

A New *Cummingsia* (Mallophaga: Trimenoponidae) from a Peruvian Mouse-Opossum (Marsupialia)

ROBERT M. TIMM¹ AND ROGER D. PRICE²

ABSTRACT: A new species of chewing louse, *Cummingsia izori* (Mallophaga: Trimenoponidae), is described and illustrated from a Peruvian mouse-opossum, *Marmosa noctivaga* (Marsupialia: Didelphidae). To date *C. izori* is known only from two individual hosts from the type locality in Peru; however, we suspect that this species of louse will be found on *M. noctivaga* throughout its range in the Amazonian basin of northern Brazil, eastern Ecuador, eastern and central Peru, and northwestern Bolivia.

The mallophagan genus *Cummingsia* Ewing historically has been one of the most enigmatic and poorly known of the chewing lice parasitizing New World mammals. In a revision of the genus (Timm and Price, 1985), we recognized six species of *Cummingsia*, most being found on South American marsupials of the family Didelphidae; however, one species was from a South American rodent of the family Cricetidae. These species and their hosts are: *C. albuja* Timm and Price, 1985, from *Caenolestes fuliginosus* (Tomes); *C. inopinata* Méndez, 1971, from *Thomasomys cinereiventer* J. A. Allen, *T. erro* Anthony, and *T. laniger* (Thomas); *C. intermedia* Werneck, 1937, from *Marmosa dryas* Thomas and *M. incana* (Lund); *C. maculata* Ferris, 1922, from *Lestoros inca* (Thomas); *C. peramydis* Ferris, 1922, from *Monodelphis brevicaudata* (Erleben) and *M. domestica* (Wagner); and *C. perezi* Timm and Price, 1985, from *Caenolestes convelatus* Anthony. At that time we suggested that numerous new species of the genus *Cummingsia* remained to be discovered. Two new species of *Cummingsia* subsequently have been described: *C. barkleyae* Price and Emerson, 1986, from *Thomasomys* sp. and *C. gardneri* Price and Emerson, 1986, from *Marmosa impavida* (Tschudi).

We recently obtained yet another new species of *Cummingsia* from another species of South American marsupial. The purposes of this paper are to provide a description and illustrations of this new species and discuss how it can be identified using the key to species of the genus provided by Timm and Price (1985). All measurements are in millimeters. As this species conforms well to the generic and subgeneric characters provided by us earlier, we will not repeat them herein.

Cummingsia (*Cummingsia*) *izori* Timm and Price, new species (Figs. 1-3)

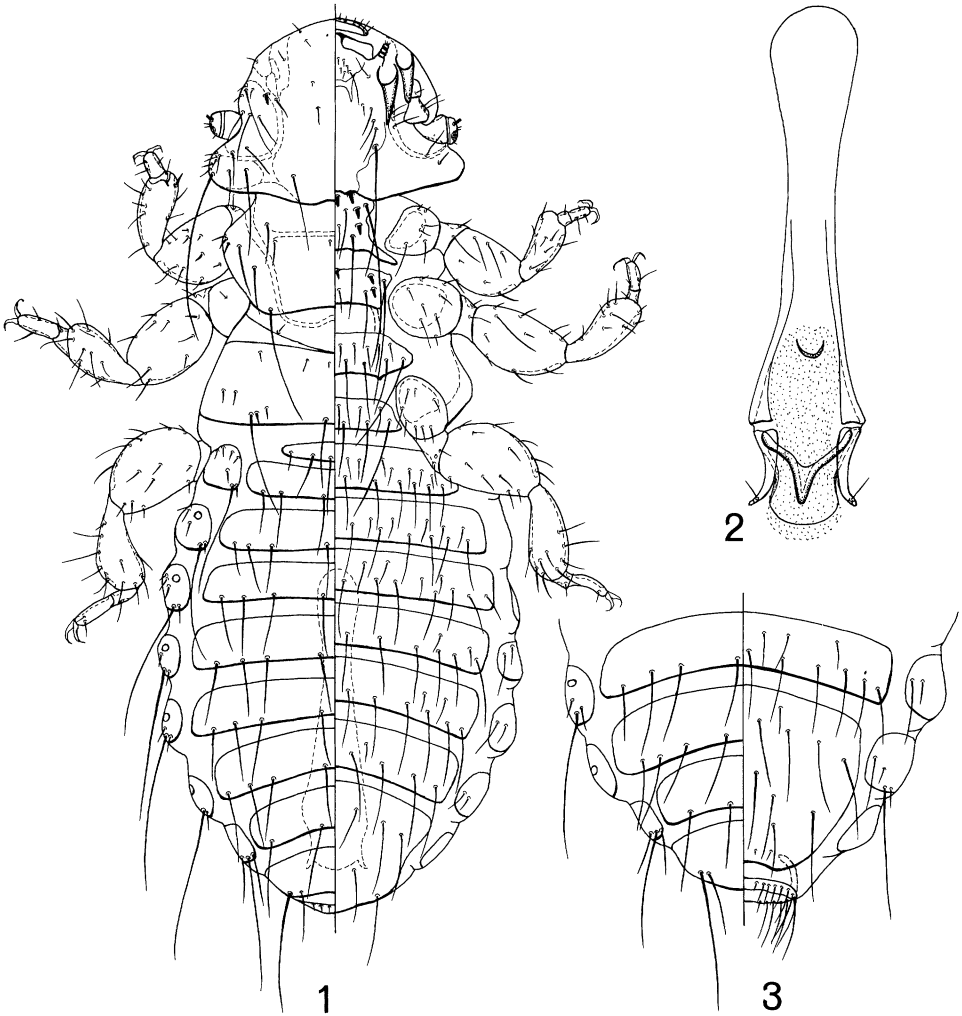
TYPE HOST: *Marmosa noctivaga* (Tschudi).

