

Description of a New Genus and Species of Louse from an
Elephant Shrew
By

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DESCRIPTION OF A NEW GENUS AND SPECIES OF LOUSE FROM AN
ELEPHANT SHREW.

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The description of this new louse, which belongs to the order Anoplura and to the sub-order Siphunculata, is based on several females and two males taken from several specimens of *Elephantulus rupestris jamesoni* at Onderstepoort, near Pretoria, by the writer in December 1919.

It is the first species of louse to be recorded from an elephant shrew, and, as was to be expected, proves to be a new species, and also to belong to a new genus, for which I propose the name *Neolinognathus*.

In addition to the above material collected on these Insectivora, all the hosts proved to be parasitized by a small undetermined yellow mite, which was only found on the bare parts of the skin round the tail, with

the exception of one or two individuals detected on the back, these being probably stragglers.

I am indebted to Mr. Austin Roberts of the Transvaal Museum for kindly identifying the host for me.

Before giving a detailed description of the louse, it would probably not be amiss if I were to first of all give a short account of its host.

E. rupestris is the largest species of the family *Macroscolidae*, excluding *Petrodromus* and *Rhynchocyon*, the two remaining genera, which occur mainly in Tropical Africa, but are also found in the Eastern Transvaal and Zululand. It is diurnal in habits, and is only found amongst rocks in more or less treeless situations on kopjes (hills) or on the veldt. It is readily recognized by the great length of the hind feet, which measure about 35 to 38 mm. in adult specimens.

The food of these animals consists principally of insects, but they may be caught in traps baited with meat.

Subfamily *LINOGNATHINAE*.

Genus *NEOLINOGNATHUS*, gen. nov.

The generic characters are:—Species small. Head long and narrow, with the posterior portion scaly; antennae five-segmented, similar in both sexes. Thorax with two narrow longitudinal sternal plates. Abdomen elongated and narrow, with a row of strong spines of peculiar construction on the posterior margins of the first seven segments of the female only; the integument is soft, and almost completely covered with scales and minute spines. Chitinized tergites and sternites and sutures between the segments are lacking. Pleurites absent, except for a rudimentary pair on the eighth segment, immediately above each of which the e is a long and short bristle. Stigmata are only present on the thorax and eighth abdominal segment, there being a pair on the thorax near the lateral margin and a large pair on the eighth segment above the pleurites. The first pair of legs are smaller than the succeeding pairs, each with a small claw. The second pair are slightly larger than the third pair, but to a less extent in some specimens than in the one figured, and in the males there is little difference in size; the claws of the mid and hind pairs are large and equal.

It is probably not advisable to attempt at present to discuss this new species with reference to its nearest known relative. All that it is necessary to say is that *Neolinognathus* resembles *Polyplax* in size, but can be distinguished from it or any other known genera by the following characters:—

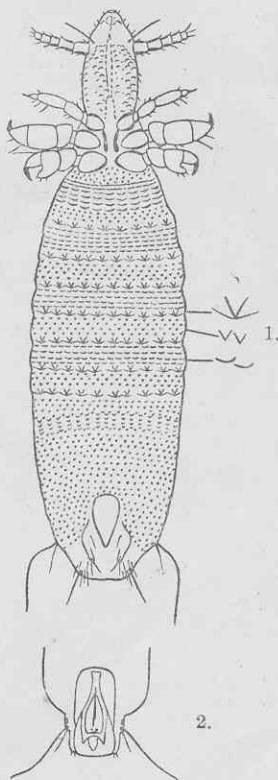
- (1) The presence of only a single pair of stigmata on the abdomen.
- (2) A pair of sternal plates.
- (3) Hind head being covered with scales.

- (4) The abdomen of the female having a row of strong characteristic spines on the posterior margins of both surfaces of the first seven abdominal segments.
- (5) By the integument of the abdomen being covered for the most part with scales and minute spines.

Scales are also present in two genera, occurring on marine mammals, but in both these they are of a totally different construction, being attached to the integument by means of a minute stalk, whereas in *Neolinognathus* they form part of the integument itself, and may be only rudimentary spines.

Neolinognathus elephantuli, sp. nov.

♀. *Head* much longer than broad, widening but little behind the antennae, the occipital area entering a broad U-shaped groove in the thorax. Forehead conical, with four minute hairs on each side; on the dorsal surface behind the anterior margin there is a narrow transverse band slightly darker than the rest of the head, and between the antennae there is a median transverse suture, which projects forward on each side towards the anterior basal margin of the antennae; between this structure and the antennae there is a short hair on each side, another short one a little distance beneath it, and a minute hair a short distance above it. On the ventral surface there is a longish hair on each side between the antennae, and two minute admedian ones some distance beneath these. On the margins of each temple there are four or five minute hairs, and two admedian ones in a line with the base of the temples. *Thorax* narrow in front, broadening towards the abdomen; sides rounded, with a minute hair near the middle. The parts of the dorsum are very indistinct and hard to make out. Sternal plates elongated and narrow, almost touching the first pair of coxae. *Legs*: the legs have been dealt with under generic characters, and parts not described there can be clearly made out in the illustration. *Abdomen* elongated, shaped as in fig. 1. First seven segments with a row of strong spines on the posterior margins of both surfaces, which are peculiarly constructed (see figure). The ventral surface of the first segment is covered with minute spines in front, then about seven rows of scales, which are directed in precisely the opposite direction to those on the head, and beneath these again there are more minute spines, some of which have a very minute hair at their apices. The dorsal surface is similar, except that there appear to be no spines in front of the scales. The second, fourth, and sixth segments are covered both dorsally and ventrally with small scales. The third, fifth,



1. *Neolinognathus elephantuli*, ♀.
2. Ditto, ♂, genitalia.

seventh, and eighth are covered with minute spines on both surfaces; on the ventral surface of the eighth there are several slightly larger spines on each side near the anterior margin, and in some specimens there is a complete transverse band of them as shown in the figure. At the latero-posterior margin of the eighth there is a rudimentary pleurite, a short and long bristle, and above these a large stigma. Dorsum of the ninth segment with a narrow indistinct transverse band and clothed with minute spines; on the venter there are five short and one longish hair on each side, spines absent. Genital plate pear-shaped, with a longitudinal row of four minute hairs in the middle. Gonopods each with three hairs at the apex and one near the middle of the inner side.

♂. In this sex the apex of the abdomen differs in shape from that of the female (compare figures 1 and 2), and the strong spines on the posterior margins of the abdominal segments are entirely absent. In other details the male resembles the female, except in size.

Measurements in millimetres.

	<i>Length.</i>	<i>Breadth.</i>	<i>Length.</i>	<i>Breadth.</i>
Head . . . . .	.23	.1	.216	.9
Thorax . . . . .	.05	.116	.03	.1
Abdomen . . . . .	.816	.283	.45	.2
Total	1.096 mm.		.696 mm.	

Types in the Veterinary Research Laboratory, Onderstepoort, and a co-type of the female will be deposited in the British Museum.

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