



Zooplankton of West Madagascar

John Bemiasa and Sitraka Remanevy

Institut Halieutique et des Sciences Marines, University of Tulear, Tulear, Madagascar

During six week survey (August – October 2009) in Western and Northern coast of Madagascar, the R/V ‘Dr. Fridtjof Nansen’ has carried out a study of the pelagic ecosystem. In collaboration with Agulhas & Somali Current Large Marine Ecosystems project (ASCLME) and South West Indian Ocean Fisheries Project (SWIOFP), the aim of the survey was to establish the physical, chemical and biological characteristics of the Western Madagascar shelf region as a whole.

Zooplankton samples were collected with Hydromed Multinet at all environmental stations ranging from 200 m depth to the surface. The Multinet was equipped with 5 nets for depth-stratified sampling. The nets were fitted with 180 μm mesh size and the water flow through the nets was measured. The Multinet was deployed and retrieved at a rate of ~ 1.5 m per second and was obliquely hauled. The five nets were triggered at the pre-selected depth intervals 0-25m, 25-50m, 50-80m, 80-120m and 120-200m. All samples were stored in marked bottles and preserved with buffered formaldehyde of 4% for further analysis.

As results, the zooplankton abundance was influenced by physico-chemical factors. During the study period 34 Family of zooplankton were identified which are dominated by Copepoda (58,69%) followed by Radiolaria (12,06%), Appendicularia (6,47%), Sagitta (5,11%), Larvae (4,57%), Ostracoda (3,13%), pelagic Foraminifera (2,15%). Family of zooplankton with abundance <1% were also recorded, namely Salpidae (0,94%), Euphausiacea (0,44%), Tintinnidae (0,39%), Annélidae Polychètes (0,34%), Mysidacea (0,21%), Ptéropodae (0,13%). Highest number of zooplankton were found at the depth below the maximum of fluorescence during the day. Copepods distribution depends on site and depth. During this study, the number of identified species is always superior to 50 for all sampling sites.

The findings of the present study will help to improve the scientific knowledge of the marine ecosystem of the west coast of Madagascar.