

# Some new Mallophaga from North-Indian birds

By

M. A. H. Qadri



With 4 figures in the text

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#### A. Introduction.

In continuation of my previous paper<sup>1</sup> "Studies on the *Mallophaga* of North-Indian Birds", I have collected some more material which has been described in this paper. At first my plan was to produce a larger work describing the known species as well as all the new forms which I could find in the collection of *Mallophaga* in the Zoological Museum of the Aligarh Muslim University, but partly owing to a great dearth of literature on *Mallophaga* in India and partly due to other unavoidable circumstances the original scheme had to be abandoned. The present paper deals with the description of three new species and one new genus of biting-lice collected from our birds. As already mentioned in my previous paper, there is a large number of Indian *Mallophaga* which has not yet been discovered, and it is desirable that an exhaustive survey of the known and unknown forms should be made and this, I am sure, will have a great bearing on the morphological and taxonomic study of the biting-lice.

#### B. Description of New Mallophaga.

##### 1. *Pseudomenopon poliocephalus* n. sp. (Fig. 1).

Two males and three or four females were collected from the Indian Purple Coot, *Porphyrio poliocephalus* LATHAM. Also one male and two females were collected from a Snipe belonging to the genus *Capella* which could not be further identified as it was badly mutilated after shooting. The present species resembles *P. tridens* NITZSCH from which it can be distinguished by the differences in the shape of prothorax, in chaetotaxy and in some characters in the posterior region of the abdomen.

Description of Female: Body moderately robust, yellowish brown in colour, with dark patches on the head and on the sides of the abdominal segments. Head roughly triangular broader than long, the greatest width

<sup>1</sup> Z. Parasitenkde S, H. 2, 226—238.

lying across the posterior margin. Front rounded; lateral margins rather unexcavated; ocular slit indistinct, faintly chitinised. Backing the ocular slit is a chitinised area from which a faintly chitinised band proceeds to meet the occipital band which is narrow but distinct. Pharyngeal sclerite small and thinly chitinised and lingual glands are wanting. Antennal fossae deep. Antennae four segmented, first segment conical beset with short spines on the outer face, second segment with marked anterior expansion and the fourth short and broad. Ocular fringe of setae distinct. Temples narrow and produced, with four large and several short setae. Gular plate characteristic; central piece passing slightly beyond occipital band. Lateral pieces equally broad but less chitinised. There are four long setae on either side of the gular plate.

Prothorax large and protruded, with acute wings. Prothoracic sternum present without any setae. Posterior lateral margin convergent making an angle with the posterior margin. Each bears five setae. Posterior margin straight bearing six setae. Transverse bar faintly chitinised. Metathorax with lateral margins strongly divergent. Each posterior angle bears two long and one short setae. Legs normal, paler than the body. Anterior femora slightly expanded. Posterior femora bearing a thin patch of setae.

Abdomen broadly elliptical. Abdominal segments nearly sub-equal in length. Tergites continuous with the pleurites and extending somewhat to ventral side where they end into a conspicuous process margined with a row of setae. Sternites with two partial rows of setae, and thin patches of setae on the sides of the third and fourth abdominal sternites. Apex with a rounded plate bearing a row of small setae on the ventral side, a circlet of closely set setae with a small chitinised transversely lying area produced into a short process anteriorly near its each end. A small chitinised longitudinal bar near each process of the former probably represents vestigial gonopod. Spiracles present on the third to eighth segment. Gastric teeth present.

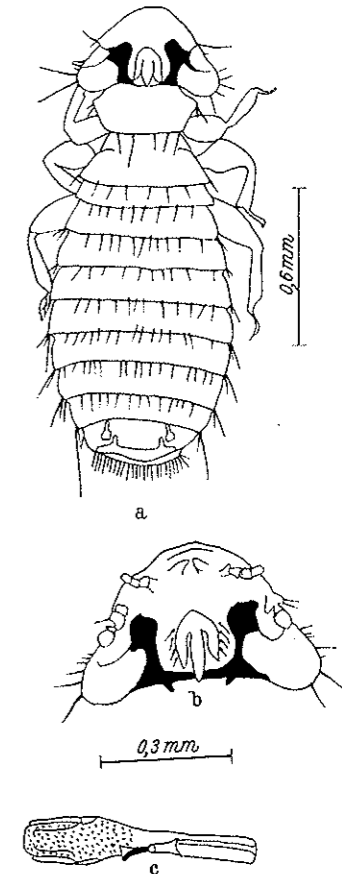


Fig. 1a—c. a *Pseudomenopon poliocephalus* n. sp., female; b Ventral aspect of head; c Male genitalia.

Male: In general characters agrees with the female. Body smaller and the cirlet of the setae in the last abdominal segment not present.

