

A NEW SPECIES OF *HOPLOPLEURA* (Anoplura : Hoplopleuridae) FROM AN AUSTRALIAN RAT¹

By Ke Chung Kim²

Abstract: *Hoplopleura cornata* Kim, new species, is described and illustrated. This new taxon was collected from *Rattus cornatus* in Australia. A key to the Australian species of *Hoplopleura* is also presented.

The Australian species of *Hoplopleura* were reviewed by Kuhn and Ludwig (1967). Six species are currently known from Australian Muridae. Through the kindness of Dr. K. C. Emerson of the U. S. National Museum of Natural History and Dr R. Domrow, Queensland Institute of Medical Research, I have had the opportunity to examine specimens of a sucking louse collected from *Rattus cornatus* Thomas, 1923. This new taxon is herewith described and illustrated, and a key to the Australian species of *Hoplopleura* is also presented. Morphological terminology of Kim (1965) is followed here.

Hoplopleura cornata, new species

Type-data. Holotype ♂, allotype ♀, 25 ♂♂ and 74 ♀♀ paratypes from *Rattus cornatus* (= *Rattus sordidus cornatus*), Kowanyama, Cape York Peninsula, Australia, 10.IV.1969, R. Domrow. Holotype, allotype and major portion of paratypes are deposited in the collection of the Australian National Insect Collection, Canberra, Australia. Paratypes are deposited in the collections of the National Museum of Natural History, Smithsonian Institution, Washington, D. C., the Frost Entomological Museum, The Pennsylvania State University, The K. C. Emerson Entomological Museum, The Oklahoma State University, Stillwater, Oklahoma, and the British Museum (Natural History).

Diagnosis. *H. cornata* Kim, sp. n. is related to *H. oenomydis* Ferris and *H. pacifica* Ewing. This new taxon can be distinguished from its related species by having paratergal lobes of abdominal segment 6 narrow and pointed, thoracic sternal plate evenly rounded laterally, and the basal arms of pseudopenis laterally expanded.

Description. ♂: Total body length 0.94 mm (\bar{X} , n=4). *Head* (fig. 2) longer than wide; post-antennal angle strongly developed; posterolateral angle not developed; antennal, preantennal, oral, and clypeal setae distinct; 2 sutural and 4 marginal head setae present on each side; dorsal principal head seta long, with anteromedial accessory seta; anterior and posterior central head setae distinct; ventral principal head seta long, reaching the base of antennal segment 2; antennae 5-segmented, with 1 large sensorium on segment 4 and 1 small sensorium on segment

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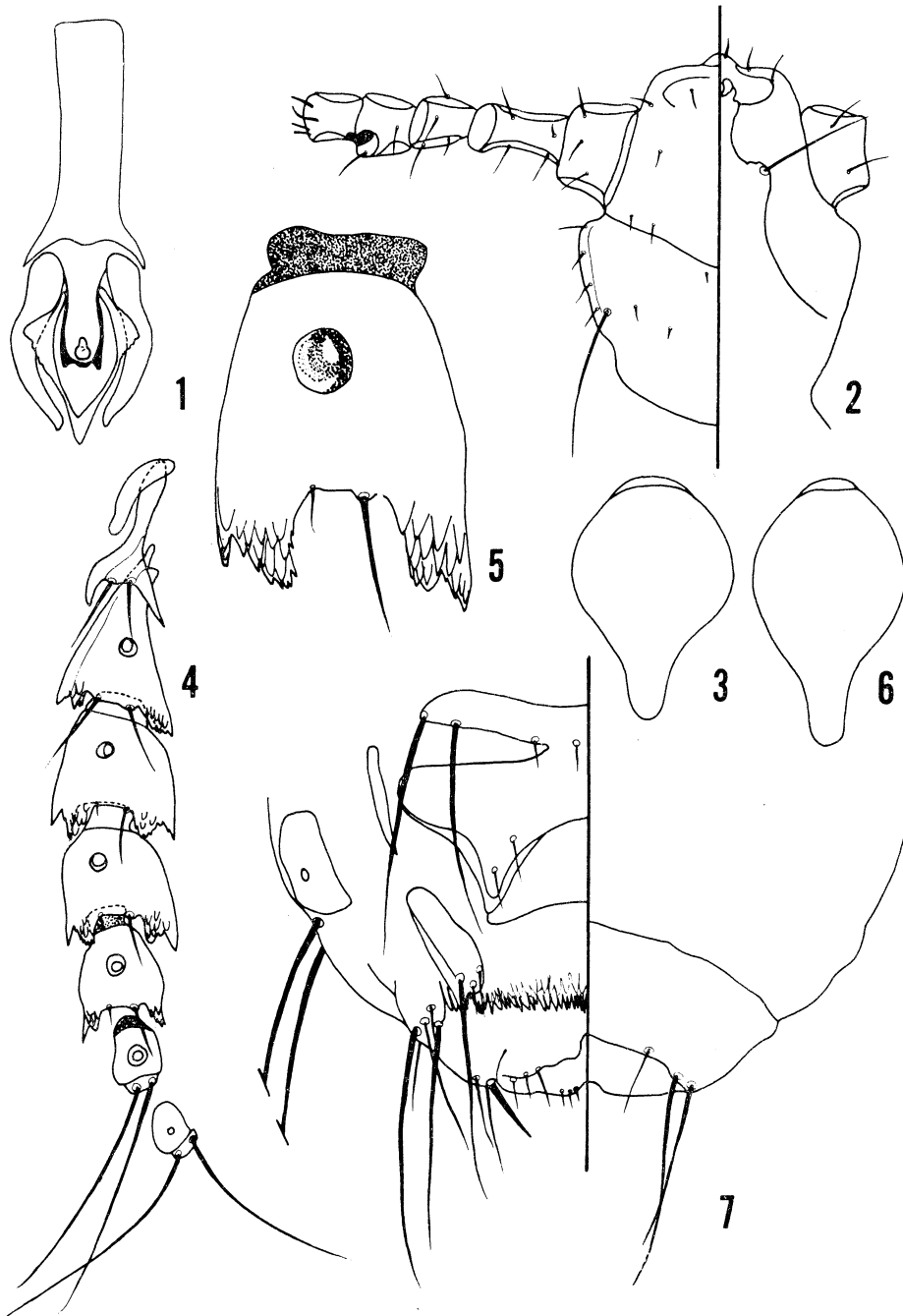


