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*Neomenopon*

## MALLOPHAGA FROM SOUTH AFRICAN BIRDS.

DESCRIPTIONS OF A NEW GENUS (*NEOMENOPON*) AND TWO  
 NEW SPECIES (*MACHAERILAEMUS PLOCEI*, *NEOMENOPON*  
*PTEROCLURUS*).

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(With Plates XII and XIII.)

THE species herein described both belong to the family Menoponidae. One of these species, collected by me from a Waxbill (a passerine bird) at Onderstepoort, Pretoria, belongs to the genus *Machaerilaemus* Harrison, the other, taken from a Sandgrouse in the Rustenburg District, Transvaal, by Mr Powell, together with specimens of a species of *Degeeriella*, I am placing in a new genus, for which I propose the name *Neomenopon*. These two new species are extremely interesting, in that they both possess a chitinous framework extending backwards from the anterior margin of the head for the support of the mandibles, a structure previously only known to occur in the genus *Eomenopon* Harrison, which was established partly on account of this structure. A similar structure, however, also occurs in a small unidentified species of *Menopon* taken from a Little Banded Goshawk (*Astur polyzonoides*) at Onderstepoort. This species may eventually prove to be sufficiently distinct in other details from the type of *Menopon* to warrant the founding of a new genus for its reception.

Curiously enough, both *Eomenopon* and *Machaerilaemus* were described by Harrison in the same paper in 1915, *Eomenopon* being established for the reception of a species found on two species of Australian Lorikeets, and *Machaerilaemus* being established for a species found on an Australian Grassfinch (a passerine bird). Since then Harrison has included Carriker's *Menopon laticorpus*, described from specimens found on an Ant-bird (*Thamnophilus doliatius*), a passerine bird, in Costa Rica, in the genus *Machaerilaemus*.

*Machaerilaemus latifrons* possesses a dark transverse band on the forehead, which is also present in both the species described here, and likewise in the *Menopon* from a hawk, but in these the bands are inconspicuous, very short, and are interrupted in the middle.

In the type of *Machaerilaemus* the mesothorax is separated from the metathorax, whereas in the new species described here these parts are fused together.

The following table will serve to differentiate the three genera: *Eomenopon*, *Machaerilaemus* and *Neomenopon*:

(1) Head not twice as wide as long, with a deep narrow cleft in the side of the forehead, extending to the inner border of the antennary fossa; chitinous framework for support of the mandibles present, extending backwards from the anterior margin of the head to form a pair of short free projecting spinous processes; meso- and metathorax distinct. *Eomenopon*.

Head more than twice as broad as long, without a cleft in the sides of the forehead; no spinous processes attached to the chitinous framework when present.

(2) Head with a large chitinous plate on the throat, flanked by two dagger-like processes (present or absent in *M. laticorpus*?) with or without a central circular perforation; chitinous framework absent or present; meso- and metathorax distinct or fused. *Machaerilaemus*.

No chitinous plate on throat; chitinous framework present; mesothorax fused with the metathorax. *Neomenopon*.

Genus *MACHAERILAEMUS* HARRISON.

Harrison (1915). *Parasitology*, VII. 389.

*Machaerilaemus plocei*, n. sp. (Plate XII, figs. 1-3).

**Female.** Ground colour pale brown, with darker markings of the same colour.

*Head* slightly more than twice as broad as long across temples. Forehead flatly rounded in front, abruptly rounded and swollen at the sides, with six hairs on each side. Eye with two minute hairs. Temples rounded, with four long hairs and several shorter ones. Occiput slightly concave, with two median hairs just inside the margin, and two more on each side, of which the outer one is the shorter. The only other hairs present on the dorsal surface are: two hairs on the forehead situated midway between the lateral angles and the middle line, the outer one being slightly longer than the inner one, and a short hair a little distance above these.

On the ventral surface the most conspicuous features are the chitinous framework, which has already been described; the gular plate and a more or less triangular plate on either side of this. The gular plate is heart-shaped, with a free projecting spinous process and five or six hairs on each side. Antennae with the two terminal segments indistinct. Palpi with the apical

segment the longest, the second and third sub-equal, and slightly longer than the first. Above the gular plate there are two hairs, and two more, slightly shorter, occur above these.

*Thorax.* The prothorax is winged, with two short spines, a long hair, and another short spine on each side, and a row of eight hairs on the posterior margin. The scapulars and interscapular bar are less developed than is usual in this family. On the prosternum there is a plate, and beneath this another plate, which extends on to the metasternum, the shape of these being shown in Pl. XII, Fig. 2. The metathorax has a row of about ten hairs on the posterior margin, and a long hair and several short spines at the postero-lateral angles. On the ventral surface, between the mid and hind coxae there is an inconspicuous plate clothed with shortish hairs.

