

VIII.—*The Lice of Petrels.*—Part III. *The Genus
Pelmatocerandra.* By GORDON B. THOMPSON.

[Plate II.]

IN the two previous contributions toward a study of the petrel lice I have listed the species described to date and given some general notes on the various groups of species. This, the third paper in the series, deals with the monotypic genus *Pelmatocerandra*. Unfortunately, owing to lack of certain specimens, I shall be compelled to deal with the various groups in an order which will be controlled

by the amount of material available. As many drawings and photographs of whole insects as are possible will be used, thus dispensing with the wearisome task of giving lengthy descriptions. It is to be hoped that the identity of at least the greater number of the known species may be settled in this series of papers for all times.

Genus PELMATOCERANDRA Enderlein.

Pelmatocerandra Enderlein, Deutsche Südpolar-Expedition (1901-1903), 1909, Bd. x, Heft 4, p. 449.

Pelmatocerandra Harrison, 1916, Parasitology, ix, pp. 23, 144.

Pelmatocerandra Ewing, A Manual of External Parasites, 1929, p. 111.

The original description of the genus is as follows:—

“Antennen fünfgliedrig, verschieden in beiden Geschlechtern; beim ♀ ist das 1 Glied kurz, beim ♂ sehr läng und nach hinten gebogen. 3. Glied des ♂ ohne Fortsatz. Meso- und Metathorax verschmolzen. Kopfoorderrand ziemlich flach, an den Seiten mit Ecken. Körperform lang und schmal. Labialpalpus eingliedrig. Maxillarpalpus fehlt.”

The following is a translation of Enderlein's generic description:—

“Antennæ five-segmented—differing in both sexes; in the female the first segment is short; in the male the first segment is very long and bent backwards, third segment of male without a process. Meso-metathorax fused. Front margin of head somewhat flat, with angles at sides. Form of body long and narrow. Labial palpi one-segmented. Maxillary palpi wanting.”

Enderlein added the following remark: “Distinguished from *Ricinus* Degeer (= *Nirmus* Nitzsch) by the sexual dimorphism of the antennæ.”

The genus *Pelmatocerandra*, as originally described, was due to a misconception both of its author and of the author of the species upon which it was founded, but it is, nevertheless, as in the case of *Pseudonirmus*, a valid genus.

Pelmatocerandra setosa (Giebel). (Pl. II.; text-figs. 1-10.)

Bibliography.

Nirmus setosus Giebel, Ann. & Mag. Nat. Hist. 1876, (4) xvii, p. 388.

Nirmus setosus Giebel, Phil. Trans. roy. Soc. 1879, 168 (extra vol.), pp. 253-254, pl. xiv, fig. 18.

Nirmus setosus Giebel, Piaget, Les Pédiculines, Leiden, 1880, p. 205.

Nirmus setosus Giebel, Studer, Forschungsreise der Gazelle, 1899, Bd. iii, p. 125.

Nirmus setosus Giebel, Enderlein, Wiss. Ergebn. deutsch. Tiefsee-Expedition, 1903, Bd. iii, p. 236.

Nirmus setosus Giebel, Kellogg, Wytzman's Genera Insectorum, 1908, fasc. 66, p. 29.

Pelmatocerandra setosa (Giebel), Enderlein, Deutsche Südpolar-Expedition (1901-1903), Berlin, 1909, Bd. x, Heft 4, pp. 449-450, figs. 189-191.

Lipeurus eatoni Kellogg, Sci. Bull. Brooklyn Inst. 1914, ii, pp. 86-87.

Pelmatocerandra setosa (Giebel), Harrison, Parasitology, 1916, ix, p. 144.

