OPHIOTERESIS BEAUFORTI NOV. SPEC.

BY

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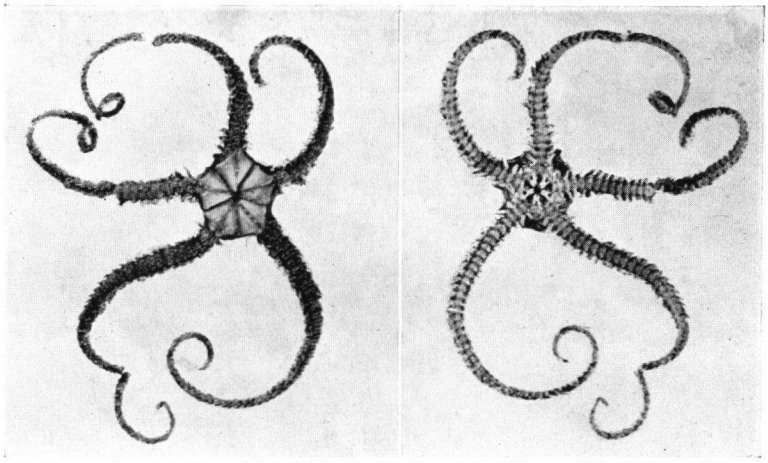
1 specimen, Inhaca Island, Delagoa Bay near Lorenço Marques, coll. Prof. Dr. C. J. van der Horst.

This animal closely resembles *Ophioteresis elegans* Bell, 1892 (Proc. Zool. Soc. London, p. 178, Pl. XI, Fig. 1—5) and *Ophiothela tigris* (Lyman, 1871, Ill. Catal. Mus. Comp. Zool. VI, p. 10 in Mem. Mus. Comp. Zool. Harvard Coll. II), both described more in detail by MORTENSEN, 1913 (Mindeskrift for Japetus Steenstrup, X, København). See also SOLLAS, 1914, in Phil. Trans. R. Soc. London, ser. B, vol. 204, Pl. 9, Fig. 2. It differs, however, in having the skin of the upper side of the arms covered by rough thorny nodules, while the smooth grains on the upper side of the disc occur here only between the large radial shields.

Arms five. Diameter of disc 7 mm, length of arms 35 mm. The disk is wholly covered by the large smooth radial shields. Between them lie smooth grains. In the centre of the disk there are about 8 of them, of a round form, while they are more oval in the ten narrow spaces between the radial shields. Their number varies here from 1—7 in each space. One plate only shows one grain *on* its proximal point; for the rest there are no grains *on* the radial shields. I cannot see any difference between the grains on the radial and those on the interradial spaces. In this (dried) specimen the radial shields all lie close together. Distally of them a narrow space of naked skin is visible, spotted with fine blue spots and partly covered with small spines. Some of these are only little smaller than the smallest arm spines; they are short stumps with about 5 sharp points round their top. Others are yet smaller and look like mere grains. These same spines, stumps or grains, as they may eventually be called, also cover the naked skin of the upper side of the arms, a feature not described in the other species. They are rather widely spread on the first arm joints, becoming more crowded about the 5th or the 6th joint. In the next 5 or 6 joints they are very crowded, covering the whole upper side of the arms, whereafter their number decreases again: in the following joints they are found especially in the middle of the arm. In the distal part