Measurements.

|                     | Length  |         | Width   |         |
|---------------------|---------|---------|---------|---------|
|                     | ♀<br>mm | ♂<br>mm | ♀<br>mm | ♂<br>mm |
| Body . . . . .      | 1,826   | 1,565   | 0,724   | 0,54    |
| Head . . . . .      | 0,34    | 0,284   | 0,58    | 0,52    |
| Thorax . . . . .    | 0,39    | 0,35    | 0,525   | 0,44    |
| Prothorax . . . . . | 0,21    | 0,19    | 0,41    | 0,39    |
| Abdomen . . . . .   | 1,096   | 0,931   | 0,724   | 0,54    |

Type slide No. M 10 and M 11 A.

Genitalia with long basal plate reaching the fourth abdominal segment, expanded towards the apex. Parameres thinly chitinised and pointed towards their free ends. A pair of chitinised band like endomeres present in the preputial sac, overlying the apex of the basal plate is a trumpet like chitinised structure. A tubular and chitinised penis overlies the trumpet shaped organ.

2. Genus *Pseudo-colpocephalum* n. g. (Fig. 2).

A genus of *Colpocephalidae*, *Pseudo-colpocephalum* resembles *Colpocephalum* (in apparent body structure); but is widely different from it by its characteristic male genital armature. Three combs of spines are present upon the ventral surface of the posterior femora and two combs of spines upon each side of the third abdominal sternite. Mesothorax small separated from the metathorax by a faintly defined suture. Head *Colpocephalid* type, gastric teeth present.

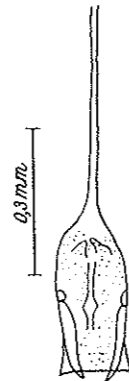


Fig. 2.  
Male Genitalia  
of *Pseudocolpocephalum*  
*uchidi*.

Female: Abdomen elliptical. Apex rounded. Abdominal segments not divided longitudinally. Last abdominal tergum divided into two by a median space. Eighth abdominal sternum slightly bilobed and its posterior margin beset with a row of strong setae.

Male: Genitalia entirely different from other *Colpocephalid* genera. Basal plate long and slender reaching the posterior margin of second abdominal segment; expanded towards the apex where it articulates with a pair of long incurved and pointed parameres. Sides of the preputial sac strongly chitinised. Towards the apex of the basal plate the preputial sac has a pair of out-growths. A well formed tubular and characteristic penis is present.

The present genus, as the above description shows, stands on well marked characters specially those of male genitalia. The old unwieldy genus *Colpocephalum* NITZSCH has been greatly simplified by taking out a number of distinctively different forms and grouping them as separated genera. This work has been done to a large extent by UCHIDA who separated the genera of *Ferrisia* (now known as *Neo-colpocephalum*),

*Cuculiphilus* and *Kurodaia* from the old genus *Colpocephalum* NITZSCH. The type species of *Colpocephalum* NITZSCH was formerly *C. zebra* NITZSCH. UCHIDA has changed the type species of *Colpocephalum* as *C. importunum* N. which HARRISON does not admit to be different from *C. decimifasciatum* BOISDUVAL et LACORDAIRE. It is evident from the structure of *C. zebra* NITZSCH, very clearly described by FERRIS, that according to its structure of the body it must be included in the genus *Neo-colpocephalum* UCHIDA. This is probably the reason why UCHIDA changed it for *C. decimifasciatum* BOISDUVAL and LACORDAIRE as type species of genus *Colpocephalum* NITZSCH. I fail to understand why UCHIDA does not include *C. zebra* NITZSCH under the genus *Neo-colpocephalum* to which it belongs nearly in all its features? The present genus has its type species as *P. uchidi* n. sp. which I propose to name after SEINOSUKE UCHIDA who has done pioneer work on *Mallophaga*.

3. *Pseudocolpocephalum uchidi* G. et. sp. n. (Fig. 3).

Three males and a few females were collected from the Indian white necked stork, *Dissoura episopa*. The broad outline of the body is of *Colpocephalid* type but the male genital armature together with other minor characters distinguish it from others.

Description of female: A moderately chitinised slender form. Body more or less elliptical; colour yellowish brown with dark brown patches on the head. Head wider than long. Front broadly rounded with one seta on either side of the tip and a few setae on either side behind the tip. Lateral margins excavated with a shallow but distinct slit in front of the eyes. Ocular fringe comb like. Frame-work of the head heavily chitinised forming conspicuous blotches, there being a pair of such blotches in front of the antennal fossae, a second pair about the base of the lateral notch and a third pair on the posterior margin of the head. Connecting the two occipital blotches there is a well chitinised and broad band and a fainter band connects each occipital area with that at the base of the lateral notch of its own side. Pharyngeal sclerite and glands present. Antennal fossae deep, dorsal border exceeding ventral one slightly near the base. Antennae four segmented, the fourth segment is globular and provided with several setae on the outer face. The second antennal joint is greatly constricted at the base. Gular area with a faintly chitinised plate. Seven long setae on either side of gular plate. Labial palpi slender, two jointed. Temples are expanded each with three long and several short setae. Occipital margin concave with four long thread like setae.

