Stray Notes on Mallophaga.—II.
By G. H. E. Hopkins, M.A.*

5. The Measurements published by Rudow.

Rudow’s descriptions of Mallophaga are notoriously careless in the extreme, and his names have caused endless trouble in the systematics of the group, especially as most of his types are lost. Unfortunately we cannot ignore these names, and must endeavour to interpret them and make neotypes where necessary.

In the works of the early monographers one frequently meets with a statement that they would have synonymized one of Rudow’s names with some other name but for the small size mentioned by Rudow. Similarly the present writer has frequently collected a species from Rudow’s type-host and would have felt complete confidence that it was Rudow’s species except for the grave discrepancy in size between Rudow’s description and the actual specimens. It is, therefore, important to examine whether the measurements given by Rudow bear any relation to reality.

For this purpose we have an invaluable guide in that Taschenberg (1882) redescribed a number of Rudow’s species from type-material. In the table below I give for a number of species the length (“Grösse”) given by Rudow in the original description and that given by

* Published by permission of the Director of Medical Services, Uganda.
Taschenberg, all figures being in millimetres. In the case of *G. carpophaga* there may be some doubt as to whether Taschenberg’s figures were taken from Rudow’s material, but there can be very little doubt that Taschenberg’s specimens were conspecific with Rudow’s, since Taschenberg saw the types and redescribed the species from the same host. A few doubtful cases have been omitted. All the species have been retained in the genera in which Rudow placed them.

<table>
<thead>
<tr>
<th>Species</th>
<th>Rudow.</th>
<th>Taschenberg.</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Goniodes eximius</em></td>
<td>1</td>
<td>♂ 2·93, ♀ 2·85</td>
</tr>
<tr>
<td><em>Goniocotes fissa</em></td>
<td>1</td>
<td>♂ 2·39, ♀ 2·75</td>
</tr>
<tr>
<td>, <em>carpophaga</em></td>
<td>0·25</td>
<td>♂ 1·00, ♀ 1·13</td>
</tr>
<tr>
<td>, <em>flavus</em></td>
<td>0·75</td>
<td>♂ 0·96, ♀ 1·29</td>
</tr>
<tr>
<td><em>Oncosphorus schillingi</em></td>
<td>1·5</td>
<td>1·73</td>
</tr>
<tr>
<td><em>Trichodectes mexicanus</em></td>
<td>1</td>
<td>1·68</td>
</tr>
<tr>
<td>, <em>breviceps</em></td>
<td>1</td>
<td>1·84</td>
</tr>
<tr>
<td>, <em>longiceps</em></td>
<td>1</td>
<td>♂ 2·04, ♀ 1·93</td>
</tr>
</tbody>
</table>

To the above we may add *Acidoproctus rostratus* (Rudow), of which the type is in the Halle collection. Rudow gave the length as 2·5 mm. in 1866 and 1·5 mm. in 1869; Dr. Kéler very kindly informs me that the type is 2·5 mm. in length.

From the above examples only one conclusion is possible—that Rudow’s measurements are the wildest of guesses. They are (at least usually) much below the true measurements, but the error is in no way consistent, *i.e.*, there is no factor by which we may multiply Rudow’s measurements and arrive at even an approximately true figure. In any endeavour to interpret Rudow’s names the measurements published by him must be ignored.

6. *A further Note on Rhopalocerasaliceps* (Nitzsch), and on some other Mallophaga from Tinamidae.

In a previous note (Hopkins, 1938, p. 198) I stated that *Rhopalocerasaliceps* must “be very close to, if not identical with,” *Rhopaloceras genitalis simplex* Carriker.” Subsequently Mr. Carriker most kindly gave me a pair of paratypes of *R. a. simplex*, and Dr. Kéler has been good enough to compare the male with Nitzsch’s type of
aliceps. He finds my specimen "absolutely identical with" Nitzsch's type, the only apparent difference being that (owing to the accidents of preparation and mounting of the specimens) the temporal lobes in Nitzsch's type are spread out flat, whereas in my specimen they are somewhat curled up and lend the head an illusory appearance of being narrower than in the type.

