Manuscript 183SR-009, Table T1. Stratigraphic distribution of diatom taxa, Hole 1140A.

Age	Diatom zone (Harwood and Maruyama, 1992)	Core, section, interval (cm)	Depth (mbsf)	Preservation	Abundance	*Actinocyclus curvatulus*	*Actinocyclus ingens*	*Actinocyclus karstenii*	*Actinocyclus ochotensis*	*Actinocyclus octonarius*	*Actinocyclus oculatus*	*Actinocyclus thumii*	*Actinoptychus bipunctatus*	*Actinoptychus senarius*	*Araniscus lewisianus*	*Asterolampra insignis*	*Asterolampra marylandica*	*Asteromphalus concavus*	*Asteromphalus inaequabilis*	*Asteromphalus oligocenicus*	*Asteromphalus symmetricus*	*Azpeitia endoi*	*Azpeitia tabularis*	*Biddulphia deodora*	*Cavitatus jouseanus*
		183-1140A-																							
middle Miocene	*N. denticuloides*	1R-2, 108–109	2.58	M	A		A			F			F	F								C			
		1R-3, 75–76	3.75	M	A		F						R	F							R		F		
		1R-4, 23–24	4.73	M	A		C						F	F											F
		1R-5, 26–27	5.66	M	A		A			F				F	F							F			
		1R-CC, 9–14	6.15	M	A		C						F	C											
		2R-1, 25–26	9.75	M	A					C					R										
		2R-2, 100–102	12	M	A		A	F		F			F	F	F							C			
		2R-3, 100–102	13.5	M	A		C																		
		2R-4, 100–102	15	M	A		C			F			R	F	F										
		2R-CC, 17–22	15.7	M	A		CC	F		F	R		C	F	R							F			
	D. hustedtii–N. grossepunctata	3R-1, 100–102	19.6	M	A		C							F							R				
		3R-2, 25–27	20.35	M	A		F																		
		3R-CC, 13–18	20.77	M	A	R	A			F				F								C			
		4R-1, 100–102	28.9	M	A			F						F	F						R				
		4R-2, 25–27	29.65	M	A		C			C				C	F										
	A. ingens var. *nodus*	4R-CC, 11–6	29.99	M	A		C			R				F	C							C	F		
		5R-CC, 45–50	37.65	M	A		C	R						F							R				
	N. grossepunctata	6R-1, 25–27	46.75	M	A		F							F	F										C
		6R-1, 100–102	47.5	M	A		A			F				F	A					R		F			
	A. ingens–D. maccollumii	6R-2, 25–27	48.25	M	A	R	R							F	F										R
		6R-2, 100–102	49	M	A		C			F				C	F										C
early Miocene	*D. maccollumii*	6R-CC, 13–18	49.33	M	A					F				F	F										
		7R-1, 25–26	55.85	M	A	R								F	R										R
		7R-1, 100–101	56.6	M	A	R				F				F											C
		7R-2, 25–26	57.35	M	A					C				C								F			
	C. kanayae	7R-CC, 17–22	57.84	M	A	R		R						R	R										
		8R-CC, 27–32	64.87	M	A					F				C	F										A
	T. fraga c	9R-1, 25–27	73.95	M	A					C				A	R										
		9R-1, 100–102	74.7	M	A									C	R				R					F	
		9R-CC, 17–22	75.29	M	A									C	F										C
early Oligocene	*R. vigilans* a	20R-1, 25–27	179.75																						
		20R-1, 100–102	180.5	M	A					C				F											R
		20R-2, 25–27	181.25	M	A			R						R				R			R				
		20R-2, 100–102	182	M	A					F				C						F					
		20R-3, 25–27	182.75	M	A					C				F						F		R			F
		20R-4, 25–27	184.25	M	A			F						F				R							R
		21R-1, 100–102	190.1	M	A					C				F						R					F
		21R-2, 25–27	190.85	M	A				R	C				F						F					
		21R-1, 100–102	191.1	M	A									R				F							F
		21R-2, 100–102	191.6	M	A									C						F					
		21R-3, 25–27	192.35	M	A			F		F		R		C						F					C
		21R-3, 100–102	193.1	M	A					C				C			R			F		F			F
		21R-4, 25–27	193.85	M	A							R		F			F			R	F				
		21R-4, 100–102	194.6	M	A					F				F						F					
		21R-5, 25–27	195.35	M	A					C				F						F					
		21R-5, 100–102	196.1	M	A									R				R							
		21R-6, 25–27	196.85	M	A									F						R					
		22R-1, 25–27	198.95	M	A					C				F			R			R					F
		22R-1, 100–102	199.7	M	A									F						R					
		22R-2, 10–12	200.3	M	A					C				C			R			F					F
		22R-2, 89–91	201.09	M	A													R		F					
		22R-3, 25–27	201.95	M	A									C		R	F			R					
		22R-3, 100–102	202.7	M	A					F				F			F			R					F
		22R-4, 25–27	203.45	M	A																				R
	C. jouseana	22R-4, 100–102	204.2	M	A					F				F			R			R					
		22R-5, 25–27	204.95	M	A					F							R			R					
		22R-5, 100–102	205.7	M	A			F												R					F
		22R-6, 22–24	206.42	M	A																				
		22R-6, 100–102	207.2	P	F					F				C			R			F					R
		22R-CC, 15–20	207.79	P	F									R											R
				P	F																				

