

## OCCURRENCE OF ZOANTHID COLONIES (CNIDARIA: HEXACORALLIA: ZOANTHARIA) AT KARACHI COAST, PAKISTAN: A PRELIMINARY REPORT

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### ABSTRACT

During a field visit to Manora at Karachi coast of Pakistan some zoanthid colonies were noticed on the intertidal rocks. The close examination of the colonies and the polyps revealed that, they belong to the genus *Zoanthus* Lamarck, 1801 (order Zoantharia: suborder Brachycnemina: family Zoanthidae). The taxonomic study of zoanthids is neglected in Pakistan. This preliminary investigation suggests that, these colonies are morphologically close to *Zoanthus sansibaricus* Carlgren, 1900, however, molecular analysis is necessary.

**Key words:** Zoanthid, Zoantharia, Zoanthidae, *Zoanthus*, Pakistan.

Zoanthids are generally colonial zoantharian cnidarians with clonal polyps connected by coenenchyme, having one siphonoglyph and two rows of marginal tentacles (Irei *et al.*, 2011). The family Zoanthidae Gray, 1840 contain three genera: *Zoanthus* Lamarck, 1801; *Isaurus* Gray, 1828, and *Acrozoanthus* Saville-Kent 1893, all are zooxanthellate, containing endosymbiotic *Symbiodinium* spp. which are photosynthetic dinoflagellates. Genus *Zoanthus* can be distinguished from *Isaurus* by having polyps which stand upright and are not provided with tubercles on their outside however, *Acrozoanthus* is monotypic represented only by *Acrozoanthus australiae* Saville-Kent 1893 described from the Great Barrier Reef, Australia (Reimer *et al.*, 2010). Zoanthidae is the only zoantharian family which does not encrust sediments into their body (Reimer, 2007).

Colonies of zoanthids were observed on 28-10-2012 from the upper intertidal rocks of Manora at Karachi coast. These colonies were five in number and were exposed to sunlight. The two massive colonies were reaching to a size of approximately 0.5 m<sup>2</sup>. The specimens (colonies) were collected by hand; photographs of the live specimens were made in vitro and then preserved in 4% formalin. The specimens (MZD/CN-10) are housed in the Museum of Zoology Department, Jamia Millia Govt. Degree College, Malir, Karachi.

The polyps (Fig. 1) have fluorescent green colour oral discs with strip like oral opening. The oral disc width of the large polyps is between 6-8 mm. The column of the polyps is light brown in colour, smooth and without any markings in the upper region. The body wall of the polyps is free of any sediment encrustation. The tentacle count in most of the fully grown polyps is upto 56. The coenenchyme is less developed with upright well extended polyps. In the field, polyps were opened during the sunlight with their oral discs in close connection giving rise to an overall appearance of a green colour mat.



Fig.1. A part of colonies of *Zoanthus* sp. collected from Manora, Karachi coast, Pakistan.

Identification at species level is difficult in zoanthids. This is due to the wide intraspecific variations and overall cryptic nature of the group; further, their taxonomy is also in an urgent need of revision. The study of morphological

characters and the identification keys given in various papers (Carlgren, 1900; Reimer, 2007; 2010; Reimer *et al.*, 2006) indicate that, the discussed *Zoanthus* colonies are morphologically close to *Zoanthus sansibaricus* Carlgren, 1900 a well known Indo-Pacific species however, it is also concluded that, molecular analysis is necessary for species confirmation. Zoanthids are found from intertidal to a sea depth of 5000 m and are common in tropical and subtropical seas (Reimer and Miyake, 2009; Irei *et al.*, 2011).

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