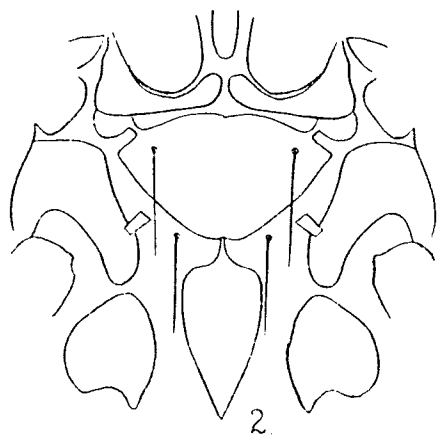
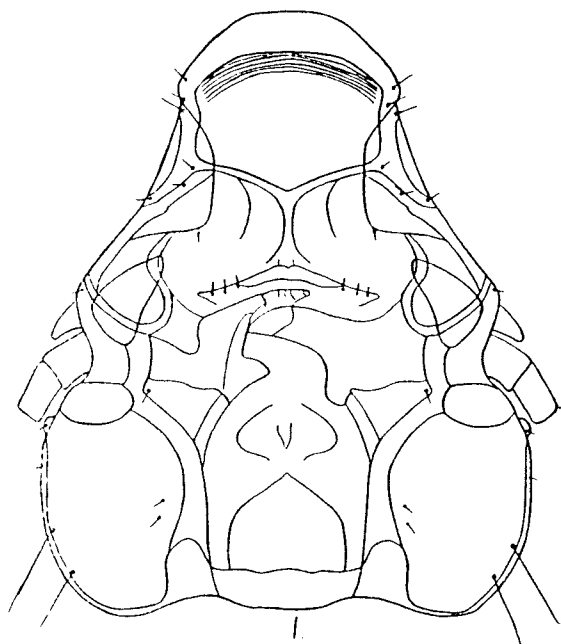
Type-host.—*Pelecanoides urinatrix* (Gmelin).

History of the Species.—This interesting species was first described briefly in Latin by Giebel (1876) on the basis of six specimens collected from *Pelecanoides urinatrix* at Kerguelen I., in 1874, by the English Transit of Venus Expedition. Three years later a more detailed description of the insect appeared in an extra volume of the 'Philosophical Transactions of the Royal Society' in English, having been translated from Giebel's German paper. In this paper Giebel's original Latin description was reproduced together with a general description of the species. The whole insect was figured, together with details of the first and third legs and the right side of the head. It seems fairly evident that Giebel's specimens, which consisted of six examples, two of which were immature, were all females. The lice were reported to have been found among the “white feathers of the breast and belly.”

Piaget (1880), who apparently did not see specimens of the species, merely gave a brief description in French, together with measurements, and refers to Giebel's description of 1876.

Studer (1899) merely listed the species, without any indication of the host. Enderlein (1903) listed the species and gave the host as *Pelecanoides urinatrix* in his contribution to the insects of Kerguelen I. in the reports on the German Deep-sea Expedition. Kellogg (1908) included the species in his list of the known species of Mallophaga.