Core, section, interval (cm)	*Cestodiscus pulchellus*	*Corethron criophilum*	*Coscinodiscus asteromphalus*	*Coscinodiscus decrescens*	*Coscinodiscus marginatus*	*Coscinodiscus monicae*	*Coscinodiscus rhombicus*	*Craspedodiscus coscinodiscus*	*Crucidenticula ikebei*	*Crucidenticula kanayae*	*Crucidenticula nicobarica*	*Crucidenticula punctata*	*Dactyliozolen antarcticus*	*Denticulopsis hustedtii*	*Denticulopsis lauta*	*Denticulopsis maccollumii*	*Denticulopsis punctata*	*Dimerogramma fossile*	*Ethmodiscus rex*	*Eucampia antarctica*	*Goniothecium decoratum*	*Hemiaulus* sp. aff. *H. giganteus*	*Hemiaulus altus*	*Hemiaulus danicus*	*Hemiaulus inaequilaterus*
183-1140A-																									
1R-2, 108–109		F	F		C									C					F						
1R-3, 75–76													F	R											
1R-4, 23–24					C									F				R							
1R-5, 26–27		F	F		C									C					F						
1R-CC, 9–14														C											
2R-1, 25–26														F											
2R-2, 100–102		F			A						F			F					F						
2R-3, 100–102														C											
2R-4, 100–102	F													F		R			C						
2R-CC, 17–22		R	F		A						F			F					C						
3R-1, 100–102												C		C						R					
3R-2, 25–27																									
3R-CC, 13–18			F		C										A				C						
4R-1, 100–102					C	C								C											
4R-2, 25–27					F									F					F	R					
4R-CC, 11–6	F				A	F			F						A	C			C	F					
5R-CC, 45–50					C																				
6R-1, 25–27	F		F		F								R		F	C									
6R-1, 100–102			F		C		F						F			A	R								
6R-2, 25–27					F											F									
6R-2, 100–102			F		C								R			F				F					
6R-CC, 13–18					C											R			C						
7R-1, 25–26			R		F					R															
7R-1, 100–101			F		F														F			R			R
7R-2, 25–26			F		C											C			F						
7R-CC, 17–22			F		C					F															
8R-CC, 27–32	F				C					R									F			F			
9R-1, 25–27					C		A																		
9R-1, 100–102																									
9R-CC, 17–22			F		C		F																		
20R-1, 25–27																									
20R-1, 100–102	C				F														F						
20R-2, 25–27																									
20R-2, 100–102			F																			F	F		
20R-3, 25–27	C		F																F			R		R	
20R-4, 25–27																									
21R-1, 100–102	R		F	F	C			R											R				F		
21R-2, 25–27					C														R						
21R-1, 100–102																									
21R-2, 100–102			F																C						
21R-3, 25–27					C														C			F			
21R-3, 100–102			R		C														F		F	F			F
21R-4, 25–27			F		C														C			F	R		
21R-4, 100–102	F		F		C														A				R		
21R-5, 25–27	C		F		C														F						
21R-5, 100–102																									
21R-6, 25–27	F		C		C																				
22R-1, 25–27	F		F		C														F			F			R
22R-1, 100–102					C														C						R
22R-2, 10–12	F		F		C														C			F			
22R-2, 89–91																									
22R-3, 25–27			F		C																	F			
22R-3, 100–102			R		F														F			R			F
22R-4, 25–27													R												
22R-4, 100–102			F		C														C			F			
22R-5, 25–27					F																	R			R
22R-5, 100–102					F								R												
22R-6, 22–24					F																				
22R-6, 100–102					C																				R
22R-CC, 15–20					F																				
			F		F																				

Core, section, interval (cm)	*Hemiaulus incisus*	*Hemiaulus polycystinorum*	*Hemiaulus polymorphus*	*Hemiaulus pungens*	*Hemiaulus* spp.	*Nitzschia barronii*	*Nitzschia denticuloides*	*Nitzschia grossepunctata*	*Nitzschia kerguelensis*	*Opephora gemmata*	*Paralia sulcata*	*Pseudorocella barbadensis*	*Pseudotriceratium chenevieri*	*Pyxilla johnsoniania*	*Rhaphoneis cocconeides*	*Rhaphoneis elongata*	*Rhizosolenia* spp.	*Riedelia claviger*	*Rocella gelida*	*Rocella praenitida*
183-1140A-																				
1R-2, 108–109									f		F									
1R-3, 75–76						r			c								C		R	
1R-4, 23–24							R										R			
1R-5, 26–27							F		f											
1R-CC, 9–14								R			R						F		F	
2R-1, 25–26											R									
2R-2, 100–102							F	F			F									
2R-3, 100–102											F						C			
2R-4, 100–102																				
2R-CC, 17–22							F	F			F						F		F	
3R-1, 100–102											C									
3R-2, 25–27																				
3R-CC, 13–18											C									F
4R-1, 100–102																			R	
4R-2, 25–27																				
4R-CC, 11–6											F									F
5R-CC, 45–50											R									
6R-1, 25–27											F						F			
6R-1, 100–102				R							F									R
6R-2, 25–27																				
6R-2, 100–102																	F		F	C
6R-CC, 13–18				F																F
7R-1, 25–26											F									F
7R-1, 100–101			R								F									C
7R-2, 25–26											F				R					C
7R-CC, 17–22																				R
8R-CC, 27–32											F						R		F	
9R-1, 25–27		F		F							F									F
9R-1, 100–102											R									F
9R-CC, 17–22											R								F	
20R-1, 25–27																				
20R-1, 100–102			F	F							R	F				F				
20R-2, 25–27					F															R
20R-2, 100–102				F								F	F							
20R-3, 25–27			F	R							F	F					F			R
20R-4, 25–27					F															
21R-1, 100–102			F	F								F	F							F
21R-2, 25–27				C							F						R			
21R-1, 100–102					C															R
21R-2, 100–102	F	F	F	C	A												R			F
21R-3, 25–27	F	F	C	C								R	R							
21R-3, 100–102			F	C						R	R	F	F							F
21R-4, 25–27	F		F	C								C	F					F		
21R-4, 100–102			F	C							R	F								F
21R-5, 25–27			C	F								A	F							F
21R-5, 100–102					F															
21R-6, 25–27				R							F									F
22R-1, 25–27			F	F								F	F				F			F
22R-1, 100–102	R		F	F							R	R	R							
22R-2, 10–12			F	C							C	F	F	F			F			C
22R-2, 89–91					F															
22R-3, 25–27		F	C								R	F	F							
22R-3, 100–102			F	C							F	F	C	F			F			C
22R-4, 25–27					F															
22R-4, 100–102		F	C	C							F	F	R							F
22R-5, 25–27		F	F	C							F	F	R				F			C
22R-5, 100–102					F							F								
22R-6, 22–24					R															
22R-6, 100–102	R	F		A							F	F	F	F			R			C
22R-CC, 15–20												F								F
					R												R			

