

A new species of *Colpocephalum* (Phthiraptera) on *Threskiornis* (Aves) from Aldabra

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Abstract

A new species, *Colpocephalum abbotti*, is described for specimens off the type-host, *Threskiornis aethiopicus abbotti*, from Aldabra.

Introduction

This is one of three papers on the Phthiraptera parasitic on *Threskiornis* and deals with a new species of *Colpocephalum*.^{*} The material on which this species is based, together with new species of Ischnocera from the same host, was collected during the Royal Society expeditions to Aldabra by B. Cogan, A. Hutson and R. Lowery in 1968. The three species of *Colpocephalum* recognized from *Threskiornis*—*C. pygidiale* Mjöberg, *C. melanocephalae* Price & Beer, and *C. aethiopicae* Price & Beer—have been placed together to constitute the *pygidiale*-group of Price & Beer (1965). A series of *Colpocephalum* from *T. aethiopicus abbotti* (Ridgway) has proven to be quite distinct from the above species, as well as from any other known *Colpocephalum*.

All material for this description is from the collection of the British Museum (Natural History) (abbreviated as BMNH), and I thank Dr Theresa Clay for making it available to me. Morphological terminology and numbers applied to certain setae generally follow that of Clay (1969). Measurements are in millimetres.

Colpocephalum abbotti sp.n.

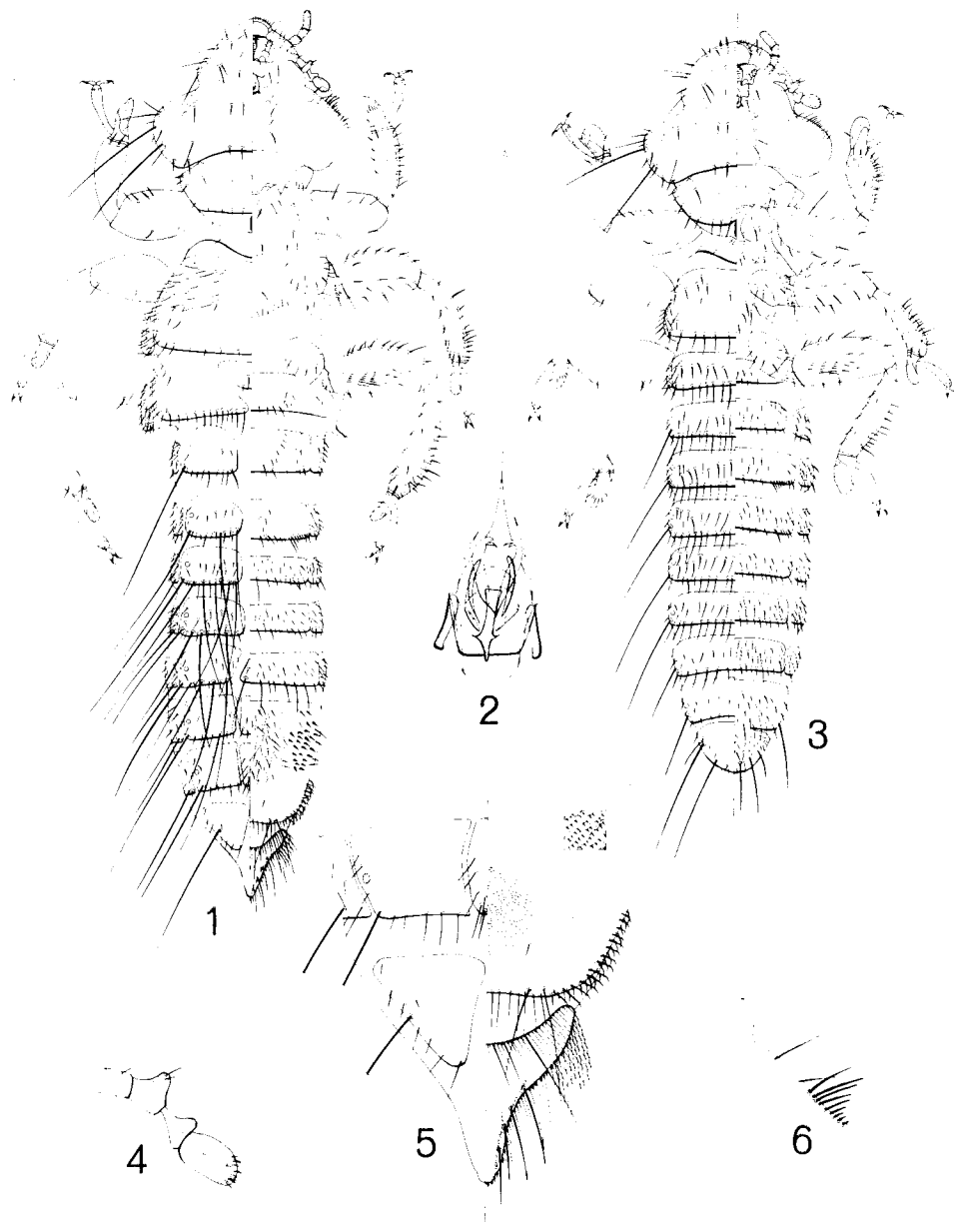
(Figs. 1-6)