MALE: As in Fig. 1. Dorsal head chaetotaxy as shown, each side with medio-lateral heavier spiniform seta and longer median seta. Slender pointed ventral inner spinous head process well separated from outer. With reduced carina across

¹ Museum of Natural History and Department of Systematics and Ecology, The University of Kansas, Lawrence, Kansas 66045.

² Department of Entomology, University of Minnesota, St. Paul, Minnesota 55108.

Accepted for publication 30 October 1987.



Figs. 1-3. *Cummingsia izori*. 1. Male. 2. Male genitalia. 3. Female terminalia.

posterior head margin and without medioposterior protrusion. Pronotum with pair of minute central setae and 2 much longer lateral setae on each side near end of transverse thickening; anterior metanotal setae with medial pair usually minute, less often with 1 minute and 1 longer. Prosternal plate with 7 long, 7-8 short stout setae; mesosternal plate with 5 long, 5 short stout setae; metasternal plate with 18-21 short to long setae. Tergal setae: I, 6 (with outermost shortest, innermost longest); II, 6; III-IV, 8-9; V, 8-10; VI, 8-9; VII, 7-8; VIII, 4-5; IX, 1 very long, 1 medium on each side. Pleura II-VII each with 2 marginal setae, medial seta short, lateral seta very long; VIII with 3 marginal setae, with middle seta much longer than those adjacent to it. Anterior pleural setae: II, 2-5; III, 2-3; IV, 1-3; V-VI, 2-3; VII, 2; VIII, 0. Total sternal setae: I, 11-16; II, 23-32; III, 22-28; IV, 21-23; V, 17-20; VI, 16-18; VII, 8-10. Anterior sternal setae (included in totals above): I, 3-8; II, 13-18; III, 8-15; IV, 8-9; V, 5-8; VI, 4-6; VII, 0-2.

Subgenital plate (fused VIII-IX) with 10 setae. Dimensions: preocular width, 0.25-0.26; temple width, 0.32-0.33; head length, 0.22-0.23; prothorax width, 0.30-0.31; metathorax width, 0.33-0.35; abdomen width at segment V, 0.45-0.50; total length, 1.05-1.15. Genitalia as in Fig. 2, with genital plate broadly tapered, with small semicircular sac sclerite, and with tip of paramere with subapical seta well removed from end; genitalia width, 0.08-0.10; genital plate width, 0.06-0.07; genital plate length, 0.05-0.06.

FEMALE: Much as for male, except as follows. All specimens with both setae of anterior metanotal medial pair minute; mesosternal plate with 4-5 short stout setae. Tergal setae: II, 6-8; III, 7-8; V, 9-12; VI-VII, 8-10. Anterior pleural setae: II, 3-6; III, 2-5; IV, 2-3; VII, 1-2; VIII, 0-1. Total sternal setae: I, 13-17; IV, 22-25; V, 18-21; VI, 17-19; VII (fused with VIII), 10-12. Anterior sternal setae (included in totals above): I, 7-11; IV, 8-12; VI, 5-7; VII, 2-4. Terminalia as in Fig. 3. Subgenital plate (fused VIII-IX) with 12-13 setae, including 4 short to minute medioposterior setae. Anus oval, with 28-30 setae of lengths as shown. Dimensions: preocular width, 0.26-0.27; temple width, 0.33-0.35; head length, 0.22-0.24; prothorax width, 0.30-0.32; metathorax width, 0.36-0.40; abdomen width at segment V, 0.53-0.56; total length, 1.22-1.31.