Core, section, interval (cm)	*Rocella vigilans* var. a (<40 µm)	*Rouxia granda*	*Rouxia* spp.	*Sceptroneis* aff. *mayenica*	*Sceptroneis mayenica*	*Sceptroneis praecaducea*	*Sceptroneis propinqua*	*Sceptroneis* spp.	*Stephanogonia hanzawae*	*Stephanopyxis* sp. (1 spire)	*Stephanopyxis barbadensis*	*Stephanopyxis eoceanica*	*Stephanopyxis spinosissima*	*Stephanopyxis turris* group	*Stephanopyxis turris* var. *trispinosus*	*Stictodiscus* sp. cf. *S. kittonianus*	*Thalassionema schraderi*	*Thalassiosira* spp.	*Thalassiothrix longissima*	*Triceratium cruciforme*	*Triceratium inelegans*	*Triceratium macroporum*	*Triceratium pileus*	*Triceratium schulzii*	*Triceratium* spp.	*Xanthiopyxis oblonga*
183-1140A-																										
1R-2, 108–109																R	C		A			A				
1R-3, 75–76																		C	C			F				
1R-4, 23–24																R		C	C			C				
1R-5, 26–27														F			F		A			A				
1R-CC, 9–14																		A	C						F	
2R-1, 25–26																		C				F				
2R-2, 100–102																	C		A			A				
2R-3, 100–102								F											C						C	
2R-4, 100–102									R									C				C				
2R-CC, 17–22			F																C			A				
3R-1, 100–102																			C							
3R-2, 25–27																										
3R-CC, 13–18														F			C		C			F				
4R-1, 100–102			F																C						C	
4R-2, 25–27			F											R				C	A							
4R-CC, 11–6														C					A			F				
5R-CC, 45–50														R					F							
6R-1, 25–27									F										A							
6R-1, 100–102				R					F			R		F					A							R
6R-2, 25–27									R					R					F							
6R-2, 100–102								F						F					C		F					
6R-CC, 13–18																			A							
7R-1, 25–26								R	F										F							
7R-1, 100–101									R										C							R
7R-2, 25–26									F										C							R
7R-CC, 17–22																			F							
8R-CC, 27–32														F					A	R						
9R-1, 25–27									F					C					C							F
9R-1, 100–102														F				F	F				R			C
9R-CC, 17–22									F					F					A							
20R-1, 25–27																										
20R-1, 100–102	C				F		C							F					F					R		F
20R-2, 25–27	R													R					F							
20R-2, 100–102	C		R						F					C					A							F
20R-3, 25–27	F	F						F		F			F	F	F											F
20R-4, 25–27	F		R					F						F					F							
21R-1, 100–102		F	F				F			F				F					F							F
21R-2, 25–27		F								F			F	F												F
21R-1, 100–102	R													C					F							
21R-2, 100–102	C													F	F			C	C							F
21R-3, 25–27	F								R					C					A							F
21R-3, 100–102	F		F			R	C				R		F	C					F							F
21R-4, 25–27	F								R					C				F	C							R
21R-4, 100–102		R	R											A				F	C							R
21R-5, 25–27	F		F				F						F	C												F
21R-5, 100–102	F		R											F					F							
21R-6, 25–27	F													C					C							F
22R-1, 25–27	C						F							C					C							R
22R-1, 100–102	F													F												
22R-2, 10–12	F												F	F					F		R					
22R-2, 89–91	R													R					F						R	
22R-3, 25–27	F						F							C					A							R
22R-3, 100–102							F						F	F					F							F
22R-4, 25–27					R									F					F							
22R-4, 100–102	F													C												R
22R-5, 25–27							R	F			R			F					F							R
22R-5, 100–102														R					F							
22R-6, 22–24														F												R
22R-6, 100–102							F						R	F					C							F
22R-CC, 15–20														R					R						R	
														F												

Notes: Preservation: G = good, M = moderate, P = poor. Abundance: A = abundant, C = common, F = few, R = rare. Lowercase letters = reworking caused by drilling disturbance.