*Legs.* The coxae are elongated; the second and third pairs each with five short spines, two being situated near the apex and three at the apex. Hind femora without a tuft of hairs or spines on the ventral surface. Mid and hind tibiae with several short spines near the apex.

The *abdomen* is elongate-oval, being broadest at the fourth segment. The tergites each with a pale brown transverse band, and a series of hairs on the posterior margin. On each sternite there is a dark transverse band, with three irregular rows of hairs on it, and with three or four short spines at the postero-lateral margins of the bands. The transverse band on the first sternite narrows out to a point at either end, and the bands on sternites six and seven are fused together. On the eighth sternite there is a narrow longitudinal blotch on either side of the median line, which broadens out posteriorly. The borders of the vulva are closely beset with a row of fine hairs.

The *pleurites* are dark brown, with several short hairs in the middle, and a row of longer ones and one or two spines on their posterior margins.

**Male.** The male resembles the female, except for the markings on the venter of the terminal segments, as will be seen by comparing Pl. XII, figs. 1 and 3, the former of which shows the ventral markings on the terminal abdominal segments.

The general form of the genitalia can be seen in Fig. 1.

*Measurements in millimetres.*

	Female		Male	
	Length	Breadth	Length	Breadth
Head	0.26	0.6	0.23	0.51
Prothorax	0.13	0.44	0.1	0.35
Metathorax	0.15	0.56	0.11	0.41
Abdomen	1.09	0.86	0.7	0.56
Total	1.63		1.14	

Described from one ♀ and one ♂ taken from a Waxbill at Onderstepoort, Pretoria, on 14. XII. 1918.

## Genus NEOMENOPON, n. gen.

The genus may be characterised as follows: Head with distinct and fairly deep ocular emarginations; very broad, more than twice as wide as long; temples large. Prothorax with lateral margins rounded. Mesothorax fused with the metathorax. Pleurites well developed.

*Neomenopon pteroclurus*, n. sp. (Plate XIII, figs. 1, 2).

**Female.** Specimens preserved in alcohol are extremely dark, almost black, and it is then impossible to make out the markings. When mounted in Canada balsam, however, they are brown in colour, with dark brown markings. The *head* is extremely broad, being slightly more than twice as wide across the temples as long. The forehead is flatly rounded in front, and turns abruptly inwards on each side, extending backwards from the lateral angles in an almost straight line to the temples. On the margin of the forehead there are sixteen hairs, and on the dorsal surface there are six, situated in a line between the lateral angles; of these, one is situated on each side, midway between the median line and the lateral angle, and two—a long and a minute one—on each side between this hair and the margin. The temples are abruptly rounded, with about 10 long and short hairs on the margins. Occiput very slightly concave, with six hairs. Eye large, without a hair. On the ventral surface there is a chitinous structure for support of the mandibles, which consists of a band projecting backwards and slightly inwards on each side from the anterior margin to a short distance beyond the antennary fossa, where each is joined together by a transverse band. From each of the two angles formed by these bands there extends a curved band to the occipital margin. Above the transverse band there are two hairs, and above these are two shorter ones. The apical segment of the palpi is the longest, the third is the shortest, and the first and second sub-equal.

The shape of the two terminal segments of the antennae cannot be made out, owing to their being partly hidden by the pockets formed by the forehead and temples, which are very dark. On each side of the gular region there are four or five hairs in a longitudinal row.

**Thorax.** The prothorax is winged, with a short spine on each side in front, a long hair beneath it, and another short spine beneath this again; and on the posterior margin there are eight hairs. The interscapular bar does not quite reach the scapulars, and it is crossed by a median longitudinal bar.

The metathorax is shorter than the prothorax, with twelve hairs on the posterior margin, and a short spine on each side near the latero-posterior angles. On the metasternum there is a narrow longitudinal median plate bearing about ten hairs, and below this, between the mid and hind coxae, a median patch of nine hairs.

*Legs.* The coxae of the forelegs are elongated; coxae of mid and hind legs with three or four spines on or near their apical margins. The femora are very broad, and the hind pair each have a tuft of about 60 short hairs on their ventral surface.