REMARKS: In using the key to the species of *Cummingsia* given by Timm and Price (1985), individuals of *C. izori* would pass to couplet 5, the last couplet, but would not identify with either *C. perezi* or *C. maculata*. The 2 additional *Cummingsia* species subsequently described by Price and Emerson (1986) are both quite different from *C. izori* and key to couplets 1 and 2 of the key presented by Timm and Price (1985).

Both sexes of *C. izori* have: 1) longer dorsolateral head setae than *C. maculata*, being closer to *C. perezi* in this feature, but with fewer and shorter dorsomedial head setae than either; 2) usually a medioanterior pair of minute metanotal setae, less often a single minute and single longer seta, whereas all other known *Cummingsia* have only longer setae in this position; and 3) only 2 marginal pleural setae on II-VII, thereby resembling *C. maculata* but differing from *C. perezi*, which has 3. The female of *C. izori*: 1) is much smaller in all dimensions than that of *C. perezi* and smaller, but to a lesser degree, than *C. maculata* in all dimensions except head length; and 2) has the chaetotaxy of the subgenital plate close to *C. maculata*, but lacking indication of a medioposterior division. The male of *C. izori*: 1) has a pair of minute central pronotal setae, while both *C. maculata* and *C. perezi* have longer setae there; 2) is also smaller than *C. perezi* in all body dimensions; and 3) has a distinctively different shape of the genital sac sclerite from that of both other species.

The type host of *C. izori*, *Marmosa noctivaga*, is found in the northern Amazonian basin of northern Brazil, eastern Ecuador, eastern and central Peru, and northwestern Bolivia. Although we have specimens of *C. izori* only from the type locality in Peru, we suspect that it will be found on *M. noctivaga* throughout its range.

We still know too few of the species of *Cummingsia* to make a detailed analysis of host-parasite relationships. However, judging from the species diversity of *Cummingsia* and their apparent widespread representation on New World marsupials of the genera *Caenolestes*, *Lestoros*, *Marmosa*, and *Monodelphis*, it seems likely that *Cummingsia* are primarily parasites of marsupials. The two species of

Cummingsia now known from the rodent genus *Thomasomys* quite likely represent a secondary, albeit early, host transfer from marsupials to *Thomasomys*.

ETYMOLOGY: This new species is named in honor of Robert J. Izor of the Field Museum of Natural History, Chicago, in recognition of his interest in ectoparasites and for collecting the hosts and making them available to us.

MATERIAL: Holotype male, ex *Marmosa noctivaga*, Ridge above Hacienda Amazonia, Alto Río Madre de Dios, Departamento Madre de Dios, Peru (12°58'S, 71°09'W), elevation 825 m, 4.VIII.1985, collected by R. J. Izor (#187); in collection of Field Museum of Natural History. Paratypes—3 males, 9 females, same data as holotype; 1 female, same, except 11.VIII.1985, R. J. Izor (#324). Paratypes will be deposited in Field Museum of Natural History, Chicago; U.S. National Museum of Natural History, Washington; University of Minnesota, St. Paul; and Oklahoma State University, Stillwater.

Acknowledgments

We are grateful to Robert J. Izor for conscientiously collecting the hosts and ectoparasites which made this study possible, and to Ronald H. Pine who confirmed the identity of the hosts. The field efforts in Peru were supported by a grant from the National Science Foundation to John W. Fitzpatrick and by the Field Museum of Natural History. This study was partially supported by Project No. Min-17-015, Minnesota Agricultural Experiment Station, St. Paul, Minnesota 55108, and has been assigned Paper No. 15,559, Scientific Journal Series.

Literature Cited

- Price, R. D., and K. C. Emerson. 1986. New species of *Cummingsia* Ferris (Mallophaga: Trimenoponidae) from Peru and Venezuela. *Proc. Biol. Soc. Wash.* 99:748–752.
- Timm, R. M., and R. D. Price. 1985. A review of *Cummingsia* Ferris (Mallophaga: Trimenoponidae), with a description of two new species. *Proc. Biol. Soc. Wash.* 98:391–402.