

Characteristic of the diatom assembles in Hirota bay, Iwate, Japan

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The recent 2011 Tohoku tsunami strongly affected the coastal area of the Pacific coast of Tohoku. Many of the damage caused by the tsunami around Hirota bay, Iwate. Tsunami origin sediment over a wide range are distributed. We will show about characteristic such as lithofacies description, a grain size composition and diatom assembles of the columnar core sampled from Hirota bay.

Result of this study, the core consist of Unit1(U-1) and Unit2(U-2). U-1 was sand to silt sediments layer with grading, and has forms the erosion surface structure at the bottom of this layer. U-2 was massive sediments with fine sand to silt layer characterized by bioturbation. We assume that U-1 is 2011tsunami deposit and U-2 is normal sediment in this bay.

On the 13HV2 core which sampled near the coast, freshwater species from Unit1 dominate but marine diatom from Unit2 dominate. On 13HV3 core which sampled near the coast, marine species from Unit1 dominate but freshwater diatom from Unit2 dominate. U-1 and U-2 which near the coast shows the characteristics diatom assembles is reversed to be dominant species. On the 13HV8 core which sampled near the Kesen river, U-1 and U-2 are both freshwater diatoms dominated. On the 13HV4 core and 15HV8 core which sampled the central portion of the bay, U-1 and U-2 are both marine diatoms dominated.

The diatom assembles of 2011tsunami deposit shows the separate characteristics near the coast, the Kesen river and in the central portion of the bay.

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