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DESCRIPTION OF A NEW GENUS AND SPECIES OF TRIMENOPONIDAE FROM PANAMÁ

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The systematics of the family Trimenoponidae remains unsatisfactory. The group is comparatively small since only nine species are known, all of which are found in the American tropics associated mainly with rodents and marsupials. In his monograph, Werneck (1948) combines this particular group with the family Boopidae (found on mammals) and the families Ricinidae and Menoponidae (found on birds), in a single group, the family Ricinidae. However, this system of classification is not generally followed and many investigators consider the lice grouped in the family Trimenoponidae, as designated by Harrison (1915) and reviewed by Ferris (1922) as a separate, well-defined group restricted to mammal hosts.

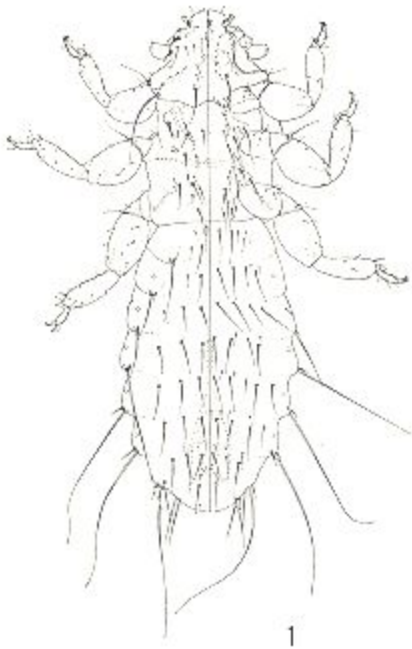
The most recent discussions regarding affinities and host-parasite relationships within the family Trimenoponidae have been presented by Hopkins (1949) and Vanzolini & Guimaraes (1955). To date this group contains five genera, namely: *Cummingsia, Chinchillophaga, Harrisonia, Philandesia* and *Trimenopon.* Recently Dr. Phyllis T. Johnson has kindly submitted to me for study specimens of Trimenoponidae that apparently belong to an unknown genus and species and form the basis for the present paper. This discovery bears out the statement of Emerson (1964) to the effect that more collecting from probable hosts in South America could enlarge the family.

Hoplomyophilus, n. gen.

Generic diagnosis.—Trimenoponidae lacking spinelike processes on ventral side of head; with two lateral spiniform setae at level of antenna. Prothorax subquadrate, smaller than pterothorax; anterior thoracic stigmata conspicuous.

Hoplomyophilus can be readily separated from the other known genera, with the exception of *Philandesia* and *Trimenopon*, by the absence of spinelike processes on the ventral region of head. The new genus can be separated from the latter two genera by structural features of the head and thorax. The following differences are outstanding: In *Hoplomyophilis* the head has two conspicuous lateral spiniform setae at same level with antenna. These spiniform setae are absent in *Philandesia* and *Trimenopon.* In *Hoplomyophilus* the prothorax is subquadrate, smaller than pterothorax, whereas both *Philandesia* and *Trimenopon* have a trapezoidal prothorax which is larger than pterothorax.

Description.—Head without spinelike processes on ventral region; with lateral and posterior margins sinuate; posterior margin with central sinus; with two dorsal,



Figs. 1–4, *Hoplomyophilus nativus*, n. gen., n. sp.: 1, dorsal-ventral view of male holotype; 2, genitalia of male holotype; 3, dorsal-ventral view of female allotype; 4, genitalia of female allotype.

submarginal spiniform setae at the antennal level; clypeal region moderately produced, not limited by distinct suture; eyes absent; maxillary palpi four-segmented, exposed; antennae four-segmented, exposed, not protected ventrally by a flap; antennal fossae deep; temporal lobes slightly prominent, truncate. Prothorax and pterothorax fused, both subquadrate; anterior thoracic stigmata conspicuous; posterior thoracic stigmata reduced; sternal plates fused into a single plate. Legs short, stout; with distinct pulvilli on the first tarsal segment of all legs. Abdomen subovate, with five pairs of abdominal stigmata; male genitalia of simple type.

Type species.—*Hoplomyophilus nativus*, new species.

Affinities.—It is my opinion that *Hoplomyophilus* is closely related to the peculiar genus *Harrisonia* Ferris. Similarities are noticed particularly in the morphology of the thorax and abdomen. Among the most important features common to the two genera are the complete union of prothorax and pterothorax, the fusion of the thoracic sternal plates into a single plate and the conspicuous anterior thoracic stigmata. The fact that *Harrisonia* also parasitizes spiny rats, *Proechimys semispinosus* being its true host, seems to support this belief.

Hoplomyophilus nativus, n. sp.
(Figs. 1–4)

Description.—MALE (Figs. 1, 2). Head slightly wider than long, with clypeal region moderately produced, having anterior margin evenly convex, provided with minute and short marginal and submarginal setae. Lateral margins of head sinuate, slightly notched; each margin armed with two dorso-submarginal spiniform setae located at same level with the antenna. Posterior margin of head sinuate, with indentation at middle. Maxillary palpi four-segmented, exposed, with few short setae mostly concentrated on apical segment. Antennae four-segmented, exposed, bearing a few fine setae. Last antennal segment slightly swollen, semiglobular, larger than remaining segments. Antennal fossae deep, with very sclerotized, concave margin. Temples truncate, moderately projecting, with lower angle bearing a long dorsal seta that reaches middle of thorax. Both dorsal and ventral regions of head clothed with setae of different sizes and irregular distribution.