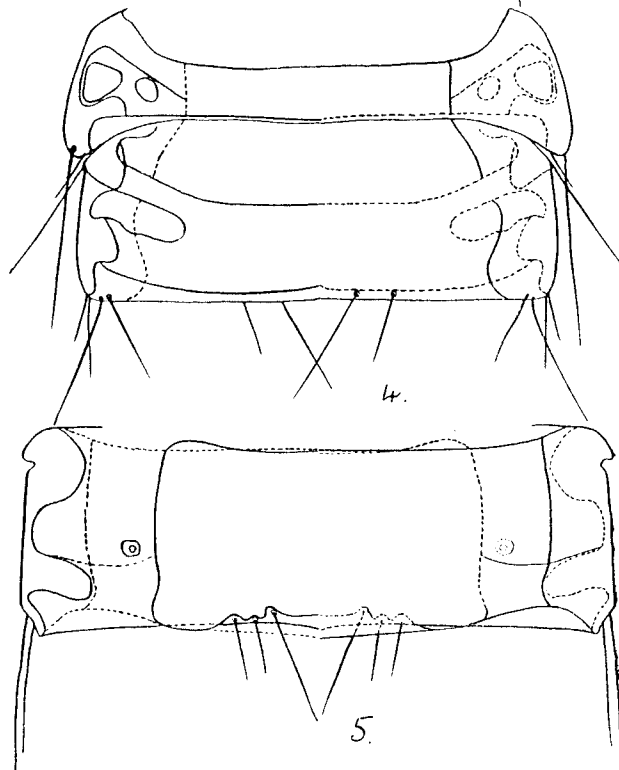
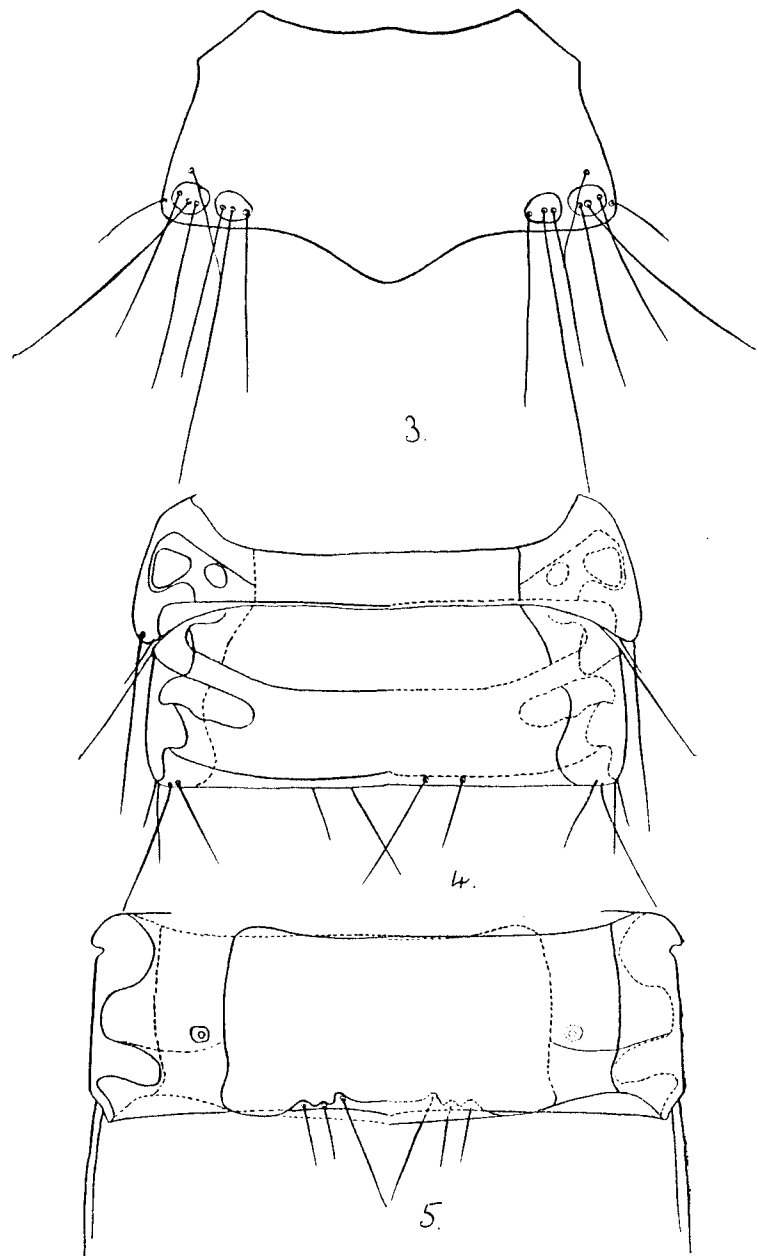
Enderlein (1909) redescribed the species, and erected a new genus for it on the basis of a number of specimens collected by the German South Polar Expedition. All his specimens save one, which may be considered as a straggler (on *Pachyptila d. desolata* (Gmelin) (the host



Pelmatocerandra setosa (Giebel).

Fig. 1.—Head of ♀.

Fig. 2.—Thoracic sternites.



Pelmatocerandra setosa (Giebel).

Fig. 3.—Metathorax.

Fig. 4.—Fifth and sixth abdominal segments of ♂.

Fig. 5.—Sixth abdominal segment of ♀.

recorded by him)) were taken on the type-host. He figured the dorsal and ventral aspects of a male and the dorsal aspect of a female. His figures are not, however, particularly helpful.

Kellogg (1914) recorded two females and a male taken from *Pelecanoides urinatrix* at South Georgia I. and a single female from *Oceanodroma leucorhoa*, which may be regarded as a straggler. This author suggested that Giebel's specimens were probably all females, "which led him to describe the species as a *Nirmus* instead of assigning it to *Lipeurus*, where it certainly belongs, if no genus * is erected for it. The secondary sex differences of the antennæ are revealed by the male specimen now in my hands. But they are differences much less than shown by most *Lipeuri*, consisting only of an enlargement of the first (especially) and third segments, without the presence of a projecting process on either of them." Kellogg, after deciding to transfer the species to *Lipeurus*, proposed the unnecessary new name *catoni*.

