Geophysical Research Abstracts
Vol. 20, EGU2018-2693, 2018
EGU General Assembly 2018

Temporal and spatial variations of siphonophores associated with hydrographic features in the coastal waters off southwestern Taiwan, western North Pacific Ocean

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The hydrography of coastal waters off southwestern Taiwan shows clear seasonal changes and is usually influenced by seasonal precipitation, river runoff, and monsoon driven water masses, and thus is characterized by complex hydrographical conditions, and consequently influences the distribution patterns of zooplankton. Based on our investigations of samples taken by three seasonal cruises from September 2016 to June 2017, we identified 50 siphonophoran taxa belonging to 29 genera and 11 families, with the mean abundance of 866 $\pm$ 143 inds./100m3. Chelophyes contorta (in 40.7% of the total abundance of siphonophore), Lensia subtiloides (40.7%), Diphyes dispar (6.2%), Diphyes chamissonis (4.9%), Bassia bassensis (4.4%), and Chelophyes appendiculata (4.4%) were the six dominant taxa. Species richness of siphonophores had significant seasonal change, but not for the abundances. Generally, siphonophores exhibited higher species richness in cold and dry winter (January), most species, except C. contorta, also showed significantly higher abundance in this period. The distribution pattern of siphonophore assemblages was closely linked to the hydrographic features in the study area, with temperature, Chla, and zooplankton being the three most important factors.