

MALLOPHAGAN RECORDS AND DESCRIPTIONS.

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III. LOUSE OF THE RUSTY GRACKLE.

Docophorus barbatus n. sp.

Elongate, head and thorax red brown, abdomen fuscous brown. Length 2 mm.

Head much narrowed in front of antennæ, the margin slightly incurved; clypeus convex in front, clypeal signature long, narrow behind, clypeal space bordered by sinuate chitinous bars; trabecule conic, anterior border scarcely sinuate; antennæ small, first joint thick and short, second longest. Border of head with five bristles in front of antennæ, two long bristles and two short minute hairs on border behind antennæ, and four very minute hairs on occipital border. Prothorax quadrate, anterior angles rounded, postero-lateral angles nearly rectangular, hind border slightly convex, a long bristle in angle; metathorax with prominent lateral angle and with three or four strong bristles. Abdomen elongate ovate, scarcely wider than head; fasciæ broad, fuscous brown, each segment with marginal row of strong bristles; terminal segment with distinct incision.

The male genitalia are slender, the terminal segment almost truncate with a few stiff bristles on apical margin, the segment being dark below and the abdominal fasciæ nearly continuous above.

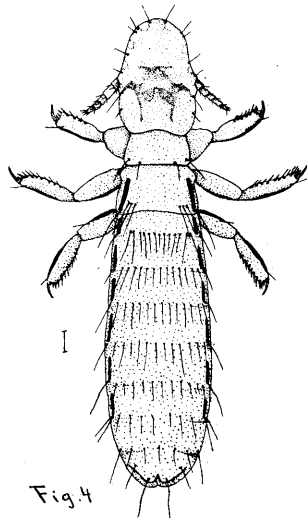
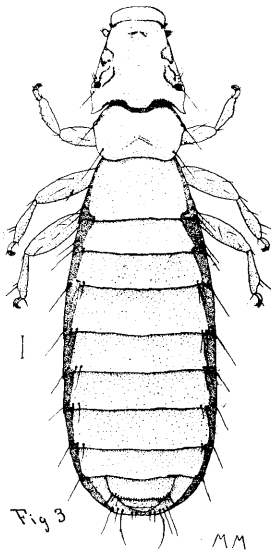
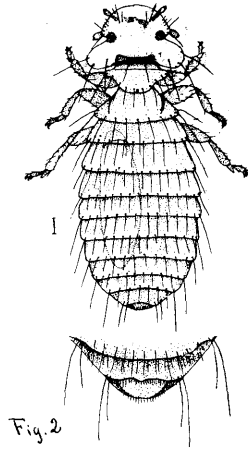
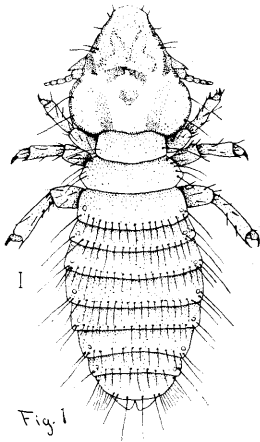
This species presents some quite remarkable similarities to *speotyti* Osb., especially in the clypeal structure and the excision of terminal segment in the female, and were there not apparent certain constant differences I should be tempted to think it that species and its occurrence on the grackle accidental. The shape of head, terminal segment of male and genitalia differ, and I conclude they must be distinct. Collected from the rusty grackle, *Scolecophagus carolinus*, at Lincoln, Nebraska, by Professor Lawrence Bruner.

IV. NEW SPECIES AND RECORDS IN COLPOCEPHALUM AND PHYSOSTOMUM.

Colpocephalum pectinatum n. sp.

Light brown with conspicuous ocular and occipital spots. Length 2 mm.

Head of usual form; anterior border strongly convex; about six minute hairs and one long bristle in front of the antennæ; postero-lateral lobes with three long bristles and several small hairs. Occipital spots connected by a brown band, but no distinct connecting band with the ocular spots. Prothorax with prominent lateral angles, a strong bristle and a small hair at extreme angle and six bristles on the hind border. Metathorax with long marginal bristles. Legs unicolorous, the hind femora with three combs of minute teeth. Abdomen elongate ovate, with faint brownish transverse bands and a row of marginal bristles; third segment below with two combs of minute hair-like teeth on each side, a little nearer the margin than median



line, each comb with about ten teeth. Penultimate ventral segment with a median process and ciliate border; terminal segment of female with fine ciliate border.

Described from a number of specimens collected from the burrowing owl, *Speotyto cunicularia hypogæa*, by Prof. Lawrence Bruner, Lincoln, Nebraska.

