

## Mallophaga from Bolivian Birds.

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The following determinations and descriptions of new species of *Mallophaga* refer to a small collection of specimens from Bolivian birds in 1901 by the late Perry O. Simons. (This unfortunate collector of birds for the British Museum was murdered by Indians in the Bolivian mountains in 1902 (?))

In Simons' notes the birds are listed only under Bolivian vernacular or descriptive English names, and we are unable to ascribe them with certainty to their proper species. The English names reveal at least their general sort, as duck, humming bird, eagle, etc.

### *Docophorus laticeps* Giebel.

Several specimens from the "white-headed oriole" (Choro, Bolivia, 3500 metres, dry season).

### *Docophorus communis* Nitzsch.

Specimens from "bird" (Choro, Bolivia).

### *Docophorus fissi-signatus* n. sp. (Fig. 1.)

Two females from "desert curlew" (Lagonillas, Bolivia).

This species belongs to Piaget's type *fisignati* from the Spoon bills and Ibises and is the second of this type that we have found on curlews in this country.

*Description of female*.—Body length, 2.4 mm.; width, 1.06 mm. Signature double. Head: Length, .66 mm.; width, .68 mm.; quite dark in color except for the clypeus; signature double, somewhat lighter in color than the rest of the head except for its two posterior prolongations; margin and space between the portions of the signature transparent. Clypeus truncate; rounded on the angles, sides slightly diverging, suture distinct. The antennal bands extend over half the length of the clypeus. A prominent hair arises just forward of the termination of the antennal band and another shorter one on the margin at the termination of this band; also a short hair near the suture with another long one arising on the dorsal surface further forward; a hair arising from the ventral surface extending beyond

the lateral margin near the center. On the margin just behind the clypeal suture are three rather long hairs, a short one on the base of the trabeculae and a long one on the margin near the basal segment of the antennae. Temples broadly rounded with three long hairs and three short spines; a hair and one spine arising from the prominent eye. Occiput nearly straight, very slightly sinuous; the occipital bands are prominent and are prolonged in the antennae. Second segment of antennae nearly as long as the last three; third shortest; second and third very light in color, the basal and terminal two being somewhat darker.

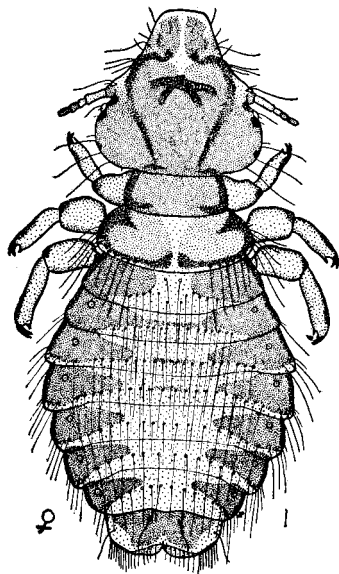


FIG. 1.—*Docophorus fissi-signatus* n. s. ♀ line.

Thorax shorter than head and narrower; length, .4 mm. Prothorax, a trifle less than half that length; quadrangular with a lateral marginal band which also extends along the posterior margin nearly to the center. Median portion of segment light in color. Metathorax with sides diverging, posterior angles broadly rounded and posterior margin convex; a row of pustulated hairs extends around from the straight diverging sides half way to the center of the posterior margin. There are two blotches leaving a narrow uncolored line down the center; darker marginal bands extend from the anterior angles to the median uncolored

Abdomen elliptical with segments of nearly equal length except the ninth, which is very small and bilobed; color pale except for the dark, sharply defined, triangular transverse blotches on the first seven segments which extend in about two-thirds of the way to the center; These segments also have pitchy lateral bands. A spiracle occurs in a clear space on segments two to seven. The eighth segment is dark in color except along the margin; two hairs arise near the center of this segment from clear pustules. The last two segments are rounded, the eighth with straight, almost parallel lateral sides, and a fringe of hairs on the posterior margin. There is a row of hairs across the middle of each of the preceding segments and several in each posterior angle.

line.

**Nirmus fuscus** Nitzsch.

Several specimens from "hawk" (Cochabamba, Bolivia); also from "hawk" (Charuplaya, Bolivia).

**Lipeurus temporalis** Nitzsch.

Several specimens from "river duck" (Charuplaya, Bolivia).

**Lipeurus epiphanes** n. sp. (Fig. 2.)

Male and female from "desert curlew" (Lagonillas, Bolivia).

