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## Last 600ka Terrestrial Environmental Changes Reconstructed from Analysis of the Uwa Basin-fill Sediment, Ehime Prefecture

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Quaternary deposits have buried Uwa basin, Ehime prefecture continuously (Uwachou shinnsousuishigenn cyousakai, 2007), the deposits are expected to have recorded global 100ka Glacial/Inter-Glacial climate cycles. Ohno et al.(2008) drilled out 113m-long borehole core (UNO core) from the deposits, found number of tephras, and estimated the beginning age of Quaternary deposition at 700ka. Sugai et al.(2009) stated that Uwa basin was marsh in Glacial periods and was lake in Inter-Glacial periods by analyzing approximately 500ka-deposits (0-70m). Sasaki et al. (2009) also analyzed approximately 600ka-deposits of 80m-long borehole core (IE core) taken by Uwa-town (Seiyo-city at present) and reported the same result as Sugai et al.(2009).

This time, the author conducted TOC-TN analysis (70-100m), max grain size measurement and elementary analysis (0-100m) to UNO core and additional TOC-TN analysis to IE core. In this presentation, the author will be enforcing the evolutionary changes of the Uwa basin's paleo-environment with these new obtained data.

A summary of this study is as follows. For around 600-250ka Uwa basin was mainly lake. At the last stage of the lake period (during MIS8), coarse sediments supplied from the surrounding slopes frequently deposited at the basin floor to prevented lake water spreading afterwards. As a result, since 250ka, lake water rarely spread and the basin has been peaty marsh. For the lake period (600-250ka) lake water shrank and peat deposited in Glacial periods (MIS12, 10, 8). Since 250ka, much more organic rich material deposited in Glacial periods (MIS6, 2) while lake water spread in MIS5. In addition, TS values which fluctuate with TOC values are high in organic rich layers deposited in Glacial periods under the relatively dry conditions. These results indicate that Uwa basin's deposits have continuously recorded 100ka Glacial/Inter-Glacial climate cycles during the last 600

Keywords: basin deposit, middle Pleistocene, TOC/TN, TS, sediment grain size