. 11.



Craspedonirmus colymbinus. ♂.

transverse suture ; occiput with broad bands. Pharyngeal glands and sclerite small. Prothorax short ; pterothorax with flattened, not divergent, lateral margins. Abdomen elongate and rather stout ; segments I–VIII with continuous tergal plates ; paratergal plates with elongated curved re-entrant heads of characteristic shape ; sternal thickening in the form of median plates. In the female abdomen a curved ventral plate runs across each side of segments VIII and IX. Genitalia with distal end of paramera thickened and forked.

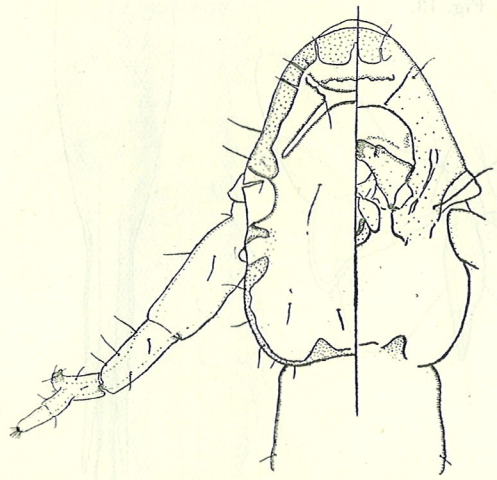
Genotype : *Philopterus colymbinus* (Denny) 1842. Type-host : *Colymbus stellatus* (Red-throated Diver).

8. Splendoroffula, gen. n.

This genus is distinguished by the characters of the clypeal region of the head and by the terminal segments of the male abdomen.

Description of the Genus.—Elongated Esthiopterinæ with the following diagnostic characters :—Clypeal region with narrow, somewhat hyaline flap along anterior margin of head ; clypeal signature appears to be fused each side to the clypeal bands, and in some species there appears

Fig. 12.



Splendoroffiula corythæolæ, sp. n. ♂.

to be no definite signature but a continuous clypeal band round the anterior margin ; chitin of anterior part of pre-antennal region modified into a number of raised projections as in *Oxylipeurus* ; suture of pre-antennal region as shown in fig. 12 ; occipital bands may be present or absent ; post-antennal region of female with small dorsal suture each side. Clavi present, small in the female ; antennæ exhibiting sexual dimorphism. Pharyngeal sclerite and glands present. Prothorax small and rectangular ; pterothorax with straight or slightly divergent sides. Abdomen elongated, with segment I small ;

paratergites with or without re-entrant heads. Terminal segment in both sexes bilobed posteriorly ; in the male the last segment is somewhat modified ventrally and bears a clump of lateral setæ and a median backwardly directed process which is fused to or arises close to the fused sternal plates of segments VII and VIII as in *Oxylipeurus*. Genitalia diverse in form.

Fig. 14.

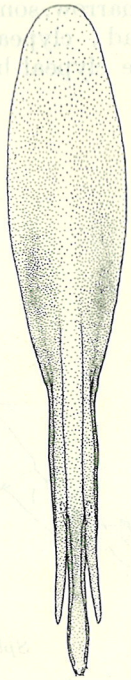


Fig. 13.

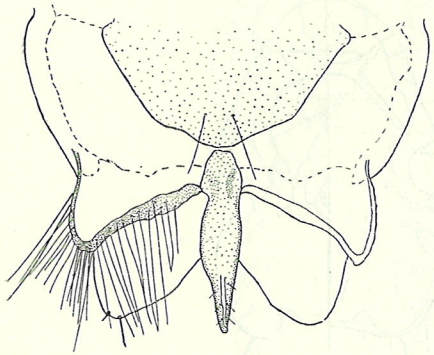


Fig. 13.—*Splendoroffiula corythæolæ*, sp. n. ♂ abdomen.
Fig. 14.—Ditto. ♂ genitalia.

Genotype : *Splendoroffula corythæolæ*, sp. n.

