

DESCRIPTIONS OF NEW SPECIES OF MALLOPHAGA COLLECTED
 BY C. H. MERRIAM WHILE IN THE GOVERNMENT GEOLOGICAL
 SURVEY OF THE ROCKY MOUNTAINS, PROFESSOR F. V. HAY-
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BY A. S. PACKARD, JR., M. D.

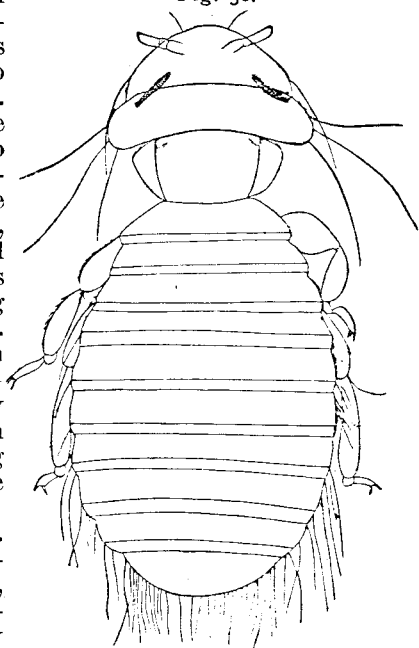
Menopon picicola, n. sp. (Fig. 58.)

Body slightly more than twice as long as broad. Head lunate, being much shorter than wide, well rounded in front, with a lobe on each side. Antennæ short and slender, terminal joint nearly twice as long as penultimate. Head with three long hairs from posterior division, and two oblique dark spots in the middle.

Prothorax with a median square area half as wide as head, with two rings on each side, making the entire segment three-fourths as wide as head. Abdomen regularly oval, two-thirds as wide as long, terminal segment large and broad. Segments convex, with a slight ridge crossing behind the middle of each segment. Two or three long hairs project from hind edge of each segment, and numerous finer hairs. Legs moderately long, tibiæ long, a third longer than femora; tarsi with second joint long and slender, ending in two large claws. Pale horn color.

Length, .08 inch. Ten specimens.

From *Picoides arcticus* and *P. dorsalis*, (Nos. 236 and 237.) August 26, 1872, at Lower Geyser Basin, Wyoming Territory. This is more closely allied to *M. citrinella*, Denny,* than any other species I am acquainted with, but differs in the shorter, broader head. The form of the prothorax is very different, being transversely oval instead of squarish, as in *M. citrinella*.



MENOPON PICICOLA.

Goniodes Merriamanus, n. sp. (Fig 59; a, male antennæ.)

Head about as broad as long, full, convex, broad, and regularly rounded in front of insertion of antennæ. Deeply excavated in middle, receiving basal two-thirds of basal joint of antennæ; on posterior edge of the notch a prominence, and still posteriorly a large prominence, giving a square appearance to head posteriorly, which at hinder edge suddenly contracts where it is articulated to prothorax. Head about two-thirds as wide as abdomen. Prothorax about half as wide as head. Abdomen ovate or pear-shaped, being broadest just before the end. It

* Monographia Anoplurorum Britannicæ. London, 1842.

is whitish, corneous on the edges. Antennæ recurved, four-jointed, basal very large, second as long as first is thick, third and fourth slender, subequal; fourth as long as second is thick. Legs stout, second pair with stout spines on inner side of tibiæ; tarsal joints very indistinct, short, with a long curved claw.

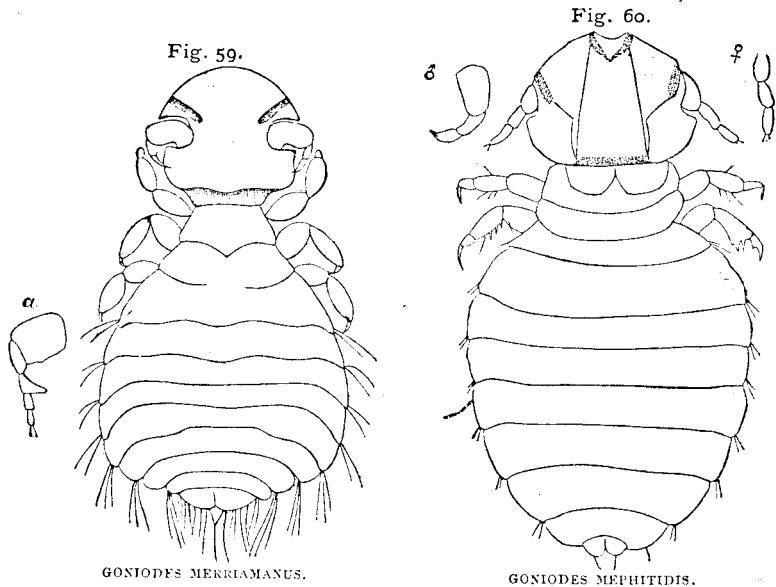
Length, .10 inch. One specimen.

From *Tetrao Richardsoni*, (No. 219.) Collected August 5, 1872, at North Fork of Snake River, Idaho.

It is very different from *G. tetraonis* Denny, and closely allied to *G. Colchici* Denny, especially in the pyriform shape of the abdomen. The head in one species is rather longer and more produced in front of the antennæ, the prothorax is rather longer and broader, and the mesothorax wider and shorter in proportion.

