

LOXOTHYLACUS NIERSTRASZI, A NEW SPECIES OF RHIZOCEPHALAN PARASITE FROM THE EAST INDIES

BY

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The new species described in the present paper is dedicated to the memory of Professor NIERSTRASZ, the well known specialist of parasitic Crustacea. The specimen on which the description is based belongs to the collections of the Zoological Museum at Amsterdam, among other material of the group it was kindly put at my disposal by Professor DE BEAUFORT, the director of this institution. The parasite was found by Miss J. E. LEENE in the course of her work on the swimming crabs of the Siboga Expedition and other material in the Amsterdam Museum.

Loxothylacus nierstraszi nov. spec.

Gier Expedition (exact locality not given, but probably Java Sea), 1 ex. on *Charybdis (Goniohellenus) truncata* Fabr.

Specific characters: Testes not strongly differing in shape and structure, completely separated from each other. Colleteric glands fairly large, with numerous branched tubes. External cuticle of moderate thickness (12-18 μ), its surface covered with small papillae which have a length of 4-6 μ . Internal cuticle of the mantle with retinacula, each of which bears 3-6 spindles with a length of about 15 μ .

The specimen has an irregularly oval shape, its measurements are: greater diameter 17 mm, antero-posterior diameter 13 mm, and thickness 3 mm (fig. 1). In comparison to its size it is extremely thin and strongly flattened. The surface of the mantle shows a number of irregular grooves, one of which is strongly pronounced, viz., the median longitudinal groove at the side

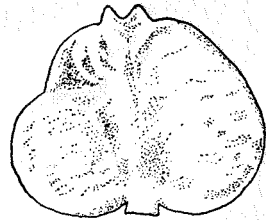


Fig. 1. *Loxothylacus nierstraszi*, the surface of the animal which was turned against the thorax of the crab. $\times 2$.

which was turned towards the abdomen of the host. The mantle opening, which lies at the extremity of a short tube, is found in the centre of the anterior region.