Table T1. Stratigraphic distribution of diatom taxa, Hole 1140A

Age	Diatom zone (Harwood and Maruyama, 1992)	Core, section, interval (cm)	Depth (mbsf)	Preservation	Abundance	*Actinocyclus curvatulus*	*Actinocyclus ingens*	*Actinocyclus karstenii*	*Actinocyclus ochotensis*	*Actinocyclus octonarius*	*Actinocyclus oculatus*	*Actinocyclus thumii*	*Actinoptychus bipunctatus*	*Actinoptychus senarius*	*Araniscus lewisianus*	*Asterolampra insignis*	*Asterolampra marylandica*	*Asteromphalus concavus*	*Asteromphalus inaequabilis*	*Asteromphalus oligocenicus*	*Asteromphalus symmetricus*	*Azpeitia endoi*	*Azpeitia tabularis*	*Biddulphia deodora*	*Cavitatus jouseanus*
		183-1140A-																						
		1R-2, 108–109	2.58	M	A		A			F			F	F								C			
		1R-3, 75–76	3.75	M	A		F						R	F							R		F		
		1R-4, 23–24	4.73	M	A		C						F	F											F
		1R-5, 26–27	5.66	M	A		A			F				F	F							F			
	N. denticuloides	1R-CC, 9–14	6.15	M	A		C						F	C											
		2R-1, 25–26	9.75	M	A					C					R										
		2R-2, 100–102	12	M	A		A	F		F			F	F	F							C			
		2R-3, 100–102	13.5	M	A		C																		
		2R-4, 100–102	15	M	A		C			F			R	F	F										
		2R-CC, 17–22	15.7	M	A		CC	F		F	R		C	F	R							F			
middle Miocene		3R-1, 100–102	19.6	M	A		C							F							R				
	D. hustedtii–	3R-2, 25–27	20.35	M	A		F																		
	N. grossepunctata	3R-CC, 13–18	20.77	M	A	R	A			F				F								C			
		4R-1, 100–102	28.9	M	A			F						F	F						R				
		4R-2, 25–27	29.65	M	A		C			C				C	F										
	A. ingens var. *nodus*	4R-CC, 11–6	29.99	M	A		C			R				F	C							C	F		
		5R-CC, 45–50	37.65	M	A		C	R						F							R				
	N. grossepunctata	6R-1, 25–27	46.75	M	A		F							F	F										C
		6R-1, 100–102	47.5	M	A		A			F				F	A					R		F			
	A. ingens–	6R-2, 25–27	48.25	M	A	R	R							F	F										R
	D. maccollumii	6R-2, 100–102	49	M	A		C			F				C	F										C
		6R-CC, 13–18	49.33	M	A					F				F	F										
	D. maccollumii	7R-1, 25–26	55.85	M	A	R								F	R										R
		7R-1, 100–101	56.6	M	A	R				F				F											C
		7R-2, 25–26	57.35	M	A					C				C								F			
early Miocene	*C. kanayae*	7R-CC, 17–22	57.84	M	A	R		R						R	R										
		8R-CC, 27–32	64.87	M	A					F				C	F										A
		9R-1, 25–27	73.95	M	A					C				A	R										
	T. fraga c	9R-1, 100–102	74.7	M	A									C	R				R					F	
		9R-CC, 17–22	75.29	M	A									C	F										C
		20R-1, 25–27	179.75																						
		20R-1, 100–102	180.5	M	A					C				F											R
		20R-2, 25–27	181.25	M	A			R						R				R			R				
		20R-2, 100–102	182	M	A					F				C						F					
		20R-3, 25–27	182.75	M	A					C				F						F		R			F
		20R-4, 25–27	184.25	M	A			F						F				R							R
		21R-1, 100–102	190.1	M	A					C				F						R					F
		21R-2, 25–27	190.85	M	A				R	C				F						F					
		21R-1, 100–102	191.1	M	A									R				F							F
		21R-2, 100–102	191.6	M	A									C						F					
early Oligocene	*R. vigilans* a	21R-3, 25–27	192.35	M	A			F		F		R		C						F					C
		21R-3, 100–102	193.1	M	A					C				C			R			F		F			F
		21R-4, 25–27	193.85	M	A							R		F			F			R	F				
		21R-4, 100–102	194.6	M	A					F				F						F					
		21R-5, 25–27	195.35	M	A					C				F						F					
		21R-5, 100–102	196.1	M	A									R				R							
		21R-6, 25–27	196.85	M	A									F						R					
		22R-1, 25–27	198.95	M	A					C				F			R			R					F
		22R-1, 100–102	199.7	M	A									F						R					
		22R-2, 10–12	200.3	M	A					C				C			R			F					F
		22R-2, 89–91	201.09	M	A													R		F					
		22R-3, 25–27	201.95	M	A									C		R	F			R					
		22R-3, 100–102	202.7	M	A					F				F			F			R					F

Table T1 (continued).