Type-host: *Threskiornis aethiopicus abbotti* (Ridgway).

^{*} See also papers by Clay and Tandan in this issue (Eds.).

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Female. As in Fig. 1. Head with well-developed nodi and carinae. Head with mid-dorsal setae 17 and 18, ocular seta 19, occipital setae 21 and 22, and temporal setae 24 and 25 all approximately same length. Shallow preocular notch. Antenna (Fig. 4) with second segment expanded distally, terminal segment distinctly longer than wide. Subocular comb row (Fig. 6) preceded by several more widely spaced setae. Gular region with pigment across anterior portion, with 4+4 short setae. No ventral spinous head processes. Hypopharyngeal sclerites well developed. Each side of pronotum with 8 short marginal setae, medial 4 somewhat finer and shorter than lateral 4; outer central pronotal seta 1 much longer than minute inner seta 2; prosternal plate poorly developed, without setae. Mesosternal plate weak, with 7-8 short setae. Metanotum marginally with about 12 short setae, with cluster of lateroanterior setae; metasternal plate weak, with 12-18 short setae. Femur III with 3 ventral ctenidia, posterior margin with 2 short setae. Abdomen with all tergites divided: I and VI-VIII tripartite, II-V and last bipartite. Metathorax and abdominal segment I abruptly wider than remainder of abdomen. Marginal tergal setae, with lengths as shown: I-V, 20-26; VI, 19-24; VII, 15-17; VIII, 13-15. Irregularly distributed anterior tergal setae: I-II, 2-5; III, 8-11; IV-V, 12-16; VI, 10-12; VII, 6-11; VIII, 4-7. Post-spiracular setae very long on II-VIII, short on I. Last tergite with 1 very long seta each side, flanked by about 8 short setae. Sternite III with 1 well-developed ctenidium each side. Sternal setae: I, 15-26; II, 30-35; III, 20-26 mediad to ctenidia; IV-VI, 37-56; VII and VIII fused, with over 100 fine to spiniform setae. Subgenital plate (Fig. 5) flatly rounded, with lateral hooked setae, posterior margin with longer setae medially, and submarginally with 2 long setae each side; with spiculate cuticle. Anus (Fig. 5) 'V'-shaped,



Figs. 1-6. *Colpocephalum abbotti* sp.n. (1) female; (2) partially extruded male genitalia; (3) male; (4) female antenna; (5) female terminalia; (6) female subocular setae and comb row.

with 4 heavier inner dorsal setae each side, and about 60 ventral, 90 dorsal fringe setae. Genital chamber with round median particulate structure.