*R. genitalis simplex* Carriker is, therefore, an absolute synonym of *Rhopaloceras aliceps aliceps* (Nitzsch).

I also stated that the name *Tinamus "macrourus"* refers to *T. major major*, but I now consider that this is not established, and probably incorrect. Kéler (1938, p. 325) has suggested, probably correctly, that the name is a mistake for *Dendrotyx macrourus* and that the specimens were stragglers. This is the more probable as both Tinamidae and the *Dendrotyx* are game-birds, and might well come into contact in a game-bag or in a Zoological Garden (we know nothing as to the origin of the host of Nitzsch's material). The evidence as to the identity of "macrourus" is as follows:—The two species of Mallophaga described from it are *Rhopaloceras aliceps* (Nitzsch) and *Ornicholax alienus* (Giebel). I have shown above that the *Rhopaloceras* agrees perfectly with material from *Tinamus major castanceiceps*, and as we know that other species of *Tinamus* (serratus and tao) have their own forms of *Rhopaloceras*, it is more than probable that the true host of *R. aliceps* was *Tinamus major* subsp. As regards the *Ornicholax*, the position is different. Clay (1937, p. 158) states differences between the type and material from *T. major robustus*, but notes that a specimen from *T. m. major* appears to agree with the type; she does not mention the genitalia. Kéler (1938, p. 325) places *O. robustus* Carriker (from *T. m. castanceiceps*) as a synonym of *alienus*, and figures the male genitalia of a specimen from *Tinamus solidarius*, which he states agrees in all respects with the male type; he also thinks Carriker's figures of the male genitalia of *robustus* and its subspecies to be faulty. The species of *Ornicholax* from *T. solidarius* has been described as *Ornicholax solidarius* Guimarães and Lane (1937, p. 3), and their figure of the male genitalia agrees very fairly with that of Kéler of material from the same host; as the type of *alienus* is a male, and was compared by Kéler with his
material from *T. solitarius*, we may safely assume that *O. solitarius* is a synonym of *O. alienus*. But the genitalia of *O. r. robustus* as figured by Carriker do not agree at all well with either of the figures of material from *T. solitarius*. I have not seen material from the latter host, but have before me a series of *O. r. robustus* from *Tinamus major castaneiceps*, the type-host of *robustus*. The series includes three males, one of which has had the genitalia dissected out so that all details can be observed. The genitalia of these males agree excellently with each other and also with Carriker’s figure, but differ in several respects from those of the form from *T. solitarius* as figured by Guimarães and Lane and by Kéler. The most obvious difference is that in *O. r. robustus* the parameres are strongly curved, whereas in both the figures of material from *Tinamus solitarius* they are shown as almost straight. It may be regarded as established, therefore, that *O. solitarius* Guim. and Lane is a synonym of *Ornicholax alienus* (Giebel), and that *O. robustus* Carriker is at least subspecifically distinct. It is also probable that the true host of *alienus* (Giebel) is *Tinamus solitarius*. The case is an excellent example of the danger of synonymizing different forms of Mallophaga except on the basis of comparison of types or, at the very least, of specimens from the type-hosts of the forms in question.

I may also take this opportunity to comment on *Heptagoniodes agonus* Nitzsch. The type is a female from *Tinamus tao* and Kéler (*loc. cit.* p. 323) identifies it with specimens of both sexes from *T. solitarius*. Strangely enough, Nitzsch and Kéler appear to have been the only workers on Mallophaga to obtain the female of any species of this genus, unless the sexes of *H. excavatus* (Piaget) are correctly associated, which seems very doubtful *. But from both *Tinamus tao* and *T. solitarius* species of *Heptagoniodes* have been described from the male sex only—*H. mirabilis* Carriker from the former host and *H. clayi* Guimarães and Lane from the latter—and the only really striking differences between these species are in the form of the head (a purely male