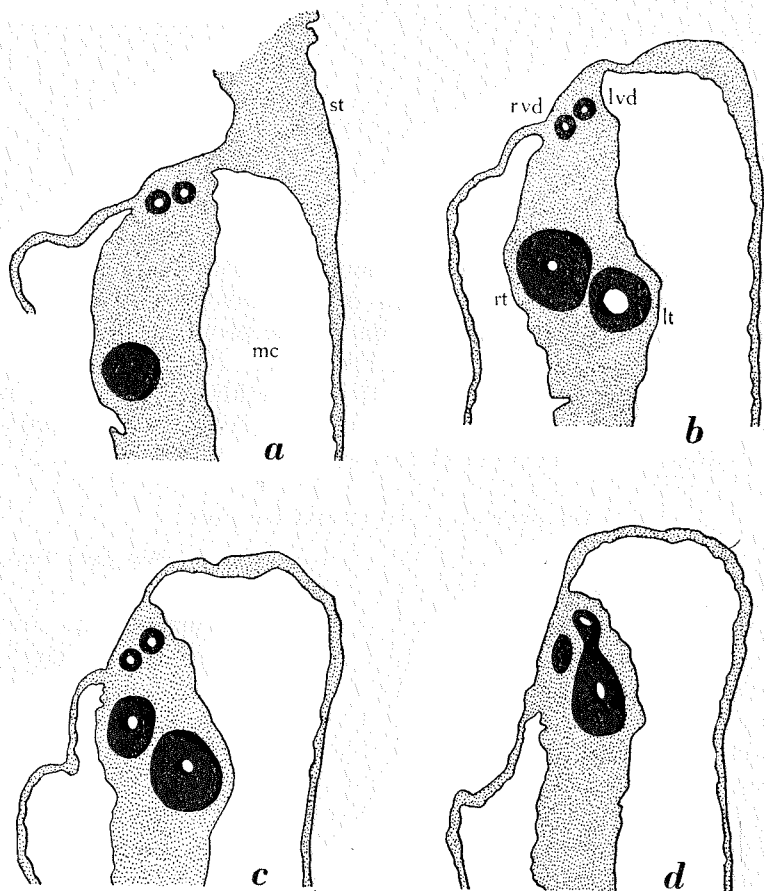


Fig. 2. *Loxothylacus nierstraszi*, longitudinal sections (anterior parts omitted). a, section through the stalk, each following section from a more dorsal region. lt, left testis; lvd, left vas deferens; mc, mantle cavity; rt, right testis; rvd, right vas deferens; st, stalk. $\times 18$.

From the visceral mass and the posterior part of the mantle a series of longitudinal sections has been made for the study of the internal organs. Sections through the stalk (fig. 2 a) show that the visceral mass is attached to the mantle at some distance from the stalk.

The male genital organs are of fairly large size, the left is somewhat nearer to the dorsal region than the right. In fig. 2 a the two vasa deferentia and the extreme ventral part of the right testis are shown, the following figures, each from a more dorsal plane than the preceding, show both testes.

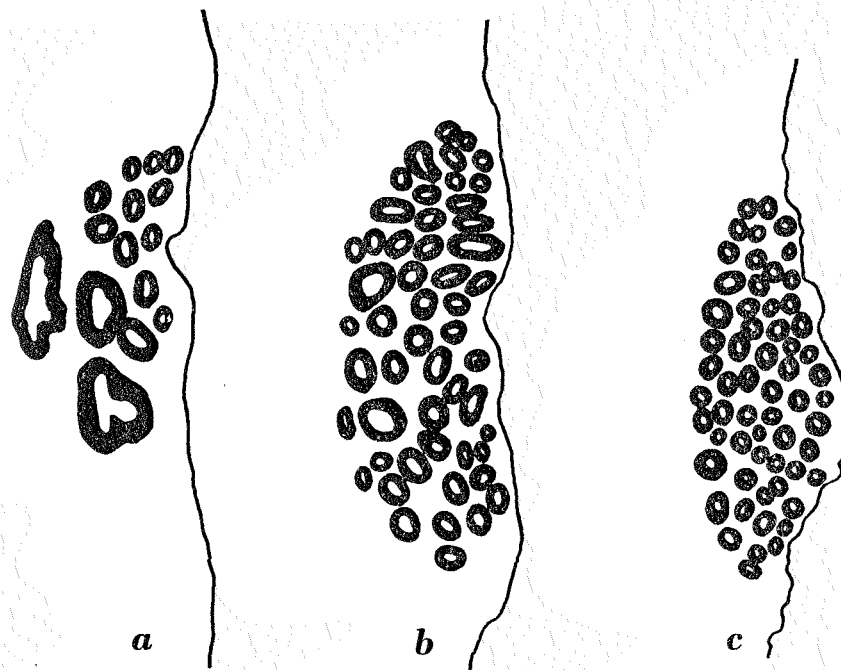


Fig. 3. *Loxothylacus nierstraszi*, longitudinal sections of one of the colleteric glands; posterior end at the upper side of the figures. $\times 72$.

The colleteric glands are comparatively large, they have a well developed system of strongly branched canals. In the median region of these glands there are a few canals only (fig. 3 a), in sections farther towards the periphery of the glands the number of canals increases considerably, so that in the section represented in fig. 3 c there are 60 of these.

