Vogonatha spinosa Cam.

Redescribed.

♂.—Black; with dense, long silvery pubescence. Yellow markings as follows: clypeus, mouth-parts, bases of mandibles, scapes except laterally, pronotal calli, scutellum, tegulae (except small macula), mesopleural calli, horse-shoe pattern on propodeum including apophyses; fore and middle legs except stripe on upper side of femora and lower side of tibia, tarsal segments 1 and 2 except apex; hind coxae except large macula on outer side, basal half of femora on underside, apical two-thirds of tibiae except the base, and all tarsi; base and apex of 1st abdominal tergite, apical margins of remaining tergites, wider laterally. White annulus of antennae complete, segments 5–10, and underside of 4 and 11. Wings hyaline, venation dark brown.

Shining. Mandibles slightly longer than wide, longitudinally striate at the base. Clypeus with sparse punctures; malar space one-third of the width of mandibles. Face with irregular longitudinal rugae, transverse on frons, vertex unsculptured. Back of head sparsely, obliquely striate and punctate, space between hind ocelli one-fourth of that between them and the eyes, which is about two-thirds of that between them and the occiput. Pronotal calli strongly and angularly produced outwards. Mesonotum with rather fine irregular sculpture except the middle of the lobes which are rough but unsculptured, the sides of notauli and margins coarsely reticulate. Scutellum with a fringe of long, erect hair. Regular coarse reticulation of the propodeum extended on metapleural; mesopleure reticulate anteriorly, continuing as transverse rugae to the speculum, which is glabrous; propodeum reticulate above, with coarse, transverse rugae below. 1st abdominal segment with lateral margins strongly carinate above and below, lower carina with two coarse, curved spines, the basal curved inwards, and a smaller spine produced below the spiracles; apical spine curved outwards. Abdominal tergites very densely reticulate-punctate, the basal half distinctly raised, 2nd tergite with a deep V-shaped impression at the base, width equals length, 3rd tergite twice as wide as long.

Length 14 mm. Ovipositor 5 mm.

♀.—Base of mandibles red, remainder of coloration as in ♂ except that the hind coxae are black with a fulvous fascia on the upper side. Upper part of the horse-shoe pattern of propodeum distinctly produced (less prominently in some ♂ specimens). Abdominal tergites with deep, transverse impressions in the middle; V-shaped impressions at the base of 2nd tergite, also in apical half of tergites 3–6. Spines of 1st segment present but less pronounced.

Length 14 mm.

Borneo, Sarawak, Mt. Matang. 3000 ft., 1 ♂, 1 ♀, 5. xii. 1913 (G. E. Bryant); W. Java, Palabuan, 1 ♂, xii. 1936 (F. Dupont), in Buitenzorg Museum, Java.

In albispinosa Cam. the head is entirely black, pronotum, tegulae, mesopleural calli, scutellum, parapsidal spines and apophyses yellow; abdominal apical fascia reddish or yellow; remaining coloration as in spinosa. Albispinosa differs structurally from spinosa in the absence of pronotal calli.

I have not seen the types of spinicollis Cam., 1909, and acutispina Cam., 1909, both from Borneo.

A very distinct genus by reason of the prominent curved spines of the scutellum.

My thanks are due to Mr. J. F. Perkins for much help in elucidating these genera.

III.—Stray Notes on Mallophaga.—III.

By G. H. E. Hopkins, M.A.*


Harrison (1916) places L. modestus Giebel in the genus "esthiopteron, and grandis Piaget and lacustris Kellogg and Chapman as synonyms. Thompson (1926), following Harrison’s lead, includes it in the genus Perineus. Both these authors have clearly overlooked the statement of Tachenberg (1882, p. 128), who, after examining the unique type, declares that it is nothing else but a female of Liperus leucopygus N., now known as Ardecita ardea (Linn.).

* Published by permission of the Director of Medical Services, Uganda.
10. The Identity of Lipurus atheronous Nitzsch.

