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Supplement of

The Eocene–Oligocene transition at ODP Site 1263, Atlantic Ocean: decreases in nanoplankton size and abundance and correlation with benthic foraminiferal assemblages

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Table S1. Factor scores obtained in the PCA performed with and without the presence of the marker species for dataset A. The bold numbers are the most important loadings.

Species	DATASET A			
	Markers		No Markers	
	PC1	PC2	PC1	PC2
<i>Braarudosphaera bigelowii</i>	-0.02	0.00	-0.02	0.00
<i>Bramlettei serraculoides</i>	0.16	0.09	0.17	0.08
<i>Clausicoccus obrutus</i>	-0.63	0.08	-0.64	0.12
<i>Clausicoccus subdistichus</i>	0.15	0.04	0.15	0.03
<i>Chiasmolithus</i> spp.	-0.07	-0.07	-0.07	-0.08
<i>Chiasmolithus altus</i>	-0.02	-0.07	-	-
<i>Coccolithus pelagicus</i> (3-7µm)	-0.09	0.22	-0.09	0.24
<i>Coccolithus pelagicus</i> (7-11µm)	-0.02	0.19	-0.02	0.21
<i>Coccolithus pelagicus</i> (11-16µm)	-0.16	-0.07	-0.16	-0.07
<i>Coccolithus eopelagicus</i>	0.01	0.08	0.01	0.08
<i>Coccolithus cachaoi</i>	0.10	0.03	0.10	0.03
<i>Coccolithus formosus</i>	-0.10	0.27	-	-
<i>Cyclicargolithus</i> sp. (3-5µm)	-0.13	-0.13	-0.13	-0.14
<i>Cyclicargolithus</i> sp. (5-7µm)	0.03	-0.05	0.02	-0.04
<i>Cyclicargolithus</i> sp. (7-10µm)	-0.13	0.18	-0.13	0.17
<i>C. floridanus</i> (3-5µm)	-0.29	-0.03	-0.29	-0.03
<i>C. floridanus</i> (5-7µm)	-0.19	-0.21	-0.19	-0.20
<i>C. floridanus</i> (7-10µm)	-0.08	0.03	-0.08	0.02
<i>Dictyococcites stavensis</i>	0.31	-0.22	0.30	-0.23
<i>Dictyococcites bisectus</i>	0.22	-0.15	0.22	-0.17
<i>Reticulofenestra daviesii</i>	0.22	-0.08	0.22	-0.10
<i>Discoaster</i> spp.	0.16	0.13	0.16	0.13
<i>Hayella situliformis</i>	0.12	0.10	0.12	0.10
<i>Isthmolithus recurvus</i>	0.10	0.20	0.10	0.20
<i>Lanternithus minutus</i>	-0.11	-0.68	-0.12	-0.71
<i>Reticulofenestra umbilicus</i>	0.17	0.06	0.17	0.05
<i>Reticulofenestra hillae</i>	-0.04	0.15	-0.03	0.12
<i>Reticulofenestra</i> sp1	0.02	0.04	0.02	0.04
<i>Reticulofenestra scrippsae</i>	0.09	0.03	0.09	0.03
<i>Reticulofenestra samodurovii</i>	0.10	0.03	0.10	0.03
<i>Helicosphaera</i> spp.	0.08	-0.10	0.08	-0.10
<i>Sphenolithus</i> spp.	0.02	0.20	0.02	0.22
<i>Sphenolithus akropodus</i>	-0.01	-0.04	-	-
<i>Sphenolithus tribulosus</i>	0.00	-0.01	-	-
<i>Zygrhablithus bijugathus</i>	0.08	0.15	0.08	0.16

Table S2. Factor scores obtained in the PCA performed without marker species for dataset B. The bold numbers are the most important loadings.

