New Genera and Species of Mallophaga.

By G. A. H. BEDFORD, Research Officer, Onderstepoort.

Super-family Ichneumonea Kellogg.
Family Trichopteridae Burmeister.
Genus Tricholipurus Bedford.


Tricholipurus antiquus nov. sp.
(Figs. 1-3.)

Male.—Head (fig. 1) light brown, median area pale, with reddish-brown bands and mandibles. Temples with a narrow marginal band. Plate on gular region triangular. Antennae with the first segment large, very slightly longer than the second and third together; second and third segments subequal.

Thorax light brown with slightly darker lateral bands.

Prostomum with a transverse row of four minute postulated setae in the middle; five or six on each side on the posterior margin and two on each lateral margin. Metastomum with a row of about 28 minute postulated setae on the posterior margin. Between the fore and mid coxae there is a narrow chitinous band which widens out between the latter. In a line with the bases of the hind coxae there are two small postulated setae in the middle.

Legs with the mid tibiae very slightly narrower and longer than either the fore or hind tibiae.

Abdomen elongated and narrow with crenulated lateral margins; pale in colour, with a transverse band and a row of minute postulated setae on the dorsal and ventral surface of each segment. Tergite i with a narrow marginal band; tergites ii to vii with a short comma-shaped chitinous bar in front of each spiracle; close to these and nearer the middle there is a small oval-shaped chitinous spot. Spiracles median-sized. Tergite viii with a transverse row of setae in the middle, and a row on each side below. On sternites vi to vii there is a longitudinal band on each side of the genitalia. Male genitalia as in figure 2. The pre-anal spur not shown in the figure is bent with minute teeth.

Female.—Head as in the male, except that it is broader at the temples. First joint of antennae slightly broader than the last two, as long as the second; third joint the longest.
NEW GENERA AND SPECIES OF MALLOPHAGA.

Thorns and legs as in the male.

Abdomen without D-shaped chitinous spots on the tergites. Tergite viii with two short postulated setae in the middle, and two more close together on each side between them and the lateral margin. Apical segment bilobed, with two setae on the dorsum of each lobe and two on the venter. Venter of apical sternites as shown in figure 3.

Measurements.

<table>
<thead>
<tr>
<th></th>
<th>Female</th>
<th></th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Length</td>
<td>Width</td>
<td>Length</td>
</tr>
<tr>
<td>Head</td>
<td>0.54</td>
<td>0.44</td>
<td>0.53</td>
</tr>
<tr>
<td>Prothorax</td>
<td>0.28</td>
<td>0.22</td>
<td>0.30</td>
</tr>
<tr>
<td>Metathorax</td>
<td>0.16</td>
<td>0.29</td>
<td>0.16</td>
</tr>
<tr>
<td>Abdomen</td>
<td>1.29</td>
<td>0.56</td>
<td>1.18</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>2.29 mm</td>
<td></td>
<td>2.56 mm</td>
</tr>
</tbody>
</table>

Holotype.—A male.

Described from males and females taken by the writer off Antidorcas marsupialis Zimu. (springbok) at Underspool on the 28th July, 1939. This species is closely related to T. arcuatus Hell. and T. levitans Hell. From both these species the females can be distinguished by the apical sternites and the males by the genitalia. The female of T. levitans also has the forehead more deeply emarginated in front.

Family PHILOPTERAES Bremieter.

Genus PSILOPTERUS nov.

This genus is established for the reception of a new species found on Charadrius Larus Burch. (giant bustard) at Kwandamubhi, Zululand, on the 20th March, 1921.

Head almost as long as wide; forehead rounded, wider behind than in front, with a marginal band. Trilobes very small. Antennae 5-jointed, similar in both sexes, except that the first segment of the male is slightly larger. Eyes present. Mandibles situated in a line with the antennae. Oesophageal scute and glands present. Temples rounded.

Prothorax and pleuronae wider than long, with the lateral margins rounded.

Abdomen oval with tergal plates, these being interrupted in the middle by a narrow clear space on some of the anterior segments; these plates are duplicated on some of the median segments in a similar manner to those of Neophractis, and in the male there is a median plate beneath the transverse plate on the median segments. Spiracles present on segments ii to vii. Male genitalia with the basal plate fairly broad and of medium length.

Oliopterus dimorphus nov. sp.

(Figs. 4, 5, 7.)

**Female.**—Head pale brown, except the temples, which are very slightly darker. On the venter there are three setae on each side a short distance behind the anterior margin, another one further back close to the first lateral setae and one close to the antennal suture. Gular plate indistinct.
NEW GÉNÉRA AND SPECIES OF ZALOTHORAX.

