

TWO NEW ANOPLURA.

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During the course of plague investigations carried out in Kenya Colony in 1921 by the late Dr. R. Van Someren, and in Uganda during 1922 by the same collector in conjunction with Dr. C. A. Baker, some hundreds of Mallophaga and Anoplura were collected, mainly from small rodents. This material was sent to the Imperial Bureau of Entomology in two instalments, and the present paper deals only with a new species and variety represented in the first collection forwarded by Mr. T. J. Anderson, Government Entomologist, Nairobi. The rest of the collection will be dealt with later. The opportunity has been taken to add also the description of a very remarkable louse which infests an Indian tree shrew.

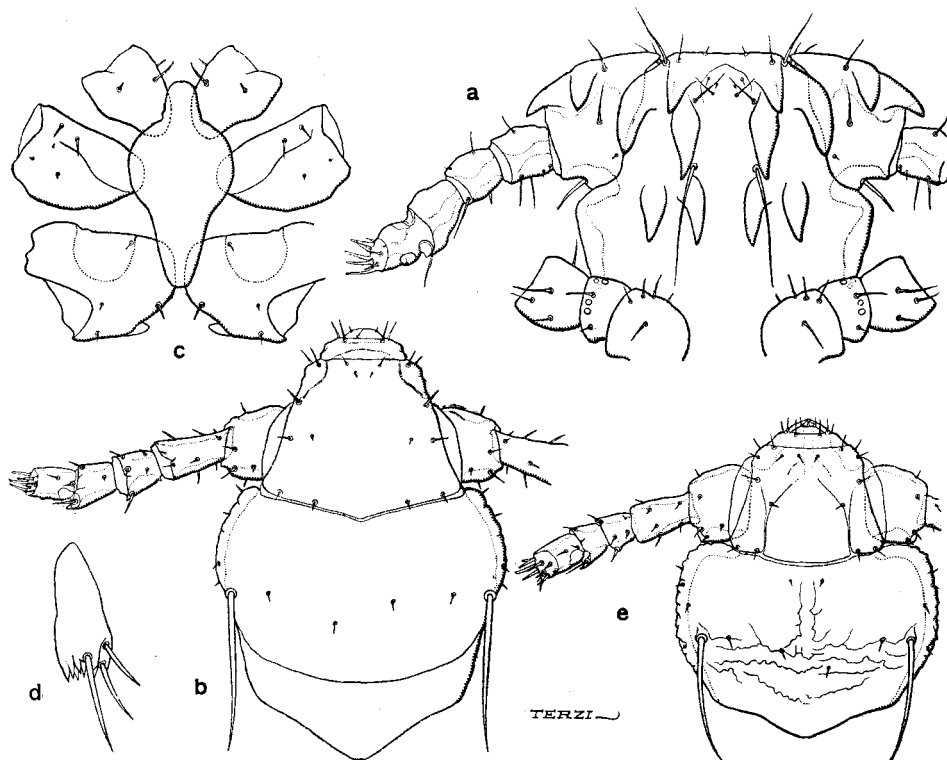


Fig. 1. *Docophthirus acinetus*, sp. n.: a, underside of head of ♂.
Hoplopleura somereni, sp. n., ♀: b, head; c, sternal plate; d, gonopod.
H. intermedia, Kell. & Ferr., var.: e, head of ♀.

Hoplopleura somereni, sp. n.

♀. Length, 1.6 mm.; length of head, 0.25 mm. (laterally) and 0.3 mm. (along mid line); antenna, 0.18 mm.; head and thorax, 0.47 mm. Breadth of head, 0.2 mm.; of thorax, 0.33 mm.; of abdomen, 0.7 mm. (segment 4).

Head (fig. 1, b) somewhat elongate and about half longer than wide if measured to the posterior limit of its insertion into the thorax; well-developed in front of the antennae.