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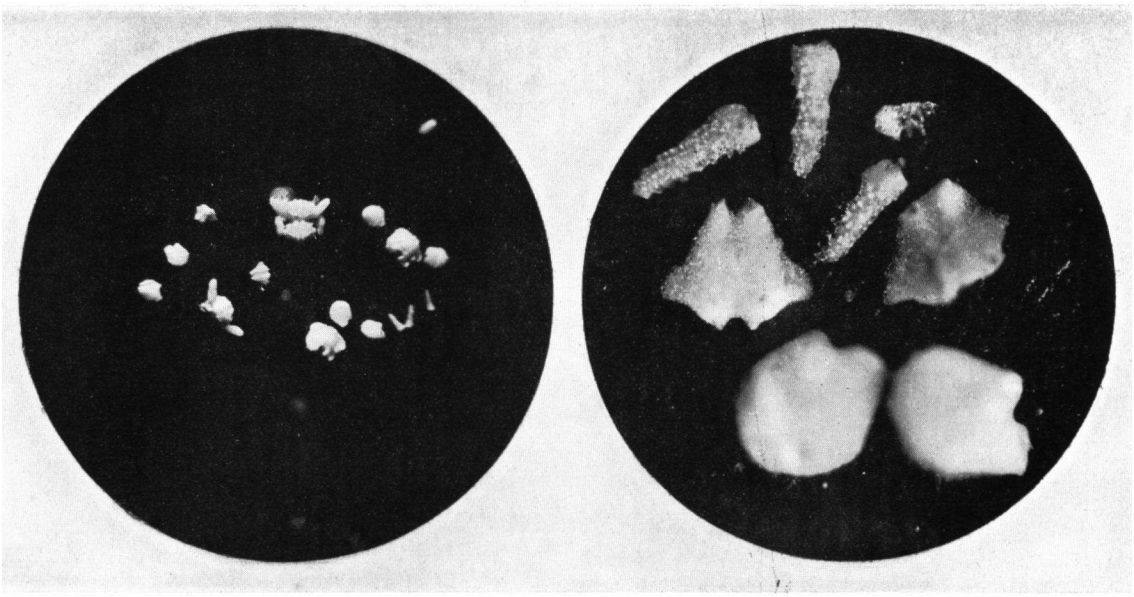

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Fig. 1. *Ophioteresis Beauforti* nov. spec.
1. Upper side of the dried specimen. Enlarged. — 2. Under side of the dried specimen. Enlarged. — 3. Calcareous bodies of the arm skeleton: 3 arm joints with side and ventral plates seen from ventral side, 2 vertebrae seen from distal side, 2 ventral plates, 6 lateral plates, 3 arm spines. Enlarged. — 4. Calcareous bodies of the arm skeleton: 2 side plates, 2 ventral plates and 4 arm spines. Enlarged.

there even is a tendency towards regularity: each of the vertebrae shines through the skin as a crescent with two small ridges parallel with its horns; according to this pattern the grains are arranged; a series of 3—7 (one often being larger and central) along the distal border of the crescent, and one of 2 or more along the distal border of each of the parallel ridges. This arrangement, however, is less distinct and more irregular on one arm than on another. In the proximal part of the arm, the crescent is seen to consist of the two horns and, in the middle, two small parallel radial ridges. The grains are clearly visible on the photograph, fig. 1.

There are some loose, mostly paired, fragments of upper arm plates on the proximal (about 4) arm joints. On the upper side of the disk the interbrachial spaces are limited by the genital pores, standing out in this dried animal like strong crests. As said above, the naked skin on the upper side of the disk is provided with small dark blue pigment spots, and bears some small spines. These, however, become larger and more frequent on the under side of the disk, often being larger here than the largest arm spines. They are spinulose throughout their length and rapidly decrease in size proximally; usually one sees 8—14 longer ones and 5—9 shorter ones, while there are only a few that are middle-sized. The pigment spots are also found on the under side.

Like the upper side, the whole under side of the body is covered by the thick skin, so that it is often difficult to trace the exact outline of the plates. The oral shields are oval to diamond-shaped, the short axis in the interradius; the adoralia are oval to kidney-shaped and only little smaller. The jaw as usual in the Ophiotrichidae: with a large hole in the middle and a cluster of tooth papillae (which, because below the tip they form two side rows of somewhat larger papillae, give the impression in the photograph of two tooth papillae only). The second (first visible) tentacle pore lies proximal of the first vertebra, next to the jaw and just inside the mouth slit. The third pair of pores lies lateral of the second vertebra, distal of its side plate. The fourth pair moves to the margin of the ventral arm side, while the fifth passes it and, like the rest, lies on the side of the arm, above the sideplate. As usual in the *Ophiotrichidae,* we find outside the oral plate two distinct plates, which also border the proximal interradial border of each genital slit.

MORTENSEN l.c. gave a detailed description of the structure of the arms. Like in his description, the ventral plates shine through the skin. I give a photograph of some of the calcareous bodies included: ventral plates, side plates and some arm spines after treatment with Eau de Javel. Moreover, I have drawn one of the vertebrae from different sides, marking the ventral plate (in reality inconspicuous) by means of a dotted surface. From all these figures it is clear that the structure of the arm is principally the same as in *O. elegans,* though the form of the vertebrae differs in small details. It must be emphasized that the "glassy knobs" seen on the dorsal side of a vertebra are not the grains (spines, stumps) described above, which are fastened *on*

