Pacific Insects 14 (2): 393-397 20 August 1972

POLYPLAX RHIZOMYDIS, A NEW SPECIES OF SUCKING LOUSE (Anoplura) FROM ASIAN BAMBOO RATS

By **Phyllis T. Johnson**

Abstract: *Polyplax rhizomydis*, n. sp., from *Rhizomys sumatrensis* is described and compared with *Polyplax cannomydis* Johnson. Descriptions and illustrations of nymphs of both species are included.

Introduction

The new species described in this paper is the second species of sucking louse known from Oriental bamboo rats, family Rhizomyidae. *Cannomys* and *Rhizomys* are the only Recent genera in this aberrant group of the Muroidea (Simpson, 1945). The two species of sucking lice that parasitize species of *Cannomys* and *Rhizomys* are also aberrant, although very closely related themselves. As discussed by Johnson (1959), the closest obvious relationship of *cannomydis* Johnson (and thus of *rhizomydis*, new species) is with the genus *polyplax*, although both species depart radically from typical members of that genus.

Since nymphs of *cannomydis* Johnson have not been described they are illustrated and compared with *rhizomydis*, n. sp., in this paper.

The holotype of the new species, and the bulk of other specimens, are deposited in the collections of the Bishop Museum, Honolulu. Drawings of like parts or stages on a single plate are made to the same scale unless otherwise indicated. I am grateful to Dr. Ronald H. Pine, National Museum of Natural History for checking the host names.

Polyplax rhizomydis Johnson, new species Fig. 1-3, 5, 8, 9.

Type data: Female holotype (BISHOP 9621), from *Rhizomys sumatrensis*, Laos: 18 km NW Xieng Khouang, 3450′, 15 August 1960, Leech and Nadchatram collectors, no. R70307. Also examined: A series of five males, six females, and six second- and third-instar nymphs, supposedly from *Rattus niviventer*, Laos: Ba Na Khouang, 30 km S Plaine des Jarres, 4500′, 21 August 1960, Leech collector, R70198-99. The field identification was "hamster," a designation that fits *Rhizomys* better than *Rattus niviventer*. It seems likely that a mixup in collection numbers occurred.

Diagnosis: Very close to *cannomydis* Johnson from the rhizomyid *Cannomys badius minor*, collected in Thailand. Differs mainly in being considerably larger: by having a heavier sclerotization on the anterior part of the head (compare fig. 7 and 8); and with more setae in the lateral groups on the abdomen. The aedeagus also differs from that of *cannomydis* as shown in Figures 3 and 4.