*Lipurus atheronous* was described (ex Nitzsch's manuscript) by Giebel in 1861 (p. 517). In 1874 (p. 207, pl. xvii, fig. 8) he described the type, which he states was no longer in condition for detailed description, and published Nitzsch’s sketch. The immature specimen had meanwhile apparently been lost, and it may or may not have been conspecific. Taschenberg (1882, p. 108) considered *atheronous* to be identical with *L. quadriraculatus* Piaget (1880, p. 298, pl. xxiv, fig. 8), or, rather, with the form which Piaget mentioned from *Rheo*, and which he subsequently described (1885, p. 54, pl. vi, fig. 2) as *L. asymetricus*. Harrison (1916, p. 130) transferred *atheronous* to *Ethioperus* and Bedford (1931, p. 291) placed it in *Polakoleurus*, which is only explicable on the assumption that he had not seen the published figure.

Taschenberg is so far correct that a single glance at the figure is sufficient to show that *atheronous* is a *Struthiolipurus* and not a *Polakoleurus*, but I have recently had the opportunity of examining specimens of *S. struthionis* (Gervais), of which *L. quadriraculatus* Piaget is a synonym, and find that the shape of both the head and the thorax of these specimens agrees reasonably well with the figures of *atheronous* and quadriraculatus, but not at all with those of *asymetricus* Piaget.

I consider, therefore, that *L. atheronous* Nitzsch is a synonym of *Struthiolipurus struthionis* (Gervais), which has nearly twenty years' priority. Nitzsch’s sketch shows the general appearance of the insect rather better than Piaget’s more detailed figure.

11. The Identity of two Species of Trichodectes, s.l.

Kéler and Bedford have recently cleared up much of the confusion hitherto existing with regard to the Trichodectes found on the weasel, *Mustela nivalis* Linna., the stoat, *M. erminea* Linna., and the marten, *Martes foina* (Erx.). For these, together with some other species, Kéler has erected the genus *Stachella*. Most unfortunately this distinguished worker on Mallophaga does not wholly accept the International Rules of Nomenclature, and in particular he considers that the publication of a name as a *nomen nudum* gives it priority over a validly-described name of later date. For this reason he adopts in some instances a nomenclature which is not in accordance with the Rules, though in the particular case with which I deal here I hope to show that the name he uses need not be changed.

Kéler applies the name *Sphachiella retusa* to the species found on *Martes foina*, and attributes it to Nitzsch, 1818. Nitzsch did not describe the species, and the first description is that of Burmeister (1838, p. 436). Kéler states that Burmeister’s description was from the wrong material and really applies to specimens from *Mustela nivalis*, and it must be admitted that the very brief description fits such material better than it fits specimens from *Martes foina*. If this were all it would undoubtedly be necessary to place *T. retusa* Burmeister as a synonym of *Stachella muscele* (Schrank), and to rename *T. retusa* as later described and figured by Giebel (1861, p. 87, and 1874, p. 55, pl. iii, fig. 4) and by Kéler. But comparison of the description given by Burmeister with that published by Giebel in 1861 suggests very strongly that the former is not to be regarded as applying to different material but as a very careless and inaccurate description of the same material as was used by Giebel (i.e., the material from *Martes* on which Nitzsch based his *n. nudum*, *T. retusa*). This material is that used by Kéler for his excellent redescriptions and figure. There seems, therefore, to be no need to alter the name, and the species may stand as *Stachella retusa* (Burmeister). It is particularly to be noted that *T. retusa* “N.” of Piaget (1880, p. 397, pl. xxxi, fig. 8) is not this species but *muscele* (Schrank), and that most later users of the name *retusa* have misapplied it.

The position with regard to *Trichodectes dubius* Nitzsch is very different. In Harrison’s Catalogue (1916) this name is referred to Nitzsch in Denny, Harrison taking the view that Nitzsch’s publication of the name in 1818 was a *nomen nudum*. This view has been accepted by several later authors, but is quite incorrect. The original mention of the name by Nitzsch is in the following form:—

“Tr. (dubius) (Mustele vulgaris).

Pediculus Mustela Schrank Fauni. boica.”

The name *dubius* is, therefore, not a *nomen nudum* but an unnecessary *nomen novum* for *mustele* Schrank,
and an absolute synonym of this name—a view correctly accepted by Kéler. Both names apply to the species found on the weasel. In connection it is necessary to consider also the name *Trichodectes pusillus* N. (Giebel, 1861, p. 88); this is again an unnecessary new name for *dubius* Nitzsch. Although Giebel, in 1874, mentions as hosts both *M. vulgaris* and *M. erninea*, he definitely states that he had seen no material from the latter host, which is evidently quoted from Denny. The name is an absolute synonym of *mustela*.