This genus is apparently confined to the Musophagidæ and contains a number of rather diverse species. Some of these species have certain of the characters of the head, the terminal segments of the male and female abdomen and the male genitalia indistinguishable from *Oxylipeurus*, but all species are distinguished from this latter genus

by the presence of the hyaline flap on the clypeus. Species of *Splendoroffula* have been examined from the following genera of the Musophagidæ : *Corythæola*, *Corythaixoides*, *Gallirex*, *Gymnoschizorhis*, *Musoghaga*, and *Turacus*. *Esthiopterum distinctum* Harrison, 1916 (*dispar* Piaget, 1885), is almost certainly this genus, but as it has been impossible to examine the type it has been thought more

Fig. 15.

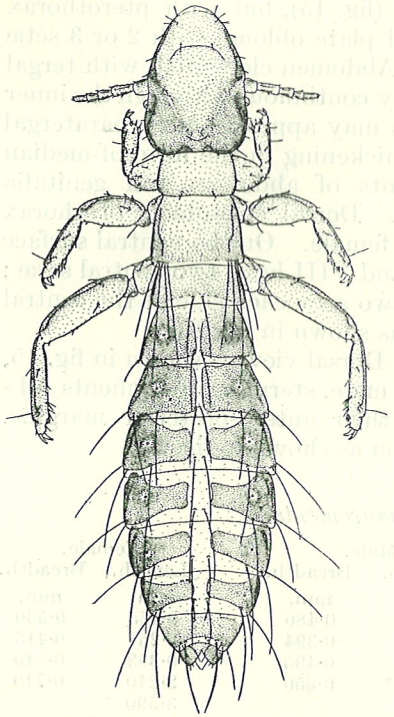


Fig. 16.

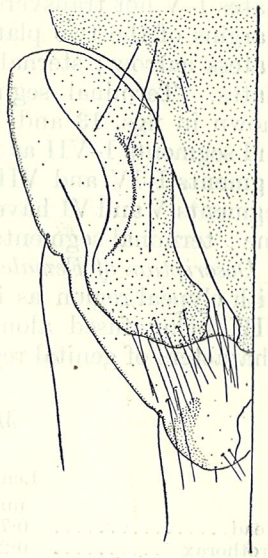


Fig. 15.—*Splendoroffiula corythæolæ*, sp.n. ♀.
Fig. 16.—Ditto. ♀ Abdomen.

satisfactory to make a new species the genotype in the place of a doubtfully identified species. *Philopterus acuminatus* (Piaget), 1888 (type not examined), is not this genus and is probably a straggler. *Lipeurus opimus* Piaget, 1885 (type not examined), is not of this genus

but is probably from the host given by Piaget, as another similar species has been examined from *Crinifer zonurus*.

Splendoroffula corythæolæ, sp. n.

An elongated, well-chitinized species distinguished from other species of this genus by the characters of the clypeal region, the terminal segments of the abdomen in both sexes, and the male genitalia.

Description of Male.—Head as shown in fig. 12. Thorax similar to that of female (fig. 15), but with pterothorax somewhat longer ; sternal plate oblong, with 2 or 3 setæ each side of distal end. Abdomen elongated, with tergal plates I–V not transversely continuous, although the inner margins of the two plates may approximate ; paratergal platess narrow ; sternal thickening in the form of median plates. Terminal segments of abdomen and genitalia shown in figs. 13 and 14. Dorsal chætotaxy of thorax and segments I–VII as in female. On the ventral surface segments I–IV and VII and VIII have two central setæ ; segments V and VI have two setæ each side of the central line ; terminal segments as shown in fig. 13.

Description of Female.—Dorsal view as shown in fig. 15, with clypeal region as in male, sternites of segments VI–VIII being fused along their antero-posterior margins. Characters of genital region as shown in fig. 16.

Measurements.

	Male.		Female.	
	Length.	Breadth.	Length.	Breadth.
	mm.	mm.	mm.	mm.
Head	0·740	0·480	0·755	0·530
Prothorax	0·270	0·394	0·251	0·415
Pterothorax	0·400	0·495	0·383	0·540
Abdomen	2·230*	0·650	2·210	0·740
Total	3·640		3·590	
C.I.	0·65		0·70	

Described from 51 ♂♂ and 35 ♀♀ from skins and fresh material of *Corythæola cristata* (Vieill.) collected in Uganda, Nigeria, and Liberia.

Holotype.—♂ in the Meinertzhagen collection, slide no. 13407, from Uganda.

Paratypes : 50 ♂♂ and 35 ♀♀.

* Excluding ventral process.