* The record of Kellogg and Paine (1911, p. 23, fig. 3) may be dismissed at once, for their figure of the apex of the male abdomen shows a species which almost certainly does not belong to this genus. It appears to be an *Ornicholax*. 
character in this genus) and of the male genitalia. Kéler figures both sexes from *Tinamus solitarius*, and states that the females agree perfectly with Nitzsch's type. But his figure of the male genitalia is exactly similar to that of the male genitalia of *H. clayi*, and his measurements also agree excellently with those of Guimarães and Lane except that the head-index in their case works out a trifle higher (1·17 as against 1·13), which might easily be due to the pressure of the cover-slip. There is, therefore, no possible doubt that *H. clayi* is the form from *Tinamus solitarius* which Kéler identifies as *H. agonus* (Nitzsch). But is Kéler's form *H. agonus* (Nitzsch)? I claim that there is no real evidence that this is the case. There are numerous instances in which closely-allied species are inseparable in the female sex but quite distinct when we examine the male genitalia, and I consider that, until definite evidence is produced in the shape of female *Heptagonides* from *Tinamus tao*, the only reasonable procedure is to regard *H. mirabilis* Carrière as the male of *H. agonus* (Nitzsch) (from the same host) and *H. agonus* "(Nitzsch)" Kéler, 1938, *nec* Nitzsch, 1874, as a synonym of *H. clayi* Guimarães and Lane.

7. Notes on some Mallophaga of the Coot.

There are on the Common Coot of Europe, *Fulica a. atra* Linné, at least five species of Mallophaga, all belonging to different genera:—*Eulæmobothrion, Pseudomenopon, Incidifrons, Rallicola*, and *Fulicoffula*.

The first author to record any of these species was Redi (1668), who depicted on his tav. iv. three "Pollini della folaga," of which fig. 1 is the *Eulæmobothrion*, fig. 2 the *Fulicoffula*, and fig. 3 the *Incidifrons*. All these figures are remarkably good, considering the date at which they were drawn, and leave no doubt as to the identity of the species portrayed. In the Latin translation of Redi's works (1729) the same plate is reproduced, and Albin (1736, pl. xliv. fig. [4]) copied Redi's figure of the *Eulæmobothrion* as his "Louse of a Coot."

Linné (1758, p. 613, no. 28) gave the name *Pediculus fulicæ* to Redi's plate, but without specifying any figure; the name is, therefore, composite. With the exception of Schrank, all pre-Nitzschian authors who mention

* Possibly two species of *Rallicola*. 
Pediculus fulicae merely repeat the references without any attempt to restrict the name.

Schrank (1803, p. 191) describes a Pediculus Fulicae from "Blasshuhn" (=Coot) and refers to "Redi, Opusc. I. Tab. IV. Fig. 3," i.e., the Latin version of Redi. His description is very inadequate, but nothing in it conflicts with the species shown in Redi's plate. The description is not a formal restriction of Linné's name, because Schrank does not give any reference to the work of Linné. Harrison (1916, p. 14) adopts a procedure with regard to the name Pediculus fulica which is in accordance neither with the Rules of Nomenclature nor with common sense: he rejects fulica Linné as composite and fulica Schrank as invalidated by fulica Linné, although it is one of the components of the latter! But the Rules, fortunately, do not permit of the rejection of a name on the grounds that it is composite (if this were so we would have to reject an enormous number of the names at present in use for Mallophaga), but only of the restriction of such a name. I therefore formally restrict Pediculus fulicae Linné, 1758, to fig. 3 of Redi's plate iv., thus making Pediculus fulica Schrank a synonym. The further synonymy will be dealt with below.

