

Kaysius emersoni (Mallophaga: Menoponidae), a New Genus and New Species of Louse from the Wedge-Billed Woodcreeper (Passeriformes: Dendrocolaptidae) of Peru

ROGER D. PRICE AND DALE H. CLAYTON¹

Department of Entomology, University of Minnesota,
St. Paul, Minnesota 55108

Ann. Entomol. Soc. Am. 82(1): 29-31 (1989)

ABSTRACT A new genus of chewing louse, *Kaysius*, and new species, *K. emersoni*, are described and illustrated using specimens collected from the wedge-billed woodcreeper, *Glyphorhynchus spirurus* (Vieillot), of Peru.

KEY WORDS Insecta, Dendrocolaptidae, *Kaysius*

AN EXTENSIVE SERIES of menoponid Mallophaga collected by D.H.C. in Peru from 20 specimens of the wedge-billed woodcreeper, *Glyphorhynchus spirurus* (Vieillot), represents a new genus and new species. Descriptions and illustrations of these new taxa are provided below.

Kaysius Price and Clayton, n. gen.

Type species: *Kaysius emersoni* Price and Clayton, n. sp.

When describing a new genus on the basis of a single species, it is difficult to decide which characters to present in the generic diagnosis and which in the species description. Based on our previous taxonomic experience with lice of the family Menoponidae, we present the following features as most pertinent to the generic definition.

Description. Little sexual dimorphism, except that associated with size and abdominal terminalia. **Head.** Approximately twice as broad as long, widest across temples; without preocular notch or slit; outer middorsal seta lateroanterior to inner middorsal seta; all temple setae 21-28 (numbering laterad from midline) present, but 24 and 26 very short; posterior margin of temples without 2 setae having contiguous alveoli; dorsal anterior setal complex with associated seta short and immediately adjacent to complex; temple without ventral setae except for submarginal row (Fig. 3); antennal fossa not deep, with antenna entirely exposed, but beneath head; antenna with terminal segment globose, undivided (Fig. 4); gular plate pigmented only along setal bases; without ventral spinose processes; nodi and associated carinae weakly defined; hypopharyngeal sclerites poorly developed (Fig. 5).

Thorax. Prosternal plate moderately developed, not pointed posteriorly (Fig. 6), usually without