The *abdomen* is broadly oval, being widest at the fourth segment. The tergites each have a pale transverse band (serrated on its posterior border) extending to, or almost to, the pleurites and with a series of about 18 to 20 hairs on their posterior margin. On each sternite there is also a transverse band, which is darker and not so wide as that on the corresponding tergite; on each band there is an irregular series of short hairs, which on tergites 3 to 6 form a more or less dense patch on the sides. The band on the seventh sternite is interrupted in the middle, the median space being filled by a still darker blotch, and the same appears to be the case on the sixth sternite, at least the median area is also darker than the rest of the segment. On sternites 7 and 8 there is a longitudinal blotch on each side of the median line, extending from the middle of the seventh to the apex of the eighth. The vulva is broadly rounded, with a series of fine short hairs on its margin.

The *pleurites* are well developed, brown in colour, with several hairs in the middle, and a series of longer ones and one or two small spines on their posterior margin.

*Measurements in millimetres.*

Female	Length	Breadth
Head	0.41	0.86
Prothorax	0.16	0.61
Metathorax	0.15	0.81
Abdomen	1.51	1.45
Total	2.23	

Described from one adult and two immature ♀♀ found on three specimens of Namaqua Sandgrouse (*Pteroclorus namaqua*) in the Rustenburg District, Transvaal, by Mr Powell in 1917.

REFERENCES.

- CARRIKER (1903). Mallophaga from Birds of Costa Rica, Central America. *Univ. Nebraska Stud.* III. 190-191.
- HARRISON (1915). On a New Family and Five New Genera of Mallophaga. *Parasitology*, VII. 385-393.
- NEUMANN (1912). Notes sur les Mallophages, II. *Archives de Parasitol.* xv. 353-368.

## EXPLANATION OF PLATES XII AND XIII.

## PLATE XII.

*Machaerilaemus plocei*, n. sp.

- Fig. 1. Male, dorsal aspect.  
Fig. 2. Male, head and prothorax, ventral aspect.  
Fig. 3. Female, posterior abdominal segments, ventral aspect.

## PLATE XIII.

*Neomenopon pteroclorus*, n. sp.

- Fig. 1. Female, dorsal aspect.  
Fig. 2. Female, head and prothorax, ventral aspect.

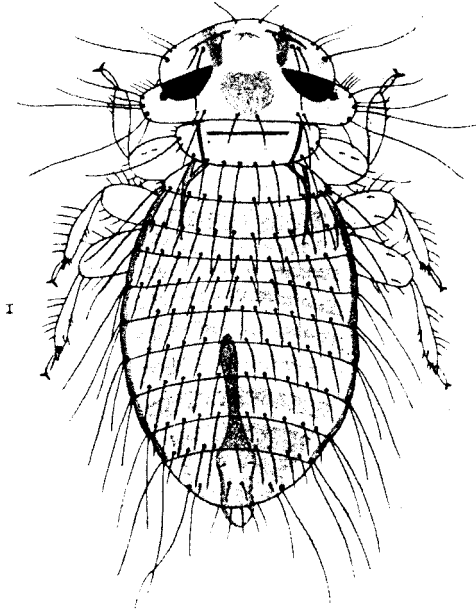


Fig. 1. *Machaerilaemus plocei*, n. sp. ♂

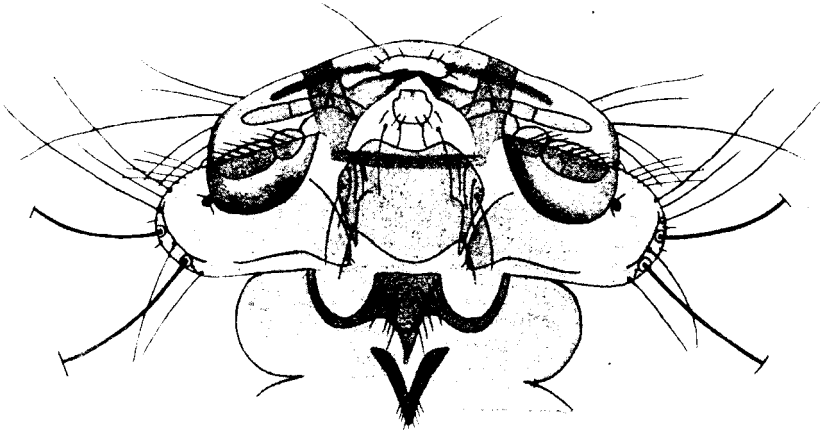


Fig. 2. *Machaerilaemus plocei*, ventral surface of head and prothorax of ♂

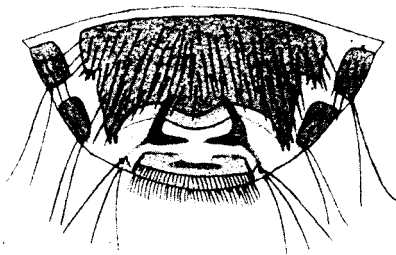


Fig. 3. *Machaerilaemus plocei*, ventral surface of terminal abdominal segments of ♀