Goniodes mephitidis, n. sp. (Fig. 60.)

Head short, about as long as broad, well rounded in front, with a narrow curved sinus in the middle; widest behind the middle, with well-



marked lateral projections. Two dark spots on each side of the sinus; side of head in front of the projections lined with black. A transverse black line across hind edge of head, ending on each side in two black points, and sending obscure prolongations anteriorly. Antennæ four-jointed; basal joint very large, three outer ones filiform, third considerably longer than second, fourth minute, short. Prothorax corneous, slightly narrower but distinct from mesothoracic segments, the sides of which are produced hook-like beyond it. Abdomen large, orbicular, but little longer than broad, white. Legs white, hind tibiæ dilated distally, with several long spines on the inner side, one especially large; several long hairs on the outer side. The tarsal joint ends in a curved slender claw as long as itself, seen with the naked eye; head and thorax appear pale testaceous; abdomen white.

Length, .06 inch. Seven specimens.

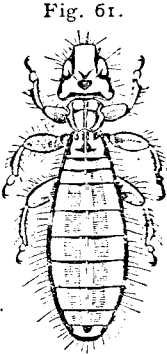
From a skunk (*Mephitis*) collected August 13, 1872, at Fire-Hole Basin, Wyoming Territory.

It differs from any species figured by Denny in the notch in front of

head, and short, broad lunate mesothoracic segment, and long oval form of abdomen.

Nirmus buteonivorus, n. sp. (Fig. 61.)

A very large species, long and slender; head long, oblong, subtrapezoidal, half as wide in front as at base; front truncate, with prominent rounded lateral wings on each side of head, behind insertion of antennae, more prominent than usual. Antennae just reach as far as the front edge of head; four-jointed; two basal joints of much the same size and length, two outer much smaller, fourth slenderer, and a third longer than third. A large, round inflated swelling on under side, just behind the mouth, and behind the single-jointed minute labial palpi, apparently forming a sucker to draw mouth near to skin of host. Mental region behind flattened, rather narrow. Prothorax small, rounded square, incised on each side; a transverse impressed line crossing the anterior third, and, with the longitudinal line, dividing the surface into four square spaces, the two anterior half as long as two posterior. Abdomen, including meso- and metathorax, regularly ovalanceolate, two and a half times as long as wide, with fine long hairs along edge. Legs rather large and long, with tarsi on three hinder pair of legs, basal joints much swollen and enlarged, with a white swollen disk-like under-surface for holding on to skin of host; second joint remarkably long and slender. Edge of head white, and whole body black. front edge of head white, hind edge black, a dark scutellate spot just behind the middle of the head; two round black spots under base of head; two black spots projecting inward at front edge of mesothorax; a brown stripe across hind edge of each abdominal segment, interrupted on anterior four rings by median line of the body. Joints of legs edged with black brown.



NIRMUS BUTEONIVORUS.

Specimens vary much in extent and intensity of dark lines and spots, as usual.

Length .40 inch. Twelve specimens.

From *Buteo Swainsonii*, (No. 239.) Collected August 27, 1872, at Lower Geyser Basin, Wyoming Territory.

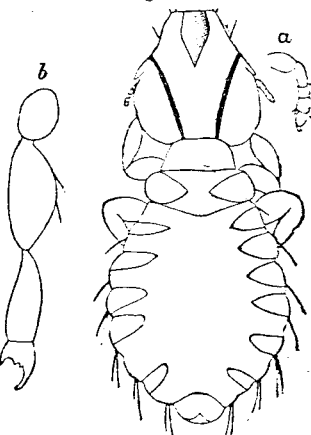
Differs remarkably in form and size from any figured by Denny.

I have in describing this species used, for comparison, a specimen of this genus from Goose Lake, Siskiyou County, Cal., (J. Holleman,) in which the head is triangular, and the tarsal joints not dilated, and second joint is much shorter and thicker. Its host not indicated.

Docophorus syrni, n. sp. (Fig. 62; a, antenna; b, hind leg.

Head a little longer than broad, being a little longer than usual; two-thirds as wide as abdomen. Mouth cavity deeply excavated. Trabeculae small, acutely pointed, projecting slightly beyond the head. Two oblique chitinous bands diverge from base of head to upper side of base of trabeculae; antennae slender, of the usual form; five-jointed; fourth joint much shorter than fifth. Prothorax trapezoidal, half as wide as head; mesothorax wide, projecting considerably beyond the succeeding segment; edge more bulging

Fig. 62.



than others. Abdomen regularly oval, but little broader than long, with the usual triangular pale horny pieces on each side of segments, with a few long hairs, especially toward end of body.

Length, .09 inch. Four specimens.

Lives on *Syrnium nebulosum*, (♂ No. 55, private collection.) Collected November 24, 1872, at Locust Grove, New York, by C. H. Merriam.

Of the species figured by Denny, it approaches nearest in the form and shape of the head to *D. testudinarius*, (Children,) Back's Narrative, &c. It is allied in form to *D. ostralegi* Denny, but the prothorax is shorter; and to *D. icterodes* Nitzsch but the head is much broader. From *D. communis* Nitzsch, it differs considerably, the head being shorter and broader, and the trabeculæ much smaller, judging from Denny's figures.

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EMBRACING

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BEING A REPORT OF PROGRESS OF THE EX-
PLORATIONS FOR THE YEAR 1872.

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