The Pseudomenopon was not known to Redi; it must have a brief mention because of a curious confusion over the host. It was first described by Burmeister (1838, p. 440) as Menopon tridens, the sole host being Fulica atra. Giebel added Podiceps cristatus to the list of hosts in 1866 (p. 396), and in 1874 (p. 296) gives a long list of hosts, including Gallinula chloropus. Piaget (1880, p. 479, pl. xxxix. fig. 1) first misidentified material from Gallinula chloropus as tridens, and then (on the next page) described specimens from Fulica atra as var. major (nec M. var. major Piaget, 1880, p. 441). Harrison (1916, p. 63) established the error yet deeper by giving the host of tridens as "Gallinula chloropus" and other Rails. Eichler (1937, p. 97), considering the forms on Gallinula and Fulica to be distinct, has been misled by the errors of Piaget and Harrison into proposing the name Pseudomenopon thompsoni as a nomen novum for the invalid Pseudomenopon var. major (Piaget). P. thompsoni Eichler is, of course, a synonym of P. tridens, and it is tridens Piaget, nec Burmeister, which requires renaming if the two forms are distinct, as is very probable.
In the brief list of Mallophaga published by Nitzsch in 1818 he mentions four species infesting the Coot: Philopterus (Docophorus) pertusus (p. 290), Ph. (Nirmus) minutus (p. 291), Ph. (Lipeurus) luridus (p. 292), and Liotheum (Læmbothrium) atrum (p. 302.)

The last-named need not detain us long. Nitzsch gives a reference to "Redi, Exp. t. iv. fig. 1"; the subgeneric definition fits the species there depicted, and the host is the same. Harrison (1916, pp. 63 and 65), wrongly considering atrum Nitzsch, 1818, to be a nomen nudum, replaced it by nigrum Burmeister, 1838. But the Eulæmbothrium of the Coot must stand as E. atrum (Nitzsch), 1818.

Philopterus (Docophorus) pertusus is a nomen nudum in so far as the 1818 paper is concerned, since all that Nitzsch says about it is "Ph. pertusus (Fulicae atrae.)."

In his mention of P. (L.) luridus (p. 292) Nitzsch gives a reference to Redi, pl. iv. fig. 2, and this figure fits his definition of the subgenus Lipeurus as constituted by him on the same page. But he gives the host as "Fulicae chloropod," which is the Waterhen, Gallinula c. chloropus (Linné). Since it is by no means certain that the species of Fulicoftula found on the Coot and the Waterhen are the same, this point is of considerable importance. Assuming that the species found on these two hosts are different, P. (L.) luridus Nitzsch, 1818, is a mixture of a nomen novum for Redi's Pollino della Folaga and an undescribed species on the Waterhen. As an undescribed species cannot be taken into account, the name must be regarded as applying only to Redi's species. The type-host of Fulicoftula lurida (Nitzsch) is, therefore, the Coot, Fulica a. atra. Clay and Meinertzhagen (1938), misled by Harrison into considering luridus Nitzsch, 1818, to be a nomen nudum, have made Esthiopterus luridum (Denny) the genotype of Fulicoftula; fortunately Denny's species is also from the Coot, and is the same as that of Nitzsch.

We are left only with Philopterus (Nirmus) minutus, and this is much the most difficult case with which we must deal here. The reference is as follows:—

"Ph. minutus (Fulicarum). Redi, Experim. t. iv. fig. III."

Now Redi's pl. iv. fig. 3 is the Incidifrons, as already noted above, and some authors would contend that minutus Nitzsch should fall to Incidifrons fulice (Linné).
But both *pertusus* and *minutus* have been described from Nitzsch's material by later authors, in particular Giebel, who published Nitzsch's drawings of both species in 1874 (*pertusus* on pl. xi. figs. 3 & 12, and *minutus* on pl. v. fig. 7). The fact that these are Nitzsch's own drawings is of great importance, because it establishes beyond doubt that his *pertusus* is the *Incidifrons* and his *minutus* the *Ralllicola*. This identification of the two names has been accepted by all later authors, and *pertusus* Nitzsch is the genotype of *Incidifrons* Ewing, 1929. Fortunately another circumstance proves conclusively that Nitzsch's reference to Redi under *minutus* is a *lapsus calami*: on the same page Nitzsch defines his subgenus *Nirmus*, the most important character from our present point of view being "Trabeculæ nullæ aut parvulae, rigidæ." But Redi's pl. iv. fig. 3 shows an insect with very conspicuously large trabeculae, and therefore grossly at variance with Nitzsch's definition of *Nirmus*. The discrepancy was noticed by Denny (1842, p. 125). On the other hand, Nitzsch's drawing of *minutus* (Giebel, 1874, pl. v. fig. 7) shows an insect with at most very small and rigid trabeculae, thus conforming perfectly to the definition of *Nirmus*. I claim that *minutus* Nitzsch, 1818, should be regarded as a *nomen nudum*, the reference being a *lapsus calami* and referring to an insect which is at variance with Nitzsch's definition of the subgenus in which he includes it. This being so, the correct name of the species is *Ralllicola fulica* (Denny), 1842 *.