Fig. 1-7. *Hoplopleura cornata* Kim, n. sp. 1-3. ♂ holotype: 1, ♂ genitalia; 2, head; 3, thoracic sternal plate. 4-7, ♀ paratype: 4, paratergites; 5, paratergite of abdominal segment 4; 6, thoracic sternal plate; 7, ♀ genitalia.

5, both sensoria contiguous. *Thorax* with distinct mesothoracic phragma; dorsal prothoracic seta short; dorsal mesothoracic seta distinct, borne on anterior edge of mesothoracic spiracle; dorsal principal thoracic seta long; sternal plate (fig. 3) laterally rounded, with distinct posterior process but anterior process not developed. *Legs* as in other members of the genus. *Abdomen* with 6 tergites, 11 sternites, and 8 paratergites (fig. 4); segments 3 to 8 with distinct tergites, each bearing 8 to 11 dorsal setae; segment 1 with 2 dorsal setae; and segment 2 with 4 dorsal setae; segment 3 with 4 dorsal setae and 11 setae on the tergite; 1 or 2 dorsal setae off the tergite; segment 2 with sternite extended laterally to articulate with corresponding paratergite, bearing 6 setae; segment 3 with 2 sternites, the anterior sternite extended laterally to articulate with corresponding paratergite bearing 2 sets of 2 spiniform setae, and posterior one with 8 setae; segment 4 with 3 sternites, each bearing 7 to 9 setae; segments 5 and 6 each with 2 sternites bearing 6 to 10 setae; segment 7 with 6 setae on sternite; 4 lateral setae placed off the sternites; paratergites of segments 4 to 6 each with 1 long and 1 short apical setae (fig. 5); paratergites of segments 2, 3, 7, and 8 each with a pair of long setae; paratergal lobes of segments 2 and 6 pointed, slightly scaly; paratergal lobes of segments 4 and 5 moderately subdivided into lobules (fig. 5); paratergites 7 and 8 without apical lobe; paratergites 3 to 8 each with distinct spiracle. *Genitalia* (fig. 1) with parameres gradually bent and tapered posteriorly; pseudopenis with basal arms laterally expanded and short apical arm.

♀: Total body length 1.24 mm (\bar{X} , n=4). *Head, thorax, legs, and abdomen* same as in male, unless otherwise mentioned. *Thorax*: Sternal plate as shown in fig. 6. *Abdomen* with 16 tergites and 15 sternites; segments 4 to 7 each with 3 tergites, each tergite with 6 to 8 setae; segment 3 with 2 tergites each bearing 6 to 8 setae; 5 to 6 dorsal lateral setae present off the tergites on each side; segments 3 to 6 each with 3 sternites, each sternite with 8 to 10 setae; segment 7 with 2 sternites each bearing 6 to 8 setae; 6 ventral lateral setae present off sternite on each side. *Genitalia* (fig. 7): Genital plate much wider than long, with 2 long setae at lateral apex, 4 short setae at center, and 2 short setae on posterolateral side; gonopods oblong, with 2 small and 1 long apical setae; genital lobe distinct, with spiniform genital seta; spermatheca indistinct.

A KEY TO THE AUSTRALIAN SPECIES OF HOPLOPLEURA

1. Paratergite of abdominal segment 7 with distinct apical lobe 2
 Paratergite of segment 7 without distinct apical lobe 3
2. Paratergite of abdominal segment 8 with distinct apical lobe; paratergite of segment 3 with one short apical seta; on *Mastacomys fuscus* **mastacomydus** Kuhn & Ludwig, 1967
 Paratergite of segment 8 without apical lobe; paratergite of segment 3 with a pair of long setae; on *Pseudomys higginsii* **calabyi** Johnson, 1960
3. Thoracic sternal plate heart-shaped with a rounded anterior process; paratergites of abdominal segments 3 to 5 deeply bilobate; on *Gyomys fumeus*
 **gyomydis** Kuhn & Ludwig, 1967
 Thoracic sternal plate not heart-shaped and with short anterior and long posterior processes; paratergites of segments 3 to 5 not deeply bilobate 4
4. First sternal plate of abdominal segment 3 extended laterally to articulate with the corresponding paratergites 5
 First sternal plate of segment 3 not extended laterally; ex *Hydromys chrysogaster fulvovavatus* (=“*Mus rattus*” of Neuman, 1909)..... **bidentata** (Neuman, 1909)
5. Abdominal spiracles unusually large, diameter more than 0.030 mm; on *Uromys caudimaculatus* **uromydis** Kuhn & Ludwig, 1967
 Abdominal spiracles small, diameter less than 0.020 mm..... 6
6. Paratergite of abdominal segment 6 with 2 distinct apical lobes; on *Rattus cornatus*
 **cornata** Kim, n. sp.

Paratergite of segment 6 with a single or no apical lobe; on *Rattus assimilis* and *R. lutreaulus* *irritans* Kuhn & Ludwig, 1967

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