

ON TWO NEW SPECIES OF MALLOPHAGA (MENOPONIDAE):
 MENACANTHUS BALFOURI N. SP. AND MYRSIDEA VICTRIX N. SP.
 FROM COLOMBIA.

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PLATE I.

During a visit to Colombia in May of this year, Dr. Andrew Balfour, director, Wellcome Bureau of Scientific Research, secured several Mallophagous parasites on a "black and yellow billed Toucan." * These examples have been handed to me for report, and they are of special interest as coming from a host genus of whose parasites little is known.

Two species, both Menoponids and apparently new, are represented in Dr. Balfour's gatherings. Till recently, many genera and possibly even sub-families have been confused under *Menopon*. In 1912, Neumann (Archiv. de Parasitol., p. 353) proposed the name *Menacanthus* for those forms which are provided with a pair (or more) of heavy peg-like spines on the inferior surface of the head. This excellent character, however, seems to me to have more than generic value, and *Menacanthus*, bringing together as it does parasites of woodpeckers, fowls and dogs, has still too wide a scope, and is neither natural nor convenient. The genus should be further sub-divided, and might well be restricted to those species with spines on the underside of the head, which when flattened out is slightly pointed anteriorly, the flap across the ocular emargination rounded off before the eye, and separated from it by a slit-like incision above the last joint of the antennae, the temples evenly rounded, the thorax normal, small, not markedly separated from the abdomen, which is without pleural incassation of any kind, and the abdominal chaetotaxy simple.

This definition would include the first four species of Neumann's list and, of course, many others. The genus *Menacanthus* thus narrowed is specially characteristic of the Passerine order of birds.

At least one other genus is found on the same hosts. It may be defined as follows.

MYRSIDEA *gen. nov.*

Head and thorax broad and large in proportion to the abdomen. No spines on ventral surface of head. Flap across ocular emargination continuous with eye. Temples large, reclined towards the occiput. Forehead flatly rounded

* Probably *Rhamphastos tocard* Vieill. A.B., in litt.

anteriorly. Meso- and metathorax separate from one another. Metathorax separated from 1st abdominal segment by a membranous area. Sternal markings well defined. 1st abdominal sternite reduced, 2nd different in size, shape or chaetotaxy (sometimes in all these respects) from the others. Pleurites well developed, but with no internal thickening.

♂ with characteristic genitalia—a moderately long basal plate, continuous distally with a broad truncately rounded lamina at the base of which the stout apically recurved paramera are set.

♀ sometimes with simple transverse abdominal tergites, but quite as often the sexes are dimorphic here, one or more of the tergites being backwardly produced.

Hosts—Passerines, especially the more advanced groups, e.g., crows.

Genotype: *M. victrix* sp. n.

The above complex of characters sufficiently indicates one of the most interesting Menoponid groups. A number of species have been described by various authors as *Menopon* or *Colpocephalum*.

Myrsidea may ultimately have to be further split up. Possibly the sexually dimorphic should be separated from the simpler forms. The genotype is one of the most specialised of the group, as the 2nd sternite bears strong processes with heavy asters of spines, and no fewer than four of the tergites are modified. *Myrsidea* and *Menacanthus* occur together quite often on the same individual host.

MYRSIDEA VICTRIX *sp. n.*

♂. *Head.* 4 long bristles on the temples, 2 rather short at the middle of the occiput. 1 minute bristle where the occiput crosses the prothoracic edge, and another pair of similar bristles a short distance from the edge. On each side of the quadrate posterior ventral sclerite are 4 bristles, 1 strong and long below the occiput and 3 much weaker and shorter in front. 6 short bristles in 2 parallel rows (3, 3) in the space between the antennal grooves.

Thorax. Pronotum, 3 short spines at lateral angle. On the posterior edge a row of stout elements, viz., a spine, 4 bristles and a spine. Mesonotum bare, save for a minute spine posteriorly on each side of the median line. Metanotum with two such spines on each side, separated by a narrow unchitinized belt from the mesonotum and almost straight across the abdomen. 1-2 spines and a long bristle at the angles, and about 12 long bristles on the posterior edge. Prosternum bare, with a pear-shaped mark. Mesosternum and metasternum with large quadrate marks sending out arms between the coxae. The mesosternum bears anteriorly 6 short spines, and 8 longer bristles.

