

ORGANISMS IN AYIRAMTHENGU MANGROOVE

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ABSTRACT : Diversity of biofouling organisms in Ayiramthengu Mangroove was investigated during 2012-2013. The biofilm samples (Microfouling) were scraped from constructions, tire, rock, wood, boat, etc from three different stations. Other fouling organisms (Macro foulers) were collected by hand picking method. The range of water temperature was 28 to 33° C , dissolved oxygen (D.O) was 5 – 6.8mg/l and salinity was 9.8 – 35. 10 categories of fouling organisms belonging to 4 phyla were identified. The phylum Mollusca contributes the 38.78% of the total faunal population, were the most important in the terms of species abundance. The least important phylum in collected fauna was Crustacea it contributes 9.1% of the total species abundance. The abundance of fouling organism varies with geographical and seasonal variation.

KEYWORDS : Biofouling Organisms - Ayiramthengu Mangroove

INTRODUCTION

The exposure of hulls of ships and boats, pillars of piers buoys, under water cables, constructions, equipment to the seawater and rocks results in the settlement of large number of organisms called foulers or fouling organisms *i.e.*, biofouling or Biological fouling is the accumulation of micro organisms, plants, algae or animal on wetland surfaces. Such accumulation is referred to as epibiosis when the host surface is another organism and the relationship is not parasitic. Many groups of animals and plants are recognized as foulers. Even though they are from entirely different groups, they show some common characteristics. These organisms together form a community, known as fouling community.

The most important members of the fouling community include algae, representatives from almost all invertebrate groups such as Protozoa, Porifera, Tubeworms, Coelentrates, Polyzoa, Annelida, Crustacea, Arthropoda, Mollusca, The tunicates, Bryozoa (either branching or flat or encrusting hydroids and encrusting sponges. Biofouling is divided into microfouling and macrofouling. Microfouling is the biofilm

formation and bacterial adhesion, macrofouling is the attachment of larger organisms. Due to distinct chemistry and biology that determine what prevents them from setting, organisms are also classified as hard or soft fouling types. Calcareous or hard fouling organisms include barnacles, encrusting bryozoans, molluscs, polychetae and other tubeworms and zebra mussels. Non calcareous or soft fouling organisms include seaweed, hydroids, algae and biofilm slime. Together these organisms form a fouling community.

Prevention of fouling is routinely done by using copper sheathing in the case of wooden hulls of boats. A great disadvantage of this practice is that copper is subjected to corrosion when exposed to seawater. Later attention was directed towards a suitable antifouling agent. Barnacles can be prevented by painting the ships with Bis-N-Tributyltin oxide or Neoprin commonly known as No foul.

The problem of fouling organisms is really serious and therefore an understanding of the ecology of fouling is necessary for solving the problem of attachment of the organism. Hence the present study indicates the study of diversity