Age	Diatom zone (Harwood and Maruyama, 1992)	Core, section, interval (cm)	Depth (mbsf)	Preservation	Abundance	*Cestodiscus pulchellus*	*Corethron criophilum*	*Coscinodiscus asteromphalus*	*Coscinodiscus decrescens*	*Coscinodiscus marginatus*	*Coscinodiscus monicae*	*Coscinodiscus rhombicus*	*Craspedodiscus coscinodiscus*	*Crucidenticula ikebei*	*Crucidenticula kanayae*	*Crucidenticula nicobarica*	*Crucidenticula punctata*	*Dactyliozolen antarcticus*	*Denticulopsis hustedtii*	*Denticulopsis lauta*	*Denticulopsis maccollumii*	*Denticulopsis punctata*	*Dimerogramma fossile*	*Ethmodiscus rex*	*Eucampia antarctica*
		183-1140A-																							
		1R-2, 108–109	2.58	M	A		F	F		C									C					F	
		1R-3, 75–76	3.75	M	A													F	R						
		1R-4, 23–24	4.73	M	A					C									F				R		
		1R-5, 26–27	5.66	M	A		F	F		C									C					F	
		1R-CC, 9–14	6.15	M	A														C						
	N. denticuloides	2R-1, 25–26	9.75	M	A														F						
		2R-2, 100–102	12	M	A		F			A						F			F					F	
		2R-3, 100–102	13.5	M	A														C						
		2R-4, 100–102	15	M	A	F													F		R			C	
		2R-CC, 17–22	15.7	M	A		R	F		A						F			F					C	
middle Miocene		3R-1, 100–102	19.6	M	A												C		C						R
		3R-2, 25–27	20.35	M	A																				
	D. hustedtii–N. grossepunctata	3R-CC, 13–18	20.77	M	A			F		C										A				C	
		4R-1, 100–102	28.9	M	A					C	C								C						
		4R-2, 25–27	29.65	M	A					F									F					F	R
	A. ingens var. *nodus*	4R-CC, 11–6	29.99	M	A	F				A	F			F						A	C			C	F
		5R-CC, 45–50	37.65	M	A					C															
	N. grossepunctata	6R-1, 25–27	46.75	M	A	F		F		F								R		F	C				
		6R-1, 100–102	47.5	M	A			F		C		F						F			A	R			
	A. ingens–D. maccollumii	6R-2, 25–27	48.25	M	A					F											F				
		6R-2, 100–102	49	M	A			F		C								R			F				F
		6R-CC, 13–18	49.33	M	A					C											R			C	
		7R-1, 25–26	55.85	M	A			R		F					R										
	D. maccollumii	7R-1, 100–101	56.6	M	A			F		F														F	
		7R-2, 25–26	57.35	M	A			F		C											C			F	
early Miocene		7R-CC, 17–22	57.84	M	A			F		C					F										
	C. kanayae	8R-CC, 27–32	64.87	M	A	F				C					R									F	
		9R-1, 25–27	73.95	M	A					C		A													
	T. fraga c	9R-1, 100–102	74.7	M	A																				
		9R-CC, 17–22	75.29	M	A			F		C		F													
		20R-1, 25–27	179.75																						
		20R-1, 100–102	180.5	M	A	C				F														F	
		20R-2, 25–27	181.25	M	A																				
		20R-2, 100–102	182	M	A			F																	
		20R-3, 25–27	182.75	M	A	C		F																F	
		20R-4, 25–27	184.25	M	A																				
		21R-1, 100–102	190.1	M	A	R		F	F	C			R											R	
		21R-2, 25–27	190.85	M	A					C														R	
		21R-1, 100–102	191.1	M	A																				
		21R-2, 100–102	191.6	M	A			F																C	
		21R-3, 25–27	192.35	M	A					C														C	
early Oligocene	*R. vigilans* a	21R-3, 100–102	193.1	M	A			R		C														F	
		21R-4, 25–27	193.85	M	A			F		C														C	
		21R-4, 100–102	194.6	M	A	F		F		C														A	
		21R-5, 25–27	195.35	M	A	C		F		C														F	
		21R-5, 100–102	196.1	M	A																				
		21R-6, 25–27	196.85	M	A	F		C		C															
		22R-1, 25–27	198.95	M	A	F		F		C														F	
		22R-1, 100–102	199.7	M	A					C														C	
		22R-2, 10–12	200.3	M	A	F		F		C														C	
		22R-2, 89–91	201.09	M	A																				
		22R-3, 25–27	201.95	M	A			F		C															
		22R-3, 100–102	202.7	M	A			R		F														F	

Table T1 (continued).

Age	Diatom zone (Harwood and Maruyama, 1992)	Core, section, interval (cm)	Depth (mbsf)	Preservation	Abundance	*Coniothecium decoratum*	*Hemiaulus* sp. aff. *H. giganteus*	*Hemiaulus altus*	*Hemiaulus danicus*	*Hemiaulus inaequilaterus*	*Hemiaulus incisus*	*Hemiaulus polycystinorum*	*Hemiaulus polymorphus*	*Hemiaulus pungens*	*Hemiaulus* spp.	*Nitzschia barronii*	*Nitzschia denticuloides*	*Nitzschia grossepunctata*	*Nitzschia kerguelensis*	*Opephora gemmata*	*Paralia sulcata*	*Pseudorocella barbadensis*	*Pseudotriceratium chenevieri*	*Pyxilla johnsoniania*	*Rhaphoneis cocconeides*
		183-1140A-																							
		1R-2, 108–109	2.58	M	A														f		F				
		1R-3, 75–76	3.75	M	A											r			c						
		1R-4, 23–24	4.73	M	A												R								
		1R-5, 26–27	5.66	M	A												F		f						
	N. denticuloides	1R-CC, 9–14	6.15	M	A													R			R				
		2R-1, 25–26	9.75	M	A																R				
		2R-2, 100–102	12	M	A												F	F			F				
		2R-3, 100–102	13.5	M	A																F				
		2R-4, 100–102	15	M	A																				
		2R-CC, 17–22	15.7	M	A												F	F			F				
middle Miocene		3R-1, 100–102	19.6	M	A																C				
	D. hustedtii–N. grossepunctata	3R-2, 25–27	20.35	M	A																				
		3R-CC, 13–18	20.77	M	A																C				
		4R-1, 100–102	28.9	M	A																				
		4R-2, 25–27	29.65	M	A																				
	A. ingens var. *nodus*	4R-CC, 11–6	29.99	M	A																F				
		5R-CC, 45–50	37.65	M	A																R				
	N. grossepunctata	6R-1, 25–27	46.75	M	A																F				
		6R-1, 100–102	47.5	M	A									R							F				
	A. ingens–D. maccollumii	6R-2, 25–27	48.25	M	A																				
		6R-2, 100–102	49	M	A																				
	D. maccollumii	6R-CC, 13–18	49.33	M	A									F											
		7R-1, 25–26	55.85	M	A																F				
		7R-1, 100–101	56.6	M	A		R			R			R								F				
early Miocene		7R-2, 25–26	57.35	M	A																F				R
	C. kanayae	7R-CC, 17–22	57.84	M	A																				
		8R-CC, 27–32	64.87	M	A		F														F				
	T. fraga c	9R-1, 25–27	73.95	M	A							F		F							F				
		9R-1, 100–102	74.7	M	A																R				
		9R-CC, 17–22	75.29	M	A																R				
		20R-1, 25–27	179.75																						
		20R-1, 100–102	180.5	M	A								F	F							R	F			
		20R-2, 25–27	181.25	M	A										F										
		20R-2, 100–102	182	M	A		F	F						F								F	F		
		20R-3, 25–27	182.75	M	A		R		R				F	R							F	F			
		20R-4, 25–27	184.25	M	A										F										
		21R-1, 100–102	190.1	M	A			F					F	F								F	F		
		21R-2, 25–27	190.85	M	A									C							F				
		21R-1, 100–102	191.1	M	A										C										
		21R-2, 100–102	191.6	M	A						F	F	F	C	A										
		21R-3, 25–27	192.35	M	A		F				F	F	C	C								R	R		
early Oligocene	*R. vigilans* a	21R-3, 100–102	193.1	M	A	F	F			F			F	C						R	R	F	F		
		21R-4, 25–27	193.85	M	A		F	R			F		F	C								C	F		
		21R-4, 100–102	194.6	M	A			R					F	C							R	F			
		21R-5, 25–27	195.35	M	A								C	F								A	F		
		21R-5, 100–102	196.1	M	A										F										
		21R-6, 25–27	196.85	M	A									R							F				
		22R-1, 25–27	198.95	M	A		F			R			F	F								F	F		
		22R-1, 100–102	199.7	M	A					R	R		F	F							R	R	R		
		22R-2, 10–12	200.3	M	A		F						F	C							C	F	F	F	
		22R-2, 89–91	201.09	M	A										F										
		22R-3, 25–27	201.95	M	A		F					F	C								R	F	F		
		22R-3, 100–102	202.7	M	A		R			F			F	C							F	F	C	F	