DATASET B		
No Markers		
Species	PC1	PC2
<i>Bicolumnus ovatus</i>	0.06	0.04
<i>Bramlettei serraculoides</i>	0.07	-0.33
<i>Chiasmolithus</i> spp.	-0.03	-0.08
<i>Clausicoccus obrutus</i>	-0.62	0.04
<i>Clausicoccus subdistichus</i>	-0.05	0.00
<i>Coccolithus pelagicus</i> (<6µm)	-0.03	0.16
<i>Coccolithus pelagicus</i> (6-10µm)	0.03	-0.04
<i>Coccolithus pelagicus</i> (>10µm)	-0.10	-0.34
<i>Coccolithus eopelagicus</i>	0.03	-0.07
<i>Cyclicargolithus</i> sp.	-0.28	0.08
<i>Cyclicargolithus floridanus</i>	-0.16	0.21
<i>Dictyococcites bisectus</i>	0.22	-0.15
<i>Discoaster</i> spp.	0.41	0.02
<i>Hayella situliformis</i>	0.15	0.01
<i>Helicosphaera</i> sp.	0.08	0.02
<i>Isthmolithus recurvus</i>	0.13	0.03
<i>Lanternithus minutus</i>	0.12	0.71
<i>Micrantolithus</i> sp.	-0.05	-0.04
<i>Reticulofenestra daviesii</i>	0.12	0.14
<i>Reticulofenestra</i> spp. (dissolved)	0.04	-0.01
<i>Reticulofenestra dictyoda</i>	0.03	-0.02
<i>Reticulofenestra hillae</i>	-0.01	-0.01
<i>Reticulofenestra samodurovii</i>	0.11	-0.09
<i>Reticulofenestra scrippsae</i>	0.08	0.28
<i>R. scrippsae-bisecta</i>	0.14	-0.10
<i>Reticulofenestra umbilicus</i>	0.27	-0.14
<i>Sphenolithus</i> spp.	0.09	0.00
<i>Zygrhablithus bijugathus</i>	0.03	-0.07
<i>Octolithus</i>	-0.03	-0.04
<i>Discorhabdulus</i>	0.03	0.03
Unknown	0.04	0.06
Dissolved shields	0.27	0.09

Taxonomic remarks: Taxonomic description of the species *Reticulofenestra* sp.1 cited in the text.

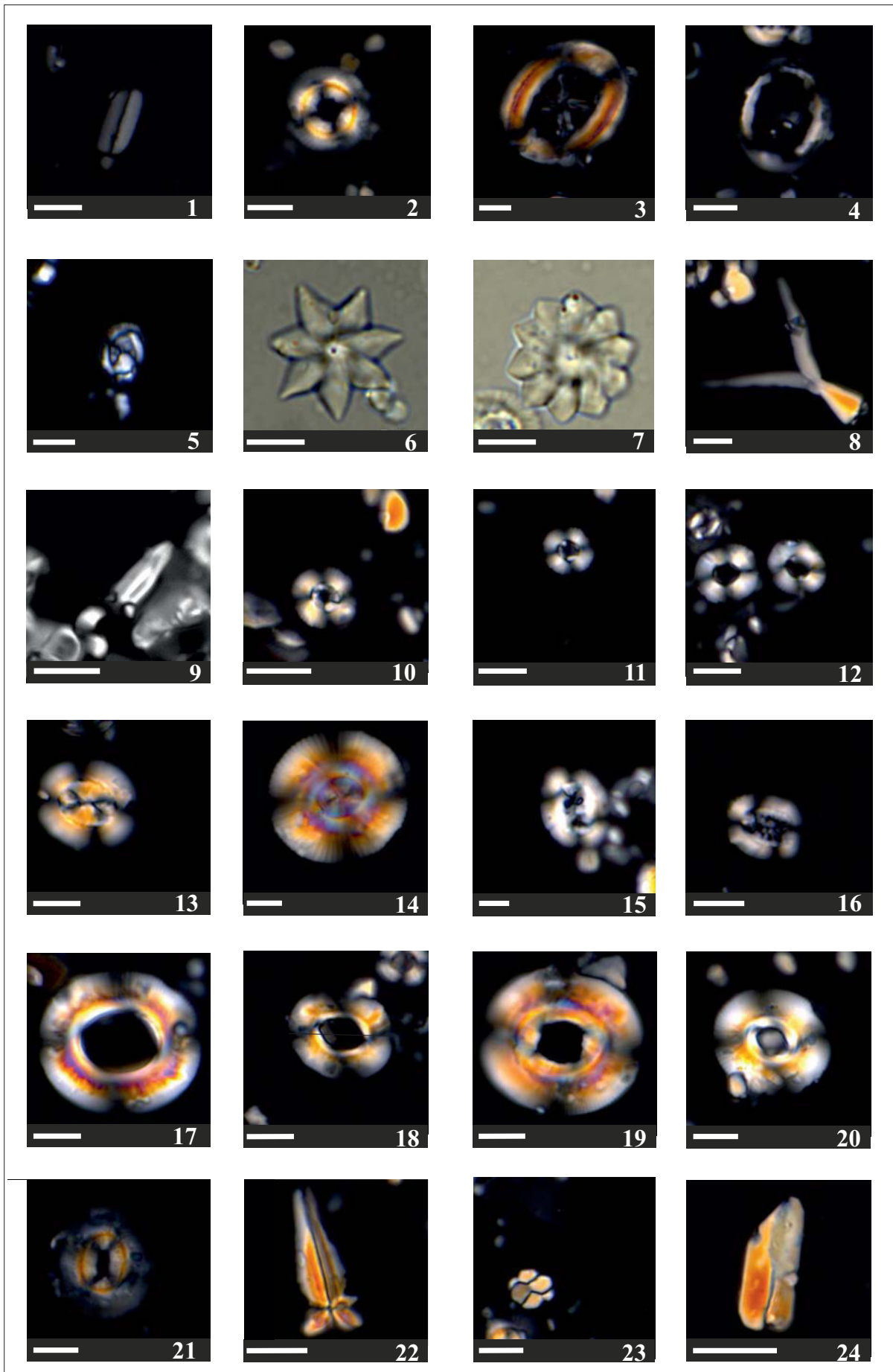
Reticulofenestra sp.1 (Plate 1, 20)