Denny’s description of *T. dubius* was made from specimens collected from weasel and stoat, which he did not separate. His material has been lost, but Thompson (1937, p. 76) has designated *M. erninea* (stoat) as type-host, and Bedford (1939, p. 108, figs. 3, 4) has published a description and figures of material from the same host under the name *Trichodectes dubius* Nitzsch. It will be obvious from the facts set out above that *T. dubius* Denny (as restricted by Thompson and by Bedford) is invalidated by *T. dubius* Nitzsch, and requires a new name. I would have wished to name it in honour of my friend the late Mr. G. A. H. Bedford, who did so much to increase our knowledge of the Trichodectidae, but his name has already been attached to several species of the group, and in view of the fact that at least one distinguished worker still regards all the species of Trichodectidae as congeneric this course might lead to confusion.

I have been able to examine a large number of specimens of the species of *Stachyella* found on the stoat, including the material utilized by Bedford. Although my material is from two different subspecies of the host, and from a number of different localities in England and Germany, the differences which separate the species from *mustela* are absolutely constant throughout the series. These differences are excellently shown in Bedford’s figures, and I see no object in re-figuring the species. My series shows a preponderance of females over males, but it is not very marked.

*Stachyella erninea*, sp. n., differs from *S. mustela* (Schräf) chiefly in details of chetotaxy and in the form of the subgenital median lobe of the female. I have not seen *S. retusa* (Burnmeister), but from Kéler’s figure the chetotaxy of this species is much more like that of *mustela* than that of *erninea*.

In the female the subgenital lobe in both species has a median excavation, bordered on each side by a projection; in *erninea* this projection is somewhat irregularly shaped and variable, but it is shorter and shallower than in *mustela*. The arrangement of the setae is much the same in the two species, but their size and number differ considerably; almost all the tergolateral setae of the abdomen are longer in *erninea* than the segment from which they arise, whereas in *mustela* they are distinctly shorter than the segment; they are also somewhat more numerous in *erninea*. The difference in size is especially marked on the second (apparent) tergite, which bears a minute seta in *mustela* but a large one in *erninea*. The sternocentral setae of the two species differ in a similar way, being longer (especially towards the outer end of the row) in *erninea* than in *mustela*, though there appears to be little or no difference in the number of sternocentrals in the two species.

In the male both species possess two tergolateral setae and one tergo-central seta on most of the abdominal tergites; in *mustela* the former are of roughly equal size and the latter are large (longer than, or about as long as, the segment) on the first to fifth apparent abdominal tergites, whereas in *erninea* the outer tergolateral seta of each pair is much smaller than the inner and the tergo-central setae on all but the first two apparent tergites are minute. On the ventral surface the sternocentral setae are more numerous and longer in *erninea* than in *mustela*.

Holotype female and allotype male from *Mustela erninea stabilis* Barrett-Hamilton (English stoat), from Suffolk, England, May 1935. Paratypes from same host (various English localities and dates) and from *M. erninea* (recently Kurr, Aurich, Germany, and Rosenheim, Bavaria, Germany). Holotype and allotype presented to the British Museum; paratypes in the Bedford, Eichler, Hopkins, Radford, and Thompson collections.

It must be noted that *Trichodectes retusa* Nitzsch of Osborn does not resemble *S. erninea*. His specimens were figured by Morse (1903, p. 629), and are stated to have been taken “on the weasel, *Putorius erninea*” at Ames, Iowa. *Mustela erninea* does not occur in North America, and from Morse’s figures one can only assume either
that the North American representative of the stoat (probably \textit{M. ciconioides}) has a totally different parasite from the European stoat or that the specimens were not from the host ascribed to them.

