Diversity and community structure of the Siphonophorae, combined study of net samples and in-situ observations.

Mary GROSSMANN (PhD Course, Yokohama City University),
Dhugal LINDSAY (Research Scientist, JAMSTEC)

Siphonophorae are a kind of modular cnidarian, variable in size (<1cm to several meters long), shape and physiology (Mackie et al., 1987, Carré and Carré, 1995). During net sampling, the modular structure of these animals is usually destroyed, the individual organs separated or lost, making the identification and estimation of abundance of siphonophores difficult. In-situ observations, performed by SCUBA diving or using submersibles, are limited to the larger, most abundant animals. Yet a good estimation of abundance is necessary to assess diversity, community structure, predation pressure and the position and importance of Siphonophorae in marine food webs.

In this study, we present the diversity and community structure of the Siphonophorae sampled during the MULTI-SPLASH (MULTIple Sampling PLAtform Survey of wHole ecosystem) campaign, at the station off Kamogawa, East of the Boso peninsula, through the joint analysis of net-caught samples and in-situ video footage.

The MULTI-SPLASH data set was collected between February and March 2006 aboard the JAMSTEC research vessels Natsushima and Kaiyo, and comprises of High Definition in-situ video footage taken with the ROV Hyper dolphin, preserved IONESS (Intelligent Operated Net Environmental Sampling System) net samples, as well as VPR (Visual Plankton Recorder) images.

The advantages and limitations of such a multi-platform sampling for the purpose of siphonophore research are equally discussed.

Marrus sp. Hyper Dolphin dive #521 off Kagoshima
IONESS net