海洋酸素同位体ステージ3の海水準低下によるBonaparte湾の堆積環境変化

Paleoenvironmental change associated with sea level drop during Marine Isotope Stage 3 in the Bonaparte Gulf

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During the Marine Isotope Stage 3 (MIS 3), ice volume changed in the short period and increased to the maximum volume in the Last Glacial Maximum (LGM). Accurate relative sea level records at far-field site, remote form ice-covered area, provide the ice volume information. However, the MIS 3 sea level records at far-field site are limited by the availability of dataset. The Bonaparte Gulf, northwestern Australia, is tectonically stable region and located at the far field. This Gulf has the carbonate platforms, which were exposed during the sea level lowstand. We show the paleoenvironmental change associated with sea level drop during MIS 3 using the marine sediments core from the Bonaparte Gulf. The primary information for the timing of exposure is calcium variation standardized by titanium. Total organic carbon, C/N ratios, and ^{14}C age offset (offset between the carbonate and organic matter age) also provide the paleoenvironmental information on the exposure of carbonate platform. We concluded that sea level drop occurred at ca. 26 ka, which is consistent with previous works as Huon Peninsula records. This drop is associated with Heinrich event 2.

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