12. \textit{The Identity of Lipurus fissomaculatus Giebel.}

Giebel described this species somewhat briefly in 1874 (p. 225) from a few specimens collected on \textit{Myxetia crumenifer} without further data. Piaget (1872, p. 317) makes two erroneous statements about it: that the principal difference from \textit{versicolor} Nitzsch (\textit{=ciconia} Linn.) is in the shape of the abdominal bands (i.e., the chitined tergal areas) and that this shape was due to the immaturity of Giebel's material; Giebel mentioned two characters of greater importance than the shape of the bands, and this shape is characteristic of adult specimens of the species found on \textit{Leptopilos crumeniferus}. Taschenberg (1882, p. 128) noted that the types were no longer in the Halle collection, and considered the species to be synonymous with \textit{versicolor}. Piaget (1885, p. 58, pl. vi. fig. 5) obtained the species on \textit{Leptopilos crumenifer} in the Amsterdam Zoo and described it as \textit{Lipurus genitallis}; his figure, though adequate for the recognition of the species, is not wholly accurate (see below). Harrison (1916, p. 134) accepted Taschenberg's statement that \textit{fissomaculatus=versicolor}, and included both the names under discussion in \textit{Estheioterum—fissomaculatus} as a synonym of \textit{ciconia} and \textit{genitallis} as a good species. Clay (1925, p. 616) included \textit{genitallis} in her new genus \textit{Ardeicola}.

But Giebel states of his species that the process of the third antennal segment in the male is markedly longer than in \textit{L. maculatus} (with which he compares it), that the clypeal signature is not round but narrowly parallel-sided and long, and that "zeigen die Flecken und Bünden der Hinterleibssegmente an ihren Vorderrandende und nache dem Seitenrande der Segmente einen tiefen scharf umgrünten weissen Schütz." All these characters are found in \textit{genitallis} but not in \textit{ciconia}. It is, therefore, beyond reasonable doubt that \textit{genitallis} Piaget is a synonym of \textit{Ardeicola fissomaculata} (Giebel).

As Giebel's types are lost I designate as neotype a male and as neallotype a female from a marabout stork,
Male.—Head broader than long, forehead fairly deeply concave anteriorly. Choriotaxy of head as shown in the figure. First segment of antenna much enlarged, second segment very slightly shorter than third, apex of antenna with two short, stout, curved spines, as is usual in the genus. Dorsum of prothorax with an oblique row of small setae, of pterothorax with a continuous nearly straight row of small setae extending the whole breadth of the segment just before the posterior margin. Legs moderately stout, the tibie of the second pair slightly slenderer than the others. Abdomen pale-coloured, with rather weakly chitinised tergal plates and pleurites. Abdomen broadest at the second (apparent) segment, thence tapering regularly to the apex, margins strongly crenulated. Tergite of first segment somewhat quadrate, weakly concave anteriorly and posteriorly and broader anteriorly than posteriorly, remaining tergites convex anteriorly and concave posteriorly; subsidiary tergal plates present posterior to the tergites of the 4th, 5th, and 6th (apparent) segments. Each segment with a single continuous transverse row of small setae and a group of pleural setae, the latter practically continuous with the transverse row on the posterior segments. Apex of abdomen produced into a large lobe, deeply incised terminally in the middle, shaped as in the figure; the lobe is pale brown, but the incision has a rather broad border which is deeper brown owing to its higher degree of chitinization; it is provided with a marginal row of small setae which extends into the incision and anteriorly becomes irregular and submarginal. Genitalia of the same type as in B. harrisi, but very different in proportions and shape of the parts, the basal plate broad and short, the parameres very strongly curved, and the endomerus short, slightly curved, and rather slender.

Female.—Head almost as in the male except for the usual sexual difference in the antenna. Abdomen broadest at the 3rd (apparent) segment, almost perfectly egg-shaped, margina crenulated as in the male. Tergite of 1st segment shaped almost as in male but broader and deeper, tergites of segments 2 to 7 with almost parallel margins and rounded ends, slightly convex in front and concave behind, the tergite of segment 2 very slightly narrower (from side to side) than that of segment 3, which is the broadest, the remainder decreasing regularly in breadth from the tergite of segment 3 to that of segment 7, tergite of 8th segment irregularly shaped, much reduced posteriorly, so that it is almost completely broken in the median line. Choriotaxy of abdomen almost exactly as in male. Copulatory valves * of approximately the same shape as in B. thomsoni Bedford, but setiferous margin convex posteriorly and concave anteriorly, forming a double curve.