Abdomen. Tergites, pleurites and sternites well developed. The sternites bear 5-8 spines or bristles. On the anterior segments are chiefly short spines,

while posteriorly they weaken and lengthen so that the 8th pleurite bears 3 very long and strong bristles with 3 much shorter and finer ones. Tergites with 1 row of bristles (12-18) of which the last on each side is long. The 9th tergite bears 2 long bristles at each side and 2 medianly, and there are half a dozen slender bristles along the edge of the corresponding sternite and 2 on the under surface. The other sternites except the 2nd bear at each side a larger or smaller patch of short spines with a row of single bristles (up to a dozen) stretching between. The 2nd sternite bears one row of bristles with a short thick process bearing an aster of 5-6 heavy spines on each side.

On the under surface of the ♂-apparatus, just before the broadening out of the basal plate, are the chitinized parts figured. Their homology is uncertain (figs. 2 b and c).

♀ closely resembling the ♂, but longer, with more pronounced chaetotaxy and the usual sexual differences in the terminal segments. Of the abdominal tergites 1-4 are more or less modified on the posterior edge. Tergite 1 is produced from each side backwards coming to a broad rounded point beyond a line connecting the anterior angles of the 3rd pleurites, *i.e.*, extending nearly $1\frac{1}{2}$ segments beyond the normal transverse line. Tergites 2 and 3 trespass about the breadth of the following pleurite. The posterior edge of tergite 4 is convex instead of straight. From 5-8 the posterior edge of the tergite is again normal and straight.

Colour. ♂ and ♀ pale brown to chestnut, darker round the antennal sulcus, along the occipital edge, and on the legs. ♂. In the completely adult condition the abdominal segments are crossed by simple, pale bands which are darker at the sides. ♀. On the first 5 abdominal segments the darker lateral marks are more extensive and wedge-shaped, those on 4 and 5 being drawn out.

MEASUREMENTS.

	♂.		♀.	
	Length.	Breadth.	Length.	Breadth.
Head .....	.38	.55	.40	.61
Prothorax .....	.20	.32	.23	.38
Meso- and Metathorax...	.29	.50	.34	.68
Abdomen.....	.87	.67 (3 and 4)...	1.28	.9 (3 and 4)
Total.....	<u>1.74 mm.</u>		<u>2.25 mm.</u>	

Holotype: a ♂ in *Brit. Mus.* Reg. No. 1914-535. (Presented by The Imperial Bureau of Entomology).

Described from 5 ♂♂, 5 ♀♀, and 11 immature examples.

From a "Yellow and black-billed Toucan," from COLOMBIA, Boca de Argua, Atrato Valley (*Dr. A. Balfour*, v. 1914).

MENACANTHUS Neumann.

MENACANTHUS BALFOURI *sp. n.*

A pale form with no definite markings.

♂. *Head.* About twice as broad as long. On the ventral aspect on each side of the median line are: 1 short hair behind the mandible, 1 longer opposite the middle of the heavy spine, and 3 in a row alongside the spine. Near the inferior edge of the occiput are two long hairs (see fig. 1). There are 4-5 long hairs superiorly on the temples, and 4 along the occiput.

Thorax. Pronotum almost bare, a short spine well inside the lateral angle where there are a spine on each side with a long bristle between them; 11 strong long bristles on posterior edge. Meso-metathorax short—nearly spanned by the long bristles of the pronotum. Metanotum with 2 short spines on the surface, on each side, near the edge.

Owing to the crop the exact outline of the metathorax over the abdomen cannot be determined. It appears to be somewhat convex. At the postero-lateral angles 2 spurs, and thereafter a straight row of long bristles, about 12, with a spine between the 2nd and 3rd on each side. These long bristles span tergites 1 and 2. No bristles between the fore-coxae, but on each, near the inner angle, is a conspicuous pair. 6 bristles between the mid-coxae and rather more behind the meta-coxae.

Abdomen. Oval, with sub-equal tergites, 1 and 2 being a little shorter than the others. Each bears a simple transverse posterior row of hairs which are stronger and longer on the hind segments. The rows increase from 12 to 18 (3rd segment), after which they decrease again. At the sides of the anterior tergites are a few short spines. On tergites 7-8 the row is sparse medianly. The 9th tergite bears posteriorly a pencil of 14 hairs—the outermost being strongest.