Table T1 (continued).

Age	Diatom zone (Harwood and Maruyama, 1992)	Core, section, interval (cm)	Depth (mbsf)	Preservation	Abundance	*Rhaphoneis elongata*	*Rhizosolenia* spp.	*Riedelia claviger*	*Rocella gelida*	*Rocella praenitida*	*Rocella vigilans* var. a (<40 µm)	*Rouxia granda*	*Rouxia* spp.	*Sceptroneis* aff. *mayenica*	*Sceptroneis mayenica*	*Sceptroneis praecaducea*	*Sceptroneis propinqua*	*Sceptroneis* spp.	*Stephanogonia hanzawae*	*Stephanopyxis* sp. (1 spire)	*Stephanopyxis barbadensis*	*Stephanopyxis eoceanica*	*Stephanopyxis spinosissima*	*Stephanopyxis turris* group	*Stephanopyxis turris* var. *trispinosus*
		183-1140A-																							
		1R-2, 108–109	2.58	M	A																				
		1R-3, 75–76	3.75	M	A		C		R																
		1R-4, 23–24	4.73	M	A		R																		
		1R-5, 26–27	5.66	M	A																			F	
	N. denticuloides	1R-CC, 9–14	6.15	M	A		F		F																
		2R-1, 25–26	9.75	M	A																				
		2R-2, 100–102	12	M	A																				
		2R-3, 100–102	13.5	M	A		C											F							
		2R-4, 100–102	15	M	A														R						
		2R-CC, 17–22	15.7	M	A		F		F				F												
middle Miocene		3R-1, 100–102	19.6	M	A																				
		3R-2, 25–27	20.35	M	A																				
	D. hustedtii–N. grossepunctata	3R-CC, 13–18	20.77	M	A					F														F	
		4R-1, 100–102	28.9	M	A				R				F												
		4R-2, 25–27	29.65	M	A								F											R	
	A. ingens var. *nodus*	4R-CC, 11–6	29.99	M	A					F														C	
		5R-CC, 45–50	37.65	M	A																			R	
	N. grossepunctata	6R-1, 25–27	46.75	M	A		F												F						
		6R-1, 100–102	47.5	M	A					R				R					F			R		F	
	A. ingens–D. maccollumii	6R-2, 25–27	48.25	M	A														R					R	
		6R-2, 100–102	49	M	A		F		F	C								F						F	
		6R-CC, 13–18	49.33	M	A					F															
	D. maccollumii	7R-1, 25–26	55.85	M	A					F								R	F						
		7R-1, 100–101	56.6	M	A					C									R						
		7R-2, 25–26	57.35	M	A					C									F						
early Miocene	*C. kanayae*	7R-CC, 17–22	57.84	M	A					R															
		8R-CC, 27–32	64.87	M	A		R		F															F	
	T. fraga c	9R-1, 25–27	73.95	M	A					F									F					C	
		9R-1, 100–102	74.7	M	A					F														F	
		9R-CC, 17–22	75.29	M	A				F										F					F	
		20R-1, 25–27	179.75																						
		20R-1, 100–102	180.5	M	A	F					C				F		C							F	
		20R-2, 25–27	181.25	M	A					R	R													R	
		20R-2, 100–102	182	M	A						C		R						F					C	
		20R-3, 25–27	182.75	M	A		F			R	F	F						F		F			F	F	F
		20R-4, 25–27	184.25	M	A						F		R					F						F	
		21R-1, 100–102	190.1	M	A					F		F	F				F			F				F	
		21R-2, 25–27	190.85	M	A		R					F								F			F	F	
		21R-1, 100–102	191.1	M	A					R	R													C	
		21R-2, 100–102	191.6	M	A		R			F	C													F	F
early Oligocene	*R. vigilans* a	21R-3, 25–27	192.35	M	A						F								R					C	
		21R-3, 100–102	193.1	M	A					F	F		F			R	C				R		F	C	
		21R-4, 25–27	193.85	M	A			F			F								R					C	
		21R-4, 100–102	194.6	M	A					F		R	R											A	
		21R-5, 25–27	195.35	M	A					F	F		F				F						F	C	
		21R-5, 100–102	196.1	M	A						F		R											F	
		21R-6, 25–27	196.85	M	A					F	F													C	
		22R-1, 25–27	198.95	M	A		F			F	C						F							C	
		22R-1, 100–102	199.7	M	A						F													F	
		22R-2, 10–12	200.3	M	A		F			C	F												F	F	
		22R-2, 89–91	201.09	M	A						R													R	
		22R-3, 25–27	201.95	M	A						F						F							C	
		22R-3, 100–102	202.7	M	A		F			C							F						F	F	

Table T1 (continued).

