

THE TAIL-SWITCH LOUSE OF CATTLE, *HAEMATOPINUS QUADRIPERTUSUS* FAHRENHOLZ

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Fahrenhölz, in 1916, described two new species of sucking lice from cattle in the Kamerouns, Africa, and he named them *Haematopinus quadripertusus* and *H. parviprocursus*. Both names were subsequently relegated by Ferris (1933) to synonymy with *H. eurysternus* (Nitzsch).

In 1947 the name *H. quadripertusus* was revived by C. F. W. Muesebeck, Bureau of Entomology, United States Department of Agriculture, for a species of sucking louse found in the tail-switch of cattle in Florida by Bruce (1947) and by Creighton and Dennis (1947).

In a personal communication, Muesebeck stated that *H. quadripertusus* may be distinguished from *H. eurysternus* by (a) its larger size, (b) the shape of the sternal plate, the lateral projections of which are much more acute and the median projection, particularly in the male, more prominent than in *H. eurysternus*, (c) the shape of the head, the distance across the posterior margin in *H. quadripertusus* being distinctly shorter than the distance from the posterior margin to a line drawn across the lateral angles, whereas in *H. eurysternus* these measurements are approximately equal, and (d) differences in the genital plates of the male and in the apical processes of the female.

To determine whether *H. quadripertusus* occurs on cattle in Queensland, the writer examined the cattle sucking lice in the collection of the Queensland Department of Agriculture and Stock at the Animal Health Station, Yeerongpilly. This material consisted of 30 lots of specimens in alcohol and 21 mounted specimens.

Five species were recognised, namely, *H. eurysternus* (Nitzsch), *H. tuberculatus* (Nitzsch), *H. quadripertusus* Fahr., *Linognathus vituli* (Linn.) and *Solenopotes capillatus* End.

H. quadripertusus was found to be identical with what had previously been called "the large, dark, tropical form of *H. eurysternus*" (Roberts, 1938). It was present in material from Townsville and from several localities in

the Gulf of Carpentaria. It was also recognised among specimens from New Guinea, the Solomon Islands and the West Indies. Present re-

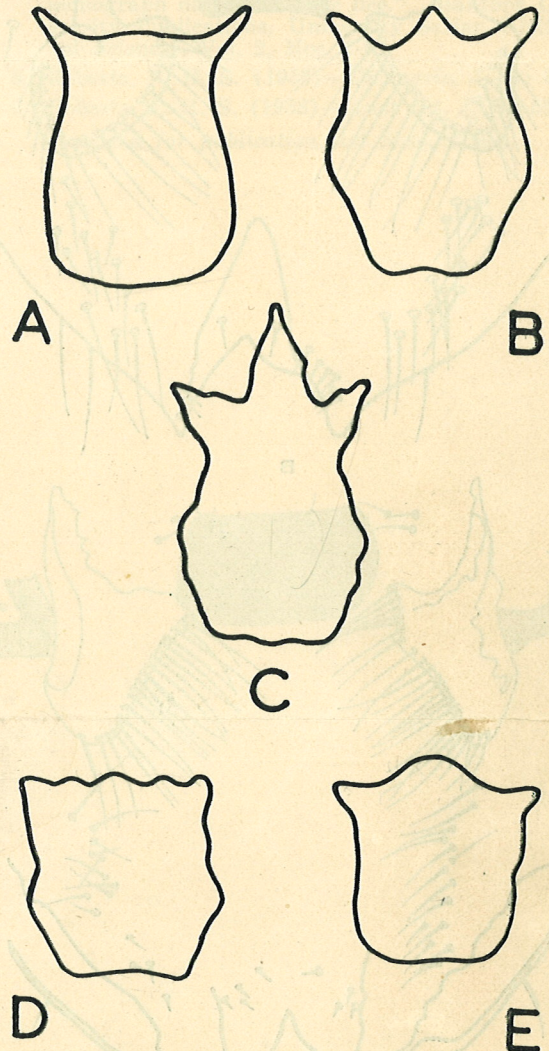


Fig. 1.
Sternal plates of *Haematopinus quadripertusus* and of *H. eurysternus*.
A and B of female *H. quadripertusus*, C of male *H. quadripertusus*, D
and E of female *H. eurysternus*.

cords thus indicate that *H. quadripertusus* is a tropical species. The shape of the sternal plate mentioned by Muesebeck was found to be a valuable distinguishing character. This plate is, furthermore, more heavily chitinised in *H. quadripertusus*