Description: Medium to large round-elliptical placolith with a wide collar around a small central opening (<1/3 of the total length). All the segments are strongly birefringent. Similar to *Reticulofenestra hillae*, but smaller in size.

Size: 8-14 μm .

Fig. S1. Most representative calcareous nannofossil species from the ODP Site 1263, light microscope images. Scale bar is = 5 μm . **1.** *Isthmolithus recurvus*, 1263B-5H-2/111-112 cm, 101.13 mcd, cross nicols (XN). **2.** *Coccolithus formosus*, 1263B-5H-2/65-66 cm, 100.67 mcd, XN. **3.** *Chiasmolithus altus*, 1263B-4H-2/131-132 cm, 89.4 mcd, XN. **4.** *Chiasmolithus* sp. (central area dissolved), 1263A-10H-5/131-132 cm, 97.44 mcd, XN. **5.** *Clausicoccus obrutus*, 1263A-10H-4/120-121 cm, 95.79 mcd, XN. **6.** *Discoaster saipanensis*, 1263B-5H-5/50-52 cm, 105.02 mcd, parallel nicols (PN). **7.** *Discoaster barbadiensis*, 1263B-5H-5/50-52 cm, 105.02 mcd, PN. **8.** *Sphenolithus tribulosus*, 1263A-10H-3/100-101 cm, 94.09 mcd, XN. **9.** *Sphenolithus akropodus*, 1263A-9H-4/50-52 cm, 85.58 mcd, XN. **10.** *Cyclicargolithus floridanus*, 1263B-5H-1/101-102 cm, 99.7 mcd, XN. **11.** *Cyclicargolithus* sp. (signs of dissolution), 1263A-10H-7/25-26 cm, 99.34 mcd, XN. **12.** *Cyclicargolithus* sp. (central area dissolved), 1263B-5H-2/11-12 cm, 100.13 mcd, XN. **13.** *Dictyococcites bisectus*, 1263A-10H-5/11-12 cm, 96.19 mcd, XN. **14.** *Dictyococcites stavensis*, 1263A-10H-5/30-31 cm, 96.39 mcd, XN. **15.** *Dictyococcites* (signs of dissolution), 1263A-10H-5/100-101 cm, 97.09 mcd, XN. **16.** *Reticulofenestra daviesii*, 1263A-10H-4/120-121 cm, 95.79 mcd, XN. **17.** *Reticulofenestra umbilicus*, 1263B-5H-1/55-56 cm, 99.24 mcd, XN. **18.** *Reticulofenestra samodurovii*, 1263A-10H-5/20-21 cm, 96.29 mcd, XN. **19.** *Reticulofenestra hillae*, 1263A-10H-5/0-1 cm, 96.09 mcd, XN. **20.** *Reticulofenestra* sp.1, 1263A-10H-5/0-1 cm, 96.09 mcd, XN. **21.** *Coccolithus pelagicus*, 126A-10H-4/90-91 cm, 95.5 mcd, XN. **22.** *Sphenolithus pseudoradians*, 1263A-10H-5/131-132 cm, 97.44 mcd, XN. **23.** *Lanternithus minutus*, 1263B-5H-1/71-72 cm, 99.4 mcd, XN. **24.** *Zygrhablithus bijugatus*, 1263B-5H-2/111-112 cm, 101.13 mcd, XN.