Prothorax shorter than the head; broader than long and with acute wings. Posterior lateral margins practically confluent with the posterior margin and strongly convergent. Lateral angles acute each with one spine and one long seta. The whole margin back to lateral angles nearly

evenly rounded; furnishing two spines and eight long setae. Transverse bar chitinised. Metathorax short; lateral margins strongly divergent. Posterior lateral angles acute each bearing two long setae and three spines. Posterior margin convex with eight long setae. Legs of ordinary form; paler than the body; anterior femora not expanded; posterior femora each bearing three combs of ten to fifteen brownish yellow spines with a few scattered setae towards the distal end. Femora and tibiae of the legs furnished with brown spots.

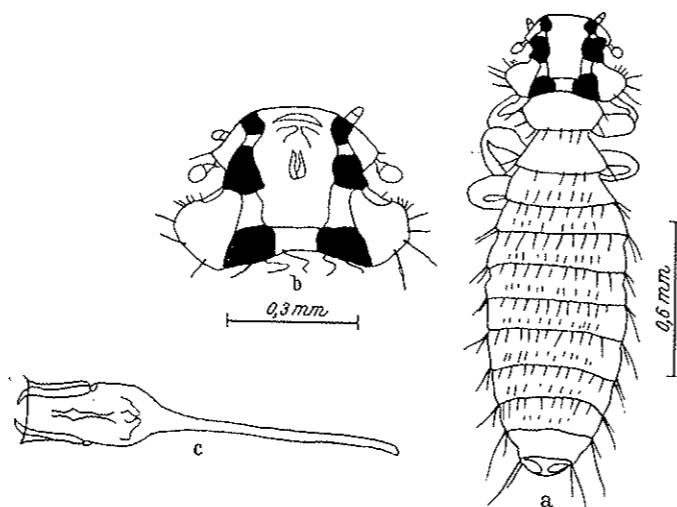


Fig. 3a-c. a. *Pseudocolpocephalum uchidi* G. et. sp. n., female; b. Ventral aspect of head; c. Male genitalia.

Abdomen elliptical; segments nearly sub-equal. Tergites strongly chitinised but sternites weakly. Lateral margins of segments nearly straight with two or three long setae on posterior lateral angle. Tergites

|                     | Measurements. |       |       |       |
|---------------------|---------------|-------|-------|-------|
|                     | Length        |       | Width |       |
|                     | ♀ mm          | ♂ mm  | ♀ mm  | ♂ mm  |
| Body . . . . .      | 1,825         | 1,733 | 0,55  | 0,515 |
| Head . . . . .      | 0,315         | 0,315 | 0,47  | 0,47  |
| Thorax . . . . .    | 0,33          | 0,325 | 0,39  | 0,36  |
| Prothorax . . . . . | 0,15          | 0,14  | 0,325 | 0,310 |
| Abdomen . . . . .   | 1,18          | 1,093 | 0,55  | 0,515 |

Type slide No. M 12.

with two rows of setae; sternites with a single row of setae. Sternite of the third segment with a pair of combs of spines on either sides. These combs are set on a slight diagonal to the posterior lateral angle of the sternite. Last tergite deeply notched. The apex of the abdomen rounded bearing a row of marginal setae. Gastric teeth present. Spiracles present from third to eighth segments.

Male: Agrees with the female nearly in all the main characters. Slightly smaller in size. Genitalia characteristic of the genus. Basal plate long and slender reaching the posterior margin of second abdominal segment. Apex expanded with which articulate long and incurved parameres tapering towards their free ends. Preputial sac with chitinised sides and devoid of any chitinous structure present in other Colpocephalids. Curved spines beset the preputial sac which towards the apex of the basal plate bears a pair of inner out-growths. A characteristic and tubular penis is present.

4. *Degeeriella episcopi* n. sp. (Fig. 4).

A number of males and females were collected from the Indian white necked stork, *Dissoura episcopa*. They resemble to some extent *D. interruptus* PIAGET. Important differences however exist in the size and in the head and abdomen. The present species is an important one being among very few species of genus *Degeeriella* NEUMANN found on storks.