In giving the synonymies of the principal species with which I have dealt here I have omitted many doubtful references or relegated them to notes. References to invalid names are enclosed in brackets.

*Eulæmobothrion atrum* (Nitzsch), 1818.

(Pollino della folaga, Redi, 1668, pl. iv. fig. 1.)
(The Louse of a Coot, Albin, 1736, pl. xlv. fig. [4].)


There has never been any real confusion over this species, which was quite well figured by Giebel (1874, pl. xviii. fig. 5). Kellogg (1896, p. 155, pl. xiv. fig. 3)

* Even if my opinion on *minutus* is not accepted, the name of the species must still be as I have stated, because in that case *minutus* Nitzsch, 1818, is a synonym of *Incidifrons fulica* (Linné), 1758.
described and figured what is probably the same species, but from *Fulica americana*.

**Incidifrons fulicæ** (Linné), 1758.

(Pollino della folaga, Redi, 1668, pl. iv. fig. 3.)

*Pediculus Fulicæ* Linné, 1758, p. 613, no. 28. Partim; reference to Redi, pl. iv., but not to an individual figure. Restrict to Redi, pl. iv. fig. 3.


*(Philopterus (Docophorus) pertusus* Nitzsch, 1818, p. 290. *Nomen nudum.*)


**Rallicola fulicæ** (Denny), 1842.

*(Philopterus (Nirmus) minus Nitzsch, 1818, p. 291. *Nomen nudum,* reference being a lapsus calami and indicating a species inconsistent with Nitzsch's definition of *Nirmus*. On *Fulica*.)

*Nirmus fulicæ* Denny, 1842, pp. 50, 125, pl. ix. fig. 2. On *Fulica atra*.

*Nirmus minus* Nitzsch, Giebel, 1866, p. 375. On *Gallinula chloropus* and *Fulica atra*.

*Nirmus minus* Nitzsch, Giebel, 1874, p. 170, pl. v. fig. 7. On same hosts.

It is particularly to be noted that, as has been pointed out by Bedford (1932, p. 342), "*Oncophorus minutus N.*" of Piaget (1880, p. 215, pl. xviii. fig. 2) is not Nitzsch's species, though it may be seriously doubted whether it is *R. cuspidata* (Scopoli) as Bedford believed *. But there can be no reasonable doubt of the synonymy of *R. minuta* (Nitzsch) with *R. fulicæ* (Denny). The principal specific character given by Giebel in his description of the former (1866, p. 375) is that "bei dem Männchen das erste Fühlerglied fast so lang ist, wie die übrigen zusammen." In Denny's male type of *fulicæ* (examined by Mr. G. B. Thompson) this character is present. *Oncophorus advena* Kellogg, 1896 (p. 133, pl. xi. figs. 1 & 2), is also probably a synonym; it is from *Fulica americana*.

**Fulicozofula lurida** (Nitzsch), 1818.

(Pollino della folaga, Redi, 1668, pl. iv. fig. 2.)

*Philopterus (Lipecurus) luridus* Nitzsch, 1818, p. 292. *Nomen novum* for above.

*Lipecurus luridus* Nitzsch, Giebel, 1874, p. 230, pl. xvi. fig. 4. On *Gallinula chloropus* and *Fulica atra*.