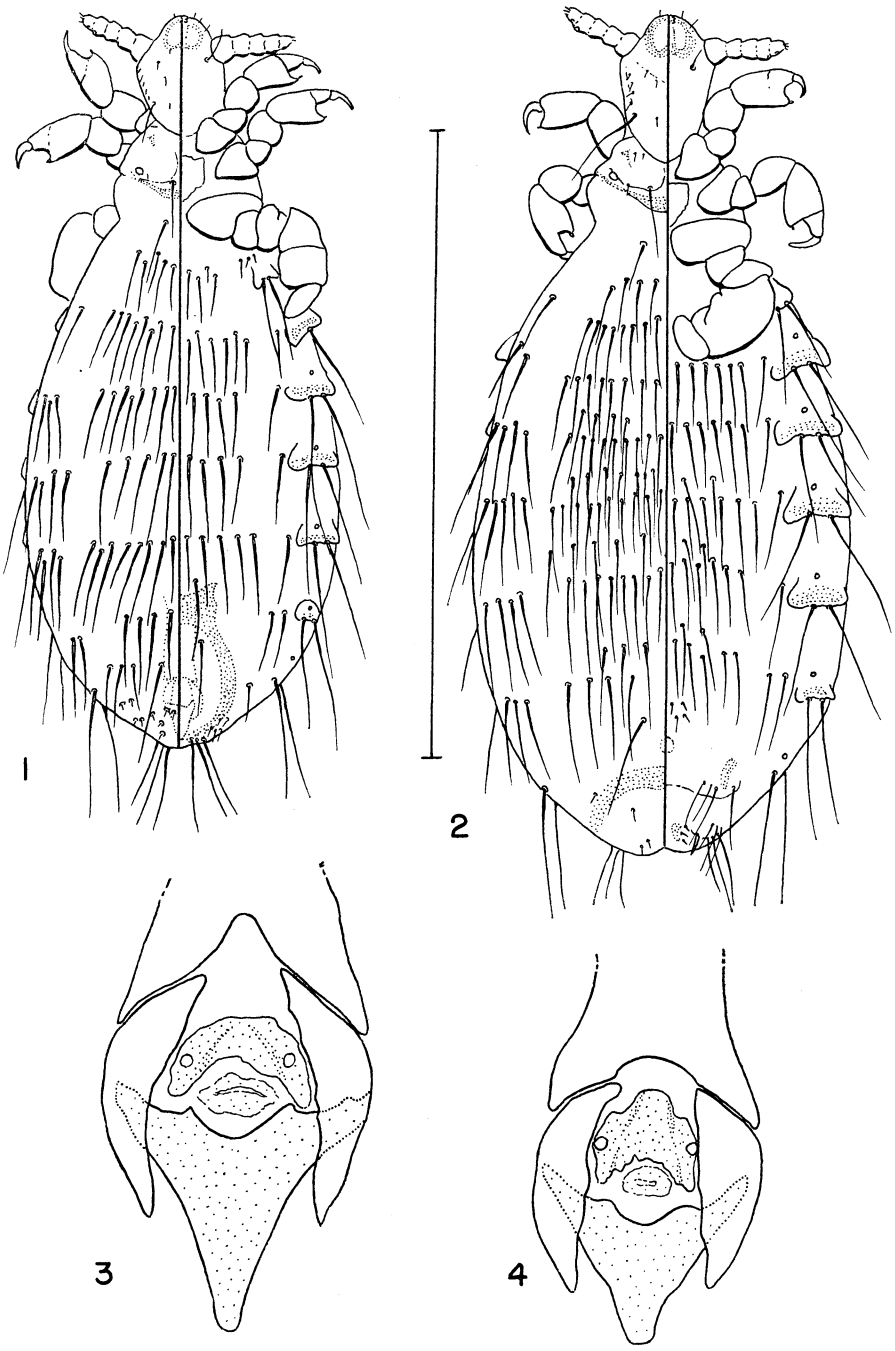

Fig. 1-4. *Polyplax cannomydis* Johnson and *Polyplax rhizomydis*, n. sp.: 1, *P. rhizomydis*, ♂; line equals 2.0 mm; 2, same, ♀ holotype; 3, same, aedeagus; 4, *P. cannomydis*, aedeagus, paratype.