Pterothorax with two short setae, one above the other, on each side of the meson in front and a long one on each side behind.

Pterothorax with six long setae on each side on the posterior margin, the outer one being the shortest. On the ventral side there are two setae between the mid and outer setae and one more in a line beneath them.

Abdomen with plates and setae on the dorsum as shown in figure 4. Stermites 1 to 8 each with a narrow median transverse band and a single row of setae. Stermites 3 to 8 each with a large brown plate, which is widest on the posterior stermites; on the plate there are three papillose setae on each side of the meson.

Male—Head and prothorax as in the female. Pterothorax with sixteen long setae on each side on the posterior margin.

Abdomen with the tergites as shown in figure 5. Stermites 1 to 8 each with a narrow median transverse band and a single row of setae. Stermites 3 to 8 each with a large transverse plate, on the plate there is a single row of about seven papillose setae situated a short distance from the posterior margin. Joining on the plate there is a small paler transverse plate which extends backwards to the base of the apical segments on the plate there are two papillose setae, one above the other, on each side. On the eighth stermite there are two setae on the posterior margin—one on each side of the plate, and on the ninth stermite there are two long setae in front, four short ones in a row in the middle, and four more on each side on the posterior margin. Male genitalia as shown in figure 7b.

Measurements.

<table>
<thead>
<tr>
<th></th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Length</td>
<td>Width</td>
</tr>
<tr>
<td>Head</td>
<td>0.69</td>
<td>0.48</td>
</tr>
<tr>
<td>Pterothorax</td>
<td>0.15</td>
<td>0.10</td>
</tr>
<tr>
<td>Pterothorax</td>
<td>0.19</td>
<td>0.14</td>
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<tr>
<td>Abdomen</td>
<td>1.08</td>
<td>0.58</td>
</tr>
<tr>
<td>Total</td>
<td>2.44 mm</td>
<td>2.09 mm</td>
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</table>

Holotype.—A female.

Degnerella unicolor (Nitzsch), described from specimens taken off Otis tarda, does not appear to be in any way related to the above species.

Genus UTILIPHLOIDES nov.

Head slightly longer than wide; facehead semi-circular, with a marginal band. Trabealine very small. Antennal 3-jointed, the third joint of the male with an appendage. Eyes present. Mandibles situated in a line with the antennae. (Spherical) sclerites and glands present. Temples rounded. On each side of the head there is a pale line where the occipital bands are usually situated.

Pterothorax wider than long with the lateral margins rounded. Pterothorax with the lateral margins divergent; posterior margin straight, or almost so, pointed in the middle.
Abdomen, elongated, widest at either the fifth or sixth segment, with tergal plates; these being divided in the middle so that, but are usually complete on the posterior segments, and may be entirely so, except on the first two in the male. Spiracles present on segments II to VII. Male genitalia with the basal plate very short and very broad.

Species found on Otidae.

Genotype: *Ethiopteron tarmac* (Nitzsch.).

*Ethiopteron antigua* (Nitzsch.) and the new species described below must also be included in this genus.

This genus is closely allied to the preceding genus, from which it can be distinguished by the presence of an appendage on the third antennal segment in the male, the shape of the pterothorax and abdomen, the plates on the tergites, and the male genitalia. *Ottipereus* is more closely allied to Lipurus than to *Ethiopteron*, and both *O. tamarix* and *O. antiquus* should not have been transferred to the latter genus.

*Ottipereus barri* n. sp. (Figs. 6, 7a.)

**FEMALE.** Head brown; the antennal band surrounding the forehead; the temples and a small area on each side close to the bases of the antennae slightly darker than the rest of the head. On the vertex there are three setae on each side a short distance behind the anterior margin, another one further back close to the first lateral seta and one close to the antennal sinus. Plate on gular region absent. Pronotum with a short seta on each side of the meson in front, another one on each lateral margin, and a long one on each side behind. Pterothorax with five long setae on each side on the posterior margin.

Abdomen with plates and setae on the dorsum as shown in figure 6. Stermites I and VIII each with a median transverse band and a single row of setae. Stermites VI and VII with a large brown plate, which is widest on the latter sternite and projects backwards onto the eighth sternite; the posterior margin of the plate is concave and the lateral posterior angles pointed; on the plate there are three postulated setae on each side of the meson.

**MALE.** Slightly larger and paler than the female. Head and pterothorax as in the female. Pterothorax with seven long setae on each side on the posterior margin.