Pleurites (fig. 2, *d*) deeply lobed on dorsal and ventral flaps; the median sinus deep and broad, with the two bristles dissimilar and on very small inconspicuous prominences; pleurite vii produced posteriorly above. Tergites very narrow, i-ii with single row of flattened bristles, iii and viii with two rows, and iv-vii with three rows; on tergites i and iii the arrangement is 1 : 1 and 3 : 3 respectively; where there are three rows the numbers are either 6-8 or about 16 in each row. Sternites: the third bears on each side two stout spines on prominences and a finer one, not so based; gonopod (fig. 1, *d*).

♂. Length, 1.4 mm.; length of head, 0.23 mm. (laterally) and 0.25 mm. (along mid line); antenna, 0.19 mm.; head and thorax, 0.47 mm. Breadth of head, 0.2 mm.; of thorax, 0.31 mm.; of abdomen, 0.6 mm. The chief dimensional difference between the sexes is in the length of the abdomen.

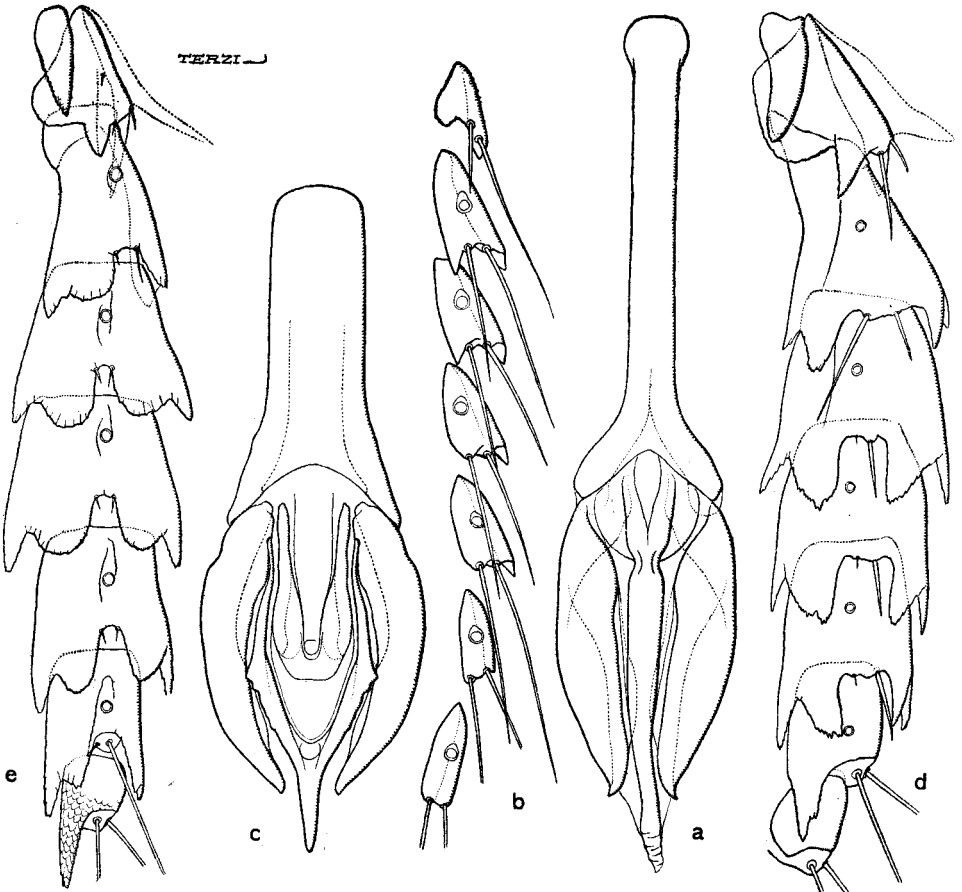


Fig. 2. *Docophthirus acinetus*, sp. n., ♂ : *a*, genitalia; *b*, abdominal pleurites. *Hoplopleura someveni*, sp. n. : *c*, genitalia of ♂; *d*, abdominal pleurites of ♀. *H. intermedia*, Kell. & Ferr., var. : *e*, abdominal pleurites of ♀.

