

*Descriptions of Three New Species
of Anoplura
from South African Mammals
by
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DESCRIPTIONS OF THREE NEW SPECIES OF ANOPLURA
FROM SOUTH AFRICAN MAMMALS.

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(With six Text-figures.)

Linognathus taurotragus nov. sp.

MALE.—*Head* conical; on the dorsum of the pre-antennal area there is a row of four short hairs behind the oral region, a short one on each side in front, a longer one on the margin between the mouth and antenna, and another below this. Between the antennae there are two hairs on each side and a longer one below these. On the post-antennal area there are four hairs on the dorsum on each side of the meson, the last pair being close together, one nearer the temporal margin and another above it on the margin. On the venter there are two hairs on each side of the meson in front of the antennae and a long admedian pair behind the antennae.

Thorax with two short hairs at each latero-anterior angle and one a short distance from these on the inner margin. Between this one and the spiracle there is a longish hair, and below this one and nearer the middle there is a short and a long hair.

Abdomen brown, with pale lines between the segments in mounted specimens. On the dorsum of the first segment there is a longish hair and several short ones on each side of the meson; second to fifth tergites each with one long and two short hairs on each side of the meson; sixth and seventh tergites each with a row of four hairs; eighth tergite with a row of about ten hairs; apical segment with a row of about eight fine hairs on each side of the meson, and two long and several short ones on the margin. Spiracular hairs on the fourth and fifth segments short, long on the sixth and eighth segments. On the venter there are two or three hairs in the middle of each of the first three segments; fourth to seventh sternites with a row of about ten to twelve hairs, and a median row of about five to six hairs above; eighth sternite with two long admedian hairs and one or two short ones between these and the lateral margin.

FEMALE.—Head and thorax as in the male, but the chaetotaxy of the abdomen is somewhat different. First tergite with two irregular rows of six to eight hairs, the admedian ones being longer than the others; second

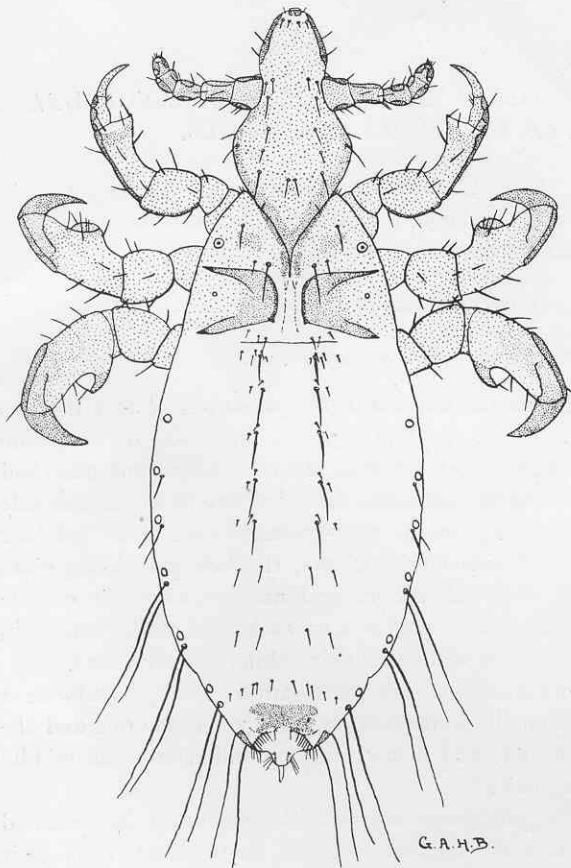


FIG. 1.—*Linognathus taurotragus* nov. sp., male.

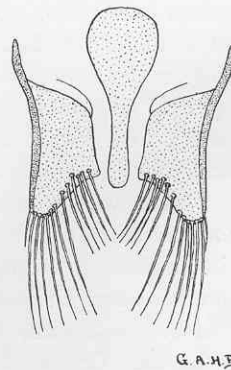


FIG. 2.—*Linognathus taurotragus* nov. sp.; gonopods and genital mark of female.

to sixth tergites each with a row of four hairs, the inner ones being longer than the outer hairs; in addition, the fourth tergite has three hairs in the middle above these, and the fifth two; seventh and eighth tergites each with a row of six hairs; apical tergite with a transverse dark band, and a row of four hairs on each side below the band near the lateral margin and one in the band above these. Gonopods and genital mark as shown in fig. 2. On each side of the gonopods there are three to four hairs, and

above the genital mark an irregular patch of about nine short hairs. Apical sternite with a chitinized plate on each side; on the posterior margin of each plate there are about eight long hairs; between each plate and the gonopods there is a fringe of long hairs and about eight minute hairs in the middle of the sternite.

