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ON A NEW SPECIES OF *HALAMMOHYDRA* (ACTINULIDA, HYDROZOA) FROM ANDAMANS, INDIA

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ABSTRACT

A new species of the interstitial solitary hydrozoan, *Halammohydra andamanensis*, collected in the intertidal sands of Rangat Bay, Middle Andamans (Bay of Bengal), is described. The odd number of both the whorls of tentacles and the linear neck, are remarkable features of the species. Some ecological notes on the species, are given.

INTRODUCTION

One of the fascinating contributions to systematic zoology during the present century is the discovery and study of aberrant cnidarians inhabiting the interstitial environment of marine sediments. Hitherto, six species of the curious solitary hydrozoan *Halammohydra* Remane are known widely to occur on European coasts (Clausen, 1967). Outside Europe, *Halammohydra* has recently been reported from the east coasts of India (Rao and Ganapati, 1966 ; Rao, 1975) and North America (Clausen, 1971). Collections of interstitial fauna from the intertidal sands of Rangat Bay in the Middle Andamans, made by the author during March 1974, contained specimens of yet another undescribed halammohydrid, which is being reported here as a new species.

SYSTEMATIC ACCOUNT

Family HALAMMOHYDRIDAE

Genus **Halammohydra** Remane, 1927

Halammohydra andamanensis sp. n.

(Fig. 1)

Material : Holotype, Regd. No. P. 2720/1, ♀, 570 μ long ; loc. Rangat Bay (Lat. 12° 28′ 40″ N and Long. 92° 54′ 20″ E), Middle Andamans, in coarse sand 5 - 10 cm. below surface, intertidal zone, 15 March 1974 coll. G. C. Rao. Paratypes, Regd. No. P 3005/1, 2 ♀ +1 ♂, 540 - 590 μ long, collection data as above. The types are deposited in the National Zoological Collections at the Zoological Survey of India, Calcutta.

Description : All the seven adult specimens examined morphologically belonged to the same population and attained a total length of 520 - 600 μ. Body elongated. opaque and sparsely ciliated. Gastric tube 420 - 460 μ long, 50 - 60 μ wide and makes up about $\frac{2}{3}$ of total length. Neck about 10 μ wide, unusually elongated and about 100 μ long. Aboral cone strikingly conical in shape, 35 × 30 μ in size, with little developed

adhesive organ occupying about 1/3 of upper part of cone. Adhesive organ nearly conical in shape and attains about 12×10 μ in size.

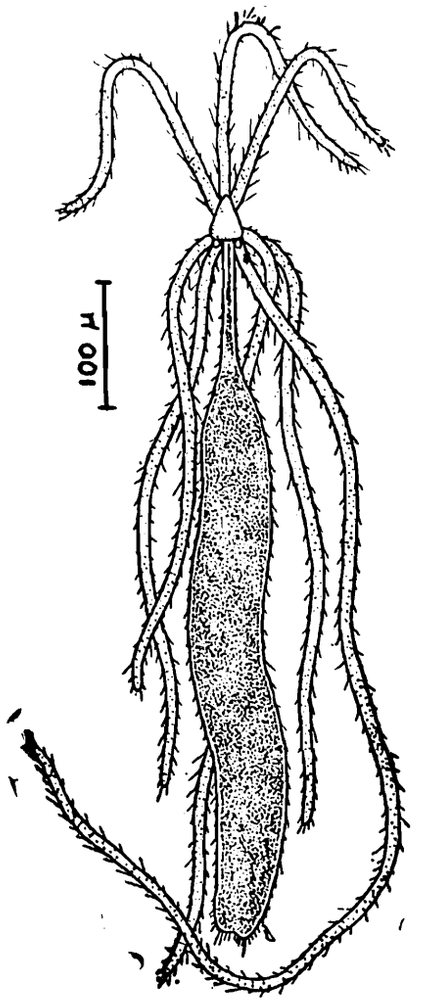

Fig. 1. *Halammohydra andamanensis* sp. n. Adult, habit.

Two distinct whorls of slender tentacles and nearly globular statocysts constantly numbered 3+5+5. Tentacles do not bulge or taper at their base. Anterior tentacles nearly of same size, while posterior ones are longer and vary in size. One of the posterior tentacles always longer than the others. During locomotion, anterior tentacles directed forwards, while posterior ones trail behind. Tentacles generally extend completely during locomotion, while certain amount of annulation often occurs distally at rest. Five statocysts alternating with posterior tentacles are lithostyle type and about 5 μ in diameter. Cnidome consists of two types of nematocysts, *viz.*, nearly spherical stenoteles of two size categories and oval atrichous isorhizas. Macrostenoteles are *c.* 6.4-7.2×6.0-6.8 μ ; microstenoteles *c.* 4.0-5.2×3.8-5.0 μ ; and isorhizas *c.* 3.4×2.2 μ. Sexes separate. Males and females with one gonad only.

Remarks : The structure of the new species presents all the peculiar features characteristic of the genus and meets all the biological needs of the interstitial environment. The odd number of both the whorls of tentacles and the linear neck, are remarkable features of the species. Among the seven known species of the genus, the present form closely approaches *Halammohydra vermiformis* Swedmark and Teissier in the worm-like shape of body, size of adhesive organ and the disposition of tentacles, but differs from the latter in the following features : (1) body size, (2) shape of aboral cone and neck, (3) number of posterior tentacles and statocysts, and (4) size of nematocysts.

Until now, *H. octopodides* Remane and *H. chauhani* Rao are the only two species of the genus recorded from the interstitial system of Indian Ocean. The discovery of *H. andamanensis* Rao from an isolated area of Bay of Bengal is of considerable zoogeographical importance and also indicates the interesting way evolution of species has occured within the genus.

Ecology : The cnidarian is an inhabitant of coarser sands mixed with fine shell gravel and little detritus 5-10 cm. below surface between the low and half-tide levels of the intertidal zone. The sands are mostly siliceous and angular ; their texture varied between 300 and 600 μ in mean diameter. Temperature and salinity of interstitial water in the habitat at the time of collection were 28.6°C and 34o/oo., respectively.

The species is free-moving, agile and

exhibits weak powers of adhesion to substratum, probably correlated with the reduced number of tentacles and the small aboral adhesive organ. The atrichous isorhizas on tentacles also appear to assist the animal in adhering to substratum. Locomotion is effected by ciliary gliding and a speed up to 2 cm./minute was recorded in a thin layer of coarser sediment spread in a petri dish. The vermiform body enables the animal to move through the interstices with considerable ease. The hydrozoan is negatively phototactic and a predator, feeding on micrometazoans of sand.

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