Tergites i-ii as in ♀; tergites iii-vii bear two rows, of which the posterior on iii-v comprises 16-18 bristles arranged 8-9 : 8-9, while on vi and vii the arrangement is 7 : 7 and 6 : 6 respectively; the anterior row on iii and iv is 3-4 : 3-4, while on v-vii it is 1-2 : 1-2. These anterior rows are set very little in front of the posterior rows, and on vi and vii the effect is of a bristle slightly out of place on each side.

Sternite ii—4, 4; iii—(a) two heavy and one light spine on each side of mid line, (b) 5, 5; iv—(a) 3, 3, (b) 1, 5, 5, 1, (c) 1, 4, 4, 1; v—(a) 1, 5, 5, 1, (b) 1, 4, 4, 1; vi—two rows 1, 4, 4, 1; vii—1, 2, 2, 1; viii—1, 1. If one takes the single bristles bordering the pleurites they form a distinct longitudinal row on each side. Certain of them have been reckoned in the above enumeration, *e.g.*, the single bristles in the row 1, 4, 4, 1; but there are others (single) not enumerated above, *e.g.*, on iv and vi, interpolated between the transverse rows at the sides, which may indicate rows otherwise obsolete.

Genitalia (fig. 2, c) with stout parameres.

Type ♀ in the British Museum.

Host: *Dasymys helukus*, H.

KENYA COLONY: Wamia, Okedi Camp, 23.vii.1921 (*R. Van Someren*).

Hoplopleura somereni, sp. n., is a member of the *neumannii* group. It is sufficiently distinguished by the pleurites, whose lobes are very broad, and by the elongate sternal plate. I am indebted to Prof. Ferris for a note that it is closest to *H. veprecula*, Ferr., a species not represented in the British Museum collection.

Hoplopleura intermedia, Kell. & Ferr., var.

Hoplopleura intermedia, Kellogg & Ferris, Ann. Durban Museum, i, pt. 11, pp. 153–154, pl. xvi, figs. 5, 5 a–d (15.v.1915); Ferris, *ibid.*, pt. 111, pp. 243–245, 247, text fig. 27 (20.iv.1916); Ferris, Proc. Cal. Acad. Sci. (4) vi, p. 156, no. 9, p. 194 (12.v.1916); Ferris, Stanford Univ. Pub. Biol. Ser. ii, no. 2, pp. 60 & 90–92, figs. 54, 55 b & c, 56 b (1921).

Originally described (from Mfongosi, Zululand) from *Mus coucha*, which appears to be the main host, though also recorded (1921) from several other African Murids. In the Anderson collection are many examples from *Rattus coucha ugandae*, de Wint. Like their host, these Uganda examples represent a sufficiently distinct race. The head (fig. 1, e) appears to be typical, but the pleurites (fig. 2, e) are more deeply lobed (*cf.* Ferris (1921), figs. 55 & 56).

Genus **Docophthirus**, nov.

Anoplura without eyes; with five-jointed antennae, which are similar in the two sexes, first antennal joint strongly developed, bearing like the underside of the head, several short, heavy, sharp, backwardly directed, anchoring processes. Thorax without a defined sternal plate. Fore pair of legs small, mid and hind pairs equal and strong, with a long stout and rather sharply pointed claw, opposed by a process of the strongly produced tibia. Abdomen deeply serrate at sides, especially in the ♀, the teeth being formed of segmental lobes capped by the small pleural plates; the latter occur on segments ii–viii, but are without free edge, feebly chitinised and indefinitely bounded on some of the posterior segments (vii and viii in genotype). Abdominal chaetotaxy: tergites and sternites with one row of bristles in the ♂ and two, for the most part, in the ♀.

Genotype: the following species:—

Docophthirus acinetus, sp. nov.