Measurements.

	Male.		Female.	
	Length.	Width.	Length.	Width.
Head . . .	0.61	0.31	0.66	0.35
Thorax . . .	0.36	0.56	0.37	0.6
Abdomen . . .	1.2	0.73	1.65	0.95
Total . . .	2 mm.		2.53 mm.	

Described from several males and females taken off a *Taurotragus oryx* (eland) at Clocolan, O.F.S., in August 1920.

Cummings, who has given a figure of the male genitalia (Proc. Zool. Soc. Lond., p. 266, March 1916), regarded this species as a variety of *L. tibialis* Piaget, but I consider it more closely allied to *L. vituli* than to *L. tibialis*. Should Cummings prove to be correct, then Waterston's *var. euhore*, found on the springbok, is certainly not a variety of *L. tibialis*. The gonopods of the female of *L. taurotragus* resemble those of *L. vituli*, and the male genitalia are somewhat similar, but it can easily be distinguished from *L. vituli*, *inter alia*, by its large size and the pre-antennal area of the head being broader.

Linognathus gnu nov. sp.

FEMALE.—*Head* widest at the temples; pre-antennal area long, with a short hair on each side near the oral region, and two short ones between them on the dorsum; a short distance behind these there is a transverse row of four short hairs, and on the margin in front of the antennae there are two hairs, one above the other. Between the antennae there are two short hairs on each side. On the post-antennal area there are two hairs on each temporal margin, and six long hairs on the dorsum on each side of the meson, the first and fifth pairs being the longest and the last pair nearest the middle. On the venter there is a transverse row of four hairs a short distance in front of the antennae, and two admedian longish hairs behind the antennae.

Thorax with a long hair on each side above the spiracle, and one or two minute hairs and two long ones on the inner side of each spiracle.

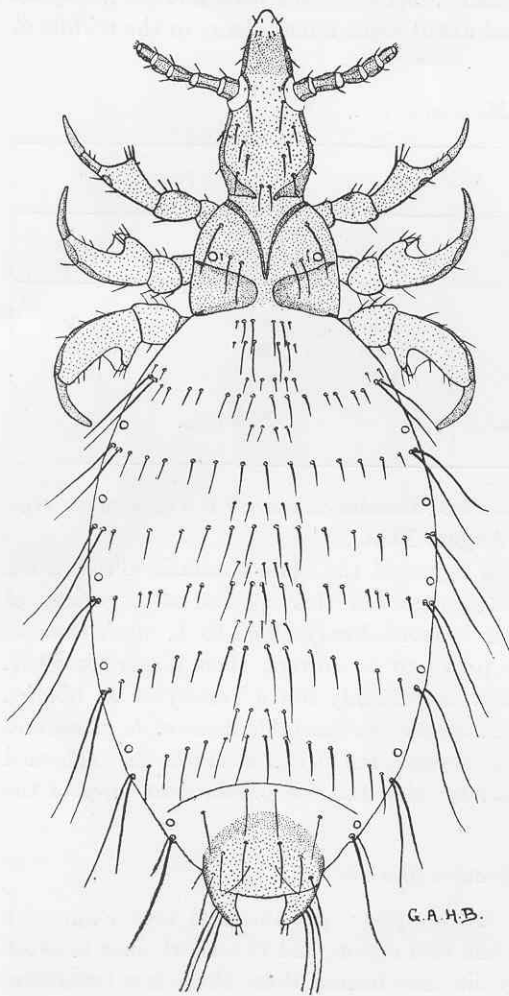


FIG. 3.—*Linognathus gnu* nov. sp., female.

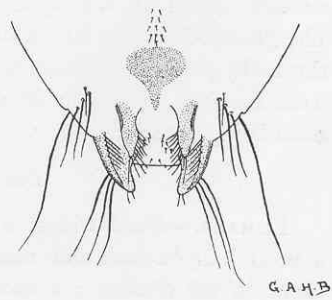


FIG. 4.—*Linognathus gnu* nov. sp.; ventral surface of terminal abdominal segments of female.

