

Ichthyoplankton distribution in Samar Sea, Philippines

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Abstract

Composition, abundance and distribution of ichthyoplankton were investigated in the South China Sea, western Philippines. Larval fish samples were collected at 31 stations by surface and double oblique tows in April/May 1998. A total of 7371.67 fish larvae, representing 85 families, were collected in the samples. Abundance of fish larvae were dominated by the Myctophidae followed by the Gonostomatidae. The ten most abundant families of fish larvae found in this study were separated into three broad categories: (1) inshore fishes, represented mainly by the Bregmacerotidae, Gobiidae, Apogonidae, and Carangidae; (2) mid zone fishes represented mainly by the Hemiramphidae, Labridae and Engraulidae; (3) offshore fishes represented mainly by the Myctophidae and Gonostomatidae. Depth and time of day appeared to affect the abundance of fish larvae and fish eggs. Fish larvae were found mainly in double oblique tows while fish eggs were found mostly in surface tows. The larvae caught at night were more abundant than larvae caught during the day. Abundance and distribution of tuna larvae are also discussed.

Burias Pass, Ticao Pass, and Waters North of Samar Sea." To date, much of what remains to be done involves the processing and analyses of the volumes of research data accumulated by this project. The main objective of the above research was to assess the status of the fishery resources of the area for the rational management of the commercial and subsistence fishing industry. However, much of the basic information generated by this multidisciplinary research can be used for other purposes as well. This paper is a contribution to this extensive research effort. Specifically, the objectives of this research are as follows: 1) to understand the seasonal monsoons and local topography and how they affect the environmental processes and patterns in Ragay Gulf and Burias Pass, 2) to determine the biogeographic distribution of ichthyoplankton in the Ragay Gulf-Burias Pass area and their relationship with their fluid environment.

Ragay Gulf and Burias Pass are among the traditional fishing grounds of the country being considered by the government for an integrated approach to fishery management (Smith, et al., 1980; Samson, et al., 1977, World Bank, 1976). The Department of Marine Fisheries, College of Fisheries, University of the Philippines in the Visayas (UPV) in cooperation with the German Technical Cooperation Agency (GTZ), and under the financial auspices of the National Science and Technology Authority (NSTA) and the Ministry of Natural Resources (MNR), was awarded a contract to do a multidisciplinary research survey of the area from November, 1981 to February, 1983 under the aegis of the NSTA-MNR-UPVCF Project. Overall mean ichthyoplankton density at daytime (56 ind/100 m³), while taxon richness (family level) higher at near shore compare to offshore. These results are compared with observed diel patterns in other investigations.

The relative similarity in daytime patterns in stations over deep water suggests that the substrates (seagrass beds and coral reefs) serve as shelters from predation during the daytime. The highest density of fish larvae was the family Bregmacerotidae of 16% identified followed by Apogonidae (pre-flexion) and Mullidae both shared 14% of the total sampled population in one year. Third place in terms of density was Leiognathidae of 13% of this is dominant in shallow sandy to muddy bottom. Next in rank was the Engraulidae (9%) and Exocoetidae (8%) while Serranidae and Apogonidae (flexion) both got 7%. Least was Lutjanidae and some unidentified larvae. Biography Renato C Diocton has his expertise in assessment and evaluation in improving the coastal zone and marine protected areas