A somewhat elongate species, easily recognised by its strongly armed, flatly truncate head and the quadrate facies of the head in conjunction with the very large first joint of the antennae (♂, ♀), and also by the elongate serrate abdomen.

♂. Head (fig. 1, a) with length and breadth subequal; anterior edge perfectly straight, and, measured at the antero-ventral hairs, only about half the breadth at the eyes; for roughly half its length and one-fourth the breadth at each side the head is anteriorly excised to receive the relatively enormous first antennal joint, which bears three stout teeth; ten more occur on lower surface in the positions indicated. The whole head is strongly chitinised, especially laterally, from the eyes backwards; dorsally on each side, one stout postero-lateral spine, with a row of about five minute

bristles running forward parallel with the edge. For chaetotaxy of lower surface see fig. 1, *a*. Thorax not separated from the head by a definite constriction but laterally continuous with head, roughly trapezoidal, a little broader than long (6 : 5), dorsally with one stout antero-lateral metathoracic spine with a few minute bristles postero-laterally; on sternal surface one fine bristle on inner side at the insertion of the coxae. Legs with the claws long, pointed straight; the spine of the opposing process stout in mid and hind legs. Abdomen two and a half times as long as head and thorax combined, and about one-third broader. Pleurites (fig. 2, *b*) apparently wanting on segment i, distinct but rather small on ii-v, reduced much more on vi, and demonstrable on vii and viii only by prolonged staining; spiracular area of pleurites rather large; each pleurite with two bristles. Tergites and sternites not strongly chitinised, though well-defined after staining; chaetotaxy as follows: sternites i-iii, ? 4 bristles (2 : 2); iv-vi, 9 (one at each side near pleurite and seven medianly (3 : 1 : 3)); vii, 7; viii, 4; ix, 2. Tergites i-iii have 2, 4 and 6 bristles respectively. Otherwise like the sternites.

Genitalia: the apparatus (fig. 2, *a*) extends backwards through one-third of the abdomen; of its length the slender basal plate occupies half; parameres broad and heavy; functional penis apically expanded. Length, 1.3-1.4 mm.; genitalia, 0.3 mm. Breadth: head, 0.21 mm.; antennae, 0.24 mm.; thorax, 0.28 mm.; abdomen, 0.38 mm.

♀. Similar to ♂ but considerably larger, the difference being chiefly in the abdomen, which is over thrice as long as the head and thorax combined. Pleurites developed to about the same extent as in the ♂, but the abdominal tergites and sternites hardly visible when unstained, and after prolonged staining very short and indefinite. Chaetotaxy: tergite i, 2 (1 : 1); ii, 6; iii, 8; thereafter up to the eighth segment there are two rows of dorsal bristles as follows: iv, 8, 10; v-vi, 9, 12; vii, 9, 14; viii, 6, 9; and 5 or 6 bristles behind on ix. Sternites i-ii, 2; iii, 6, 6; iv, 8, 8; v-vi, 9, 9; vii, 0, 6. Length: 1.9-2 mm.; antennae, 0.25 mm. Breadth: head, 0.22 mm.; thorax, 0.3 mm.; abdomen, 0.54 mm.

Type ♂ in the British Museum.

Host: *Anathana ellioti*, Waterhouse.

INDIA: Madras (Beddome Coll.), 2 ♂♂, 2 ♀♀; also 1 ♂ with data uncertain.

This is unlike any other described Anopluran known to me except *Haematopinus (Potyplax) aculeatus*, Neumann, Bull. Soc. Zool. Fr., xxxvii, pp. 143-145, figs. 5-6, 1912, which is probably congeneric with the present insect rather than with *Eulinognathus denticulatus*, Cumms., with which, however, Neumann's species has been placed. The chief points of resemblance are in the shape and armature of the head and in the abdominal pleurites: Neumann's species described from *Dipus* sp. (PEDEIIDAE), from Djerba, Tunis, is compared by its author with *Hoplopleura maniculata*, Neum., and *H. spiniger*, Burm., with neither of which, however, does it appear to have any close affinities.