Abdomen elongated-oval; segmentation indistinct, except between the seventh and eighth segments. On the dorsum there are two rows of six hairs on the first segment; second to seventh segments each with a transverse row of thirteen to seventeen hairs, and a short median row of four to five hairs above. Eighth segment with a row of four hairs; apical

segment with a dark transverse band and eight hairs. Second to eighth segments with long hairs on the lateral margins. Chaetotaxy of the venter similar to that on the dorsum. The hairs of the first row are not so numerous; there is a patch of short hairs above the genital blotch and about ten hairs between the gonopods. Gonopods with about eleven hairs.

Measurements.

Female.	Length.	Width.
Head . . .	0.75	0.3
Thorax . . .	0.43	0.43
Abdomen . . .	1.8	1.06

Described from two females taken off a *Connochaetes gnu* Zimm. (black wildebeest), at Clocolan, O.F.S., by the writer on the 18th August 1920.

Linognathus ferrisi nov. sp.

MALE.—*Head* with the pre-antennal area pointed in front, rounded at the sides; on each side of the oral region in front there is a short hair and two short ones on each lateral margin. On the dorsum there are two hairs on each side of the meson between the antennae, one above the other, and five more admedian hairs below these, the last pair being close together, and one on each temporal margin. On the venter there are two short hairs on each side of the meson in front of the antennae, and a longish admedian pair below the antennae.

Thorax with a longish hair on each side between the latero-anterior angle and the spiracle, and two short and one long hair on the inner side of each spiracle.

Abdomen without distinct segmentation. The first two tergites each with a row of four short hairs in the middle, and on the lateral margin of the second there are about five short hairs. Third to sixth tergites each with two rows of hairs, the first row consisting of four to eight hairs and the second twelve to sixteen. Seventh tergite with a row of short hairs and two widely separated hairs above. Eighth tergite with two admedian hairs. Apical segment bare, except for a short hair on each lateral margin. Spiracular hairs long. Chaetotaxy of the sternites similar to that on the tergites, except that the hairs are not so numerous, especially on the sixth and seventh sternites, and for the most part slightly longer and stronger than on the dorsum. Genitalia as shown in fig. 6.

Measurements.

	Length.	Width.
Head	0.53	0.23
Thorax	0.31	0.36
Abdomen	1	0.61

Described from a single male collected by the writer off *Gorgon taurinus*

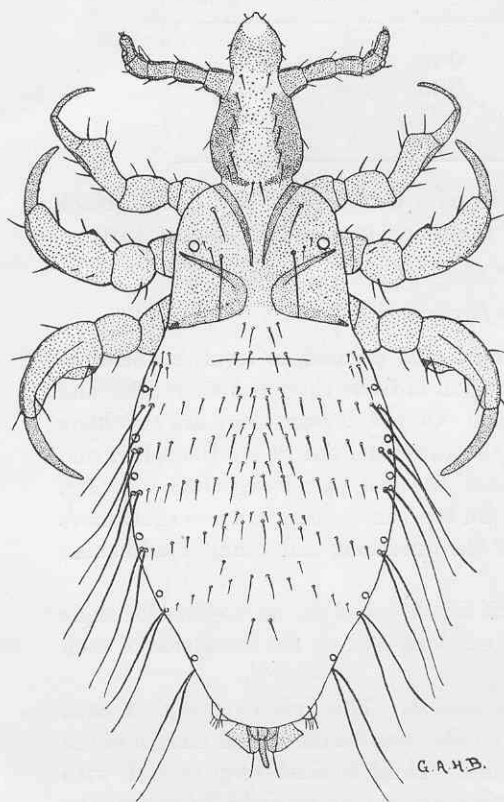


FIG. 5.—*Linognathus ferrisi* nov. sp., male.

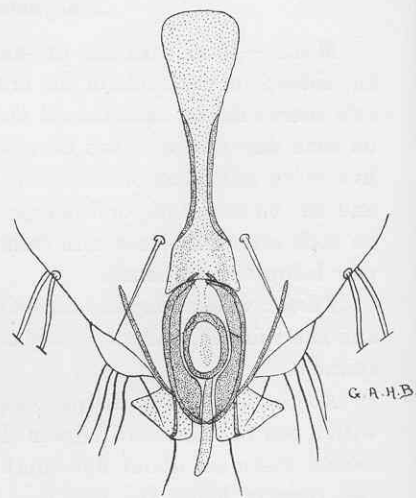


FIG. 6.—*Linognathus ferrisi* nov sp., male genitalia.

Burch. (blue wildebeest), in the Zoutpansberg district, northern Transvaal, on the 26th July 1924.

I have much pleasure in naming this species after Professor G. F. Ferris of the Stanford University, California, whose works on the Anoplura are well known.