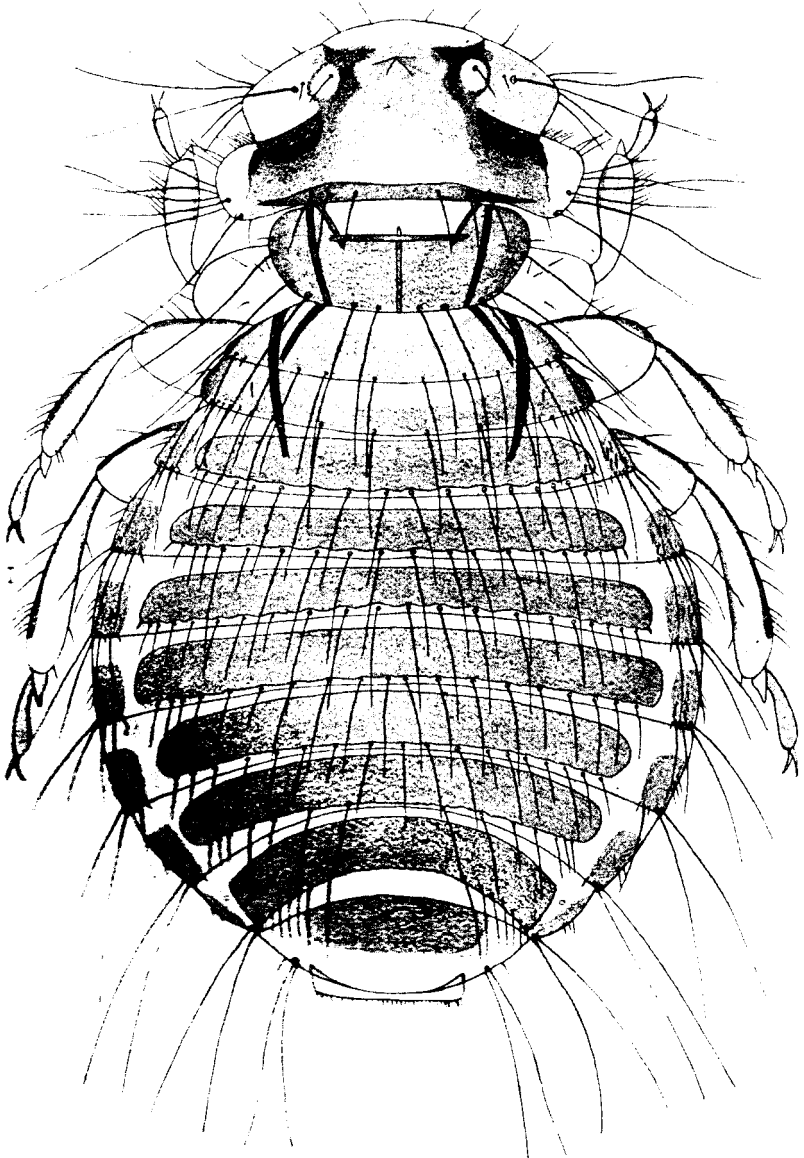


Fig. 1. *Neomenopon pteroclorus*, n. sp. ♀

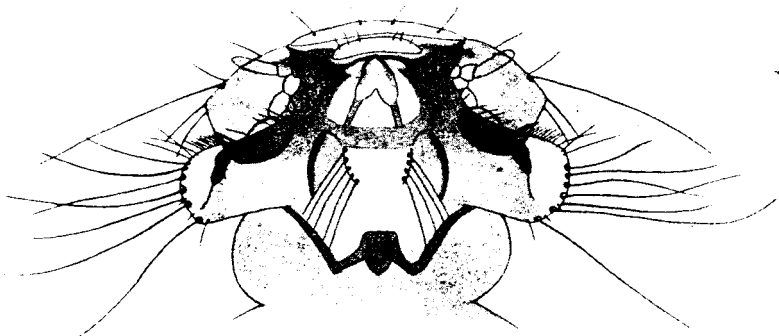


Fig. 2. *Neomenopon pteroclorus*, ventral surface of head and prothorax