

TWO NEW SPECIES OF COLPOCEPHALUM (MALLOPHAGA: MENOPONIDAE) FROM THE GRUIFORMES*

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ABSTRACT: *Colpocephalum cristatae* sp. n. is described from the Neotropical type host *Cariama cristata* (L.), and *C. haematopi* sp. n. from *Himantornis haematopus haematopus* Hartlaub from Liberia.

Five species or subspecies referable to the genus *Colpocephalum* Nitzsch, 1818, have been described from hosts stated to be within the order Gruiformes. Of these, only one, *C. benoiti* Tendeiro, 1960, is recognizable and definitely attributable to this host order. Price and Beer (1963) have shown *C. caudatum* var. *longipes* Piaget, 1885 (*nec* 1880), described from *Chunga burmeisteri* (Hartlaub), and *C. notatum* Piaget, 1885, described from *Cariama cristata* (L.), to be junior synonyms, respectively, of *C. turbinatum* Denny, 1842, and *C. maculatum* Piaget, 1880; both of these species are principally associated with members of the Falconiformes. The gruiform host given for each of these synonymized names most probably represents an error. *C. gallinulae* Uchida, 1926, was described from a single male from a captive specimen of *Gallinula chloropus indica* Blyth, and, according to Hopkins and Clay (1952), is from an erroneous host, with the true host not known. While the description is inadequate and placement is uncertain, it is sufficient to determine that this louse differs from all other known males from gruiform birds and may well represent a parasite from another host order. The fifth species, *C. breve* Giebel, 1866, is likewise unrecognizable and is discussed further later in this paper.

It is my purpose here to describe two new species of *Colpocephalum* from gruiform hosts. I thank Dr. Theresa Clay, British Museum (Natural History), for lending me the lice used in this study.

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Colpocephalum cristatae sp. n.

(Figs. 1-3)

Female

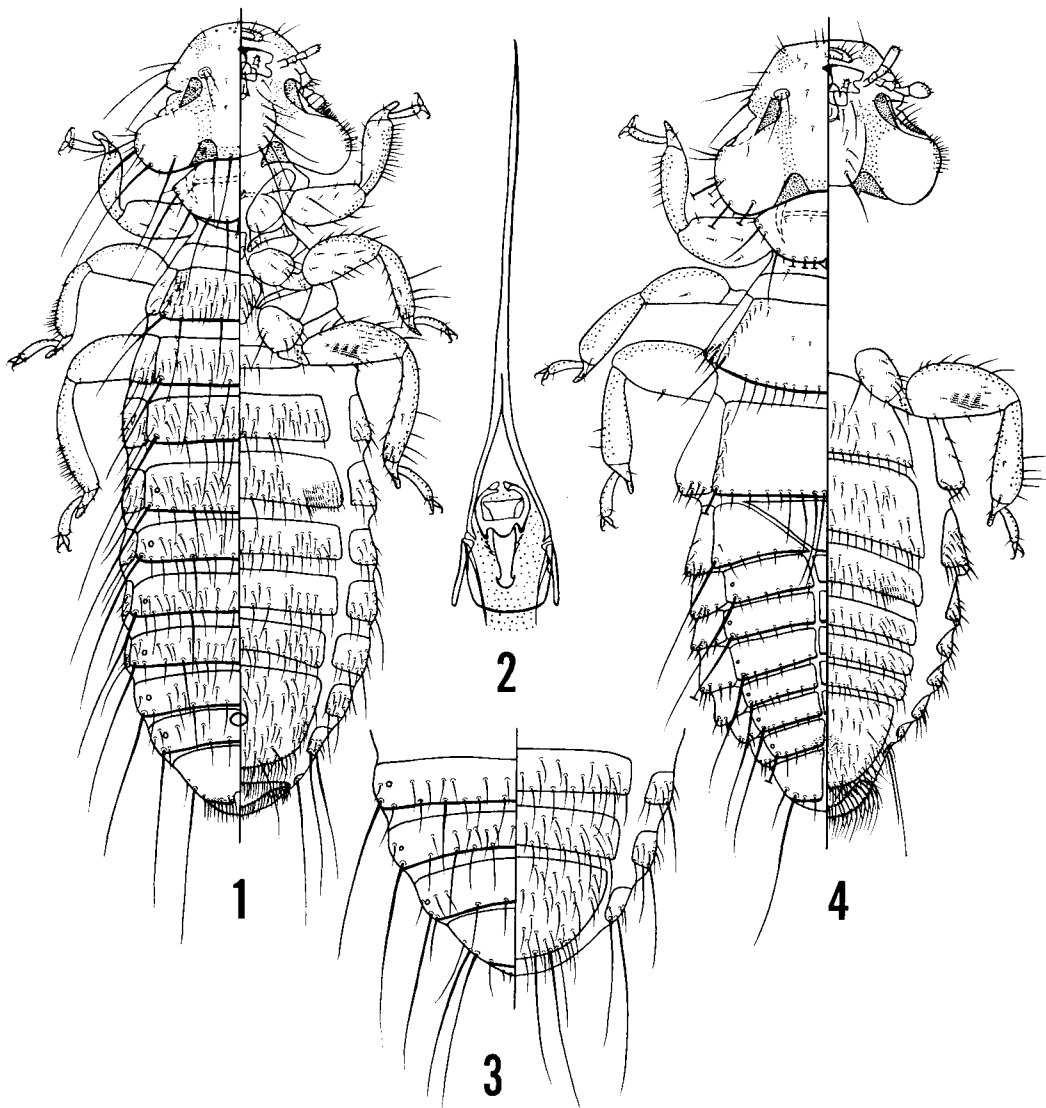
As in Figure 1. Head with rounded front margin, expanded temples, and shallow preocular slit; only 2 middorsal setae, minute; occipital setae long; temples with 2 very long setae on each side; gula with 4 to 6 long setae on each side; preocular and occipital nodi and associated carinae well developed; without ventral processes; terminal antennal segment partially to completely exposed, slightly longer than wide, and undivided; sitophore sclerite of hypopharynx of typical *Colpocephalum* type.