Age	Diatom zone (Harwood and Maruyama, 1992)	Core, section, interval (cm)	Depth (mbsf)	Preservation	Abundance	*Stictodiscus* sp. cf. *S. kittonianus*	*Thalassionema schraderi*	*Thalassiosira* spp.	*Thalassiothrix longissima*	*Triceratium cruciforme*	*Triceratium inelegans*	*Triceratium macroporum*	*Triceratium pileus*	*Triceratium schulzii*	*Triceratium* spp.	*Xanthiopyxis oblonga*
middle Miocene	*N. denticuloides*	183-1140A-														
		1R-2, 108–109	2.58	M	A	R	C		A			A				
		1R-3, 75–76	3.75	M	A			C	C			F				
		1R-4, 23–24	4.73	M	A	R		C	C			C				
		1R-5, 26–27	5.66	M	A		F		A			A				
		1R-CC, 9–14	6.15	M	A			A	C						F	
		2R-1, 25–26	9.75	M	A			C				F				
		2R-2, 100–102	12	M	A		C		A			A				
		2R-3, 100–102	13.5	M	A				C						C	
		2R-4, 100–102	15	M	A			C				C				
		2R-CC, 17–22	15.7	M	A				C			A				
	D. hustedtii–N. grossepunctata	3R-1, 100–102	19.6	M	A				C							
		3R-2, 25–27	20.35	M	A											
		3R-CC, 13–18	20.77	M	A		C		C			F				
		4R-1, 100–102	28.9	M	A				C						C	
		4R-2, 25–27	29.65	M	A			C	A							
	A. ingens var. *nodus*	4R-CC, 11–6	29.99	M	A				A			F				
		5R-CC, 45–50	37.65	M	A				F							
	N. grossepunctata	6R-1, 25–27	46.75	M	A				A							
		6R-1, 100–102	47.5	M	A				A							R
	A. ingens–D. maccollumii	6R-2, 25–27	48.25	M	A				F							
		6R-2, 100–102	49	M	A				C		F					
early Miocene	*D. maccollumii*	6R-CC, 13–18	49.33	M	A				A							
		7R-1, 25–26	55.85	M	A				F							
		7R-1, 100–101	56.6	M	A				C							R
		7R-2, 25–26	57.35	M	A				C							R
	C. kanayae	7R-CC, 17–22	57.84	M	A				F							
		8R-CC, 27–32	64.87	M	A				A	R						
	T. fraga c	9R-1, 25–27	73.95	M	A				C							F
		9R-1, 100–102	74.7	M	A			F	F				R			C
		9R-CC, 17–22	75.29	M	A				A							
early Oligocene	*R. vigilans* a	20R-1, 25–27	179.75													
		20R-1, 100–102	180.5	M	A				F					R		F
		20R-2, 25–27	181.25	M	A				F							
		20R-2, 100–102	182	M	A				A							F
		20R-3, 25–27	182.75	M	A											F
		20R-4, 25–27	184.25	M	A				F							
		21R-1, 100–102	190.1	M	A				F							F
		21R-2, 25–27	190.85	M	A											F
		21R-1, 100–102	191.1	M	A				F							
		21R-2, 100–102	191.6	M	A			C	C							F
		21R-3, 25–27	192.35	M	A				A							F
		21R-3, 100–102	193.1	M	A				F							F
		21R-4, 25–27	193.85	M	A			F	C							R
		21R-4, 100–102	194.6	M	A			F	C							R
		21R-5, 25–27	195.35	M	A											F
		21R-5, 100–102	196.1	M	A				F							
		21R-6, 25–27	196.85	M	A				C							F
		22R-1, 25–27	198.95	M	A				C							R
		22R-1, 100–102	199.7	M	A											
		22R-2, 10–12	200.3	M	A				F		R					
		22R-2, 89–91	201.09	M	A				F						R	
		22R-3, 25–27	201.95	M	A				A							R
		22R-3, 100–102	202.7	M	A				F							F

Table T1 (continued).

Age	Diatom zone (Harwood and Maruyama, 1992)	Core, section, interval (cm)	Depth (mbsf)	Preservation	Abundance	*Actinocyclus curvatulus*	*Actinocyclus ingens*	*Actinocyclus karstenii*	*Actinocyclus ochotensis*	*Actinocyclus octonarius*	*Actinocyclus oculatus*	*Actinocyclus thumii*	*Actinoptychus bipunctatus*	*Actinoptychus senarius*	*Araniscus lewisianus*	*Asterolampra insignis*	*Asterolampra marylandica*	*Asteromphalus concavus*	*Asteromphalus inaequabilis*	*Asteromphalus oligocenicus*	*Asteromphalus symmetricus*	*Azpeitia endoi*	*Azpeitia tabularis*	*Biddulphia deodora*	*Cavitatus jouseanus*
		22R-4, 25–27	203.45	M	A																			R
	C. jouseana	22R-4, 100–102	204.2	M	A					F				F			R		R					
		22R-5, 25–27	204.95	M	A					F							R		R					
		22R-5, 100–102	205.7	M	A			F											R					F
		22R-6, 22–24	206.42	M	A																			
		22R-6, 100–102	207.2	P	F					F				C			R		F					R
		22R-CC, 15–20	207.79	P	F									R										R
				P	F																			

Notes: Preservation: G = good, M = moderate, P = poor. Abundance: A = abundant, C = common, F = few, R = rare. Lowercase letters = reworking caused by drilling disturbance.