The surface of the external cuticle of the mantle is covered with small papillae. In some parts of the cuticle these excrescences are very small or entirely wanting, in other parts they are distinctly visible. These papillae as a rule have a length of 4 to 6 μ , they seem to consist of rather soft chitin, and are of a somewhat

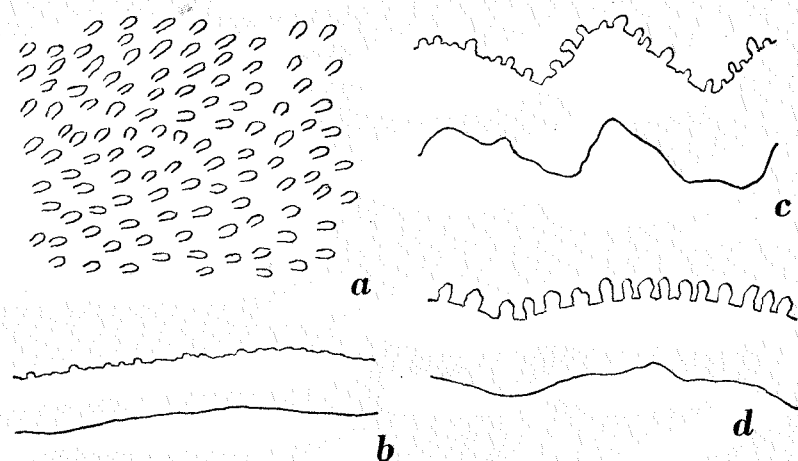


Fig. 4. *Loxothylacus nierstraszi*. a, upper view of the excrescences on the external cuticle. b, c, and d, transverse sections of different parts of the external cuticle. $\times 530$.

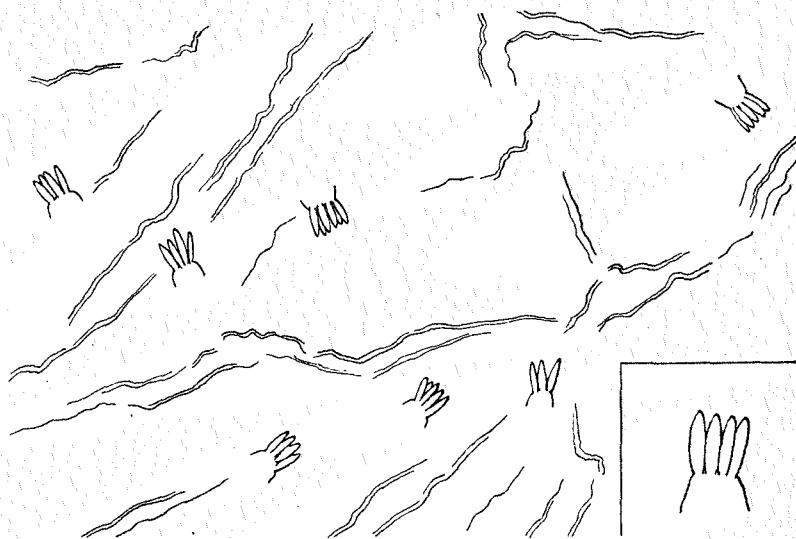


Fig. 5. *Loxothylacus nierstraszi*. Retinacula on the internal cuticle, $\times 305$ (in the right hand corner one retinaculum $\times 530$).

irregular shape. In fig. 4a some of these excrescences are shown as they occur on the surface of the cuticle, in fig. 4 b-c sections of the external cuticle from different parts of the mantle are represented, showing the variation in size and shape of the papillae.

On the internal cuticle of the mantle there are numerous retinacula, which, at least in some regions, form rather dense groups (fig. 5). Each retinaculum consists of a basal part and 3 to 6 spindles with a length of about 15μ . On the latter no barbs could be seen.

Among the species of the genus *Loxothylacus* there is one which corresponds in many details with the new species described here, viz., *Loxothylacus spinulosus* (cf. BOSCHMA, Zool. Meded., vol. 11, 1928, p. 172). The two species have excrescences of a similar size, but those of *L. spinulosus* are more or less stiff little blunt spines, whilst those of *L. nierstraszi* are more or less soft little papillae. Moreover the external cuticle of *L. spinulosus* is extremely thin (approximately 5μ), whilst this cuticle in *L. nierstraszi* is much thicker (12 to 18μ).

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IN MEMORIAM H. F. NIERSTRASZ

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E. J. BRILL

1938