

**A NEW SPECIES OF *ACTORNITHOPHILUS*
(MALLOPHAGA: MENOPONIDAE) FROM THE KNOT¹**

ROGER D. PRICE

Department of Entomology, Fisheries, and Wildlife,
University of Minnesota, St. Paul

and

LOUIS LEIBOVITZ

Department of Avian Diseases, New York State Veterinary College,
Cornell University Duck Research Laboratory, Eastport, New York

Abstract

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The new species *Actornithophilus canuti* is described and illustrated from specimens found within the quills of primary flight feathers of a knot, *Calidris canutus* (Linnaeus).

Several quills of primary flight feathers of a knot, *Calidris canutus* (Linnaeus), recently taken in New York, were observed to contain viable lice. A study of these specimens has shown them to represent an undescribed species of *Actornithophilus* Ferris. It is our purpose here to describe and illustrate this species.

***Actornithophilus canuti* n. sp.**

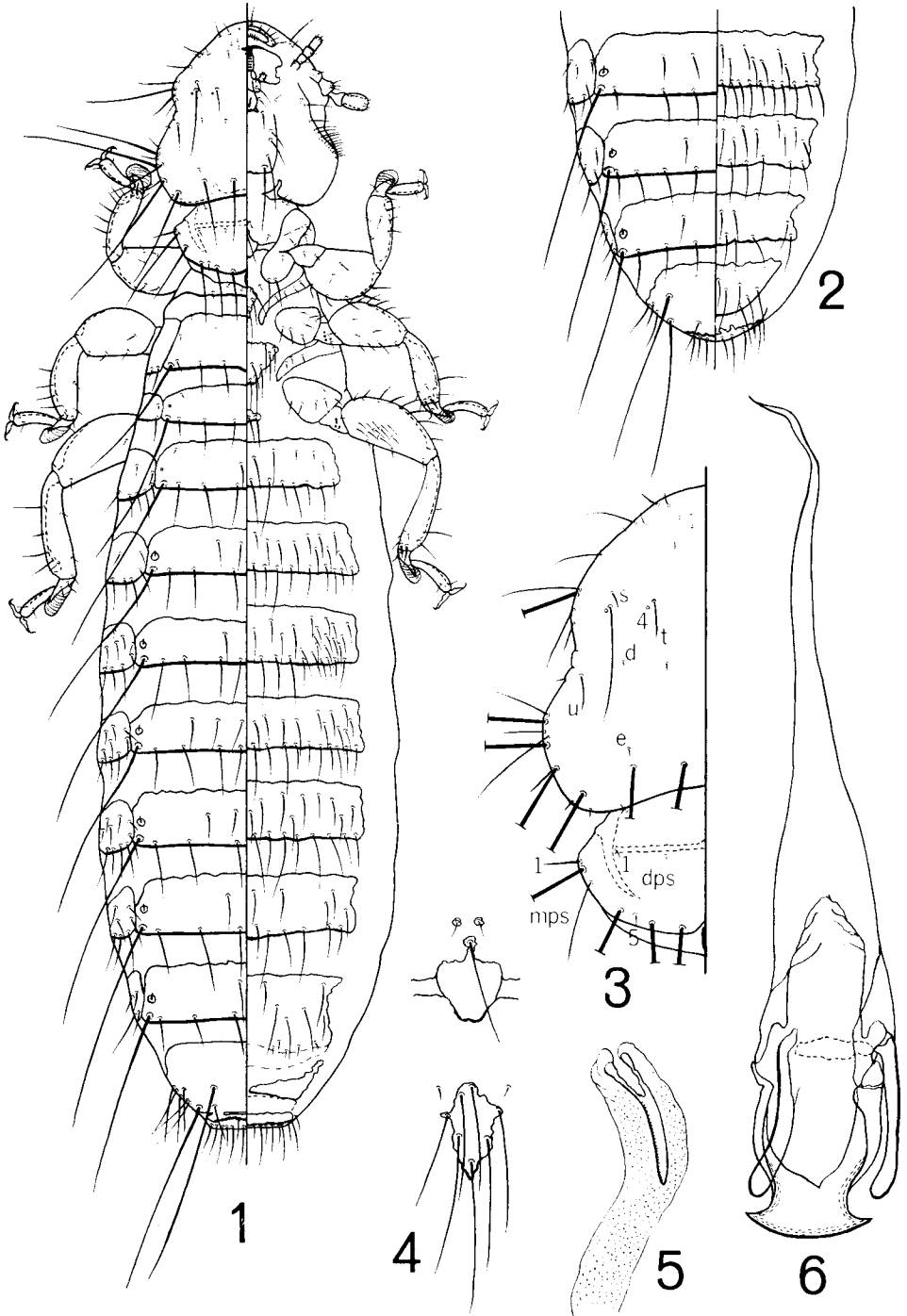
TYPE-HOST: *Calidris canutus* (Linnaeus).

FEMALE. Entire specimen as in Fig. 1; dorsum of head and pronotum as in Fig. 3. The terminology used here is as nearly as possible consistent with that used by Clay (1962). Head (Fig. 3) with shallow preocular notch, temples slightly expanded, and anterior portion gently tapered; preocular and occipital nodi much reduced; dorsal sensillus 4 present; seta *s* extending well beyond base of adjacent long seta; dorsal seta *d* present; dorsal seta *e* small; dorsal seta *t* 0.05-0.06 mm long; dorsal seta *u* 0.06-0.07 mm long; seta at base of labial palp over twice length of palp; gular setae 4+4; sitophore sclerite of hypopharynx well developed.

