

Seasonal change of diatom assemblages and surface sediments in Hirota bay, Iwate, Japan.

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The recent 2011 Tohoku tsunami strongly affected the coastal area at the Pacific coast of Tohoku district. Especially of the damage caused by the tsunami activating around Hirota bay, Iwate prit.

Tsunami origin sediment over a wide range are distributed around the Hirota bay. We will show about characteristic such as lithofacies description, a grain size composition and diatom assembles of the surface layer deposit sampled from Hirota bay.

We checked 18 samples from survey lines L8, L9, and L3. L8 (7.5~9.9m deep) and L9 (11.1~13.4m deep) are a survey line drawn in the E-W direction. L3 (6.6~49m deep) is a survey line drawn in the N-S direction of Hirota bay.

From the results of the particle size analysis, in June 2015 survey, it was found that the content of sand from the central part to entrance of Hirota bay, was low and the mud content was high. But, in October 2015, sandy sediments are distributed widely in comparison with June.

From the results of the diatom analysis, of June 2015 samples, freshwater species are dominant, but seawater species dominantly at two points in L8.

From the results of the diatom analysis, in June 2015 survey, freshwater species dominated in the L8, but seawater species was dominant at two points. This is thought to be affected by Kesengawa river and coastal current. In the L9, freshwater species are dominant overall (seawater species: freshwater species= 3:7), and it is considered that there is no influence of coastal flow. In the L3, the freshwater species decreases towards offshore, and seawater species increases. However, in October 2015 survey, freshwater species dominated in the point that the seawater species dominated in June of the L8.

From results of two analyses, characteristics of surface sediment in Hirota bay have been clarified. In the autumn head of Hirota bay sediments, the sandy material increases compared to spring, the diatom group tends to dominate freshwater species, and the influence from the Kesen river is presumed.