

Environmental changes and event deposit during the last 2500 years in Nakayama, Koshiki Islands, Japan

*Takumi Yoshii¹, Kaoru Kashima², Tsuyoshi Haraguchi³, Shiro Tanaka¹, Masafumi Matsuyama¹, Takaomi Hamada¹, Yuki Ito¹, Shinichi Hirano¹

1. Central Research Institute of Electric Power Industry, 2. Kyushu University, 3. Osaka City University

Tsunami history is extremely important information for disaster prevention planning. Tsunami deposit preserved in geologic stratum fulfill an important role in revealing longer tsunami history than historical records. Because identification of tsunami deposit assumes a heavy social responsibility, clear and objective identification criteria is needed. In this presentation, we show preliminary results of the field survey conducted in Nakayama, Koshiki Islands in western Japan to distinguish tsunami and storm deposit. We obtained approximately 6 m-long geological samples in the back marsh of the gravel beach and found some event deposits mainly composed of fine pebble. The result of diatom analysis shows that this marsh became saline environment twice during the last 2,500 years and event deposits are inserted at the bottom of the saline environment layers, indicating that marine incursion that caused event deposits could break the dune. Considering the frequency of the event deposits, these deposits were perhaps brought by typhoon. Further investigation is on-going to establish criteria for distinguishing between tsunami and typhoon deposit.

Keywords: Storm deposit, Tsunami deposit, Environmental change