The pleurites bear from 3-6 bristles or hairs. The sternites have two rows of hairs neither of which is quite continuous mesially. At the sides also one or two additional short bristles occur.

Genitalia. Basal plate exceedingly long and slender, expanded and rounded proximally. Paramera elongate, finely and gradually pointed. Mesosome oölong. The endomera ending obliquely. Telomera reduced to a chitinous edging of the long, slightly roughened sac. (fig. 2a).

MEASUREMENTS. ♂.

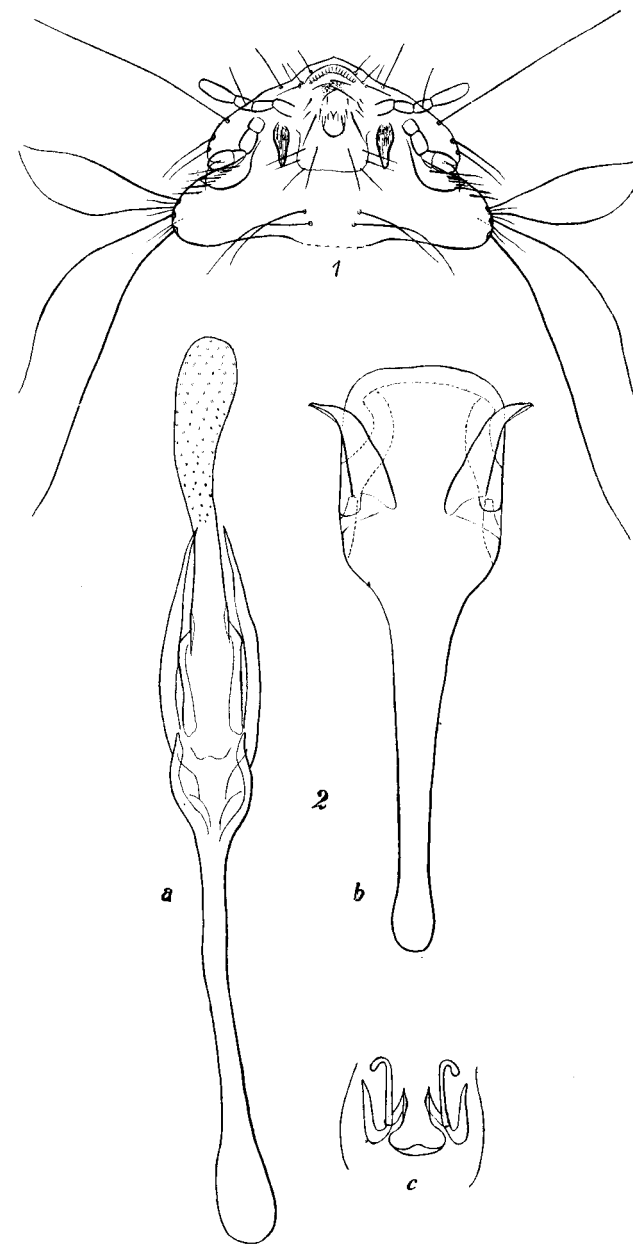
	Length.	Breadth.
Head .....	.31	.58
Prothorax.....	.23	.43
Mesothorax .....	.19	.49
Abdomen	1.15	.79 (4 and 5)
Total.....	<u>1.88 mm.</u>	

Holotype: a ♂ in *Brit. Mus.* Reg. No. 1914—535. (Presented by The Imperial Bureau of Entomology).

From a "Yellow and black-billed Toucan," from COLOMBIA, Boca de Arguia, Atrato Valley (*Dr. A. Balfour*, v. 1914).

Menacanthus balfouri is evidently close to *Menopon* (*Menacanthus*) *exsanguis* Paine and Mann, described from a Brazilian woodpecker (*Campephilus melanoleucus* Gm.). It differs from that species, however, in size, in being much less setose, and in the form of the genitalia, so far as the description allows one to judge (*Psyche*, XX, 1, p. 19, fig. 20).

London: December, 1914.



James Waterston, del.

MENACANTHUS BALFOURI AND MYRSIDEA VICTRIX.