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NOTES ON ANIMAL ASSOCIATIONS. 3. A **PARTHENOPID CRAB,** *HARROVIA ALBOLINEATA* **ADAMS** & **WHITE ON A MARIAMETRID CRINOID,** *LAMPROMETRA* SP.

By S. JONES AND C. SANKARANKUTTY

Central Marine Fisheries Research Station, Mandupam Camp

INSTANCES of decapod crustaceans living in association with crinoids are known (Hyman, 1955) and from Indian waters one such example of *Galathea elegans* living in association with *Antedon* has been recorded by Southwell (1909) from Okha in the Gulf of Kutch. The same species of anomuran crab was reported from South Africa by Barnard (1950) as commensal on another crinoid, *Tropiometra carinata.* The brachyuran crab, *Harrovia albolineata* Adams & White, has already been recorded to live in association with comatulids by Serene *et al.* (1957-58) in the Gulf of Nhatrang, Vietnam. In this article an association between *H. albolineata* and *Lamprometra* sp. is recorded.

During one of the diving operations for collection purposes in comparatively shallow water at Vedalai near Mandapam in the Gulf of Mannar, a mariametrid crinoid belonging to the genus *Lamprometra** which was harbouring a female specimen of a parthenopid crab, *H. albolineata* was collected by one of us (C.S.) from a depth of about 2 metres. The crinoid was found attached to sea-grass with the crab at the aboral side close to the aboral cirri. The latter was well camouflaged in the above position and was hardly distinguishable on account of the similarity in the colour pattern of the symbionts (Plate I, Figs. 1 & 2).

The crinoid is smaller and paler than the common species occurring here and has white aboral cirri and brownish brachials with a white band along the periphery forming a discontinuous circle when viewed as a whole from above. The crab has conspicuous dark bands on the white background of the carapace and chelipeds matching well with the characteristic colouration of the crinoid (Plate, Figs. 3 & 4).

The animals, after collection, were placed in an aquarium for observation. When separated the crab would move about restlessly till it gets at the crinoid. The crinoid survived only for a couple of days, during which time, the crab was never seen to desert its host of its own accord ; but when the crinoid died the crab was found moving about at the bottom of the aquarium.

A specimen of *Harrovia albolineata* was collected from the above locality on an earlier occasion in a dredge along with the same species of crinoid. Evidently due to the disturbance caused by the dredging operation it had got dislodged from the host and was found free.

* Identified by Mr. S. Mahadevan of the Central Marine Fisheries Research Station to Whom our thanks are due.

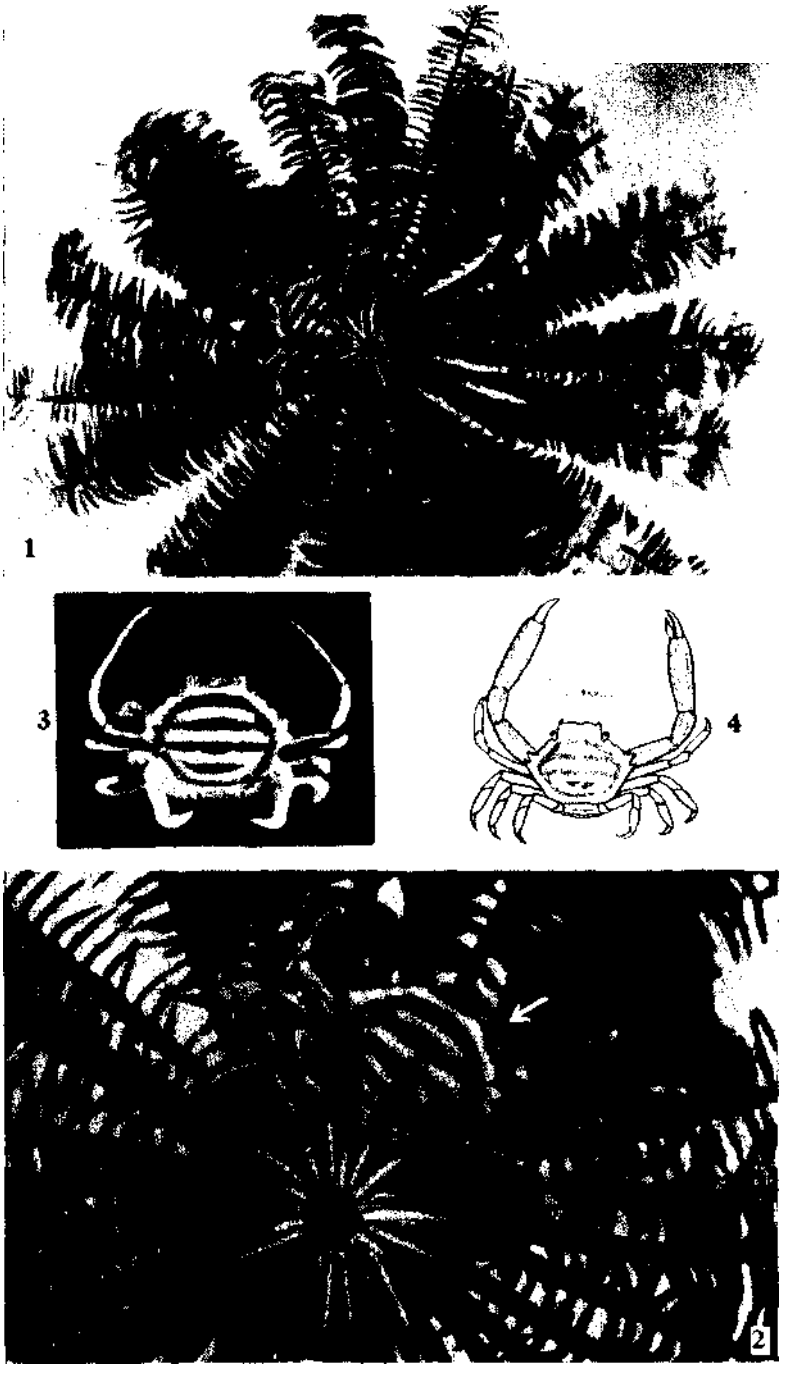

FIG. 1. Ventral view of *Lamprometm* sp., with the parthenopid crab, *Harrovia albolineala* Adams and White between the aboral cirri and brachials ; FIG. 2. A portion of the above enlarged. The position of the crab is indicated by the arrow ; Fio. 3. A photograph of *H. alholineata.* FIG. 4. A diagarm of *H. albolineata.*

In the absence of any factual data the nature of mutual benefit derived by he nartSrs could only be a matter of conjecture. It is possible that in return for the SmSaged vantage position and shelter the crab gets, the cnnoid should be indirectly benefited in the procurement of food for itscli.

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