Thorax longer than broad, bearing short and medium-size setae scattered on dorsal and ventral regions. Sternal plates apparently fused into a single plate extended along thorax, including ventral setae. Prothorax fused with pterothorax. This fusion apparently indicated by well chitinized longitudinal internal ridge in the middle of thorax. Prothorax subquadrate, smaller than pterothorax, provided with dorsal sublateral flap armed with conspicuous spiniform seta. Pterothorax subquadrate. Anterior thoracic stigmata prominent. Posterior thoracic stigmata reduced.

Legs short and stout. First pair smaller than second and third pair, which are of about same size. All legs clothed with short setae sparsely distributed. Basal tarsal segment of all legs with small pulvilli. Apical tarsal segment of all legs ending in two claws.

Abdomen slightly elongate, ovate, with sinuous lateral margins. Each tergum and sternum, except terminal ones, provided with no more than two irregular rows of short and medium size setae. Segments I–VI with two short and one long latero-marginal seta. The last reaches maximum length on segments IV–VI. Apical abdominal segments with few marginal and inner setae.

Genitalia (Fig. 2) simple, with basal plate elongate, having posterior half distinctly broad, provided with well chitinized walls; with acute sinus at middle of caudal margin. Anterior half gradually tapering to end on long, slender blade of about even width throughout. Parameres apparently absent.

FEMALE (Figs. 3, 4). General morphology and chaetotaxy essentially as in the male. Differences between sexes are found in size and the terminal abdominal

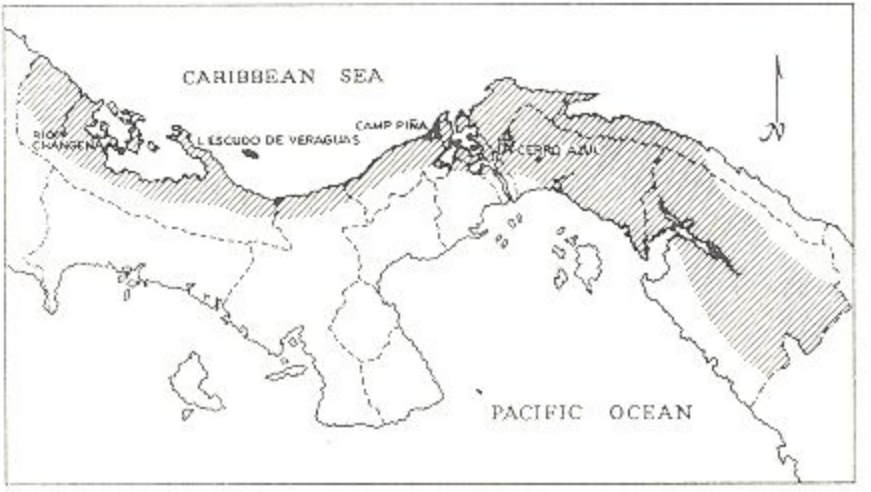


Fig. 5, Map of Panamá showing the known range of *Hoplomys gymnurus* and the localities where *Hoplomyophilus nativus* has been collected.

segments. The female genital area (Fig. 4) presents lateral gonopods provided with setae, preceded by latero-marginal group of setae. Caudal region separating gonopods having one marginal row of six medium-size setae and about two rows of minute setae accompanied by a few short ones. A patch of about ten small spicules is present at the middle of caudal area near its margin.

Types.—Holotype male from Cerro Azul, Province of Panamá, R. P., 21 March 1961; allotype female from Isla Escudo de Veraguas, Province of Bocas del Toro, 21 March 1964; one female paratype from same locality and date as allotype; one female paratype from Camp Piña, Canal Zone, 6 December 1960 and one female paratype from Río Changena, Province of Bocas del Toro, 23 September 1961. All types collected by personnel of the Environmental Health Branch, Office of the Surgeon General, United States Army Caribbean, Fort Amador, Canal Zone.

Lengths.—Male holotype, 1.27 mm; female allotype, 1.46 mm.

Type host.—*Hoplomys gymnurus* (Thomas, 1897).

Holotype and allotype will be deposited in the collections of the U.S. National Museum. One paratype will be deposited in the collections of the British Museum (Natural History). Other paratypes will be deposited in the collections of Dr. Phyllis T. Johnson and the Gorgas Memorial Laboratory, respectively.

Remarks.—It is of some interest to note that the specimens of the present new genus and species of mallophaga obtained on Isla Escudo de Veraguas, were collected from the subspecies *Hoplomys gymnurus*

wetmorei Handley, whereas the continental specimens were taken from *Hoplomys gymnurus goethalsi* Goldman. No morphological differences have been detected among the lice coming from these two different subspecies of host.

It may be assumed that *Hoplomyophilus nativus* is rare since the examination of numerous specimens of the type host from several localities in Panamá over a period of years has indicated that this rodent is more commonly parasitized by mallophaga of the genera *Gyropus* and *Gliricola* of the family Gyropidae.

The terrestrial genus *Hoplomys* belongs to the spiny rat family Echimyidae and is monotypic. In Panamá it has a wide distribution especially along the Caribbean Coast and has been collected in evergreen forest up to an altitude of 2100 feet. Besides Panamá, the genus also is known to exist in the following countries: Costa Rica, Nicaragua, Colombia, Ecuador, Venezuela, Brasil and British Guiana. In figure 5 the range of Hoplomys gymnurus in Panamá is indicated by the cross-hatched area.

I wish to express my sincere appreciation to Dr. Phyllis T. Johnson for allowing me to study and describe this interesting mallophaga. I am also grateful to Dr. K. C. Emerson for advice and criticism given me during the preparation of this paper.

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