

A NEW SPECIES OF *COLPOCEPHALUM* (Mallophaga: Menoponidae) FROM THE KEA¹

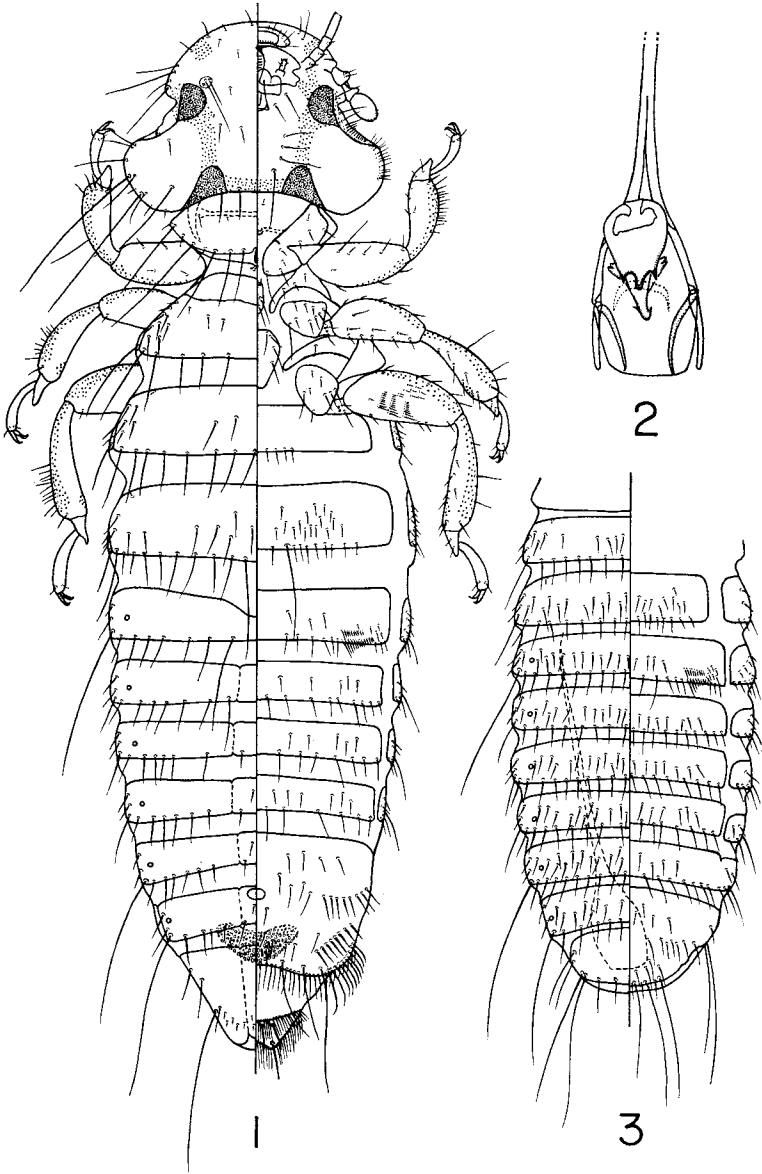
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ABSTRACT

Colpocephalum pilgrimi is described as a new species, with the type host being a New Zealand psittaciform, the kea, *Nestor notabilis*.

The *turbinatum*-group of *Colpocephalum* is currently recognized as containing three species (Price and Beer, 1963): the widely distributed *C. turbinatum* Denny, with the type host, *Columba livia* Gmelin (Columbiformes), but also found on a number of hosts in the Falconiformes and possibly sporadically within the Ciconiiformes and Gruiformes; *C. cucullare* Giebel from *Sagittarius serpentarius* (J. F. Miller) (Falconiformes); and *C. percnopteri* Price and Beer from *Neophron percnopterus* (L.) (Falconiformes). Through the courtesy of Dr. Theresa Clay, British Museum (Natural History), Dr. Jerry

¹ Paper No. 5922, Scientific Journal Series, Minnesota Agricultural Experiment Station, St. Paul, Minnesota 55101. Accepted for publication April 4, 1966.



Colpocephalum pilgrimi, n. sp.: FIG. 1, female; FIG. 2, male genitalia (without entire basal plate); FIG. 3, male abdomen.

A. Powell, University of California, and Dr. J. L. Gressitt, Bishop Museum, I have recently obtained specimens of a *Colpocephalum* representing four collections from the kea, *Nestor notabilis* Gould (Psittaciformes). These specimens, while definitely belonging to the *turbinatum*-group, are sufficiently different to be considered as a new species, and they are herewith described.