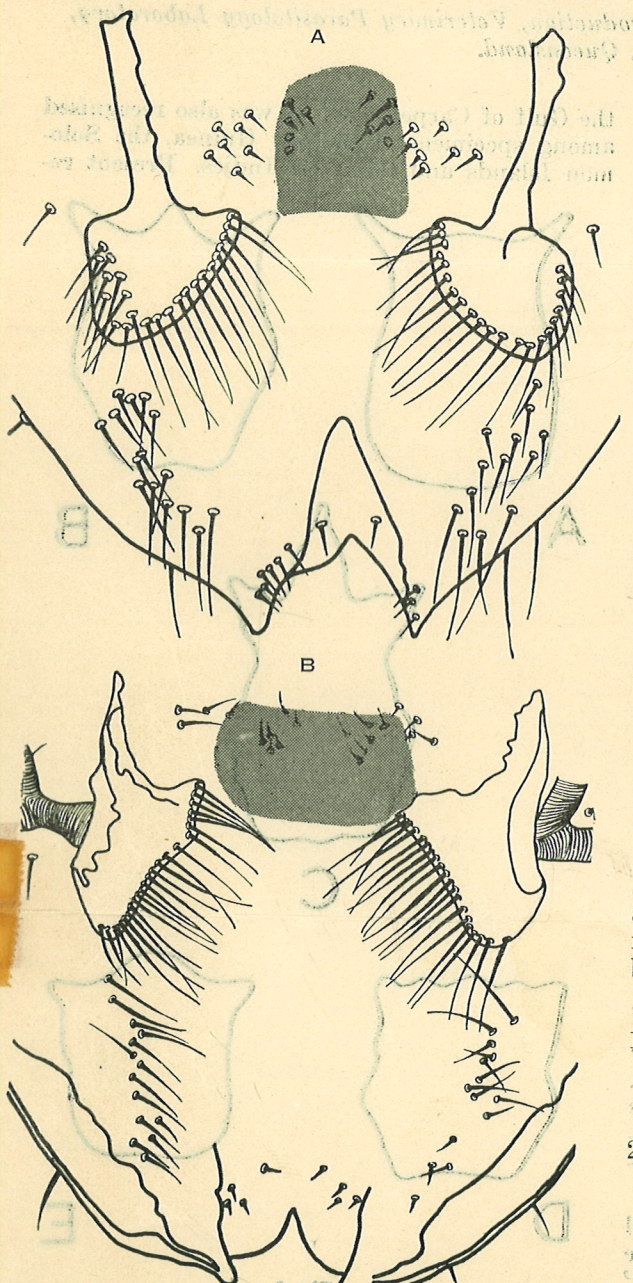


Fig. 2. Apical abdominal segments, A of female *H. eurysternus*; B of female *H. quadripertusus*.

than in *H. eurysternus*, in mounts of which it is frequently very difficult to see (Fig. 1 D & E). The lateral projections in *H. quadripertusus* are very distinct (Fig. 1 A, B & C). The median projection in the female varies considerably in length and, in odd specimens, may be entirely missing (Fig. 1 A). It is always very conspicuous in the male (Fig. 1 C).

The differences in the apical processes in the female are also very definite, as are also the shape and size of the gonapophyses (Fig. 2).

According to Bruce (1947) and Creighton and Dennis (1947), the adult *H. quadripertusus* occurs mainly in the tail-switch, but may also be seen on other parts of the body, particularly among the long hairs of the ears and around the eyes. The eggs are laid almost exclusively on the hairs of the tail-switch, and the nymphs migrate up the tail and are most prevalent around the anus and vulva, and sometimes around the eyes. The lice are most abundant during the late summer and early autumn, and are considered by these workers to be more serious than any other species, particularly among yearlings.

H. quadripertusus also appears more resistant to insecticides than other species, but may be controlled with 1.5 per cent. pp' DDT.

H. quadripertusus is not the only species of sucking louse infesting the tail-switch, for *H. eurysternus* frequently occurs there. *H. tuberculatus* may also infest this part of the body (Roberts, 1935).

H. tuberculatus may be readily distinguished from *H. quadripertusus* by (a) the shape of the sternal plate, in which the lateral angles are not at all prominent and the median projection is entirely missing, and (b) the possession of five or more bristles on the pleural angles, whereas in *H. quadripertusus*, and also in *H. eurysternus*, there are normally only two bristles present.

- Key to the Sucking Lice on Australian Cattle.**
- 1. Forelegs equal in size to the mid and hind legs 3
 - 2. Forelegs smaller than the mid and hind legs 2
 - 2. Head much longer than broad; abdominal tergites with more than one row of setae; abdominal spiracles not situated on tubercles *Linognathus vituli*
 - 3. Head about as long as broad; abdominal tergites with one row of setae; abdominal spiracles situated on tubercles *Solenopotes capillatus*

- 3. Pleural angles with, at most, two bristles . 4
- Pleural angles with five or more bristles ... *Haematopinus tuberculatus*
- 4. Sternal plate conspicuous, its lateral projections in both sexes, and the median projection in the male, very prominent; apical processes of female somewhat angulated ... *Haematopinus quadripertusus*
- Sternal plate usually inconspicuous, its lateral and median projections not prominent; apical processes of female straight ... *Haematopinus eurysternus*

Summary.

The cattle sucking louse, *Haematopinus quadripertusus* Fahr., is recorded from Queensland, New Guinea and the Solomon Islands. The characters which distinguish this species from other sucking lice found on cattle are discussed.

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