Abdomen with the first two tergites similar to those of the female; on the remainder of the tergites the transverse plates are not divided in the middle; on the eighth tergite there are one long and two short setae on each side on the posterior margin instead of two long ones as in the female. Stermites I to VIII each with a median transverse band and a single row of setae. On the remaining sternites, except the last, there is a large, indistinct longitudinal plate. On the ninth sternite there are two short submedian setae in the middle and several short ones on the posterior margin. Male genitalia as in figure 7a.
NEW GENERA AND SPECIES OF MALLOTHAGA.

Measurements.

<table>
<thead>
<tr>
<th>Female</th>
<th></th>
<th></th>
<th>Male</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Length</td>
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<td>Length</td>
<td>Width</td>
<td></td>
</tr>
<tr>
<td>Head</td>
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<td>0.69</td>
<td>0.64</td>
<td>0.42</td>
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<tr>
<td>Pronotum</td>
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<tr>
<td>Pleuritarsa</td>
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<tr>
<td>Abdomen</td>
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<td>1.88</td>
<td>0.71</td>
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<tr>
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<td>2.95 mm</td>
<td></td>
<td>3.81 mm</td>
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</table>

Holotype.—The female.

This species is described from a female and male taken off Choristes kori Puch. (granis burk) in the Rustenburg District, Transvaal, on the 15th August, 1917.

This species is closely allied to both O. tenuis and O. antarcticus. From both these it can be distinguished, inter alia, by the transverse plates on the third to sixth tergites being complete in the male; also the females of both these species are larger than the males. The abdomen of the female from which the drawing was made was not mounted very well; it is most probably wider in the middle than shown in the figure, and resembles that of tenuis in shape.

Gynae FALCOPEDUS nov.

Species elongated, of medium size (length 3 to 5 mm.). Head longer than wide. Forehead either broadly or narrowly rounded in front, with four to six more or less circular incisions on the lateral margins; eyes present. Hindhead only slightly wider than base of forehead. Mandibles situated between the antennae. Pfruggeal sclerite and gnathal well developed. On the vertex of the hind head there is a longitudinal band on each side extending to the base of the mandible. Tergite plate well developed. Antennae 5-jointed, normal in the female; in the male the first joint is enlarged with an appendage on the posterior margin, and the third joint is produced at its apex into a long, curved hook.

Pronotum with sides sub-parallel. Metatarsus slightly wider than prothorax. Sternal plate either absent or inconspicuous.

Legs with the mid and hind femora and tibiae elongated.

Abdomen.—Tergites i to vi with well-developed platernal plates; these being usually connected together by less developed median bands; tergite vii usually with a complete transverse plate. Majority of sternites with a small, elongate, sub-lateral plate on each side, and usually with a short median band. Sternites viii and ix of male with an elongated lateral plate on each side. Volselles present on segments ii to vii. Male genitalia of a distant type, as shown in figures 11 to 15. Species parasitic upon Palaearctica.

Genotype.—Falcopedus secretarius (Giebel).

The following is a list of species, together with their hosts, which must also be included in this genus:—

<table>
<thead>
<tr>
<th>Species</th>
<th>Host</th>
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<tbody>
<tr>
<td>E. aetheronewum (Nitsch)</td>
<td>Saccanusa gracilis</td>
</tr>
<tr>
<td>F. aetheronewum sp.</td>
<td>Papillogyna aetheronewi</td>
</tr>
<tr>
<td>E. aetheronewum sp.</td>
<td>Cypripedium papyus</td>
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</tbody>
</table>

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Falcopedus secretarius (Giebel).

Lipopera secretaria (Giebel). Insect. p. 214 (1874).

Lepus secretarius (Giebel) Piaget. Les Fidélitées, p. 292, pl. 24, f. 2 (1880).


(Figs. 8, 11, and 14.)

This species, which occurs on Saccanusa gracilis (secretary bird), can be distinguished by the shape of the head (fig. 8) and male genitalia (fig. 11).

Measurements.

<table>
<thead>
<tr>
<th>Female</th>
<th></th>
<th></th>
<th>Male</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Length</td>
<td>Width</td>
<td>Length</td>
<td>Width</td>
<td></td>
</tr>
<tr>
<td>Head</td>
<td>0.50</td>
<td>0.50</td>
<td>0.41</td>
<td>0.25</td>
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</tr>
<tr>
<td>Pronotum</td>
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<td>0.36</td>
<td>0.30</td>
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<tr>
<td>Metatarsus</td>
<td>0.36</td>
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<td>0.25</td>
<td>0.25</td>
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<tr>
<td>Abdomen</td>
<td>2.64</td>
<td>1.20</td>
<td>2.64</td>
<td>1.20</td>
<td></td>
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<tr>
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<td></td>
<td>4.56 mm</td>
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</tbody>
</table>

Falcopedus aetheronewum sp. (Figs. 9, 12, and 15.)