Table T1 (continued).

Age	Diatom zone (Harwood and Maruyama, 1992)	Core, section, interval (cm)	Depth (mbsf)	Preservation	Abundance	*Cestodiscus pulchellus*	*Corethron criophilum*	*Coscinodiscus asteromphalus*	*Coscinodiscus decrescens*	*Coscinodiscus marginatus*	*Coscinodiscus monicae*	*Coscinodiscus rhombicus*	*Craspedodiscus coscinodiscus*	*Crucidenticula ikebei*	*Crucidenticula kanayae*	*Crucidenticula nicobarica*	*Crucidenticula punctata*	*Dactyliozolen antarcticus*	*Denticulopsis hustedtii*	*Denticulopsis lauta*	*Denticulopsis maccollumii*	*Denticulopsis punctata*	*Dimerogramma fossile*	*Ethmodiscus rex*	*Eucampia antarctica*
		22R-4, 25–27	203.45	M	A													R							
	C. jouseana	22R-4, 100–102	204.2	M	A			F		C														C	
		22R-5, 25–27	204.95	M	A					F															
		22R-5, 100–102	205.7	M	A					F								R							
		22R-6, 22–24	206.42	M	A					F															
		22R-6, 100–102	207.2	P	F					C															
		22R-CC, 15–20	207.79	P	F					F															
				P	F			F		F															

Table T1 (continued).

Age	Diatom zone (Harwood and Maruyama, 1992)	Core, section, interval (cm)	Depth (mbsf)	Preservation	Abundance	*Coniothecium decoratum*	*Hemiaulus* sp. aff. *H. giganteus*	*Hemiaulus altus*	*Hemiaulus danicus*	*Hemiaulus inaequilaterus*	*Hemiaulus incisus*	*Hemiaulus polycystinorum*	*Hemiaulus polymorphus*	*Hemiaulus pungens*	*Hemiaulus* spp.	*Nitzschia barronii*	*Nitzschia denticuloides*	*Nitzschia grossepunctata*	*Nitzschia kerguelensis*	*Opephora gemmata*	*Paralia sulcata*	*Pseudorocella barbadensis*	*Pseudotriceratium chenevieri*	*Pyxilla johnsoniania*	*Rhaphoneis cocconeides*
		22R-4, 25–27	203.45	M	A										F										
	C. jouseana	22R-4, 100–102	204.2	M	A		F					F	C	C							F	F	R		
		22R-5, 25–27	204.95	M	A		R			R		F	F	C							F	F	R		
		22R-5, 100–102	205.7	M	A										F							F			
		22R-6, 22–24	206.42	M	A										R										
		22R-6, 100–102	207.2	P	F					R	R	F		A							F	F	F	F	
		22R-CC, 15–20	207.79	P	F																	F			
				P	F										R										

Table T1 (continued).

Age	Diatom zone (Harwood and Maruyama, 1992)	Core, section, interval (cm)	Depth (mbsf)	Preservation	Abundance	*Rhaphoneis elongata*	*Rhizosolenia* spp.	*Riedelia claviger*	*Rocella gelida*	*Rocella praenitida*	*Rocella vigilans* var. a (<40 µm)	*Rouxia granda*	*Rouxia* spp.	*Sceptroneis* aff. *mayenica*	*Sceptroneis mayenica*	*Sceptroneis praecaducea*	*Sceptroneis propinqua*	*Sceptroneis* spp.	*Stephanogonia hanzawae*	*Stephanopyxis* sp. (1 spire)	*Stephanopyxis barbadensis*	*Stephanopyxis eoceanica*	*Stephanopyxis spinosissima*	*Stephanopyxis turris* group	*Stephanopyxis turris* var. *trispinosus*
		22R-4, 25–27	203.45	M	A										R									F	
	C. jouseana	22R-4, 100–102	204.2	M	A					F	F													C	
		22R-5, 25–27	204.95	M	A		F			C							R	F			R			F	
		22R-5, 100–102	205.7	M	A																			R	
		22R-6, 22–24	206.42	M	A																			F	
		22R-6, 100–102	207.2	P	F		R			C							F						R	F	
		22R-CC, 15–20	207.79	P	F					F														R	
				P	F		R																	F	

Table T1 (continued).

Age	Diatom zone (Harwood and Maruyama, 1992)	Core, section, interval (cm)	Depth (mbsf)	Preservation	Abundance	*Stictodiscus* sp. cf. *S. kittonianus*	*Thalassionema schraderi*	*Thalassiosira* spp.	*Thalassiothrix longissima*	*Triceratium cruciforme*	*Triceratium inelegans*	*Triceratium macroporum*	*Triceratium pileus*	*Triceratium schulzii*	*Triceratium* spp.	*Xanthiopyxis oblonga*
		22R-4, 25–27	203.45	M	A				F							
	C. jouseana	22R-4, 100–102	204.2	M	A											R
		22R-5, 25–27	204.95	M	A				F							R
		22R-5, 100–102	205.7	M	A				F							
		22R-6, 22–24	206.42	M	A											R
		22R-6, 100–102	207.2	P	F				C							F
		22R-CC, 15–20	207.79	P	F				R						R	
				P	F											