Description of the female: Body brownish in colour with dark brown and black patches on head, thorax and abdomen. Head stout, yellowish brown in colour with dark brown lateral borders. Forehead trapezoidal, lateral margins straight. Clypeal band broad and well marked, punctured anteriorly. Five long setae present on either side of the forehead. Trabeculae short and conical, not movable. Antenna long, five segmented, second segment longest, and last segment provided with a cluster of setae near the tip. Temples rounded. Eyes large with hyaline cornea. Pharyngeal sclerite and glands well formed. A gular plate with narrow anterior end present. Occipital margin concave. Thorax shorter than the head in length. Tergites interrupted; sides dark brown and median area colourless. Prothorax broader than long, lateral margins nearly parallel and heavily chitinised. Pterothorax broader than long, lateral margins slightly divergent and heavily chitinised. Each posterior angle provided with a

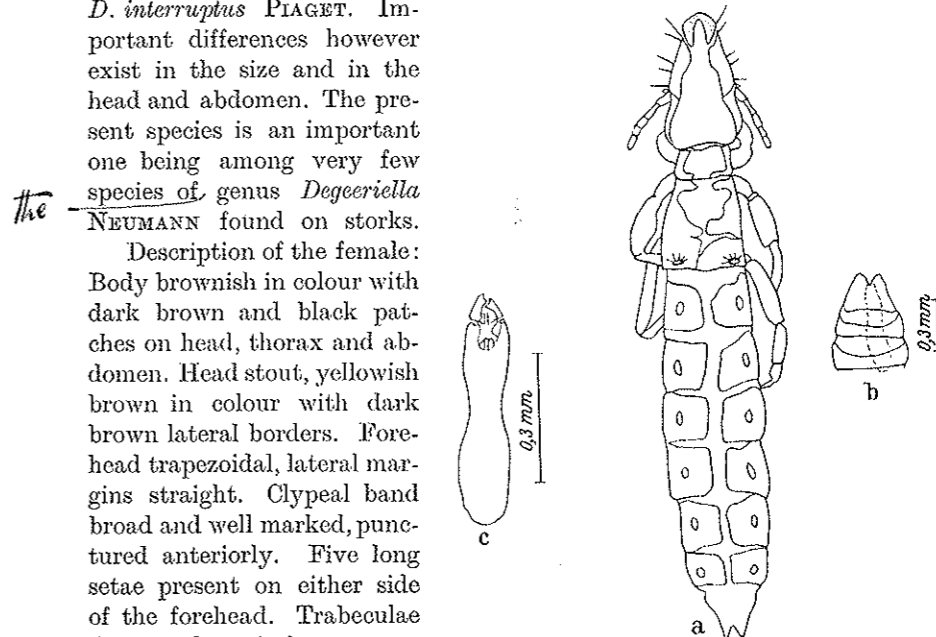


Fig. 4a-c. a. *Degeeriella episcopi* n. sp., female; b. Three posterior segments of male; c. Male genitalia.

long seta. An oval colourless patch bearing a row of five setae is present near each posterior angle of pterothorax. Legs well developed, slightly paler than the thorax, marked with dark brown patches.

Abdomen elongated broadest in the fourth segment gradually tapering towards the posterior end. Tergal bands except in the last segment interrupted in the middle by a median colourless area. Lateral tergites brownish with darker patches on the lateral borders. Anterior margin of each lateral tergite with an anteriorly produced process near the anterior lateral angle. Last segment bilobed posteriorly. Spiracles present on second to seventh abdominal segments.

Male: Smaller in size than the female. Antennae comparatively longer than in female; first antennal segment longest and stoutest. Tergites of the fourth, fifth, sixth, seventh and eighth abdominal segments

|                       | Measurements. |         |         |         |
|-----------------------|---------------|---------|---------|---------|
|                       | Length        |         | Width   |         |
|                       | ♀<br>mm       | ♂<br>mm | ♀<br>mm | ♂<br>mm |
| Body . . . . .        | 3,60          | 2,825   | 0,56    | 0,45    |
| Head . . . . .        | 0,750         | 0,69    | 0,431   | 0,41    |
| Prothorax . . . . .   | 0,180         | 0,20    | 0,30    | 0,31    |
| Pterothorax . . . . . | 0,37          | 0,32    | 0,45    | 0,44    |
| Abdomen . . . . .     | 2,30          | 1,615   | 0,56    | 0,45    |

Type slide No. M 13.

not interrupted. Rest of the structure as in females. Male genital armature characteristic. Basal plate well chitinised and long, narrow in the middle. It articulates apically with a median endomeral plate provided with paired anterior and posterior cornu and a median posteriorly produced plate. Parameres short, stout and bifurcated near the distal end. Penis is median and well formed.

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