

## Refined diatom biostratigraphy of the IODP Expedition 320/321 Sites U1334 and U1338

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Two hundred sixty slides from IODP Expedition 320/321 Holes U1334A, U1338A and U1338B were investigated to define the diatom biostratigraphic datums and acquire the paleoceanographic changes in the eastern equatorial Pacific Ocean from the middle Eocene to middle Pleistocene. As a result, the datums of twenty-four diatom zones were defined as follows:

*Fragilariopsis doliolus* (NTD 17; 0-0.69 Ma), *Nitzschia reinholdii* (NTD 16; 0.69-1.05 Ma),  
*Rhizosolenia praebergonii* (NTD 15; 1.05-3.06 Ma), *Nitzschia jouseae* (NTD 14; 3.06-4.57 Ma),  
*Thalassiosira convexa* (NTD 13; 4.57-5.40 Ma), *Nitzschia miocenica* (NTD 12; 5.40-7.36 Ma),  
*Nitzschia porteri* (NTD 11; 7.36-8.23 Ma), *Thalassiosira yabei* (NTD 10; 8.23-8.88 Ma),  
*Actinocyclus moronensis* (NTD 9; 8.88-10.18 Ma), *Craspedodiscus coscinodiscus* (NTD 8; 10.18-11.09 Ma),  
*Coscinodiscus gigas* var. *diorama* (NTD 7; 11.09-11.70 Ma), *Araniscus lewisianus* (NTD 6; 11.70-12.41 Ma),  
*Cestodiscus peplum* (NTD 5; 12.41-14.36 Ma), *Crucidenticula nicobarica* (NTD 4; 14.36-15.58? Ma),  
*Triceratium pileus* (NTD 3; 15.58?-20.00 Ma), *Craspedodiscus elegans* (NTD 2; 20.00-22.18 Ma),  
*Rossiella fennerae* (22.18-23.37 Ma), *Rocella gelida* (23.37-25.96 Ma),  
*Bogorovia veniamini* (25.96-27.56 Ma), *Rocella vigilans* (27.56-29.98 Ma),  
*Cestodiscus trochus* (29.98-30.95 Ma), *Coscinodiscus excavatus* (30.95-33.71 Ma),  
*Baxteriopsis brunii* (33.71- ? Ma), *Asterolampra marylandica* (?- ? Ma) Zones.

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