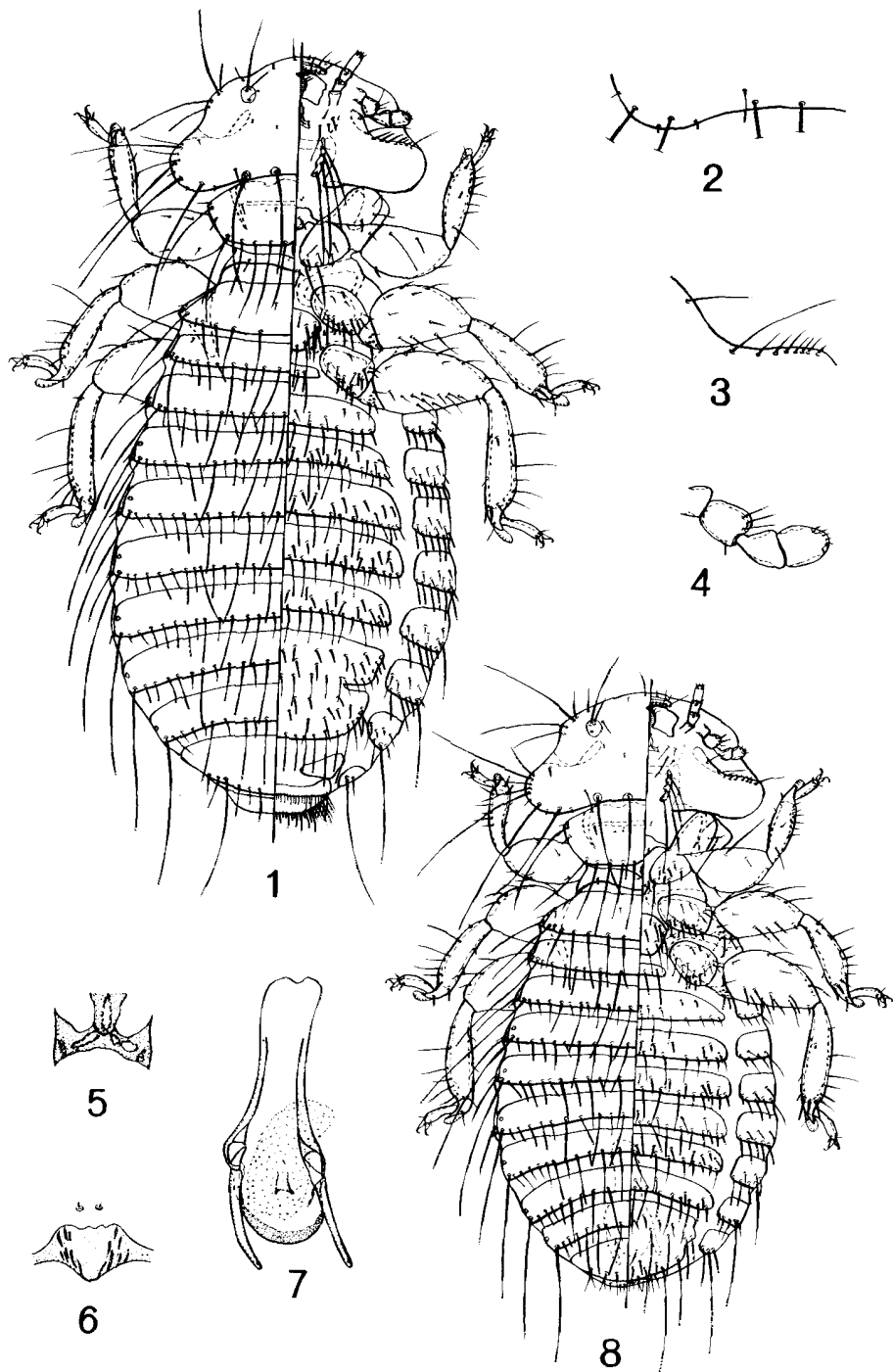
central setae but occasionally with single seta; prosternum with only 2 minute setae anterior to plate; 2 medioanterior mesonotal setae, one on each side; mesothorax as sclerotized ring formed by fused sternum, pleura, and tergum; center of mesosternum with only 2 short setae; venter of femur III with only sparse patch of medium setae.

Abdomen. No tergites enlarged, divided, or with anterior setae; tergite I with short seta laterad to postspiracular seta; sternite I present, with setae; lateral areas of sternites without ctenidia or obvious setal brushes; female sternite VII partially fused with VIII; female anus essentially oval, without inner setae; without conspicuous internal genital chamber structure; male subgenital plate formed of sternite VIII fused with sternite IX.

Remarks. This new genus appears to be morphologically most similar to *Machaerilaemus* Harrison; the two genera share such characters as head shape, reduced subocular row chaetotaxy and gular plate pigmentation, the presence of only two medioanterior mesonotal setae, the femur III and abdominal sternites without brushes or ctenidia, and head setae 21-28 all present. *Kaysius* differs from *Machaerilaemus* by having the alveoli of marginal temple setae 26 and 27 widely separated, the prosternal plate rounded posteriorly and lacking a number of central setae, the antennal fossa not deep, and the antenna entirely exposed but beneath the head.

If one uses the key provided by Clay (1969) to identify specimens of *Kaysius*, the lice will pass from the first couplet to couplet 30, then to couplet 32, where they agree with neither half of the couplet nor with any genus subsequent to this couplet. *Machaerilaemus* is bypassed in the first couplet, which discerns whether alveoli of marginal temple setae 26 and 27 are closely associated. Even if one overlooks this discrepancy and proceeds toward *Machaerilaemus* rather than as directed to couplet 30, the specimens again bypass *Machaerilaemus* in couplet 9 and proceed to terminal couplet 10,

¹Committee on Evolutionary Biology, University of Chicago, Chicago, Ill. 60637



where they fail to identify with either *Bucerophagus* Bedford from the hornbills (Coraciiformes: Bucerotidae) or with *Bonomiella* Conci from the doves (Columbiformes: Columbidae).

To date, the only lice described from the Dendrocolaptidae are in the genus *Furnaricola* Carriker (Philopteridae). Although *Machaerilaemus* and other menopid genera are widespread on hosts within the Passeriformes, *Kaysius* represents the first menopid genus to be described from the woodreeper family.

