New Genera and Species of Mallophaga.

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

Super-family Ichneumera Keller.
Family Trichopteridae Burmester.
Genus Trichopterus Bedf.ord.


Trichopterus antarcticus 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 segment subequal.

Thorax light brown with slightly darker lateral bands.

Prosternum 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. Metasternum with a row of about 38 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 spiral; close to these and nearer the middle there is a small spiral-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 vii to vi there is a longitudinal band on each side of the genitalia. Male genitalia as in figure 2. The pre-spiral stylet shown in the figures 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.

Fig. 1.—Tricholipoptena asthenes nov. sp., head of male.
C. G. Walker, del.

Fig. 2.—Tricholipoptena asthenes nov. sp., male genitalia.
C. G. Walker, del.

Fig. 3.—Tricholipoptena asthenes nov. sp., apical sternites of female.
G.A.H. B., del.

Thorns and legs as in the male.
Abdomen without D-shaped chitinous spots on the tergoites.
Tegrite 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>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Head</td>
<td>0.14</td>
<td>0.15</td>
</tr>
<tr>
<td>Prothorax</td>
<td>0.22</td>
<td>0.25</td>
</tr>
<tr>
<td>Metathorax</td>
<td>0.16</td>
<td>0.16</td>
</tr>
<tr>
<td>Abdomen</td>
<td>1.28</td>
<td>1.26</td>
</tr>
<tr>
<td>Total</td>
<td>2.02</td>
<td>2.06</td>
</tr>
</tbody>
</table>

Holotype.—A male.

Described from males and females taken by the writer off Antim
bennettii Zimmer (springbok) at Understepoort on the 26th
July, 1939. This species is closely related to T. orthophaeus Bedi.
and T. benraithi Bedi. From both these species the females can be distin-
guished by the apical sternites and the males by the genitalia. The
female of T. benraithi also has the forehead more deeply emarginated
in front.

FAMILY PHILOPTHERAE Burmeister.
GENUS OXPHTHERUS nov.

This genus is established for the reception of a new species found
on Chalcoptes kiri Burch. (giant barkl) at Kweekounaqua, Zululand,
20th March, 1921.

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

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

Abdomen oval with tergal plate, these being interrupted in the
middle by a narrow clear space on some of the anterior segments;
these plates are duplicature on some of the median segments in a
similar manner to those of Neophrithoptera, and in the male there is
a median plate beneath the transverse plate on the median segments.
Spiracles present on segments 2 to 7. Male genitalia with the basal
plate fairly broad and of medium length.

OXPHTHERUS DIMORPHUS nov. sp.
(Figs. 4, 5, 7.)

Female.—Head pale brown, except for 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 sinus.
Gular plate indistinct.
New genera and species of Zallothaea.

Prometheus with two short setae, one above the other, on each side of the meson in front and one 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 venter there are two setae between the and comoe and four more in a line beneath them.

Abdomen with plates and setae on the dorsum as shown in figure 4. Sternales I to v each with a narrow median transverse band and a single row of setae. Sternales vii and viii with a large brown plate, which is widest on the latter sternite; on the plate there are three postulated 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. Sternales I to iv each with a narrow median transverse band and a single row of setae. Sternales v and vi with a large transverse plate. On the plate there is a single row of about seven postulated setae situated a short distance from the posterior margin. Joining this plate there is a slightly paler triangular plate which extends backwards to the base of the apical segment; on this plate there are two postulated setae, one above the other, on each side. On the eighth sternite there are two setae on the posterior margin—one on each side of the plate, and on the ninth sternite 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>0.00</td>
<td>0.71</td>
</tr>
<tr>
<td>Prothorax</td>
<td>0.13</td>
<td>0.69</td>
</tr>
<tr>
<td>Pterothorax</td>
<td>0.15</td>
<td>0.30</td>
</tr>
<tr>
<td>Abdomen</td>
<td>1.36</td>
<td>0.50</td>
</tr>
<tr>
<td>Total</td>
<td>2.37</td>
<td>2.07</td>
</tr>
</tbody>
</table>

**Holotype.**—A female.

Degenerella unicolor (Nitzsch), described from specimens taken off Otho tardea, does not appear to be in any way related to the above species.

Genus **Utilipa** New.

Head slightly longer than wide; face area semi-circular, with a marginal band. Trabeulae very small. Antennae 5-jointed, the third joint of the male with an appendage. Eyes present. Mandibles situated in a line with the antennae. (beelled) plates and glands present. Temples rounded. On each side of the hind head there is a pale line where the occipital bands are usually situated.