* I adopt a translation of Kohler's term for the gonapophyses of other authors.
Measurements, in millimetres, are as follows:

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<th>Male</th>
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<th>Female</th>
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<td></td>
<td>Length</td>
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<tr>
<td>Head</td>
<td>0.45</td>
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<td>Prothorax</td>
<td>0.10</td>
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<td>Pterothorax</td>
<td>0.10</td>
<td>0.37</td>
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<tr>
<td>Abdomen</td>
<td>1.21</td>
<td>0.67</td>
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<tr>
<td>Total</td>
<td>1.86</td>
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Described from 8 males and 16 females from Alcelaphus leelei rosceleti (Heller), collected by Mr. T. W. Chorley at Potango, Awach, Gulu District, Uganda, on 10th November, 1937. It is worth recording that Mr. Chorley and I, being very largely dependent on this buck for meat during most of 1937, must have examined more than 20 specimens for Mallophaga; B. cholrelyi was only found on the single individual mentioned above.

Holotype male and allotype female presented to the British Museum; paratypes in the Bedford, Hopkins, and other collections.

14. The Species of Mallophaga described by Rudow from Tinamidae.

Carriker (1936) and Clay (1937) have demonstrated very clearly the extreme complexity of the Mallophagan fauna of the Tinamidae. Conditions in this group are nearly perfect for the carelessness of Rudow, coupled with rash identifications of his species by later authors, to produce the maximum confusion in the synonymy, and the result has been almost all that could have been expected.

Rudow appears to have collected material off only two species of Tinamous, Notura borsaqua ("Tinnamus borsaqua") and Rhamphus rufescens ("Tinnamus rufescens"). From the former he described Trinotom biguttatum (1866, p. 467), Goniocotes dilatatus (1870, p. 470), Docophorus crassipes (sic) (1870, p. 16), Nirmus anatus (1870, p. 474), and N. tinnami (1870, p. 473). From R. rufescens he described Goniocotes rotundatus (1869, p. 22) and Nirmus crassipes (1870, p. 473).

Knowing how specific the Mallophaga of the Tinamidae are, we dare not synonymize species from two hosts which are not even congeners, though this has been freely done in the past.

It is probably simplest to consider the species according to the genera in which Rudow placed them:

No conclusion is possible with regard to Trinotom biguttatum, but there is a strong probability that the specimens were stragglers. It is conceivable that there is on the Tinamidae an Ambliphilous genus superficially resembling Trinotom, but no subsequent author has rediscovered it.

Goniocotes rotundatus and G. dilatatus have caused endless trouble. The very brief description of the former was reproduced by Taschenberg (1882, p. 94); Giebel seems not to have known this description. The original description of this species agrees very well with Carriker's interpretation of the name (1936, p. 159, pl. xxviii. fig. 1), except that there are actually six "roten stümpunken" instead of four as stated by Rudow, and the latter describes the apex of the abdomen as "2-höckrig" or two-humped. The outer pair of "stümpunken" are very small and easily overlooked, and the abdomen of the female is apically somewhat indistinctly bilobed *, so that these discrepancies are of no importance. The size is another discrepancy, for Rudow says that the "Grosse" of rotundatus (by which he seems to mean the length) is 1 mm., whereas Carriker's specimens are markedly larger; but I have shown (Hopkins, 1939) that the sizes given by Rudow are completely meaningless. There is, therefore, absolutely nothing in the original description of Goniocotes rotundatus which conflicts with Carriker's interpretation of the name. Giebel seems not to have known the species, and Piaget's mention of it (1936, p. 233) is quoted from Rudow. Taschenberg (1882, p. 92, pl. iii. fig. 8) redescribed it and figured the male; the specimens he used were part of Rudow's material and are still preserved in the Halle collection, and it would have been unnecessary to discuss the species at such length but for Taschenberg's amazing statements about it in his discussion of dilatata. Taschenberg's figure is fairly good, and the species figured has been

* Through the kindness of Mr. Carriker I possess a pair of his specimens from R. rufescens rufescens.
accepted by all later authors (correctly, in my opinion) as Gonicocotes rotundatus Rudow.