Margin of pronotum (Fig. 3) typically with 10 long, 4 short setae, less often 9 or 11 long, 3 or 5 short; marginal seta 5 shortest, seta 1 longer; dorsal prothoracic seta 1 very short; prosternal plate (Fig. 4) reduced, usually with 1 medioanterior longer seta enclosed by plate; mesosternal plate (Fig. 4) with 6-8 longer setae; margin of metanotum with very long corner seta and adjacent short seta on each side, 4 medium median setae; without long anterior metanotal setae; metasternal plate with 9-12 setae; venter of each femur III with brush of 11-14 setae.

Abdominal tergites I-VIII with very long postspiracular setae. Typically 4, occasionally 3 or 5, less often 6, tergo-central setae on each of these tergites; total tergo-central setae on I-VIII, 32-38; anterior tergal setae, 0 on I, 1-3 on II, 2-4 on III-IV, 2-5 on V-VII, 1-2 on VIII. Each side of last tergite with 2 very long setae, 4-6 setae lateroanterior to these, and 1 medium inner posterior seta. Without evident pleural thickenings; each pleurite with 2-3 setae on I, 5-8 on II, 8-11 on III-VI, 6-9 on VII, 4-6 on VIII. Sparse sternal setae: I, 2-4; II, 21-28; III, 37-48; IV, 55-67; V, 38-51; VI, 27-40; VII, 24-32. Vulva with 7-10 very short posterior setae, 13-18 longer anterior setae. Anal fringes of 18-21 ventral, 15-21 dorsal setae.

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FIGS. 1-6. *Actornithophilus canuti* n. sp.: 1, female; 2, male terminalia; 3, dorsal female head and pronotum; 4, prosternal (upper) and mesosternal plates; 5, male genital sac; 6, male genitalia, without genital sac.

Dimensions (in mm): preocular width, 0.32–0.33; temple width, 0.39–0.40; head length, 0.37–0.39; prothorax width, 0.31–0.32; metathorax width, 0.45–0.49; total length, 2.36–2.45.

MALE. Head and thorax much as for female, differing only with mesosternal plate having 7–9 longer setae, metasternal plate 13–19 setae, and venter of each femur III with brush of 12–17 setae. Tergites I–IX and pleurites I–VIII (Fig. 2) essentially as for female. Tendency for more sternal setae on I, 4–7, and II, 34–40. Sternites VIII and IX (Fig. 2) not fused, VIII with 11–16 setae, IX with 8–12. Anal fringes of 8–9 ventral, 5–7 dorsal setae. Genitalia, without genital sac, as in Fig. 6; genital sac and genital sclerite as in Fig. 5.

Dimensions (in mm): preocular width, 0.31–0.32; temple width, 0.38–0.39; head length, 0.37–0.38; prothorax width, 0.30–0.32; metathorax width, 0.41–0.43; total length, 2.13–2.29; genitalia, length 0.61–0.73, width 0.10–0.11.

REMARKS. Specimens of *A. canuti*, when compared with others of this genus as discussed by Clay (1962), are morphologically closest to *A. pediculoides* (Mjöberg). However, a study of a female and male of *A. pediculoides*, in conjunction with the illustrations of this species by Emerson (1956), revealed *A. canuti* to possess a number of significant differences, some of which are as follows: (1) longer dorsal head setae *s*, *t*, and *u*; (2) usually only 2 marginal pronotal setae, instead of 3, on each side mediad to seta 5; (3) only 4 median marginal metanotal setae, instead of 6; (4) most abdominal tergites I–VIII with only 3–5 tergoventral setae, and total of 32–40, instead of 6 on each and total of 48; (5) each side of last tergite with 2 very long setae, instead of only 1; (6) more sternal setae on each of III–VII; and (7) larger dimensions.

Both *A. pediculoides* and *A. sabulosus* Clay are grouped together by Clay (1962), who states, "It is difficult to say whether the two species are, in fact, related or only resemble each other due to some similarity of their habitats, perhaps both living in the quills as suggested above (p. 192)." The occurrence of *A. canuti* within the feather quill is consistent with the postulated habitat for these morphologically closely related species and lends support to this as their normal site of infestation. Again, as Clay (1962) puts it, "This would account for their rarity in collections and for certain characters which they have in common."

MATERIAL. Holotype ♀, ex *Calidris canutus*, Center Moriches Inlet, Suffolk Co., L.I., **New York**, 11 August 1968, Center Moriches New York Audubon Society, S-2396; in the collection of the University of Minnesota. Paratypes: 26 ♀ ♀, 13 ♂ ♂, same data as holotype.

References

- Clay, T. 1962. A key to the species of *Actornithophilus* Ferris with notes and descriptions of new species. *Bull. Br. Mus. nat. Hist., Ent.* **11**: 189–244.
- Emerson, K. C. 1956. A note on the identity of *Longimenopon pediculoides* (Mjöberg) (Mallophaga, Menoponidae). *Proc. ent. Soc. Wash.* **58**: 295–296.

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