Harrison (1916) listed Giebel's species under Enderlein's genus *Pelmatocerandra*, with Kellogg's *catoni* as a synonym.

Up to the present this genus appears to be monotypic, occurring only on species of the petrel genus *Pelecanoides*, i. e., Diving Petrels, which breed in the Southern Hemisphere.

Generic Characters.—Small, stoutish forms; head only a little longer than broad, with clypeal suture; occipital blotches large and widely separated, the occiput flatly convex between them; occipital bands strong; temporal bands very narrow. Anterior half of head very distinctive. Signature approximately same shape as in *Philoceanus*, but anterior border bears crescentric rings; gutta, lateral grooves, and marginal incrassations are absent. Characteristic of the genus are the elongated triangular blotches arising from a narrow base in front of the antennæ and running forward parallel to the antennal and frontal bands.

Specimens examined †.—5 ♀♀, 2 ♂♂, off *Pelecanoides u. urinatrix* (Gmelin), New Zealand.

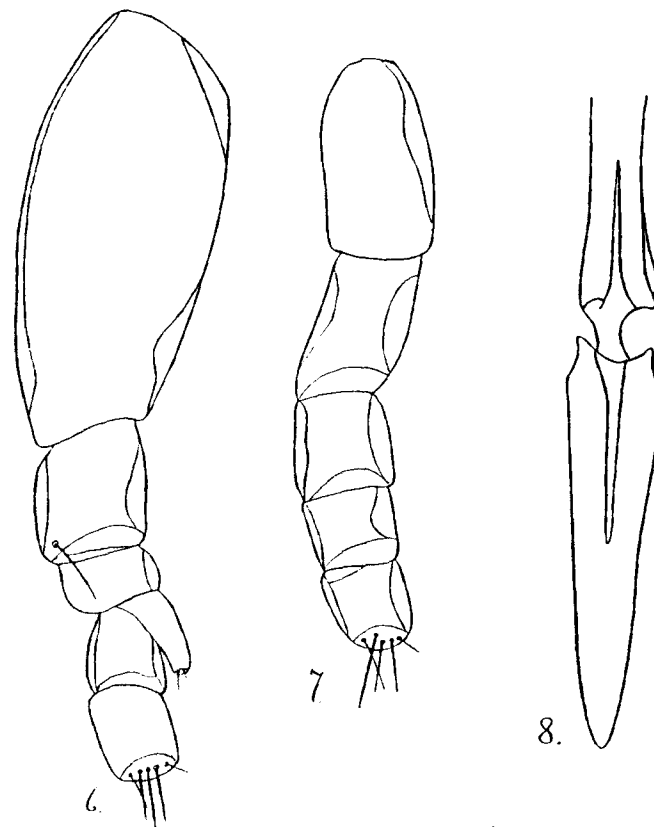
* Kellogg was apparently unaware of the publication of Enderlein's 1909 paper.

† I understand from Dr. S. Kéler that Giebel's original specimens are not contained in the Halle collection. In view of this I propose to make my specimens neotypes and neoparatypes as follows:—♀ and ♂ neotypes, and 4 ♀♀, 1 ♂ neoparatypes.

Description.—Medium stoutish forms, fairly strongly sclerotic and pigmented.

Female (Pl. II.; text-figs. 1, 2, 3, 5, 7, 9).

Head a little longer than broad. Antennal bands, ocular and occipital blotches well marked. Occipital

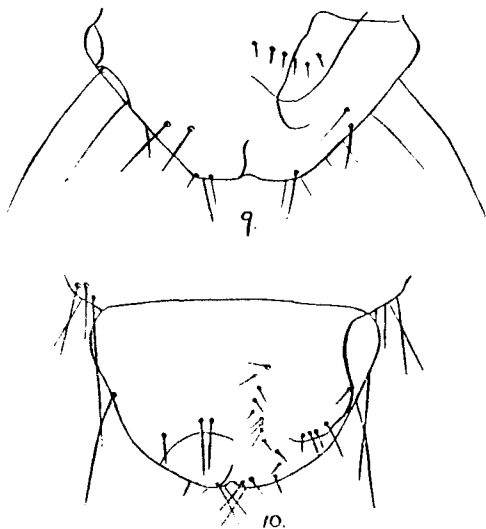


Pelmatocerandra setosa (Giebel).