In his description of Gonicocotes dilatatus (1870, p. 490) Rudow states that specimens from Rhynchocoris rufescens "sind mit diesem in der Form übereinstimmnd, nur das Abdominalende ist etwas breiter, die Zeichnungen etwas länger und daneben mit gelbem Fleck. Da aber der Thorax als charakteristisches Merkmal bei beidem gleich ist, auch das Abdomen und der Kopf nur in der Breite etwas abweichen, so nehme ich keinen Anstand, sie beide zu einer Species zu rechnen." These remarks are at the root of much of the confusion with regard to the names rotundatus and dilatatus, for they have been construed as a statement that rotundatus (from R. rufescens) is conspecific with dilatatus. They cannot rightly be read thus, for Rudow does not mention the name rotundatus in this connection; but even if it be assumed that this was his meaning, the differences he mentions would certainly nowadays be considered specific. The original host of Gonicocotes dilatatus was "Tinnamus banaquira," and Giegel (1874, p. 192) redescribed as Goniodes dilatatus Rudow specimens from "Tinnamus banaquira," which he states he received from Rudow: he describes the antennae as strongly sexually dimorphic, and for this reason it has been assumed that his species is not the same as that of Rudow. Piaget (1880, p. 258, pl. xxv, fig. 5) described and figured a species from Tinnamus variatus and T. obsolatus which he called Goniodes dilatatus R.; Clay (1937, p. 139) has examined Piaget's material, and finds that it is Heptapogaster subdilatatus (Piaget). Taschenberg's treatment of dilatatus is truly amazing. He starts out (1882, p. 48) with the misstatement that Rudow described the species from Rhynchocoris rufescens, and then states that Rudow apparently had two totally different species but identified them wrongly: "Was er als Goniodes dilatatus beschrieben hat, ist wirklich ein Goniodes und kein Goniodes, was er aber als Giebel angesandt hat, ist kein Goniodes sondern ein Goniodes." He identified the latter (incorrectly) with dilatatus Piaget, and states (also incorrectly) that as dilatatus Rudow and dilatatus Giegel are in different genera both names can be used. He says that one of the

* In spite of the fact that, according to him, dilatatus Giegel is a misidentification of dilatatus Rudow.

two titles from Hamburg (e.g., from Rudow) contains two males of the species described by Giegel and the other contains two males of the Goniodes and one of the Goniodes. * His most important statements are that he had seen Rudow's drawing of dilatatus, and that all the material he had seen was from R. rufescens. He goes on to state (p. 49) that, from the description, rotundatus Rudow is identical with dilatatus Rudow, which is certainly incorrect. As he had seen Rudow's drawing we may safely assume that dilatatus Rudow is very similar to rotundatus, as is, indeed, apparent from Rudow's descriptions of the species. But it seems perfectly clear from Taschenberg's own statements that he never saw true dilatatus, since he saw no material from Notthara boraguira; his sinking of dilatatus Rudow to rotundatus is, therefore, wholly unjustified. Carrick (1936, p. 126) has accepted Taschenberg's statements about dilatatus. But is there any evidence for Taschenberg's statement that dilatatus Giegel is not dilatatus Rudow? I have compared the descriptions of the two authors very carefully and find only the following major discrepancies between them: — Giegel describes the antennae as sexually dimorphic, whereas Rudow placed the species in Goniodes. Rudow states that the metathorax is much wider than the head, whereas Giegel merely says that it is broad, and Rudow says that the angles of the abdomen project, whereas Giegel says that they are not prominent. Both descriptions obviously refer to members of the genera Heptapogaster or Tinamico, which are only separated by the presence of sexual dimorphism of the antenna in the former. I do not consider any of the discrepancies which I have mentioned to be important, especially in view of Rudow's notorious carelessness. With regard to the antennae, Rudow's description is quite clearly of the female, and there is no evidence that he ever examined a male, though he obviously sent males to Giegel. The statement about the metathorax must be a slip, for of no known member of either of the genera is this true, but in Tinamico rotundata the wings of the mesothorax, to which both Rudow and Giegel clearly refer in this connection, make it appear quite distinctly wider than the

* If this statement is correct the specimens must be lost, for Dr. Köler kindly informs me that all the specimens now in the collection agree with Taschenberg's figure.
head, and the difference between "wider" and "much wider" is a mere matter of personal opinion in the absence of measurement or figures. Similarly the third discrepancy is a matter of personal opinion, for the two species figured by Carricker in his pl. xxvi. fig. 2. and pl. xxvii. fig. 1. would certainly be described as having projecting angles by some authors but not by others. I claim, therefore, that there is no real reason to assume that Gielis's dilatatus was not that of Rudow, and that the fact that Gielis states that his material was from the type-host and was received from Rudow is good evidence that it was Rudow's species. In any case Gielis's position as first reviser entitles his interpretation of the name to stand unless there is conclusive evidence that he was wrong, and the evidence against him is very far from conclusive. Rudow's description is not sufficiently detailed to be referable to any particular species, and his types are lost. Gielis's much more careful and detailed description does not conflict in any important respect with Rudow's, and (Gielis's material also being lost) the name dilatatus Rudow is applicable to any species of Heptapogaster occurring on Nothra borauria which agrees with Gielis's description. It should be fixed by re-description and the erection of a neotype.