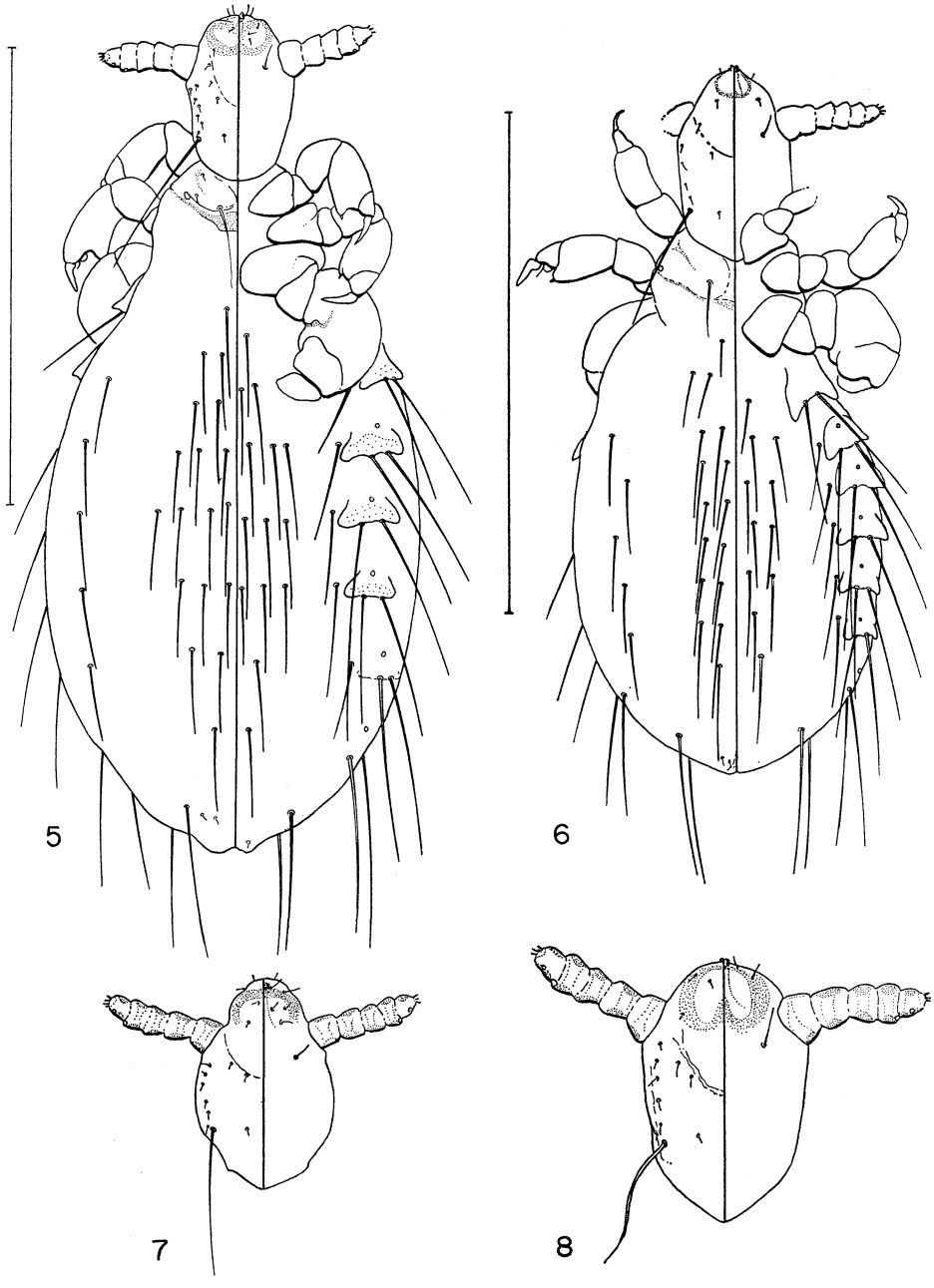

Fig. 5-8. *Polyplax cannomydis* Johnson and *Polyplax rhizomydis*, n. sp.: 5, *P. rhizomydis*, third-instar nymph ; line equals 1.0 mm ; 6, *P. cannomydis*, third-instar nymph ; Thailand, Kanchanaburi, Elbel collector, October 1952, no. RT B-15803 ; line equals 0.5 mm ; 7, Same, head, male paratype ; 8, *P. rhizomydis*, head, male.

Lengths. ♀ : holotype, 2.45 mm, others, 2.4-2.65 mm. ♂ : 1.85-2.2 mm. Third-stage nymph : 1.85-2.15 mm. Second-stage (?) nymph : 1.4-1.7 mm.

Description : ♀ (fig. 2). *Head* (fig. 8, ♂) preantennal area with heavy internal circular sclerotization ; broadest behind antennae ; postantennal margins straight ; all head setae except principal dorsal and ventral setae thin, short. Antennae unmodified ; sensoria of fourth and fifth segments separate, small. *Thorax* with sternal plate nonpigmented, vaguely defined, of irregular shape, filling ventral area between coxae. *Legs.* First and second pairs of equal size, third pair much larger, flattened, with large tarsal claw. *Abdomen* lacking sclerotized plates except for a narrow pigmented plate dorsally on segment 9. Abdominal segments with two rows of long, flexible setae dorsally and ventrally ; dorsally segments 4-7 each with lateral group of 3-5 setae in addition to medial row. Spiracles present on segments 3-8. Paratergal plates present on segments 2-7, similar in shape, posterolateral angles rounded, produced laterally, the posterior margins sclerotized and pigmented ; each plate bearing two long posteroapical setae. Eighth segment also with pair of long lateral setae.