*Description of female.*—Body length, 2.88 mm.; width, .56 mm. Head: Length, .6 mm.; width, .34 mm.; conical. Clypeus parabolic in front, sides almost straight and parallel; edge transparent with signature concentric to it; suture distinct; a rather long hair at the

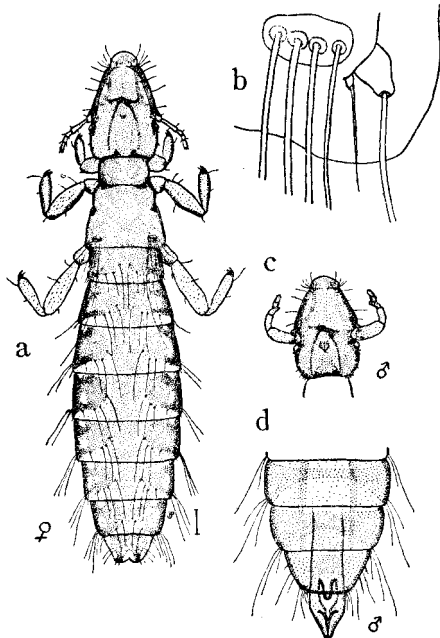


FIG. 2.—*Lipeurus epiphanes* n. sp.—a, female; b, tactile hairs of the postero-lateral angle of the metathorax; c, head of male; d, last abdominal segments of male.

angle between the straight side and the parabolic front, and three long ones at the suture. Sides of head behind the clypeal suture straight, diverging to the antennae and bordered by the prominent antennal bands; these bands turn inward at the clypeal suture, fol-

lowing it and almost meeting at the center; three hairs, evenly spaced, on the margin between the clypeal suture and the short trabeculae and another one arising on the ventral surface extending beyond the margin at a point between the anterior two of those mentioned above. From a point near the posterior ends of the antennal bands arise two internal bands which extend obliquely inward a short distance, then curve forward and run parallel to the posterior lateral angles of the clypeal signature. A narrow dark band extends entirely around the posterior part of the head connecting the ocular bands; temples almost straight and slightly converging behind the eyes, rounded at the posterior angles; occipital margin concave; occipital bands narrow, distinct. Eye prominent with a short hair on the dorsal surface and a short spine at its posterior margin; six short hairs and spines on the temples. Antennae pale, second segment as long as the last two, third segment shortest. In the male antenna the first segment is large and about as long as the following three segments together; the second segment comes next in length and the fourth is the shortest; the third has a narrow pointed appendage; there is a horseshoe-shaped blotch at the base of the first segment.

Thorax trapezoidal; prothorax quadrilateral, with sides slightly diverging behind; coxae show through plainly; length, 16 mm.; width, 28 mm. Metathorax length, .36 mm.; width at posterior angles, .4 mm.; sides diverging behind; posterior angles rounded; lateral margins notched at a point about one-third the distance from the anterior angles with a dark blotch, probably marking the suture between the metathorax and mesothorax. There are six hairs arising from the dorsal surface in the posterior angles; the outer one is very long and arises from a large curious papilla; the second is short, arising from a small papilla; the other four are very long and close together in a group. (See b, Fig. 2.)

The abdomen is long and rather narrow, expanding slightly to the fourth segment which is widest; last segment bilobed, straight across the posterior margin in the male. There are narrow dark lateral bands on each segment except the last and transverse blotches, which extend about a third the way across the body, and there are also faint lengthwise median blotches. Each lateral band extends into the segment in front and has two long appendages which curve back making a clear space in the anterior margin of the transverse blotch of the segment to which the lateral band belongs. The blotch on the last segment is median and bilobed; the margin of this segment is transparent. There are about six hairs on each segment except the last, and several hairs in the posterior angles. In the male the posterior margin of the last segment is straight. The genitalia of the male are as shown in Fig. 2, d.

**Goniodes aliceps** Tasch.

Four specimens from "Colloma" (San Ernesto, Bolivia), "Colloma" being merely the local name, we are able to make from it no determination of the bird, but from the kinds of its parasites we can say, almost with certainty, that it is some species of Tinamou, probably *Crypturus* sp.

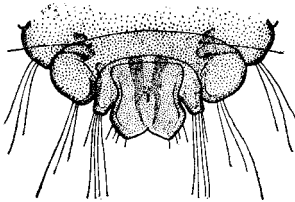
**Goniodes agonus** Nitzsch.

FIG. 3.—Last abdominal segments of *Goniodes agonus* Nitzsch. ♂

Six specimens, including one male, from "Colloma" (San Ernesto, Bolivia) collected with *G. aliceps*. The male of the curious species has not heretofore been recorded. Our male specimen unfortunately has the head damaged and the antennae lost. We figure (fig.

3) the last segments of the abdomen which differ greatly from the female.

**Colpocephalum osborni** Kellogg.

Several specimens from "red-headed bustard" (Choro, Bolivia, 3700 metres, dry season).

**Colpocephalum flavescens** Nitzsch.

Two females from "hawk" (Charuplaya, Bolivia, 1350 metres, dry season):

**Menopon maestum** Kellogg and Chapman.

Three specimens from "bird" (Choro, Bolivia).

**Menopon** sp. (juv.).

One specimen from "blue finch" (Choro, Bolivia).

**Trinoton luridum** Nitzsch.

One specimen from "river duck" (Charuplaya, Bolivia).

**Trinoton lituratum** Nitzsch.

Two specimens from "river duck" (Charuplaya, Bolivia).

**Laemobothrium** sp.

Two specimens from "grasshopper hawk" (Charuplaya, Bolivia). Although this species differs obviously from any *Laemobothrium* yet described in satisfactory manner, we shall not add a new species to this genus until the existing species determinations have been thoroughly revised. The genus is at present in a simply impossible condition.

**Physostomum doratophorum** Carriker.

Several specimens from three (three species?) "humming-birds." (Choro. Bolivia.)