Docophorus crassipes is obviously a misprint for crassipes, since one of Rudow's characters for the species is "Fusse dicht." The description reads rather like that of a Hepatogaster, but so many genera are known from the Tinamidae that it would be rash to attempt to place the species, even generically, until ample material is available from the type-host, Nothra borauria. In any case the name is invalidated by Docophorus crassipes Burmeister, 1838.

The two names Nirmus anatus and N. tinami were both given to material from Nothra borauria, and Carricker (1936, p. 92) considers that they refer to the two sexes of a species of Strongylocotes. I see no reason to disagree with this opinion. He also (p. 92) synonymizes Nirmus crassipes Rudow with Strongylocotes l. lipogonus (Nitzsch).

Mr. G. H. E. Hopkins on Mallophaga.

both from Rhynchota rufescens, and I believe him to be correct.

SUMMARY.

Great confusion has occurred with regard to some of the Mallophaga described by Rudow from Tinamidae, the principal causes being the inadequacy and carelessness of his descriptions, the fact that most of his types are lost, and Tashenberg's errors with regard to hosts and identifications. The statements made by Tashenberg have been accepted by almost all recent authors, but many of them are entirely erroneous. Of the species described by Rudow Tristisinae bistattata, from Nothra borauria, is not identifiable even generically, and is probably a straggler; Docophorus crassipes, from the same host, is perhaps a Hepatogaster, but the name is preoccupied by D. crassipes Burmeister.

There is no valid reason for the assumption that Gonioconus dilatatus Rudow and Gonioconus dilatatus Rudow of Gielis are not conspecific; the assumption originates with Tashenberg, who never saw material of either, since he records that all the material he saw was from Rhynchota rufescens. The name Heptapogaster dilatatus (Rudow) is, therefore, available for any species of this genus, found on Nothra borauria, which agrees with Gielis's redescription. Piaget's "dilatatus Rudow" is not Rudow's species, but is identical with Heptapogaster subdilatatus (Piaget).

Gonioconus rotundatus Rudow has been correctly identified by Tashenberg and by Carricker. It is a "Tinamico" and is only known from Rhynchota rufescens. Some of Rudow's type-material is in the Halle Museum, and from this material a lectotype ought to be selected.

Nirmus anatus and N. tinami, from Nothra borauria, are the sexes of one species of Strongylocotes; the latter name has page priority. Nirmus crassipes is a synonym of Strongylocotes l. lipogonus (Nitzsch).

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PELMAEA. HEMIPEPSIS Dibl.


Hemipepsis approximata, sp. n.


Kopf hinter den Augen sehr stark verschmäler., Schläfen flach abgewölbt, seitlich nicht ± so dick wie ein Auge. Ocellenstellung spitzwinklig, POL = OOL Seiten der Stirn eben (gegen die Mittellinie weder gehoben noch gesenkt), ihr mittlerer Teil eine breite und flache Furche bildend, die sich gegen die vordere Ocellen verschmälernt. Innenrand der Augen ziemlich gerade, nach oben stark konvergent, ein Auge mitten breiter als eine Stirnfläche.


Promontum flachbogig ausgespart. Scutellum hochstens vorn mit Andeutung einer keilartigen Mittellinie; Postscutellum vorn mit Andeutung eines flachen Gipfels. Postnotum fast so lang wie das Postscutellum, mit nach vorn durchgebrochenen Querrunzeln, die von dem seitlichen Gruben aus (an der Grenze des Propodeums vor dem Stigma!) steil ansteigen; mitten sind diese Runzeln oder Streifen durch flaches Längsdruck leicht abgeleitet, aber nicht durchschnitten. Propodeum mit durchlaufender scharfer Querreihen vor dem aufschüssigen