Colpocephalum pilgrimi, new species

FEMALE. As in Fig. 1. Long middorsal head setae. Both pairs of occipital setae long. Gular setae 4 + 4. Margin of pronotum with 5 long, 3 short setae on each side. Metanotum with 11–13 marginal setae, 3–4 medioanterior setae in addition to pair of short setae located lateroanteriorly. Tergite II longer than III; tergites IV–IX tripartite, III pale medially and possibly also divided. Marginal abdominal tergal setae: I, 12–19; II, 19–23; III–VII, 15–23; VIII, 10–13. Anterior abdominal tergal setae in area corresponding to that between spiracles: I, 2–6; II, 5–10; III, 0–1; IV, 0; V, 0–2; VI, 0–3; VII–VIII, 2–10. Last segment with 0–1 medioanterior setae and 2, much less often 3, medium lateral setae anterior to very long marginal seta. Postspiracular setae very long on III and VIII, or III, VII, and VIII. Abdominal sternal chaetotaxy as shown. Pair of median long marginal setae on sternite II. Vulva flattened, with pronounced lateral row of hooked setae. Anus indented dorsally, with dorsal and ventral inner setae. With internal reticulate structure of genital chamber; small ringlike structure anterior to this.

MALE. Head and thorax essentially as for female. Marginal abdominal tergal setae: I, 14–16; II–VII, 16–24; VIII, 12–16. Anterior tergal setae of two specimens of Christchurch series (Fig. 3): I, 10; II, 18–19; III–VII, 19–27; VIII, 12–19; IX, 0–2. Anterior tergal setae of I–IX of specimen of Canterbury Univ. series, respectively, 27, 35, 42, 42, 45, 36, 41, 31, and 11. Postspiracular setae very long on III, VII, and VIII. Genitalia as in Fig. 2, similar to those of other species of group.

DIMENSIONS (in mm). Preocular width, ♀ 0.31–0.33, ♂ 0.31–0.32; temple width, ♀ 0.45–0.49, ♂ 0.42–0.45; head length, ♀ 0.28–0.31, ♂ 0.28; prothorax width, ♀ 0.28–0.32, ♂ 0.27–0.30; metathorax width, ♀ 0.41–0.49, ♂ 0.36–0.38; total length, ♀ 1.62–1.85, ♂ 1.33–1.47; ♂ genitalia length, 0.55–0.63.

Type host: *Nestor notabilis* Gould, the kea.

Holotype female: Canterbury Univ., New Zealand, 2.VI.1965, R. L. C. Pilgrim. In the Canterbury Museum, Christchurch, New Zealand.

Paratypes: 1 ♀, 1 ♂, same data as holotype; 2 ♀, 2 ♂, Christchurch, New Zealand, 1 August 1965, R. L. Pilgrim; 1 ♀, Arthurs Pass, New Zealand, 12 May 1962, J. R. J.; 4 ♀, New Zealand (1618, Kellogg Coll., Univ. of Calif.).

The heterogeneity of the individuals within the *turbinatum*-group, especially those of *C. turbinatum sensu lato* from its various host species, has necessitated much caution in contemplating possible new species in the group. There is so much overlapping of quantitative features and variability of certain qualitative ones that the problem of reliable differentiation becomes most complex. However, the series described above from the kea is morphologically sufficiently different in both sexes from the other known material within the group as to justify its description as new. Additionally, it represents the first species of this group from the Psittaciformes.

Both sexes of *C. pilgrimi* have at most four to five medioanterior setae on the metanotum; the other species of the group are sexually dimorphic in this, with females having as few as four but usually more than six, and males with numerous setae, 15 to over 30, distributed evenly across the metanotum. Females of *C. pilgrimi* all have considerably fewer anterior abdominal tergal setae on every segment and only two to three lateroanterior setae on each side of the last tergite; the other species have (1) at least 5 to 10 such anterior tergal setae on each segment, and often more than this, distributed evenly across the entire tergite, and (2) usually four or more lateroanterior setae on the last tergite (see Price and Beer, 1963: Fig. 49). That the females of *C. pilgrimi* are from four different collections supports the reliability of this quantitative separation.

Males of *C. turbinatum*, in addition to having many more anterior metanotal setae, also have considerably more anterior abdominal tergal setae on all segments (see Price and Beer, 1963: Fig. 53) than the two males of *C. pilgrimi* from Christchurch: minimal counts for *C. turbinatum* range from 25 on I, 35-40 on II-VI, 25-35 on VII-VIII, and 13 on the last tergite. The male of *C. pilgrimi* from Canterbury Univ. quantitatively approaches *C. turbinatum* in its abdominal chaetotaxy and either is an aberrant specimen or one indicating the great variability to be anticipated in this male character.

Kellogg (1907) said the following for his four females from the kea: "Differs markedly from any *Colpocephalum* so far described from parrots and is undoubtedly identical with Piaget's *C. setosum* described from the vulture, *Cathartes gryphus* (Zool. Garden of Rotterdam)." The recognition of affinities with a falconiform louse is correct, but the specific identification is in error. The *C. setosum* to which Kellogg refers is now recognized as *C. trichosum* Harrison, a member of the *megalops*-group, not the *turbinatum*-group.

LITERATURE CITED

- Kellogg, V. L. 1907. The mallophagan parasites of the kea. *Psyche* 14:122-123.
Price, R. D. and J. R. Beer. 1963. Species of *Colpocephalum* (Mallophaga: Menoponidae) parasitic upon Falconiformes. *Canad. Entomol.* 95:731-763.