

## 14. MARINE DIATOM BIOSTRATIGRAPHY OF SELECTED SAMPLES FROM THE EQUATORIAL PACIFIC, DSDP LEG 33

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Six core-catcher samples were forwarded to the author by E. Martini for marine planktonic diatom biostratigraphy. Two samples are from DSDP Site 316 and four from DSDP Site 315 (Figures 1, 2); they were prepared for study according to the standard method (Schrader, 1974). This study was financially supported by the International Program of Ocean Drilling of the Deutsche Forschungsgemeinschaft.

Samples 315-1, CC and 316-1, CC (Nos. 1 and 5) contain a well-diversified diatom assemblage with the following main constituents; stratigraphic indicator species are marked with an asterisk:

*Coscinodiscus africanus* F\*  
*Coscinodiscus nodulifer* F  
*Coscinodiscus crenulatus* R  
*Coscinodiscus lineatus* F  
*Ethmodiscus rex* fragments F  
*Actinocyclus ellipticus* R  
*Hemidiscus cuneiformis* R  
*Nitzschia marina* R  
*Nitzschia reinholdii* R\*  
*Pseudoeunotia doliolus* F\*  
*Asteromphalus robustus* F  
*Thalassiosira oestrupii* F\*  
*Thalassiosira excentrica* R  
*Roperia tessellata* F  
*Thalassionema nitzschioides* A  
*Thalassiothrix longissima* C  
*Rhizosolenia bergonii* F\*  
*Rhizosolenia styliformis* R

The occurrence of *Pseudoeunotia doliolus* and *Nitzschia reinholdii* places these samples in the *Nitzschia reinholdii* Partial-range Zone of Burckle, 1972 (Figure 2).

Sample 315A-1, CC (Sample No. 2) did not allow an accurate age assignment because of rather poor preservation. The occurrence of *Thalassiosira praeconvexa*, *Nitzschia reinholdii*, and *N. cylindrica* places this sample in the lower two-thirds of the *Thalassiosira convexa* and upper part of the *Nitzschia miocenica* Partial-range zones of Burckle, 1972.

Samples 315A-2, CC (No. 3) and 316-2, CC (No. 6) contain well-preserved assemblages with the following constituents:

*Thalassiothrix longissima* A  
*Thalassionema nitzschioides* A  
*Asterolampra marylandica* A  
*Actinocyclus ellipticus* R  
*Triceratium cinnamomeum* F  
*Coscinodiscus nodulifer* C  
*Coscinodiscus aeginensis* F\*  
*Coscinodiscus lineatus* R

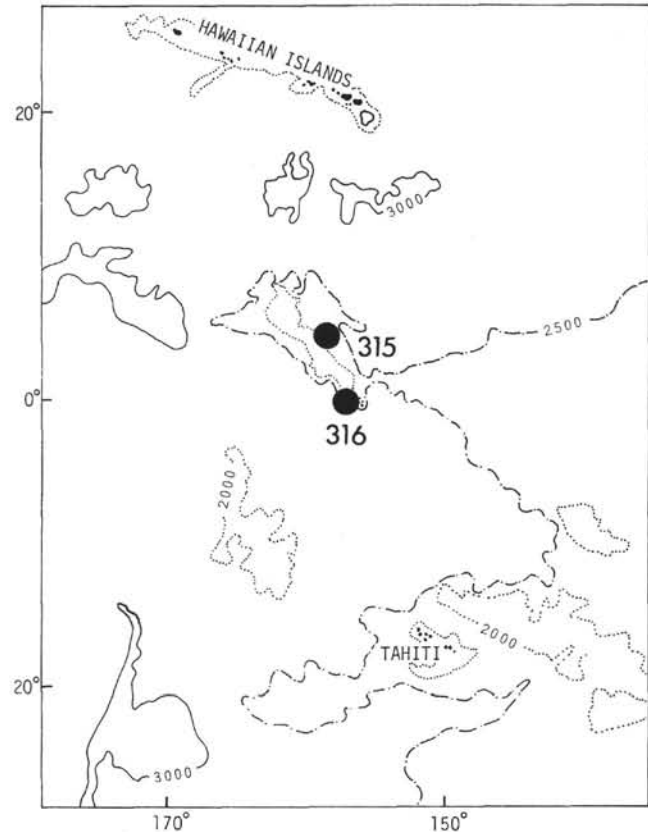


Figure 1. Location of Sites 315, 315A, and 316.

*Nitzschia cylindrica* R\*  
*Nitzschia porteri* Frenguelli F\*  
*Cussia lancettula* R\*  
 Sample 6 additional:  
*Cussia paleacea* R  
*Coscinodiscus yabei* R\*  
*Thalassiosira* sp. A. Burckle F\*

The occurrence of the species listed above places these samples in the *Nitzschia porteri* Partial-range Zone of Burckle, 1972 (Figure 2).