Fig. S1



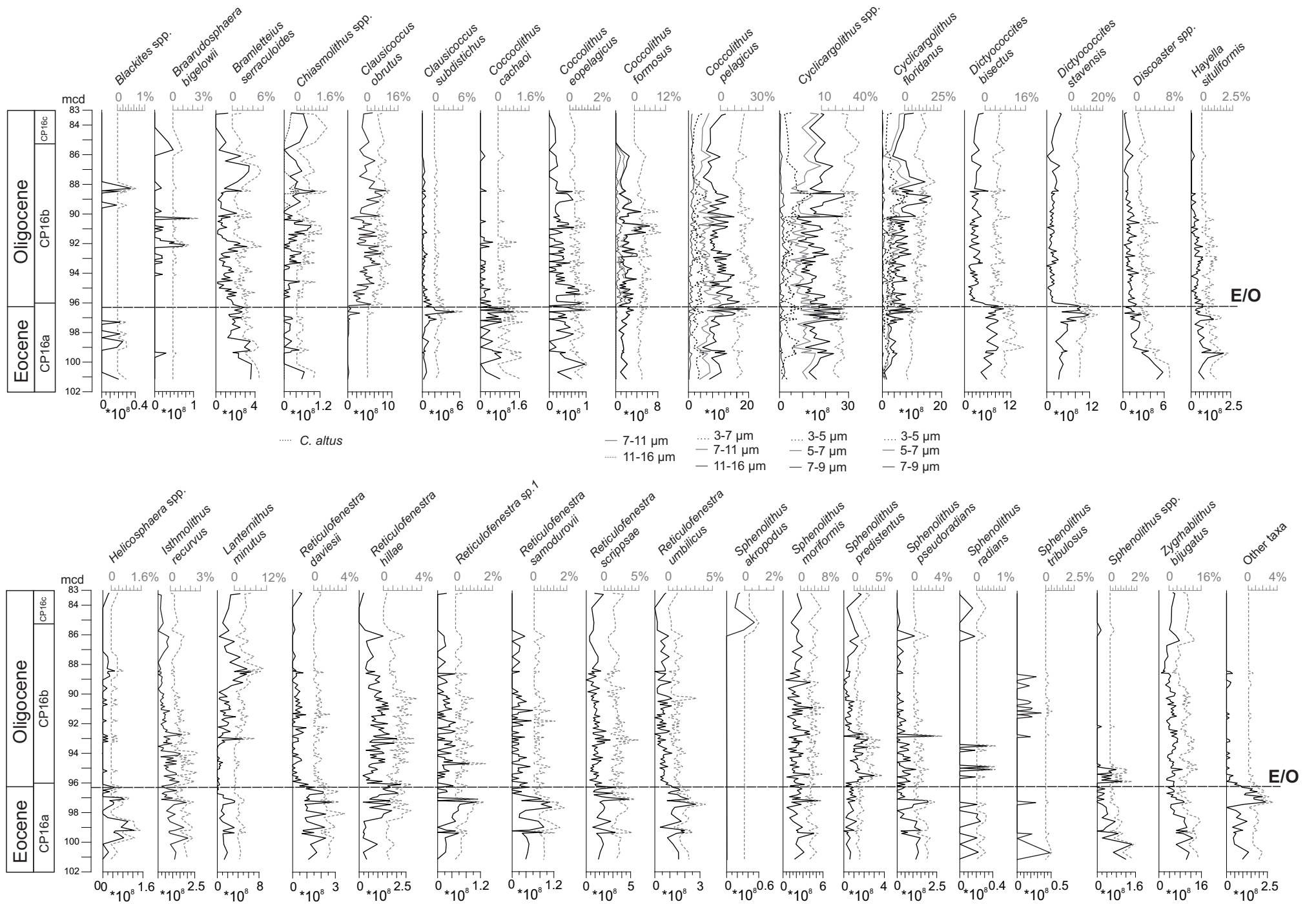


Fig. S2. Distribution curves of absolute (N g⁻¹) and relative (%) abundances of all the species and groups detected in dataset A.

