

炭酸塩堆積物と地球環境変動

Carbonate Sediments and Environmental Changes

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●炭酸塩堆積物の堆積作用と続成作用

炭酸塩堆積物の堆積作用・続成作用を規制する地質学的・生物学的・海洋学的・物理化学的・地球化学的要因について、地表調査または柱状試料を基に、種々の分析を通して検討する (Figure 1)。

●堆積物に記録された環境変動

堆積物中に様々な形で記録された環境変化を各種分析より明らかにし、地球表層の環境変動と堆積物の堆積作用及び続成作用との関係について検討する。特に海水準変動ならびに気候変動に伴う炭酸塩堆積体の成立・発達・維持・消滅、初期続成作用の定量的評価について検討する (Figure 2)。

Sedimentation and diagenesis of carbonate sediments:

Environmental factors controlling sedimentation and diagenesis of carbonate sediments are examined based on field survey and a variety of mineralogical, chemical and isotopic analyses (Figure 1).

Environmental changes recorded in carbonate sediments :

Environmental changes, such as sea-level, oceanographic and climatic change, are examined by analyses of some proxies in carbonate sediments. Especially, the initiation, development and demise of coral reefs related to environmental changes is main research objectives (Figure 2).

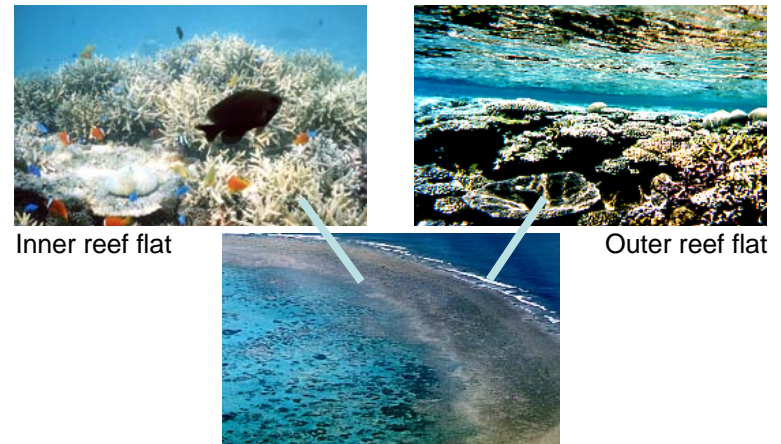


Figure 1 Reef topography and coral assemblages

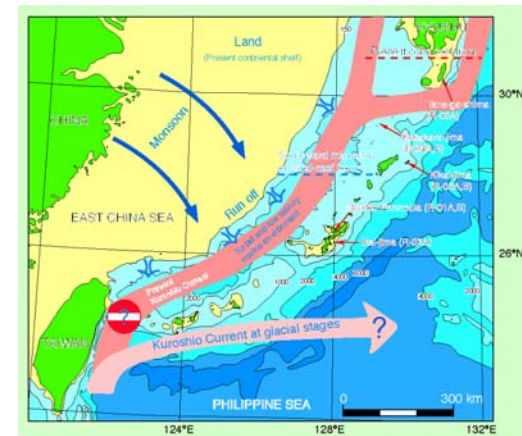


Figure 2 A schematic figure showing paleoceanographic conditions and distribution of coral reefs at glacial stages in the Ryukyu Islands.