Prothorax wider than long with the lateral margins rounded. Pterothorax with the lateral margins divergent; posterior margin straight, or almost so, pointed in the middle.
NEW GENERA AND SPECIES OF MALLOPHAGA.

Abdomen, elongated, widest at either the fifth or sixth segment, with tergal plates, these being divided in the middle so a rule, 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.—Ethiopterus turanicus (Nitzsch.).

Ethiopterus antilopaeus (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 prothorax and abdomen, the plates on the tergites, and the male genitalia. Octopusurus is more closely allied to Lipurusus than to Ethiopterus, and both O. turanicus and O. antilopaeus should not have been transferred to the latter genus.

Octopusurus harteni nov. 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 dorso as shown in figure 6. Sternites I and each with a median transverse band and a single row of setae. Sternites 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 protuberant setae on each side of the meson.

MALE.—Slightly larger and paler than the female. Head and prothorax 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. Sternites I to V 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 MALLOTUROIDS.

Measurements.

<table>
<thead>
<tr>
<th></th>
<th>Female</th>
<th></th>
<th>Male</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Length</td>
<td>Width</td>
<td>Length</td>
<td>Width</td>
</tr>
<tr>
<td>Head</td>
<td>0.64</td>
<td>0.25</td>
<td>0.65</td>
<td>0.27</td>
</tr>
<tr>
<td>Proctoptera</td>
<td>0.33</td>
<td>0.33</td>
<td>0.31</td>
<td>0.35</td>
</tr>
<tr>
<td>Abdomen</td>
<td>0.45</td>
<td>0.55</td>
<td>0.58</td>
<td>0.71</td>
</tr>
<tr>
<td>Total</td>
<td>2.86 mm</td>
<td></td>
<td>2.83 mm</td>
<td></td>
</tr>
</tbody>
</table>

Holotype.—The female.

This species is described from a female and male taken off *Charcotia harmonick* Durth (gray loche) in the Honkam District, Transvaal, on the 15th August, 1917.

This species is closely allied to both *O. parvus* and *O. antilopes*. 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 *tenuissimus* in shape.

Genus FALLOPIUS 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 margin; eyes well develops. Eyes present. Hindhead only slightly wider than base of forehead. Mandibles situated between the antennae. Prothorax small and narrow, well developed. On the vertex of the hind head there is a longitudinal band on each side extending to the base of the mandible. Antennae 5-jointed, normal in the male; 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.

Proctoptera with sides sub-parallel. Metanotum fused with metathorax, slightly wider than proctoptera. Sternal plate either absent or inconspicuous.

Legs with the mid and hind femora and tibiae elongated.

Abdomen.—Tergites i to vii with well-developed plate-like plates; tergite viii 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 ix of male with an elongated lateral plate on each side. Spermatheca present on segments ii to vii. Male genitalia of a distinct type, as shown in figures 11 to 15. Species parasitic upon *Fallopia* species.

Genotype.—*Fallopia secretorum* (Giebel).

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

- E. aeroteretorum (Nitsch) … Host: *Sarcophaga wasp.*
- F. aeroteretorum nov. sp. … Host: *Sarcophaga rhomboides* fallopiorum.
- E. aeroteretorum (Nitsch) … Host: *Sarcophaga wasp.*
- F. aeroteretorum nov. sp. … Host: *Sarcophaga wasp.*
- E. aeroteretorum (Nitsch) … Host: *Sarcophaga wasp.*
- F. aeroteretorum nov. sp. … Host: *Sarcophaga wasp.*
- E. aeroteretorum (Nitsch) … Host: *Sarcophaga wasp.*
- F. aeroteretorum nov. sp. … Host: *Sarcophaga wasp.*
- E. aeroteretorum (Nitsch) … Host: *Sarcophaga wasp.*
- F. aeroteretorum nov. sp. … Host: *Sarcophaga wasp.*
- E. aeroteretorum (Nitsch) … Host: *Sarcophaga wasp.*
- F. aeroteretorum nov. sp. … Host: *Sarcophaga wasp.*

G. A. H. BEDFORD.

FALLOPIUS secretorum (Giebel).