Male. As in Fig. 3. Head and thorax essentially as for female, except anterior head margin with several pairs of short spiniform setae, pronotal margin with longer setae medially, mesosternal plate

with only 4-6 setae, metanotum marginally with longer setae and with fewer anterior setae, and metasternal plate with only 9-12 setae. All abdominal tergites undivided. Metathorax and abdominal segment I not significantly broadened as with female. Marginal tergal setae, with lengths as shown: I, 15-19; II-V, 19-24; VI, 16-20; VII, 14-16; VIII,

11–13. Irregular single row of anterior tergal setae: I, 11–17; II–VI, 18–29; VII, 12–19; VIII, 7–12. Post-spiracular setae very long on II–VIII, short on I. Each side of last tergite with 2 very long and 7–9 shorter setae. Sternite III with 1 ctenidium each side. Sternal setae: I, 12–15; II, 32–35; III, 21–30 mediad to ctenidia; IV–VIII, 46–63. Sternite VIII partially fused with IX, portion posterior to VIII with about 50 setae. Genitalia much as in Fig. 2; with slender tapered basal plate, flattened endomeral plate, parameres extending to posterior margin of endomeral plate, several narrow genital sclerites each side of penis base, and prominent penis with distal barbs.

Measurements. Preocular width, 0.32–0.34; temple width, ♀ 0.56–0.57, ♂ 0.53–0.55; head length, ♀ 0.37–0.38, ♂ 0.34–0.36; prothorax width, ♀ 0.41–0.43, ♂ 0.38–0.40; metathorax width, ♀ 0.64–0.71, ♂ 0.45–0.46; total length, ♀ 2.41–2.67, ♂ 2.00–2.08; ♂ genitalia length 0.69–0.74, width 0.11–0.13.

Holotype ♀, ALDABRA: South Island, Cinq Cases, 3–16.i.1968 (*B. Cogan* and *A. Hutson*) (BMNH).

Paratypes. With same data as holotype, 1 ♀, 2 ♂ (BMNH), 1 ♀, 1 ♂ (University of Minnesota); 3 ♀, 7 ♂, Aldabra Atoll: East Channel, 6.vi.1968 (*R. Lowery*) (BMNH); 1 ♀, 1 ♂, Aldabra: South Island, Takamaka, 13.vi.1968 (*R. Lowery*) (BMNH).

Diagnosis. Although the female of *C. abbotti* appears closest to *C. pygidiale*, especially in the lengths of the post-spiracular setae and presence of the circular genital chamber structure, it is grossly separable from that, as well as the other ciconiiform *Colpocephalum* bearing a single sternal ctenidium. Among these unique characters are the broadened metathorax and abdominal segment I, the divisions and chaetotaxy of the abdominal tergites, the apparent absence of a median posterior tergal

plate on the last segment, and the lengths of the pronotal and metanotal setae. In the key to females (Price & Beer, 1965, 129), with modification of the first part of couplet 5 to read 'Median posterior tergal plate on IX either much longer than wide, much wider than long, or apparently absent; . . .' and the last part of couplet 6 to 'Median terminal plate on IX either longer than wide or apparently absent; . . .', then *C. abbotti* identifies with *C. pygidiale* in couplet 7. These two species may be separated by the characters listed above.

The male of *C. abbotti* is somewhat less distinctive than the female, but is recognizable from its genitalic details and its dorsal chaetotaxy, especially the numbers and relative lengths of the anterior and marginal tergal setae. In the key to males (Price & Beer, 1965, 130), *C. abbotti* identifies closest to *C. spinicollis* Price & Beer in couplet 12; however, *C. abbotti* has, among other things, a distinctly different shape of the penis and associated sclerites, as well as longer anterior tergal setae on I–VII and shorter marginal tergal setae on VIII. The females of *C. abbotti* and *C. spinicollis* differ in numerous ways and it is likely, in view of the hosts involved, that the association of the males is more a function of the key rather than being indicative of any close relationship.

References

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Received 22 April 1975