Sample 315A-3, CC (No. 4) contains a similarly well preserved and diversified assemblage with common *Coscinodiscus yabei*, *C. aeginensis*, *Nitzschia porteri*, and *Cussia paleacea*; these occurrences place this sample well into the uppermost part of the *Coscinodiscus yabei* Partial-range Zone of Burckle, 1972 (Figure 2). Correlation of the East Equatorial diatom zonation (Burckle, 1972) with the North Pacific diatom zonation (Schrader, 1973) and thus to the paleomagnetic stratigraphy (Opdyke, 1972) is shown in Figure 2.

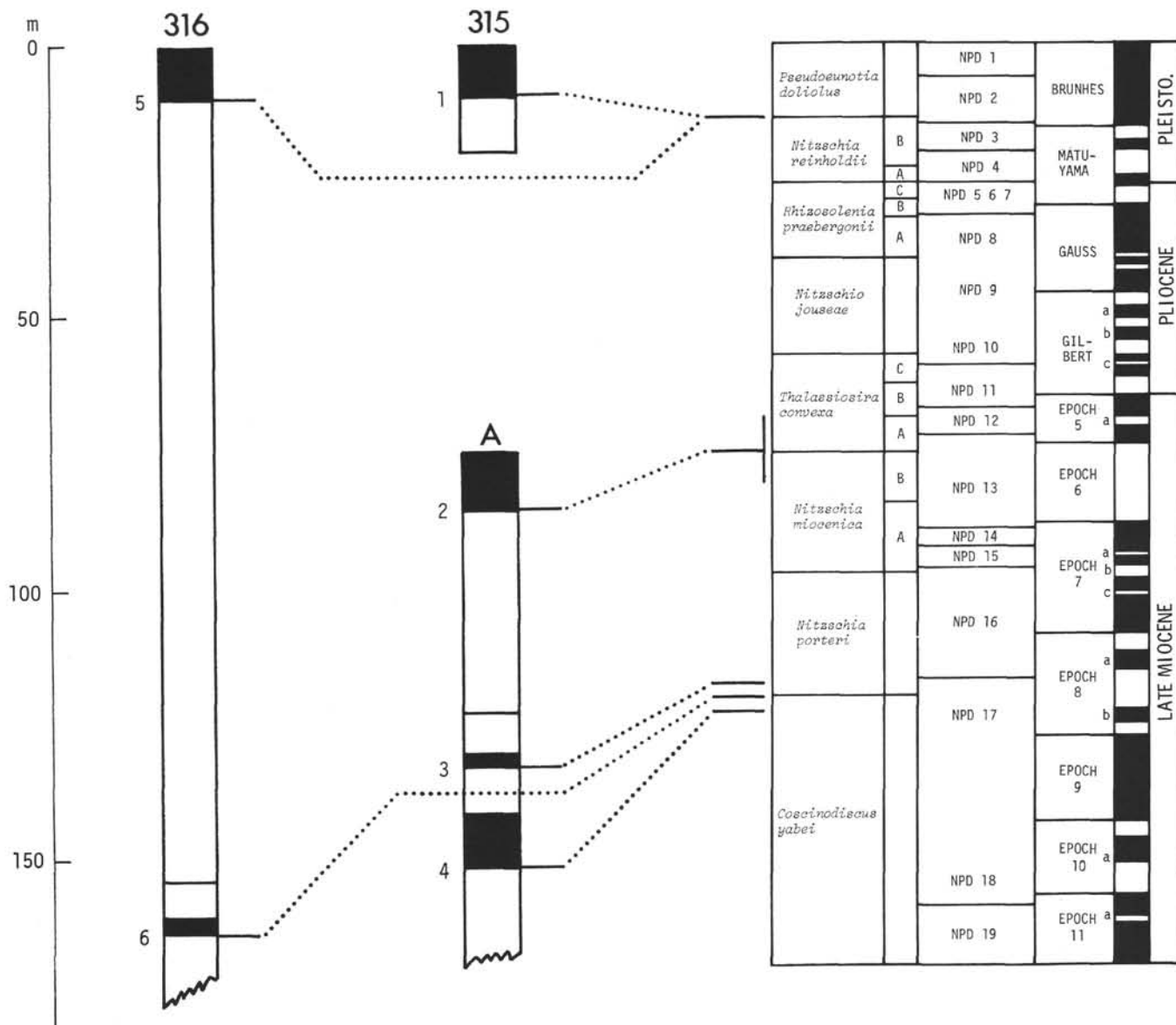


Figure 2. Correlation of Samples 1-6 with the East Equatorial Pacific diatom zonation (Burckle, 1972) with the North Pacific diatom zonation (Schrader, 1973) and the paleomagnetic stratigraphic record (Opdyke, 1972).

REFERENCES

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