**Measurements.**

<table>
<thead>
<tr>
<th></th>
<th>Female</th>
<th></th>
<th>Male</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Length</td>
<td>Width</td>
<td>Length</td>
<td>Width</td>
</tr>
<tr>
<td>Head</td>
<td>0.64</td>
<td>0.25</td>
<td>0.65</td>
<td>0.27</td>
</tr>
<tr>
<td>Proctoptera</td>
<td>0.33</td>
<td>0.33</td>
<td>0.31</td>
<td>0.35</td>
</tr>
<tr>
<td>Abdomen</td>
<td>0.45</td>
<td>0.55</td>
<td>0.58</td>
<td>0.71</td>
</tr>
<tr>
<td>Total</td>
<td>2.86 mm</td>
<td></td>
<td>2.83 mm</td>
<td></td>
</tr>
</tbody>
</table>

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

**Measurements.**

<table>
<thead>
<tr>
<th></th>
<th>Female</th>
<th></th>
<th>Male</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Length</td>
<td>Width</td>
<td>Length</td>
<td>Width</td>
</tr>
<tr>
<td>Head</td>
<td>0.64</td>
<td>0.25</td>
<td>0.65</td>
<td>0.27</td>
</tr>
<tr>
<td>Proctoptera</td>
<td>0.33</td>
<td>0.33</td>
<td>0.31</td>
<td>0.35</td>
</tr>
<tr>
<td>Abdomen</td>
<td>0.45</td>
<td>0.55</td>
<td>0.58</td>
<td>0.71</td>
</tr>
<tr>
<td>Total</td>
<td>2.86 mm</td>
<td></td>
<td>2.83 mm</td>
<td></td>
</tr>
</tbody>
</table>

Fallopia aeroteretorum nov. sp. (Figs. 9, 12, and 15.)

Male.—Head as shown in fig. 9.

Prothorax broad at the sides, pale in the middle; posterior margin slightly rounded, with a seta on each side near the latero-posterior angle. Metathorax 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 seta near the lateral-posterior angle, a longer one close to it, and three long setae in a postulate slightly nearer the meson.

Adelsoni.—Tergites 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 margin; 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.

Sterones i to vii each with a median transverse row of setae, and a small elongated brown plate on each side. Sterine viii 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.

Thorax as in the male.

Adelsoni 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 viii 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>Head</td>
<td>1.25</td>
<td>0.90</td>
</tr>
<tr>
<td>Prothorax</td>
<td>0.66</td>
<td>0.60</td>
</tr>
<tr>
<td>Metathorax</td>
<td>0.42</td>
<td>0.32</td>
</tr>
<tr>
<td>Abdomen</td>
<td>1.25</td>
<td>0.90</td>
</tr>
<tr>
<td>Total</td>
<td>5.59 mm</td>
<td>4.38 mm</td>
</tr>
</tbody>
</table>

Holotype.—A male on T. vandatus. Allotype from same host.

Described from two males and two females taken off Pseudogypa aestuaries falcatae Eri. (southern white-backed vulture) in the Eastern District, Transvaal, on the 9th December, 1916 (Coll. W. Powell). This species can be distinguished by the shape of the head and male genitalia.

Fallopia aestuaries falcatae nov. sp.

(Figs. 10, 13, and 16.)

Two males and two females taken off Pseudogypa vectatoris Daud. (southern white-backed vulture) in the Eastern District, Transvaal, on the 7th August, 1917 (Coll. W. Powell); also a male and female taken

off Gypa vultures Forest. (Cape vulture) in the same district on the 4th October, 1917. The specimens taken off the latter host were probably stragglers. We have seen a female in a G. vectatoris, which is very similar to F. afrikanus.

This species can be distinguished from both F. australis and F. afrikanus by the following characters:

1. The shape of the head (fig. 10).

2. The lateral plates on the apical sternites 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 15).

4. The male genitalia (fig. 13).

5. The plates on the seventh and eighth sternites of the females (fig. 16).

It closely resembles F. quadrinotata, but judging by Piaget's figures of F. elongatus, which is a synonym of this species, appears to be distinct.

Holotype.—A male off T. vandatus. Allotype from same host.
NEW GENERA AND SPECIES OF MALLOPHAGA.

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

Fig. 9.—Head of *Falcipennis africana* n. sp., male.

Fig. 10.—Head of *Falcipennis lucanus* n. sp., male.

G. A. H. B., del.

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

Fig. 12.—*Falcipennis africana* n. sp., male genitalia.

G. A. H. B., del.
Fig. 13.—Fulcidipneus hifuntes n. sp., male genitalia.

Fig. 14.—Fulcidipneus Lauriei (Gibb.), plates on apical sternites of female.

Fig. 15.—Fulcidipneus africanaus n. sp., plates on apical sternites of female. C.A.H.R., 84.

Fig. 16.—Fulcidipneus hifuntes n. sp., plates on apical sternites of female. C.A.H.R., 84.