Fig. 6.—♂ antenna.
Fig. 7.—♀ antenna.
Fig. 8.—♂ genitalia.

blotches well spaced, with the occiput flatly convex between them. The elongated triangular blotches arising from a narrow base in front of the antennæ and running

forward parallel to the antennal and frontal bands are very characteristic (text-fig. 1). Clypeus rectangular, with a slight median swelling of the posterior margin and a series of crescentic rings anteriorly. Trabeculae small, about half the length of the first antennal segment. Antennae simple (see text-fig. 7), five-segmented; second segment about the same length as the first, third a little shorter than the fourth, together about the same length as the first segment; fifth segment about as long as the fourth. For the remainder of the head details see text-fig. 1.



Pelmatocerandra setosa (Giebel).

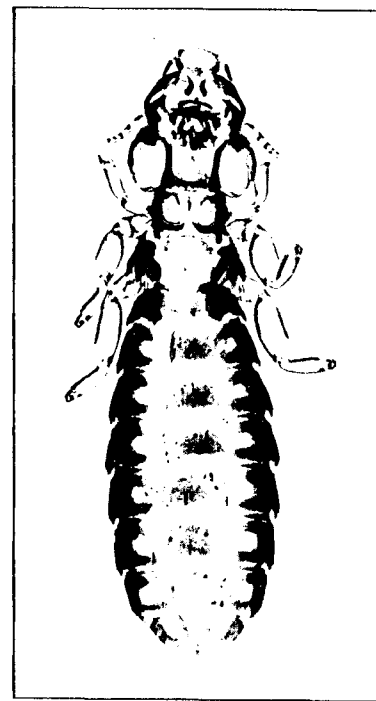
Fig. 9.—Terminal abdominal segment of ♀.

Fig. 10.—Terminal abdominal segment of ♂.

Prothorax small, about two and a half times broader than long; narrow anteriorly (being a little wider than the clypeus), expanding to its greatest width at about half its length. One small seta posterior to its widest point laterally and a slightly larger seta on the posterior margin at a little more than a fifth of its width.

Meso-metathorax (see text-fig. 3). For details of the thoracic sternites see text-fig. 2. Legs normal.

THOMPSON. *Ann. & Mag. Nat. Hist. S. 11. Vol. VI. Pl. 11.*



Pelmatocerandra setosa (Giebel), ♀. × c. 27.

Abdomen a little more than twice as long as broad. Pleurites heavily chitinized and sclerotized. Tergites continuous, unicolorous except for a clear area surrounding the spiracles. Sternites rectangular in shape, separated from the pleurites by a clear area (see text-fig. 5). Terminal abdominal segments as in text-fig. 9.

Male.

A smaller, more slender form.

The head bears a row of four small setæ in a line parallel to the dorsal occipital bands between the œsophageal sclerites and those bands on the ventral side which appear to be absent in the female. Antennæ: first segment greatly enlarged, second small, third smaller, fourth, a little longer than the third, bears a process, fifth almost equal in length to the fourth. The second to fifth segments about equal in length to the first (see text-fig. 6).

Thorax similar to that of the female, except that there appears to be a few more setæ (c. 4·4) on the lateral margins of the prothorax (my specimens of the males are somewhat damaged and some of the hairs are missing).

Abdomen considerably more than twice as long as broad. Transverse bands distinct, well chitinized and sclerotized. For details of abdominal segments, terminal segments, and genitalia see text-figs. 4, 8, and 10.

Measurements (in mm.).

	♂.	♀.
Total length	2·1	3·1
Greatest breadth	0·5	0·7

EXPLANATION OF PLATE II.

Pelmatocerandra setosa (Giebel), ♀. × c. 27.

Postscript.—Since sending this paper to the press a few additional specimens have come to hand. Some more detailed notes as a result of further study are also available, but owing to the fact that I have been called up for war service I am compelled to leave the paper in its original state.—G. B. T.