

## A NEW GENUS AND SPECIES OF MENOPONIDAE (MALLOPHAGA) FROM THE AFRICAN SWALLOW-TAILED KITE

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**Abstract:** A new genus, *Pterophilus*, and new species, *P. sudanensis*, are described from the African swallow-tailed kite, *Chelictinia riocourii*, from Sudan.

A series of menoponid Mallophaga taken from 2 specimens of the African swallow-tailed kite, *Chelictinia riocourii* (Vieillot), has been found to represent a new genus and new species. Clay (1969), in a key to the genera of the Menoponidae, has used

this as the basis for a "New Genus" in couplet 39 and has separated this genus in that couplet from *Cuculiphilus* Uchida, with which we believe it has closest affinities. It is our purpose here to describe and illustrate this series of lice.

### ***Pterophilus* Clay and Price, n. gen.**

Type-species: *Pterophilus sudanensis* Clay and Price, n. sp.

While it is difficult when describing a genus on the basis of a single species to decide which characters to present in the generic diagnosis and which in the species description, we feel, on the basis of our

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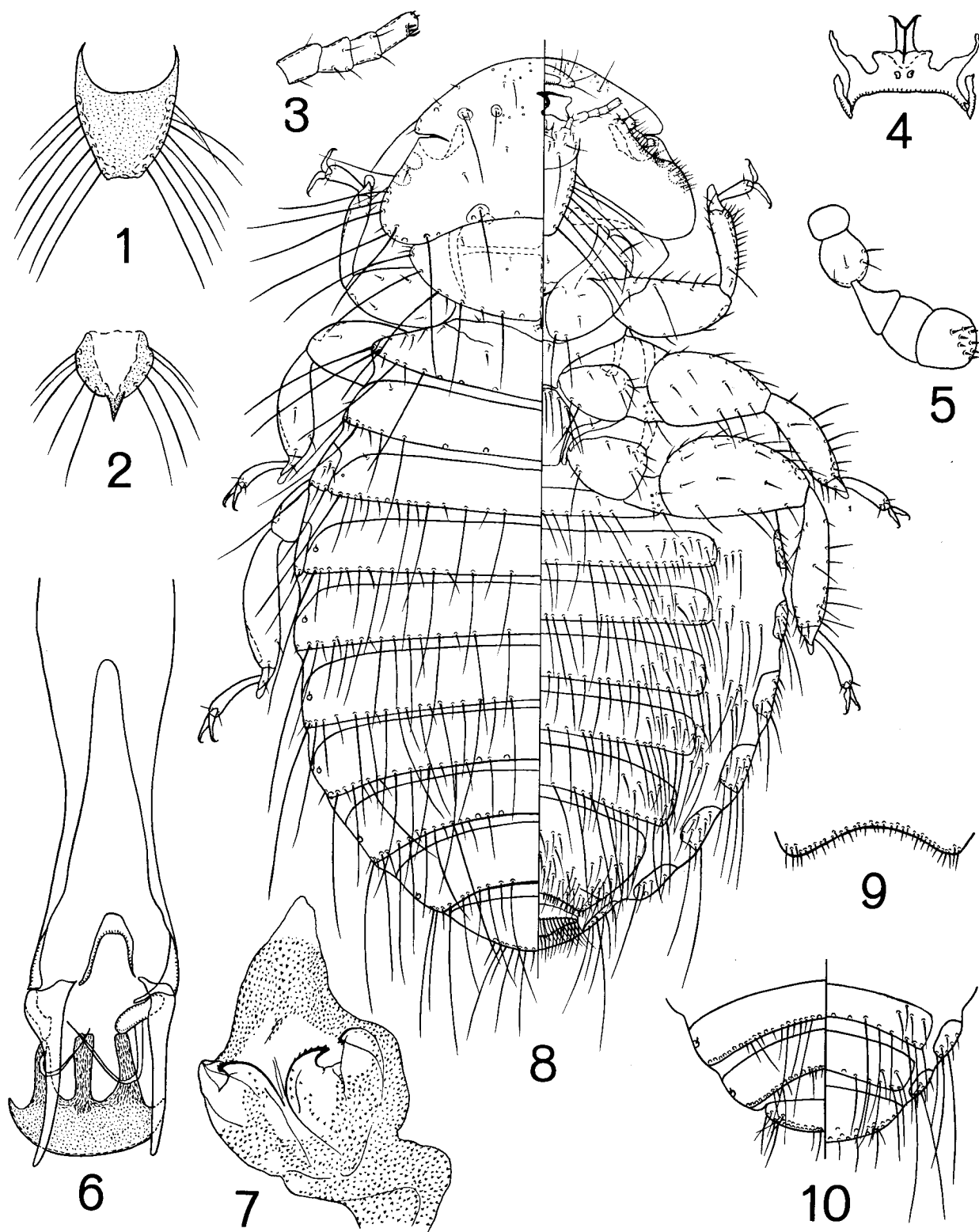


FIG. 1-10. *Pterophilus sudanensis*: (1) ♀ gular plate; (2) nymph gular plate; (3) ♀ maxillary palpus; (4) ♀ sitophore sclerite of hypopharynx; (5) ♀ antenna; (6) ♂ genitalia without genital sac; (7) anterior portion of ♂ genital sac; (8) ♀; (9) posterior margin of ♀ subgenital plate; (10) ♂ terminalia.

experience in work on lice within the family Menoponidae, that the following are most likely to include the features pertinent to the generic definition.

