



A.V.V.M. Sri Pushpam College (Autonomous)

Poondi– 613 503, Thanjavur-Dt, Tamilnadu

(Affiliated to Bharathidasan University, Tiruchirappalli – 620 024)

**3.7.1 Number of Collaborative activities per year
for research/ faculty exchange/ student
exchange/ internship/ on –the-job training/
project work**

Collaborating Agency:

Dr. S. Ramu M.R Govt. Arts College, Mannargudi



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Mannargudi - 614001, Thiruvavur - Dt, Tamilnadu
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Date: 01.06.2016

LINKAGE
For the year 2016-2017

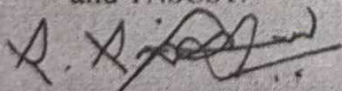
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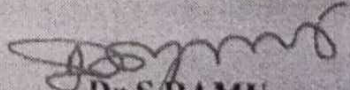
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|---|---|--|

Considering the significance of the noble cause for the student community, we have come forward to collaborate with each other to exchange research knowledge, expertise, laboratory and library facilities to the process of scientific research and education in the Biodiversity of Marine fishes. The parties (mentioned above as 1. & 2.) have had preliminary discussion in this matter and have ascertained areas of broad consensus. The parties now therefore agreed to enter in writing these avenues of consensus, under a flexible linkage, and this project aims to fill the gap between knowledge demand and subject expertise related to the mentioned field.

Joint Responsibilities

- Sharing of laboratory facilities, library resources, database etc.,
- Joint Publication of research articles, books, magazines, bulletins etc.,
- Jointly organizing conferences, seminars, symposia and workshops.
- Submitting joint proposals for research funding from agencies like UGC, CSIR, DST and TNSCST.


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MARINE FISH RESOURCES IN NAGAPATTINAM COASTAL WATERS, TAMIL NADU COASTLINE, INDIA

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ABSTRACT

The marine fish communities around Nagapattinam coastal waters are currently under various stresses, both natural and anthropogenic. The annual average landings of marine fishes and fish diversity were studied, collected and analyzed by using software Primer 6.1 Version to study the potential fishery status of the Nagapattinam coastal waters, Southeast Coast of India from May 2015 to March 2016. Highest landing (65.91-17.96 MT) was reported in March 2016 and lowest (59.66-66.00 MT) in August 2015. The diversity indices showed higher values for Shannon-Weinner (4.883), Margalef species richness (15.1) and Evenness (0.993) and the most abundant families were found to be Engraulidae and Clupeidae which shared about 87% of total fishery annually, while Leiognathidae and Lutjanidae which shared about 75% of total fishery annually. The present result demonstrated that higher diversity values might be due to availability of abundant food resources and suitable environmental conditions at Nagapattinam coastal waters, Southeast coast of India, which accessible high species richness with a potential, economical and valuable fishery resource.

Keywords: Engraulidae, Clupeidae, Leiognathidae, Lutjanidae and south east coast; Minimum inhibitory concentration.

1. INTRODUCTION

Geological change is continuously happening, although much of this change occurs over a period straddling millions of years; and some species depend on periodic disturbances such as fire in order to survive. One of the utmost challenges faced by conservationists is the changing nature and 'shifting baselines' of biological communities. In some cases, change is a natural and often necessary component of a habitat. However, unnatural anthropogenic disturbances have exponentially increased in areas around the world, with negative effects on habitat biodiversity (Short & Wyllie-Echeverria, 1996; Charlson, et al., 1992; Fahrig, 1997). These man-made disturbances can drastically change the composition of both the physical habitat and the organisms living within it, and habitat fragmentation is the primary cause of local and global extinctions and biodiversity loss across all taxonomic groups (Nichols, et al., 2007). The frequency and intensity of extreme weather conditions such as hurricanes, floods, heat waves, draughts, and tropical cyclones has and will continue to increase (IPCC, 2007). In addition, ocean salinity, surface temperature, and pH balance are shifting (IPCC, 2007; Caldeira & Wickett, 2003). In some

tropical areas, climate change may lead to the complete submergence of low-lying islands by raising sea level, and thus severe losses in biodiversity in these areas (Pernetta, 1993). In order to develop conservation strategies for the protection of biodiversity in these coastal ecosystems, more research on basic marine biodiversity patterns and community structure should be conducted (Olsgard, et al., 2003).

The assessment of marine fish biodiversity globally, two habitats identified where most new marine taxa will likely to be found are the deep-slopes and deep-reefs which are areas so far poorly sampled and studied (Eschmeyer et al., 2010). All these facts make a study on deep sea fishes valuable as it is likely to influence estimation of marine biodiversity as well as options for harvesting of valuable fishery resources by the concerned maritime nation. Hence the present studies take over on marine fish biodiversity studies completed on the Nagapattinam coastal waters, southeast coast of India.

2. MATERIALS AND METHODS

Fishes were collected at monthly intervals from the trawl bycatch landed in Nagapattinam landing centre (Lat 10°45'37.45"N Lon 79°51'09.07"E) during the May 2015 to April 2016 (Figure 1). Stratified random sampling from each of the trawl catch was followed. In the present study, the fish species was collected in the trawl bycatch and identified up to

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