Max.—Head as shown in fig. 9.

Promethium brown at the sides, pale in the middle; posterior margin slightly rounded, with a seta on each side near the lateral, posterior angle. Metatarsus with a brown plate on each side divided in
the middle by a narrow pale line; anterior third narrower than posterior two-thirds; on the posterior margin there is a short setae near the latero-posterior angle, one longer close to it, and three long setae in a posteri slightly nearer the meso.

_Abdomen._—Teretes i to vii each with a dark brown chitinous plate on each side, these being joined by a median plate, and with two rows of postulated setae, the anterior row not extending to the lateral margins; on tergite i there is an additional row of four setae in front. Tergites vi and vii with lateral plates and two rows of postulated setae. Tergite viii with a complete transverse plate and two rows of postulated setae, the first row consisting of four, the second of eight setae. Apical tergite bilobed, with a small elongated brown spot on each lobe.

Stermites i to vi each with a median transverse row of setae, and a small elongated brown plate on each side. Stermite vii with a patch of long setae on the inner margin of the lateral plate at its base and several in the middle of the segment. Apical sternite with several short setae, two longer ones on the posterior margin, and two more in front of them.

_Female._—Head as in the male. Antennae with the basal and second segments sub-equal in length; third segment the longest; two apical segments sub-equal.

_Torso._—As in the male.

_Abdomen_ with tergites and sternites i to vii as in the male, except that the lateral plates on tergites vi and vii are connected by median plates, and on tergite vi there is a small plate on the posterior margin of each of the lateral plates. Tergite viii with the transverse plate almost bisected in the middle by a narrow pale area. Apical tergite bilobed with a V-shaped band on each lobe.

_Measurements._

<table>
<thead>
<tr>
<th></th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Length</strong></td>
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<td></td>
</tr>
<tr>
<td>Head</td>
<td>1.05</td>
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</tr>
<tr>
<td>Prosternum</td>
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<tr>
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<td>0.42</td>
</tr>
<tr>
<td>Abdomen</td>
<td>0.83</td>
<td>0.90</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>4.36</td>
<td>4.39</td>
</tr>
</tbody>
</table>

_Holotype._—A male of _T. congregatus_. Allotype from same host.

_Off Gyps coprotheres_ Forest. (Cape vulture) in same district on the 4th October, 1917. The specimens taken off the latter host were probably stragglers. We have seen a female from a _G. coprotheres_, which is very similar to _F. africana._

This species can be distinguished from both _F. secretarius_ and _F. africana_ by the following characters:

1. The shape of the head (fig. 10).
2. The lateral plates on the apical sternite of the male (fig. 13).
3. The absence in the male of a patch of long setae on the eighth sternite at the base of each lateral plate. (These are not shown in figs. 11 and 12).
4. The male genitalia (fig. 13).
5. The plates on the seventh and eighth sternite of the females (fig. 16).

It closely resembles _F. quadrinotata_, but judging by Piegelt's figures of _F. elongatus_, which is a synonym of this species, appears to be distinct.

_Holotype._—A male of _T. congregatus_. Allotype from same host.

_Off Pseudogyps africana_ (off South African vulture) in the Rustenburg District, Transvaal, on the 6th December, 1916 (Coll. W. Powell). This species can be distinguished by the shape of the head and male genitalia.

_Falcoipennis jurensis_ nov. sp.

(Figs. 10, 13, and 16.)

Two males and two females taken off _Tarchisipus congregatus_ (Rut., skelarian eagle) in the Rustenburg District, Transvaal, on the 7th August, 1917 (Coll. W. Powell): also a male and female taken.
NEW GENERA AND SPECIES OF MALLOPHAGA.

Fig. 8.—Head of *Falitelipus secretarius* (Giebel), male.

Fig. 9.—Head of *Falitelipus afric anus* n. sp., male.

Fig. 10.—Head of *Falitelipus texanus* n. sp., male.

G. A. H. BEDDOE.

Fig. 11.—*Falitelipus secretarius* (Giebel), male genitalia.

Fig. 12.—*Falitelipus afric anus* n. sp., male genitalia.

G. A. H. B., del.
Fig. 10.—Fulcidiporus fumatus n. sp., male genitalia.

Fig. 11.—Fulcidiporus santosensis (Giehl), plates on apical sternites of female.

Fig. 12.—Fulcidiporus africanaus n. sp., plates on apical sternites of female.

Fig. 13.—Fulcidiporus ferratus n. sp., plates on apical sternite of female. G.A.H., 94.