The peculiar combs of fine hair-like teeth on the third segment of the abdomen, while not confined to this species are, with other characters, quite distinctive and are of special interest as showing the range of morphological features presented by members of this group. Since noting them in this species I find Piaget had described similar combs on the femora of his *pectiniferum*, a species occurring on *Milvagos pezoporos*. Of these he says "four to 5 petits peignes dont les dents diminuent insensiblement de longueur." He makes no mention of combs on the abdominal segment, which in my species have a very similar structure. About the only function that can be assigned to them is that of assisting in holding the body in definite positions in its attachment to the feathers.

Colpocephalum spinulosum Piag. var. *minor* Kellogg. (New Mallophaga III. p. 112.)

A female specimen from the American dunlin, *Tringa alpina pacifica*, from Prof. Bruner, "Salt Lake Haggard," corresponds so closely with the form described by Kellogg from *Calidris arenaria*, Pacific Grove, Cal., that I do not hesitate to so place it.

Colpocephalum laticeps Kellogg. (New Mallophaga I, p. 149.)

Kellogg described this species from one male taken from *Ardea egretta*. I have one mature female and three immature individuals taken at Ft. Collins, Col., by A. C. Stephenson, from the American bittern, *Botaurus lentiginosus*, which agree in almost every detail and description as separate species would seem unwarranted. In shape, markings and distribution of hairs and bristles there is scarcely any difference, but the meta-thorax is narrower and the lateral margins more strongly colored than shown in Kellogg's figure. Length of male is given as 1.72, and this female is nearly 1.80 mm.

Physostomum hastatum n. sp.

Occipital angles with distinct hooked angle, margins of abdomen brownish the disk with a broad brownish stripe. Length, 3 mm.

Head with the front expanded, submargin convex with numerous bristles; the labral lobes (palettes), large, projecting much beyond the margin of the

EXPLANATION OF PLATE 14.

- Fig. 1. *Docophorus barbatus* n. sp. Female dorsal view.
 Fig. 2. *Colpocephalum pectinatum* n. sp. Female, ventral surface of posterior segments below.
 Fig. 3. *Physostomum hastatum* n. sp. Female dorsal view.
 Fig. 4. *Lipeurus marginalis* Osb. Description page 176 ante.
 Figures by Max. Morse, under direction of the author.

head when out-turned; palpi reaching slightly beyond border of head; antennae minute, antennal cavities marked by distinct brown borders; ocular fleck conspicuous; occipital angles produced and with a distinct hook. There are two minute hairs on the border in front of antennal pit, three just behind ocular fleck and two longer bristles between fleck and occipital angle about equidistant from each other—the fleck and the angle. Thorax broader than long, rather deeply concave in front and shallowly concave behind, the lateral angles prominent and with a bristle and two minute hairs; postero-lateral angles rounded, with bristle and one minute hair. Metathorax with about four minute hairs on lateral border, anteriorly two long bristles on postero-lateral border. Abdominal segments with brown marginal stripe narrowing on eighth segment; a light brownish discal area extending from base to near the tip and covering about half the width of the segments.

This species agrees in coloration with *diffusum* var. *pallidum* Kellogg, but is much smaller than his measurements for *diffusum*, and the distinct hook of occipital angle would seem to separate it from that form. From *sucinaceum*, which it resembles in size, it is distinguished at once by the narrower front of head, different shape of occipital angles and number of bristles and the marginal abdominal bands.

Described from three specimens, females, two from the Oregon junco, *Junco hyemalis oregonus*, Ft. Collins, Colorado, collected by A. C. Stephenson, and one from *Junco aikenii*, Ft. Robinson, Neb., from Prof. Lawrence Bruner. It would seem probable that this form and Kellogg's *diffusum* var. *pallidum* must be closely related, but so far as present specimens go they seem quite distinct.

It is somewhat remarkable that in this genus nearly all descriptions have been from females only; only four species, so far as I have noted, referring to males, a fact that would seem to indicate that the males are quite rare or manage to escape quickly from dead birds, though the females also are usually taken in but small numbers.

Physostomum diffusum Kellogg.

Kellogg has described this species from specimens taken from the Sandwich sparrow, *Ammodramus sandwichensis*, and the golden-crowned sparrow, *Zonotrichia coronata*.

Specimens evidently belonging here have been sent me by Prof. Bruner, taken, one female from the Lincoln sparrow, *Melospiza lincolni*, Lincoln, Nebraska, and one female and one male from the Savanna sparrow, *Ammodramus sandwichensis savanna*, Lincoln, Nebraska. The male is smaller than the female, 3 mm. long, and is lighter colored, the abdomen clear white or transparent, the genital fork inconspicuous faint brown, the ends of the prong broad and rounded, a more distinct brown, crescent-shaped genital ring.