Pronotum marginally with 8 long, 4 short setae; outer dorsal pronotal setae longer than minute inner setae; prosternal plate weakly developed, without longer setae. Mesosternal plate elongate, narrow, with 3 to 6 longer setae. Metanotum with 6 to 7 long marginal setae, 25 to 35 medium medioanterior setae; metasternal plate with 9 to 10 setae; each femur III ventrally with 3 to 4 comb rows of short spiniform setae.

Abdominal tergites I to VIII of similar lengths and undivided, although often paler medially on II to VI. Postspiracular setae very long on I to VIII. Marginal abdominal tergal setae, aside from postspiracular setae, medium to long, numbering: I, 4 to 8; II, 12 to 14; III and IV, 14 to 17; V and VI, 11 to 15; VII, 9 to 12; VIII, 6. Medium anterior tergal setae: I, 20 to 26; II and III, 27 to 35; IV and V, 13 to 20; VI, 10 to 18; VII, 8 to 15; VIII, 2 to 7. Last segment with 2 very long setae on each side, 1 to 2 medium setae lateroanterior to these, row of 9 to 16 medium dorso-posterior setae; tergite indented medioposteriorly and without anterior setae. Abdominal sternite III with 3 comb rows on each side. Sternal setae: I, 3 to 8; II, 50 to 60; III, 33 to 39; IV, 51 to 56; V to VII, 38 to 48. Sternites VII to IX fused, with fused VIII and IX marginally rounded, having row of 35 to 42 medium to short setae on margin, 42 to 51 anteriorly. Anus suboval, without inner setae, with ventral fringe of 75 to 81 setae, dorsal fringe of 44 to 49. Internal genital chamber structure small, fragile, ringlike.

Male

Much as for female, except for minor quantitative differences and for details associated with



FIGURES 1-3. *Colpocephalum cristatae* sp. n. 1. Dorsoventral view of female ($\times 50$). 2. Male genitalia ($\times 115$). 3. Dorsoventral view of male terminalia ($\times 65$).

FIGURE 4. *C. haematopi* sp. n., dorsoventral view of female ($\times 55$).

terminalia, genitalia, and slightly smaller size. Metasternal plate with 7 to 10 setae. Abdominal tergites I to VIII uniformly pigmented. Possibly fewer marginal tergal setae, aside from postspiracular setae, on II, 8 to 12; III, 13 to 14; and IV, 11 to 15. Terminalia as in Figure 3; last tergite with only 2 medium medioposterior setae, without medioposterior indentation. Sternites VIII and IX fused; sternite VIII with 34 to 41 setae, IX with 33 to 36, including at least 4 very long ones. Genitalia as in Figure 2, with slender tapered basal plate, rounded endomerale plate, genitalic sclerite with blunt lateroposterior projections and rounded

medioposterior process of similar length, penis apically barbed, and parameres slender and extending almost to margin of endomerale plate.

Dimensions (in millimeters): preocular width, female 0.39 to 0.42, male 0.39; temple width, female 0.59 to 0.62, male 0.56 to 0.58; head length, female 0.36 to 0.39, male 0.36 to 0.37; prothorax width, female 0.37 to 0.40, male 0.35 to 0.36; metathorax width, female 0.57 to 0.60, male 0.48 to 0.50; total length, female 2.21 to 2.39, male 1.99 to 2.04; male genitalia, length 0.72 to 0.75, width 0.11.

Type host: *Cariama cristata* (L.).

Locality: London Zoo, March 1944, Meinertzhagen 15014.

Type specimens: Holotype female (British Museum (Natural History)) and 29 female, 14 male paratypes.

Other material: 3 females, 1 male, *Chunga burmeisteri* (Hartlaub), Brazil; 1 female, *C. burmeisteri*, no other data.