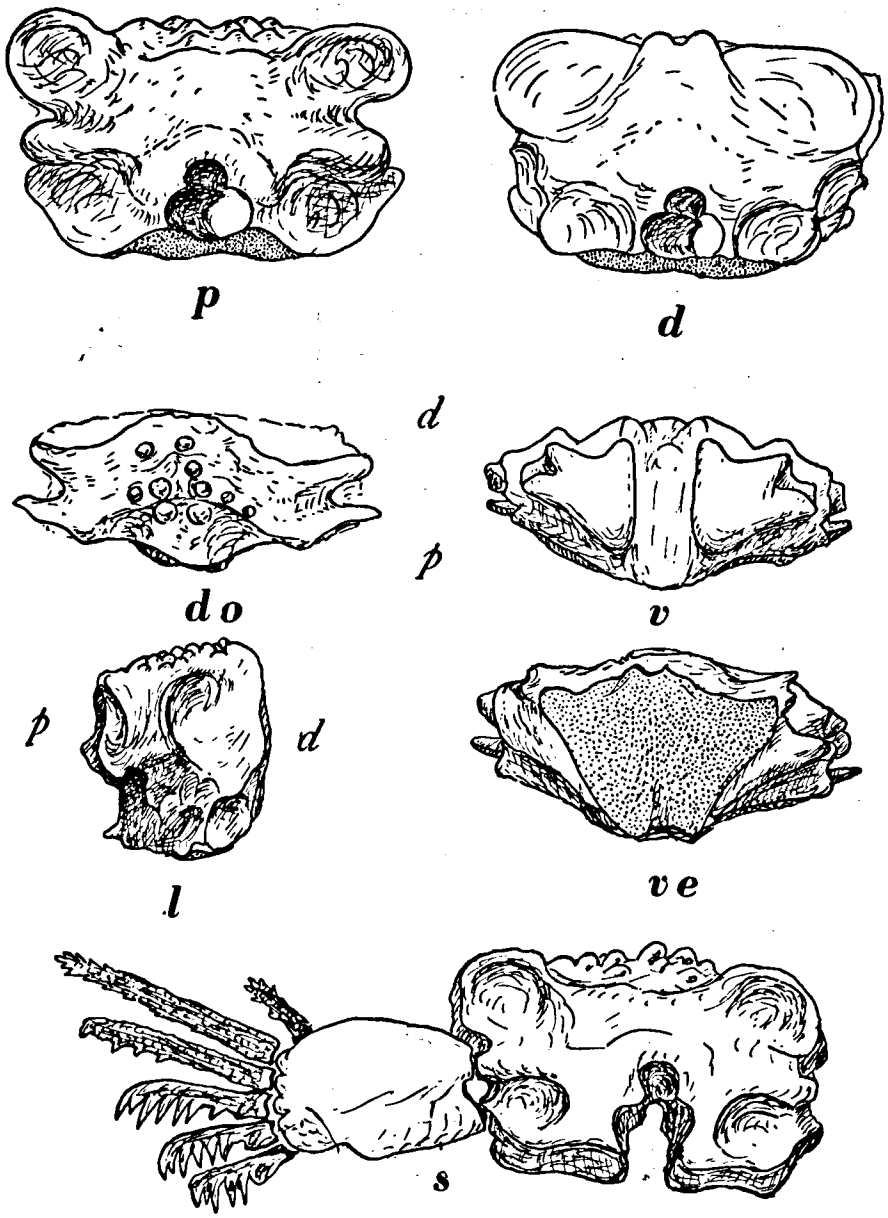

Fig. 2. *Ophioteresis Beauforti* nov. spec.
Vertebra seen from different sides, the ventral plate marked by a dotted surface: **p**, proximal side; **d**, distal side; **do**, dorsal, **v**, ventral side without ventral plate (**d**, distal direction, **p**, proximal direction); **l**, lateral side (**p**, **d**, as above); **ve**, ventral side with ventral plate; **s**, vertebra from middle region of arm, seen from proximal side with a side plate as it articulates to it and on the side plate the 6 spines.

the dorsal skin. The side arm plates stand out from the arm and bear a series of 6 spines of which the 2(—4) uppermost are real spines, the (1—)3 ventral ones having been transformed into hooks, while the one between these two forms is transitional in that its spinelets are shifted to one side. Drawings and photographs render the forms of these hooks and spines clear. The last tip was missing from all 5 arms. I could only detect one with two hooks and a small spine on each of its last side plates. Rudiments of the tentacular papillae, as MORTENSEN described them, could not be found on these side plates.