A NEW SPECIES OF ANOPLURA FROM THE PHILIPPINES

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Included in a collection of Anoplura from the 1946–47 Chicago Natural History Museum Expedition to the Philippines is a new species of Polyplax from Bullimus. The new louse species is described in this paper and compared with certain other species of Polyplax which infest rats related to Bullimus (Bandicota, Nesokia, and Rattus s. strictu).

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Polyplax bullimae, n. sp. 
(Figs. 5, 6, 8, 9)

Holotype male from Bullimus bagobus, Philippines, Davao Province, Mindanao, east slope of Mt. McKinley, 5400 ft., 20 August 1946, H. Hoogstraal collector, Field number 636, CNHM mammal catalogue number 56201. Three male paratypes bear the same data as the holotype. Allotype female, one male and two female paratypes bear data as the holotype except they were collected 19 August 1946 at 5500 ft., Field number 635, CNHM mammal catalogue number 56200. Holotype, allotype, two male and one female paratypes deposited in the collections of the Chicago Natural History Museum; two male and one female paratypes deposited in the collections of the United States National Museum.

Diagnosis: Superficially resembling Polyplax asiatica Ferris and P. insulsa Ferris. P. bullimae, n. sp., is like these two species in having the abdominal plates reduced and the head elongate and lacking postantennal angles. Both sexes of bullimae are separable from insulsa and asiatica in not having the dorsal apical seta of paratergal plates II and III greatly elongate, but with both apical setae of paratergal plate VI longer than the plate. The male is separable from insulsa and asiatica in that the pseudopenis articulates with the tip of the parameres in bullimae (Fig. 9), not with the parameres surrounding the pseudopenis (Figs. 3, 4); and further separable in that the third antennal segment is modified and bears a short stout seta. Female bullimae is separable from asiatica and insulsa in that paratergal plates III–VI do not have the ventral apical angle produced into a prominent lobe.

Description: Male (Fig. 6): Head elongate, lacking marked

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postantennal angles and not broadened behind antennae, gular region raised; antennae set well back from rounded apex of head; basal antennal segment not especially enlarged, third segment with distal angle produced and bearing a short, stout seta. Sensory pits of antennal segments 4 and 5 not contiguous. Thorax not as long as head; sternal plate with central portion irregularly triangular and sclerotized, outer rim semi-membranous, with anterior projection as in Fig. 8. Legs: Second pair of legs slightly larger than first, third pair much the largest. Pulvillus-like membranous lobe on inner margin of tarsi of first and second legs very prominent and discrete. Abdomen with narrow tergal and sternal plates; 1 row of setae per segment, except that ventrally segments 2 and 3 have 2 rows; dorsally with 2 or 3 setae laterally off the plates on each segment. Paratergal plates all poorly sclerotized; no apparent division in plate II; plates III–V with apical angles not produced, and bearing 2 short apical setae; plate VI similar but with apical setae longer than plate. Genitalia as in Fig. 9; pseudopenis narrow, longer than parameres and articulating with apices of parameres.

Female (Fig. 5): Head as in male except third antennal segment not modified. Thorax and legs as in male. Abdomen with 2 plates and 2 rows of setae per segment both dorsally and ventrally; plates greatly reduced, particularly the sternal plates and posterior tergal plate of each segment, these being interrupted, usually occurring merely as areas of sclerotization around each seta; one seta far removed laterally off plates on segments 3–7 both dorsally and ventrally. Paratergal plates as in male. Genitalia as in figure; genital plate large, poorly sclerotized; entire margin of vulva with delicate fimbriate processes, lateral setigerous lobes of the eighth segment (formerly called gonopods) suppressed.

Length: Male 1.0–1.2 mm., female 1.3–1.4 mm.

Comment on Polyplax asiatica Ferris and P. insulsa Ferris.

Ferris did not publish complete drawings of Polyplax asiatica in his original description (a figure of the male genitalia only was included). Further collections of P. asiatica represented in the United States National Museum make possible a more extended comparison of P. asiatica and insulsa than that given by Ferris. Complete drawings of both male and female asiatica are included in this paper to facilitate comparison with closely related species (Figs. 1, 2).