Remarks

This species has obvious affinities with the *Colpocephalum* of three other bird orders: (1) those of the *polybori*-group of the caracaras (Falconiformes); those of the owls (Strigiformes); and those of the crows (Passeriformes). The details of the male genitalia, the general head structure, the lengths and number of marginal prothoracic setae, and the female terminalia, including vulval and anal shape and chaetotaxy, are among features supporting this relationship. *C. cristatae* is unique in having a long outer occipital seta instead of a minute seta; a combination of other features, including (1) the large number of anterior metanotal setae, (2) the few long marginal metanotal setae, (3) the quantitative tergal chaetotaxy, (4) the very long postspiracular setae on all of tergites I to VIII, (5) the larger number of setae in the female ventral anal fringe, and (6) the larger dimensions of both sexes, provides additional characters for separation.

Giebel (1866) gives a meaningless nebulous description for *C. breve* from *Cariama cristata*. Later, however, Giebel (1874) expanded upon this description sufficiently to make it fairly certain that he was dealing with a species other than that described above as *C. cristatae*. He stressed features of sexual dimorphism, including difference of male and female head shape, and a short oval abdomen having a sharply sawtoothed lateral edge, with the female having fewer and stronger setae than the male. Since the male and female type series of *C. breve* is no longer available and since the identity of *C. breve* probably can never be ascertained, other than its being different from my *Cariama cristata* material, *C. breve* must be considered a *species sedis incertae* and *C. cristatae* described as a new species.

Colpocephalum haematopi sp. n.

(Fig. 4)

Female

As in Figure 4. Specimen with certain setae

missing and some features obscured, but with number of differences separating it from other known species of *Colpocephalum*. Head with somewhat flattened anterior margin; shallow preocular notch; nodi, carinae, antennae, and sitophore sclerite of hypopharynx as for *C. cristatae*.

Pronotal margin with 16 setae, including 10 longer and 6 shorter setae. Metanotum with 19 marginal setae, the most lateral being longest, those toward midline shortest; only 4 or so minute medioanterior setae. Each femur III with 3 ventral comb rows.

Abdomen with tergite I longest, II of intermediate length, and III to VIII shortest. Tergite I undivided, II tripartite with oblique division leaving wide triangular median plate, III to VII tripartite with median plates essentially with parallel sides, and VIII and IX bipartite. Postspiracular setae probably very long on I to VIII; with 18 other marginal setae on I, much longer at midline; marginal tergal setae uniformly short on II to VIII and numbering 12 to 13 on II to VII, and 8 on VIII. Without anterior tergal setae. Pleura with stout short marginal setae. Last tergite with 1 very long seta on each side preceded by 1 long seta, and with 4 inner posterior setae. Abdominal sternites I and II much longer than III to VI; sternite III with 2 comb rows on each side. Sternal setae: I, 44; II, 68; III and IV, 39; V to VII, 32 to 33. Sternites VII to IX fused; vulval margin with double row of about 24 setae each, 1 row being set slightly anterior to other. Anus broadly oval, with about 43 medium to long setae in each fringe; without inner setae. With reticulate internal structure of genital chamber.

Male

Unknown.

Dimensions of female (in millimeters): preocular width 0.36; temple width 0.53; head length 0.33; prothorax width 0.36; metathorax width 0.58; total length 1.75.

Type host: *Himantornis haematopus haematopus* Hartlaub.

Locality: Liberia (skin), Meinertzhagen 16244.

Type specimen: Holotype female (British Museum (Natural History)).

Remarks

The single female upon which *C. haematopi* is based was labeled as a paratype of *C. benoiti* by Tendeiro and so listed among his type series (Tendeiro, 1960). Comparison of this specimen with the description and illustrations of the female of *C. benoiti* (Tendeiro, 1960: Photos 12, 14) shows a number of excellent differences that must have been overlooked at the description of that species. *C. benoiti* has (1) at least 20 uniformly very long marginal metanotal setae, (2) tergite I without much longer median marginal setae, (3) ter-

gites II to V tripartite, but with oblique division so that median sclerite on all four segments is triangular and especially broad on both II and III, (4) tergites VI to IX bipartite, and (5) marginal abdominal tergal setae alternating long and short. Fundamental features of head structure, comb row distribution, anal and vulval shape and chaetotaxy, and certain abdominal features indicate *C. haematopi* and *C. benoiti* to be closely related yet quite different specifically.

The specimen of *C. haematopi* is from Liberia, whereas all of the *C. benoiti* specimens are from the same host species but from the Belgian Congo. Tendeiro (1960) does not state the subspecies of the host, but Peters (1934) gives the range of *H. haematopus haematopus*, the host for *C. haematopi*, as West Africa from Liberia to southern Cameroon. It is the distribution of the other subspecies, *H. h. petiti* (Oustalet) and *H. h. whitesidei* Sharpe, south of this across the Congo that coincides with the localities pro-

vided by Tendeiro for *C. benoiti*. Thus, it would appear that these subspecies of *Himantornis* may well harbor different species of *Colpocephalum*, but further collections are necessary to ascertain their full distribution.

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