♂ (fig. 1). *Head* (fig. 8), *thorax*, and *legs* as in female. *Abdomen* as in female except each typical segment has one row of setae ; but segments 2-3 each have two coalesced rows both

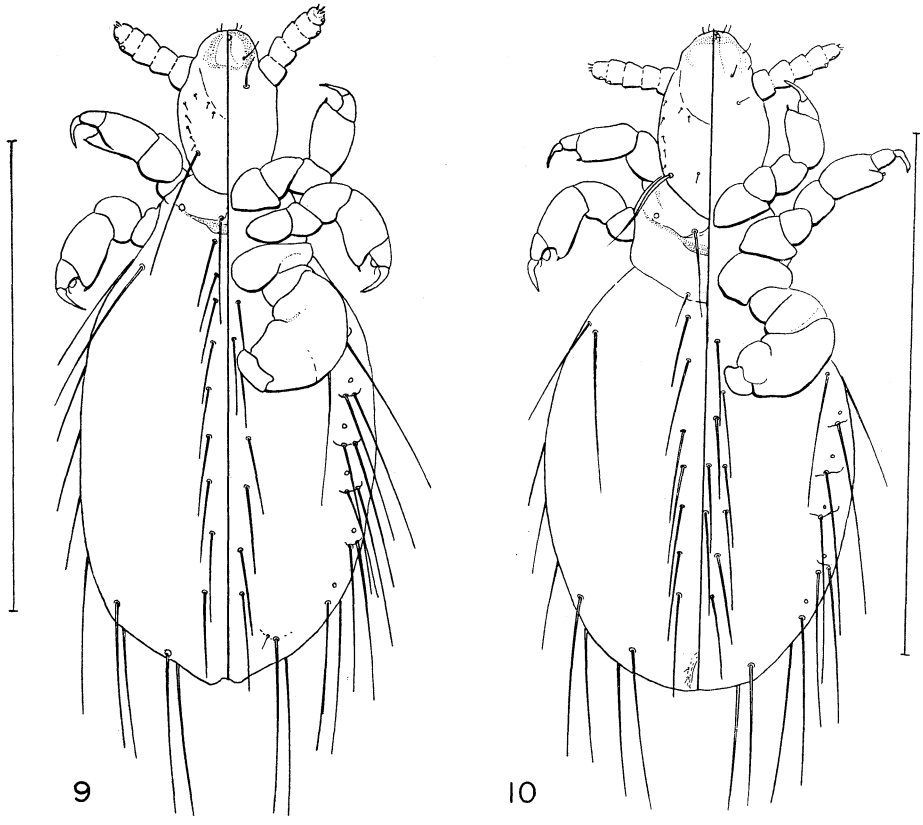

Fig. 9-10. *Polyplax cannomydis* Johnson and *Polyplax rhizomydis*, n. sp. : 9, *P. rhizomydis*, second (?) instar, line equals 1.0 mm ; 10, *P. cannomydis*, second (?) instar, from type lot, line equals 0.5 mm.

dorsally and ventrally. Genital plate pigmented, entire to posterior apex, with large central lacuna. *Aedeagus* (fig. 3) with heavily sclerotized, triangular pseudopenis which extends more than half its length beyond the lenticular parameres, pseudopenis apically narrowly rounded.

Nymph. Two stages represented in the material on hand. *Third instar* (fig. 5): With head and legs similar to those of adult; thorax lacking sternal plate. Paratergal plates II-VI shaped and pigmented like those of adult; plate VII barely indicated; spiracles present on segments 3-8. Dorsally and ventrally abdominal segments 3-7 each with one row of setae plus one lateral seta on each side. Posterior apex of abdomen with one pair of terminal setae on each side. *Second instar* (?) (fig. 9): Similar to third except paratergal plates lack posterolateral angles, are nonpigmented, and abdominal segments dorsally and ventrally each with only one pair of long median setae.

Comparison of cannomydis nymphs. The third-instar nymph of *cannomydis* (fig. 6) is similar to that of *rhizomydis*, n. sp., except for its smaller size and differently shaped head. A younger instar which may be the second (fig. 10) differs from the second (?) instar of *rhizomydis* by having a row of four ventral setae on segments 4-5 rather than a single pair; the paratergal plates are less distinct, and IV-VI have a single long apical seta rather than a pair. Lengths of *cannomydis* nymphs are: Third instar: 1.1 mm. Second (?) instar: 1.0 mm.

REFERENCES CITED

Johnson, P. T. 1959. The rodent-infesting Anoplura (sucking lice) of Thailand, with remarks on some related forms. *Proc. U. S. Natl. Mus.* **110:** 569-598.

Simpson, G. G. 1945. The principles of classification and a classification of mammals. *Bull. Amer. Mus. Nat. Hist.* **85:** i-xvi, 1-350.