Little sexual dimorphism, except that associated with size and terminal abdominal segments. *Head*: considerably broader than long, widest across temples, with deep narrow preocular slit; outer middorsal seta widely posterolateral to inner middorsal seta; posterior margin of temples without 2 setae having contiguous alveoli; dorsal anterior setal complex with associated seta long and well mediad to complex; temples with ventral submarginal patch or rows of setae; antennae with terminal segment subdivided (FIG. 5); group of 3 subterminal setae on last segment of maxillary palpus (FIG. 3); gular plate uniformly pigmented, with posterior margin truncate in adult (FIG. 1), bearing a pointed process in nymph (FIG. 2); subocular comb row preceded by row of about 10–16 evenly-spaced setae; nodi and associated carinae not well-defined.

*Thorax*: prosternal plate moderately developed, with small median external process, but without setae; prosternum with only 2 setae anterior to plate; 4 medioanterior mesonotal setae, with pair on each side close together; mesothorax as sclerotized ring formed by fused sternum, pleura, and tergum; center of mesosternum with only 2 setae; venter of femur III without ctenidia or brush of setae.

*Abdomen*: no tergites enlarged, divided, or with anterior setae; tergites I–VII with short seta laterad to postspiracular seta; no evidence of sternite I, but material not optimum for discerning this; lateral area of sternites without ctenidia but with some lateral concentration of anterior setae on sternites III–VII; ♀ sternite VII not fused with VIII, and VIII partially separated laterally from IX; ♂ genital plate extending posteriorly beyond short last tergite (FIG. 10); ♀ anus more or less oval, without inner setae; ♀ genital chamber with vestiture of sparse microtrichia.

Most of the above characters are also found in *Cuculiphilus* and thus ally *Pterophilus* closer to this genus than to any other of which we are aware. The principal differences are the absence of ctenidia on femur III and abdominal sternites, the presence of a short seta laterad to the postspiracular seta on I–VII, the poorly-defined head nodi and carinae, and details of the gular plate. Further, the type-species of *Pterophilus* differs from the known species of *Cuculiphilus* in the weak development of the hypopharyngeal sclerites and the absence of central anterior setae on sternites III–VII. This appears to be an example, perhaps like the relationship shown between *Kurodaia* Uchida and *Nosopon* Hopkins, in which the basic difference between what appear to be closely related genera lies in the respective presence or absence of femoral and sternal ctenidia. Coupling this with other pertinent modifications, it becomes necessary to recognize both the ctenidia-bearing and the ctenidia-lacking groups

as distinct genera.

### ***Pterophilus sudanensis* Clay and Price, n. sp.**

FIG. 1–10

Type-host: *Chelictinia riocourii* (Vieillot).

♀. As in FIG. 8. Missing setae indicated by open bases. Outer middorsal head seta 0.02–0.03 mm long, inner shorter; dorsum and venter of anterior head with scattered microalveoli; with 5–9 long setae on each side of gular plate; antennae concealed beneath head, with scape and pedicel lacking distal anterior prolongation; head without postpalpal or anteroventral processes; hypopharyngeal sclerites reduced (FIG. 4). Margin of pronotum with 21–22 setae, including 12 long, 9–10 shorter setae; short to minute dorsal prothoracic setae. Margin of metanotum with 12–15 setae, including apparently 10 long ones; medioanteriorly with only 2 short setae; metasternal plate with 17–20 setae. Marginal tergal setae, including long postspiracular setae on each segment: I, 17–20; II, 27–30; III, 28–32; IV, 31–34; V, 33–39; VI, 30–37; VII, 28–35; VIII, 16–20. Posterior margin of terminal segment with 10–12 setae of varied lengths. Pleurites unmodified, with marginal and anterior setae. Sternal setae: II, 13–14; III, 47–66; IV, 58–76; V, 57–70; VI, 48–69; VII, 44–49; without central anterior setae on sternites III–VII. Subgenital plate posteriorly concave, with about 35 short marginal setae irregularly arranged (FIG. 9), 90 setae anteriorly. Anal fringes with 30 ventral, 32–37 dorsal setae.

♂. Much as for ♀, except as follows. Marginal tergal setae on I–VIII, including postspiracular setae, respectively, 19, 27, 30, 32, 34, 36, 41, and 40. Posterior margin of terminal segment with 75 or so setae. Sternal setae on II–VIII, respectively, 11, 32, 35, 37, 36, 26, and 20. Genital plate with about 40 marginal and anterior setae. Genitalia as in FIG. 6, length 0.62 mm, width 0.17 mm; a relatively large genital sac present, with small generally distributed spinules and a pair of sclerites, but distortion preventing detailed study; anterior portion of sac and included sclerites much as in FIG. 7.

*Dimensions* (in mm): preocular width, ♀ 0.64–0.65, ♂ 0.57; temple width, ♀ 0.83–0.85, ♂ 0.72; head length, ♀ 0.37–0.40, ♂ 0.36; prothorax width, ♀ 0.64–0.69, ♂ 0.58; metathorax width, ♀ 0.79–0.87, ♂ 0.67; total length, ♀ 2.05 (slightly telescoped abdomen)–2.25, ♂ 1.88.

Holotype ♀, *Chelictinia riocourii*, Um Dona, Koalib, Nubar Mountains Prov., Sudan (now Kordofan Prov.), 4.III.1928, W. Rutledge; in the British Museum (Natural History). Paratypes: 1 ♀, 1 ♂, *C. riocourii* (skin), Delami, Nubor Mts., Kordofan, Sudan, 29.II.1928, Rutledge (Brit. Mus. 1969–96).

#### LITERATURE CITED

- Clay, T. 1969. A key to the genera of the Menoponidae (Amblycera: Mallophaga: Insecta). *Bull. Brit. Mus. (N. H.) Ent.* 24: 3–26.
- Scharf, W. C. & R. D. Price. 1965. A taxonomic study of the genus *Cuculiphilus* (Mallophaga: Menoponidae). *Ann. Ent. Soc. Amer.* 58: 546–55.