P. asiatica, although very close to insulsa, differs in the following ways: The head is at least one and one-half times as long as broad in both sexes of asiatica; but not in insulsa. The thoracic sternal
plate is not so broad in relation to its length as in *insulsa*. The thoracic and abdominal spiracles are much larger in *insula* than in *asiatica*. Female *asiatica* lacks developed tergal and sternal plates except for vestiges on the most anterior part of the abdomen and the usual plates on the genital segments. Further, the prolonged ventral apical angle of paratergal plates III–VI is rounded in female *asiatica*, acute in *insula*. The male genitalia differ slightly, the parameres of *insula* being longer and not so strongly incurved apically as in *asiatica* (Figs. 3, 4). The two figures of the genitalia of *asiatica* illustrate how flattening of the specimen during mounting may change the apparent shape. Both specimens drawn were collected off *Nesokia suilla*, one from Faiyum Province and one from Beheira Province, Egypt.

Ferris noted in his original description of *insula* that both males and females have a small tooth-like projection at the outer proximal angle of the tarsus of the third leg. This projection is not visible on the male and female paratypes of *insula* in the United States National Museum (from *Epimys sabanus* [*Rattus sabanus*], Bunguran, Natuna Islands, USNM mammal catalogue No. 104765).

Blagoveshtchensky (1950) described *Polyplax turkestanica* from many specimens collected off *Rattus turkestanicus* from Stalinabad, Tadzhikistan, Russia. In the same publication he set up the subspecies *turkestanica major* based on large numbers of specimens from *Nesokia indica* taken at Stalinabad, and stated that in his opinion the females reported by Ferris as *asiatica* which were taken from *Nesokia hardwickii* (now known as *Nesokia indica*) from Baluchistan probably belonged to the subspecies *turkestanica major*.

Blagoveshtchensky apparently was misled by supposing that head shape was the same in *asiatica* as in *insula*, since he stipulated that his specimens had heads at least one and one-half times as long as broad as opposed to *insula* and *asiatica*. *P. turkestanica major*

**Explanation of Plate**

*Polyplax asiatica* Ferris, 1923: Fig. 1, female (Egypt, Faiyum Province, *ex Nesokia suilla*). Fig. 2, male (Egypt, Beheira Province, *ex Nesokia suilla*). Fig. 3, male genitalia (Beheira Province). Fig. 4, male genitalia (Faiyum Province). Fig. 7, thoracic sternal plate, female (Faiyum Province).

*Polyplax bullimae*, new species: Fig. 5, allotype female. Fig. 6, holotype male. Fig. 8, thoracic sternal plate, allotype female. Fig. 9, genitalia, holotype male.
was separated from the nominate subspecies by being usually somewhat larger and with a slightly longer head (total length: \( t. \) turkestanica \( \delta \) 1.02–1.25 mm.; \( \Phi \) 1.4–1.8 mm.; \( t. \) major \( \delta \) 1.41–1.59 mm.; \( \Phi \) 1.6–2.01 mm.).

In my opinion both \( t. \) turkestanica and \( t. \) major are synonyms of asiatica Ferris. Blagoveshtchensky’s figures of the female paratergal plates, male genitalia, thoracic sternal plate and female dorsum of \( t. \) turkestanica are compatible with specimens of asiatica from Egypt and Baluchistan. Egyptian specimens of asiatica have total lengths of 1.0–1.05 mm. in the \( \delta \) and 1.35–1.53 mm. in the \( \Phi \). The two Baluchistan females are 1.2 and 1.35 mm. respectively.

Four female asiatica in the United States National Museum collections, from Bandicota sp., Formosa, measure 1.6–1.75 mm., and differ slightly in the shape of the paratergal plates from the Egyptian, Baluchistanian and Tadzhikian specimens. The collection of larger series, including males, from Formosan Bandicota may prove these specimens not to be conspecific with asiatica. However, the slight differences exhibited in the present four females do not, in my opinion, warrant the assumption that they should be separated from asiatica.

Literature Cited


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ANNOUNCEMENT

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