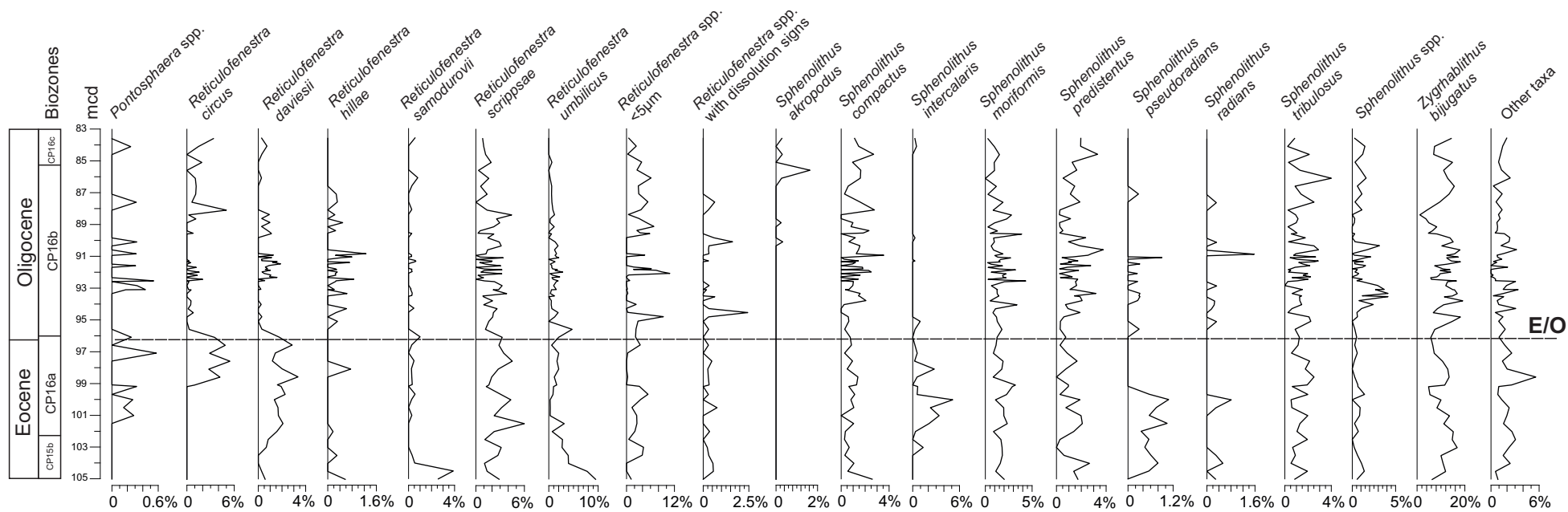
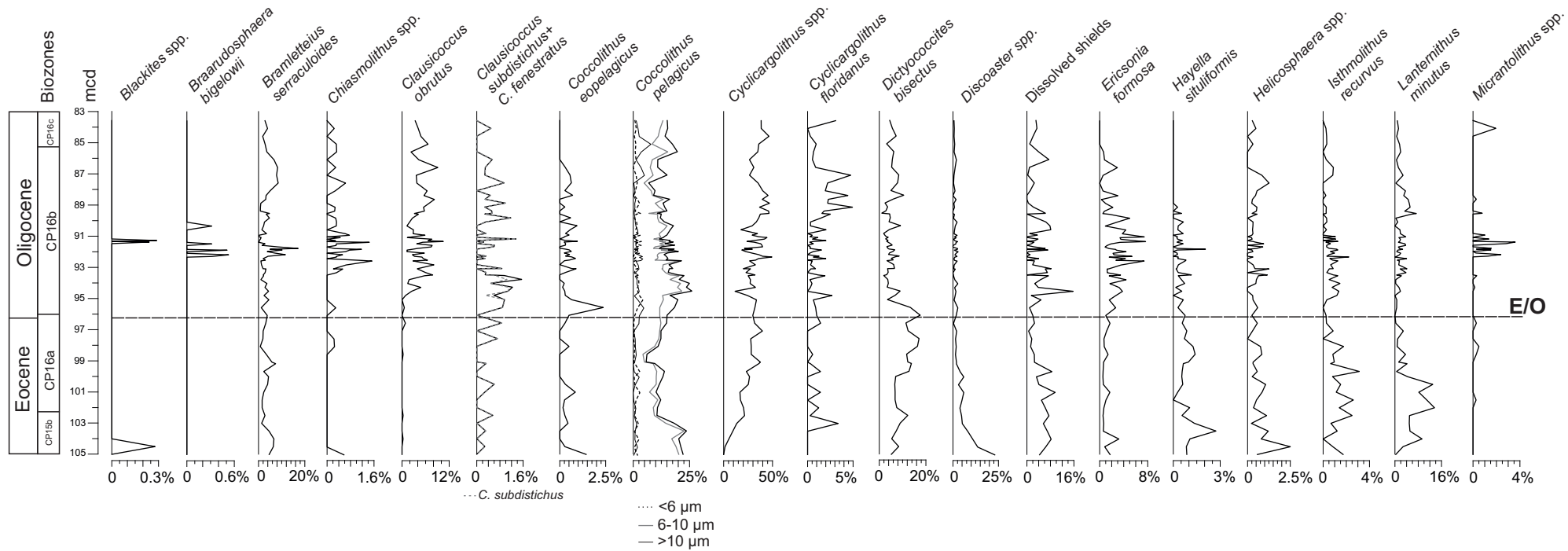


Fig. S3. Distribution curves of relative (%) abundances of all the species detected in dataset B.