Kaysius emersoni Price and Clayton, n. sp.
(Fig. 1-8)

Type host. *Glyphorhynchus spirurus* (Vieillot).

Male. As in Fig. 8. Outer and inner middorsal head setae both minute; with 4+4, 4+3, or 3+3 long gular setae. Margin of pronotum with 16 setae, including 12 long, 4 short setae; outer central pronotal seta longer than minute inner seta. Margin of metanotum with 11-15 setae, including 9-11 long setae; medioanteriorly with only 2 short setae; metasternal plate with 11-13 setae. Abdominal terga with short among long marginal setae; number of setae, including very long postspiracular setae, on each segment: I, 17-20; II, 19-23; III, 17-21; IV, 20-23; V, 18-23; VI, 17-23; VII, 16-18; VIII, 13-15. Last tergite with 6 medium marginal setae. Pleurites unmodified, with marginal and anterior setae. Abdominal sternal setae: I, 3-5; II, 19-23; III, 21-28; IV-VI, 26-35; VII, 22-25; VIII, 15-17. Subgenital plate with 16-19 setae. Genitalia as in Fig. 7, length 0.23-0.27 mm, width 0.09-0.10 mm; with relatively broad basal apodeme, evenly rounded endomeral plate, slender parameres gently curved in same direction thereby giving asymmetrical appearance, and lightly spiculate sac with only slight evidence of associated sclerite. Dimensions (in mm): preocular width 0.36-0.38; temple width 0.45-0.46; head length 0.20-0.22; prothorax width 0.31-0.32; metathorax width 0.39-0.40; total length 1.10-1.15.

Female. As in Fig. 1. Much like male, except as follows. Gular setae 4+4. Abdominal marginal tergal setae: I, 21-24; II-V, 24-28; VI, 26-30; VII, 23-27; VIII, 18-21. Last tergite with 15-17 short

to very long setae. Abdominal sternal setae: I, 4-6; II, 25-28; III, 35-43; IV-VI, 44-51; VII, 41-45. Subgenital plate posteriorly flattened, with 17-22 marginal, 18-23 anterior setae. Anal fringes with 44-47 ventral, 34-45 dorsal setae. Dimensions (in mm): preocular width 0.39-0.40; temple width 0.49-0.51; head length 0.22-0.24; prothorax width 0.34-0.36; metathorax width 0.44-0.47; total length 1.40-1.48.

Type Material. HOLOTYPE ♂, ex *G. spirurus* (DHC-1014), PERU: Dept. Madre de Dios, Cerro de Pantiacolla, 8-XI-1985; in collection of the Field Museum of Natural History, Chicago. PARATYPES, ex *G. spirurus*, 20♂♂, 29♀♀, same locality, 20 hosts, 25-VIII-1985-1-XII-1985; distributed among the Field Museum; U.S. National Museum of Natural History, Washington, D.C.; University of Minnesota, St. Paul; and Oklahoma State University, Stillwater.

Etymology. The new genus and new species are named in honor of K. C. Emerson, Sanibel, Fla., in recognition of his numerous contributions to Mallophaga taxonomy and in appreciation of his long-time association with both authors.

Acknowledgment

The collecting of lice by D.H.C. would not have been possible without the expert assistance in the collection and identification of hosts provided by John W. Fitzpatrick, David Willard, and Douglas Stotz. This is published as paper no. 15,859 of the Scientific Journal Series of the Minnesota Agricultural Experiment Station on research conducted under Project No. Min-17-015. Funds were provided D.H.C. by the Field Museum of Natural History, the Latin American Studies Center of the University of Chicago, and National Science Foundation Grant BSR-8508361 to John W. Fitzpatrick for Peruvian faunal inventory work.

Reference Cited

- Clay, T. 1969. A key to the genera of the Menoponidae (Amblycera: Mallophaga: Insecta). Bull. Br. Mus. (Nat. Hist.) Entomol. 24: 3-26.

Received for publication 29 March 1988; accepted 10 August 1988.

FIG. 1-8. *Kaysius emersoni*: (1) female dorsal-ventral view; (2) female left temple margin; (3) female subocular setae; (4) female antenna; (5) female hypopharyngeal sclerites; (6) female prosternal plate; (7) male genitalia; (8) male dorsal-ventral view.