*Lipecurus luridus* Nitzsch, Taschenberg, 1882, p. 140, pl. v. fig. 4. On *Fulica atra* and *Gallinula chloropus*.

*Ethiopopterus luridum* (Denny), Clay and Meinertzhagen, 1938, p. 279. Genotype of *Fulicozofula*.

* Bedford was misled by Harrison into accepting *Fulica atra* as type-host of this species. It was described from *Rallus aquaticus*. 
From the American Coot Kellogg described a *Lipeurus longipilus* (1896, p. 119, pl. vii. fig. 7) and a *Lipeurus picturatus* (loc. cit., p. 121, pl. viii. figs. 1 & 2). The former name is probably a synonym of *luridum*, and *picturatus* certainly applies to two immature stages of *longipilus*.

![Diagram of *Otidœcus neotidis*](image)

*Otidœcus neotidis*, sp. n., male.
Chatotaxy of antenna and legs omitted.


The genus *Otidœcus* was erected by Bedford in 1931 (p. 285) for *O. dimorphus* Bedford, and has remained
monotypical until now. The present species, which I name *Otidæcus neotidis*, is exceedingly close to *dimorphus*, and is best described by comparison with that species.

**Male** (fig. 1).—Head slightly longer than broad * (distinctly broader than long in *dimorphus*). Prothorax with only one pair of minute setæ anteriorly. The large group of setæ on the posterior margin of the pterothorax composed of only 7–9 setæ as against 9–11 in *dimorphus* (of which the types have been lent to me). First (apparent) abdominal tergite with only 3 setæ on each side on the median portion of the posterior margin, as against 5 in *dimorphus*. Third (apparent) tergite not broken in the median line. A vestigial accessory plate, in the form of narrow irregular strips of dark chitinization, behind the sixth tergite is also present in *dimorphus*, though much less marked, and omitted in Bedford's figure. Genitalia (fig. 2) of the same type as in *dimorphus*. In both species the tergo-central setæ are of a rather characteristic shape, broadest in the middle and tapering to both ends.

**Female** with head almost exactly as broad as long (in *dimorphus* distinctly broader than long); chaetotaxy

* The shape of the frontal region is not entirely accurate on the sight-hand side of the figure; it should be similar to the left-hand ride,
of head and prothorax as in the male. Otherwise apparently inseparable from *dimorphus*.

The measurements, in millimetres, are as follows:

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Length</td>
<td>Width</td>
</tr>
<tr>
<td>Head</td>
<td>0.62</td>
<td>0.60</td>
</tr>
<tr>
<td>Prothorax</td>
<td>0.13</td>
<td>0.30</td>
</tr>
<tr>
<td>Pterothorax</td>
<td>0.18</td>
<td>0.53</td>
</tr>
<tr>
<td>Abdomen</td>
<td>1.12</td>
<td>0.70</td>
</tr>
<tr>
<td>Total</td>
<td>2.05</td>
<td></td>
</tr>
</tbody>
</table>

Holotype male, allotype female, and five male and ten female paratypes from *Neotis caffra jacksoni* Bannerman (Jackson’s Rufous-necked Bustard), collected by Mr. T. W. Chorley near the River Unyama, Gulu District, Uganda, on 14th December, 1937.

Holotype and allotype in the British Museum; paratypes in the Bedford, Carriker, Hopkins, and Meinertzhagen collections.

References:

ALBIN. 1736. ‘A Natural History of Spiders and other curious Insects.’ London.


DENNY. 1842. ‘Monographia Anoplurorum Britannicæ.’


——. 1874. ‘Insecta Epizoaa.’ Leipsic.


LINNÉ. 1758. ‘Systema Naturae,’ ed. x.


REDI. 1668. 'Esperienze intorno alla generazione degli insetti fatti.' Firenze.
——. 1729. 'Opuscula varia physiologica,' vol. i.
SCHRANK. 1803. 'Fauna Boica,' part. i. Landshut.