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A SPECIMEN OF THE ASTEROID *ACANTHASTER PLANCI* (LINNAEUS) FROM THE MOZAMBIQUE COAST

by

JOHN R. GRINDLEY

(Curator of Marine Invertebrates, South African Museum, Cape Town)

The genus *Acanthaster* Gervais is morphologically a very isolated form of asteroid, which is believed to be the sole survivor of a once extensive group. The genus is now placed in the family Acanthasteridae, distinct from the Echinasteridae, for *Acanthaster* has a facies altogether unlike that of any other asteroid. The members of the genus are confined to tropical seas where they inhabit coral reefs, usually in the littoral zone, while *A. brevispinus* Fisher has been recorded from somewhat deeper water. They are said to feed on coral polyps, crawling over the reef leaving a trail of empty polyps (Madsen 1955: 186). The genus is widely distributed in the Indo-Pacific region and a number of species have been described from various localities, but most of them have been relegated to synonymy. In a recent review of the genus by Madsen (1955) only three species are accepted as distinct.

A. planci (Linn) is widely distributed in the Indo-West-Pacific region. *A. brevispinus* Fisher with much shorter abactinal disc spines was described from a depth of 18 metres from the Philippine Islands and has also been recorded off the coast of Queensland (Endean 1961: 281). Madsen (1955: 191) suspects that this species may prove to be merely a short spined variation of *planci*. *A. ellisii* (Gray) is an east Pacific form, and occurs on the Pacific coast of North America.

***Acanthaster planci* (Linnaeus)**

Asterias planci Linnaeus, 1758.

Asterias echinites Ellis and Solander, 1786.

Asterias solaris Schreber, 1793.

Stellonia echinitis Agassiz, 1835.

Acanthaster echinus Gervais, 1841.

Acanthaster echinites (Ellis and Solander) Perrier, 1876.

Acanthaster ellisii (non Gray) Studer, 1884.

Acanthaster mauritiensis de Loriol, 1885.

Acanthaster planci (Linnaeus) Fisher, 1911.

(Further details and full bibliographic references to the synonyms appear in Madsen, 1955: 181).

Distribution: Tropical Indo-West-Pacific region within the limits of coral reefs. In the western Indian Ocean the nearest recorded specimens have been from Zanzibar and Mauritius. I have also seen a colour photograph by Professor Millot of one from Nosy Be, to the north of Madagascar.

Locality: The present specimen was collected by Mr. J. Dichmont while diving at Ponta Barra (23° 47.5' S), near Inhambane, on the coast of Mozambique, in July, 1960. This is well south of the mouth of the Zambezi, and so within the southern African region as usually defined. This specimen, which is now in the South African Museum (S.A.M. A22627), is the first record of this species from this region. The specimen was found at a depth of about six metres on a coral reef. Another specimen was also seen. They appear very well camouflaged and are easily overlooked despite their large size. The members of this genus are nowhere common.

Description: This specimen has 18 rays and 7 madreporic bodies, R=185 mm. and r=100 mm. The disc and rays are covered by long spines. The surface of the spines is granular. The abactinal spines of the disc are up to 17 mm. long (including the pedicel), while those of the rays are stouter and slightly longer. The abactinal pedicellariae are long and slender.

Linnaeus (1758) originally described the species simply as "stellate with fifteen spiny arms", and cited Goa (Portuguese India) as the type-locality. The number of arms is not fixed, however, and specimens have been described with between 9 and 21 arms. There is evidence that *Acanthaster* begins life as a 5 armed sea star (Madsen 1955: 182).

In life the colour of this specimen was greenish with the spines orange. The extent of the orange colour is variable, and can be contracted. When taken from the sea the colour changed to red and this later faded to brownish on drying. This is comparable to the colouration of *A. planci* described by H. L. Clark (bluish grey with spines reddish at the tips — extent of red colour expansible — even spreading to dorsal skin).

The spines apparently carry a poisonous mucous which Mr. Dichmont reports has an unpleasant irritating or stinging effect on the skin.

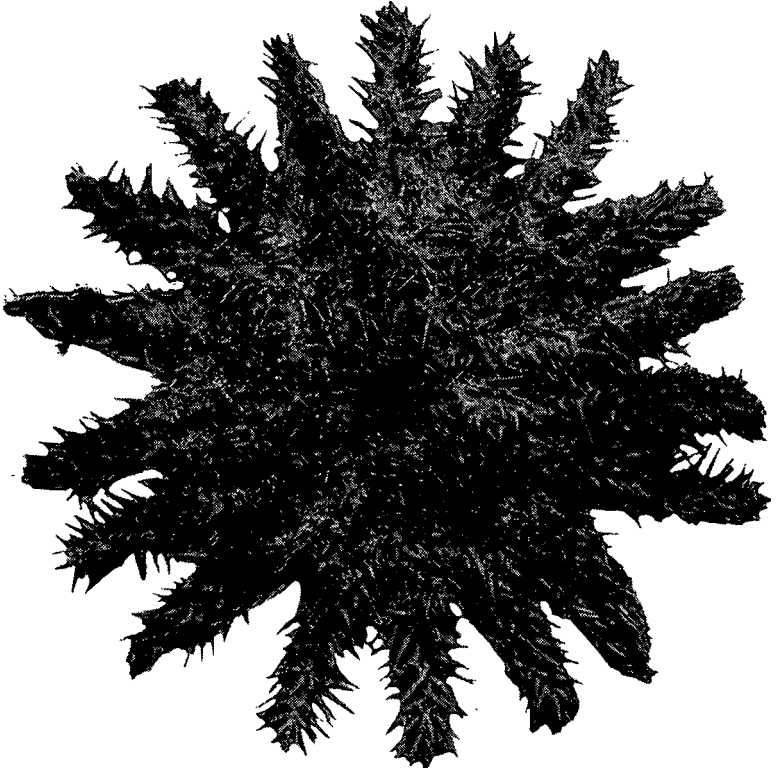
Remarks: The present record represents an extension to the known distribution and is apparently the most southerly locality from which a species of *Acanthaster* has been recorded. *Acanthaster* appears to be absent from Inhaca Island three hundred miles further south.

In the present specimen the spines are one-fifth ($17/85$) the length of a ray and markedly granular, so that it appears to resemble the form described from Mauritius. Madsen (1955: 185), however, points out that the variation within geographical regions is too great to allow the separation of subspecies.

I am indebted to Dr. Ailsa Clark, of the British Museum (Natural History), for helpful suggestions.

References

- ENDEAN, R. 1961 "Queensland faunistic records Part VII. Additional records of Echinodermata (excluding Crinoidea)," *Pap. Dep. zool. Univ. Qd.*, vol. 1, pp. 259-285.
- MADSEN, F. J. 1955 "A note on the sea star genus *Acanthaster*," *Vidensk. Medd. naturh. Foven. Copenhagen*, vol. 117, pp. 179-192. (This paper includes a list of references to earlier work in the genus).



ACANTHASTER PLANCI (LINNAEUS)

Dorsal view of specimen from Ponta Barra, Inhambane, Mozambique.