Table 1. Distribution of nannofossil species in Hole 671B. R = rare; F = few; C = common; A = abundant; V = very abundant. Lower case letters represent individual abundances of reworked species.

Age	Zone	Subzone	Core-section, (interval in cm)	Abundance	Preservation	Amaurolithus c	A. delicatus	A. primus	A. tricorniculatus	Braarudosphaera spp.	Calcidiscus	C. macintyrei	Ceratolithus	C. armatus	C. cristatus	C. rugosus	Clausicoccus	Coccolithus	C. formosus	C. miopelagicus	C. pelagicus	Coronocyclus	Crenalithus	Cyclicargolithus	C. floridanus	Discoaster asymmetricus	D. barbadiensis	D. berggrenii	D. bollii	D. brouweri	D. deflandrei	D. hamatus	D. neohamatus	D. pentaradiatus	D. quinqueramus	D. surculus	D. tamalis	D. tanii sl.	D. triradiatus	D. variabilis	Gephyrocapsa caribbeanica	G. oceanica	Small gephyrocapsids	Hayaster perplexus	Helicosphaera	H. compacta	H. recta	H. sellii	Micrantholithus	Pontosphaera	P. japonica	Pseudoemiliania	Reticulofenestra	R. hillae	R. pseudoumbilica	R. umbilica	Rhabdosphaera	Scapholithus	Scyphosphaera	Sphenolithus	S. ciperoensis	S. distentus	S. moriformis	S. predistentus	S. pseudoradians	Thoracosphaera	Triquetrorhabdulus carinatus	T. rugosus	Umbilicosphaera	Zeugrhabdolithus
early Pleistocene	Pseudoemiliania lacunosa		1-1, 88-90	C	G						C				F						C		C		r					r				r						r		A	C		F					F		R					C		C	r						F			C	
			1-1, 119-121	C	M						C				F						F		A							r											F	C	C		F					R		R					C	R	C							F			C	
			1-2, 88-90	C	P						C	r			F						F		A		r				r	r				r						r		A	F		F							R					F		F	r			r			F			C	
			1-3, 88-90	C	M						C				F						F		C											r							F	A	C		F			r				R					F		F							F			C	
			1-4, 90-92	B																																																																		
			1-5, 88-90	B																																																																		
			1, CC	A	G						C	r			C						F		C		r					r					r					r	C	A	A		F					R		A	r				C		C							F			C	
			2-1, 89-91	C	M						C	r			C						F		C		r										r							A	C		F					R		R				r	C	R	F	r						C			C	
			2-2, 89-91	C	G						C				F						F		C		r					r						r				r		A	C		C					R		R					C		C	r						F			C	
			2-3, 60-62	B																																																																		
			2-4, 89-91	C	M					R	C				R						F		C		r																A	A	c		R							C					C		F	r						R			C	
			2-5, 89-91	C	M					R	C				F						F		C		r					r	r			r			r					C	F		F							A			r		C		C	r						F			F	
			2-6, 89-91	C	M						C				F						F		C		r																	A	C		F					F		A					F		F							F			F	
			2, CC	C	M						A				F								A							r												C	C		R					F		C					F		F	r						F			F	
			3-1, 78-80	C	P						C				F						F		A		r									r											R							A					F		F				r			F			C	
			3-2, 78-80	C	M						C				F						F		C							r											C	C	C		F					F	R	A					C		C	f						F			C	
			3-3, 78-80	C	M						C				F						F		C											r							C	C	A		F					F	R	A					C		C							C			C	
	Helicosphaera sellii		3-4, 78-80	A	G						C				F						F		C							r											C	C	V		F			F		F	R	A					C		C							F			C	
			3-5, 78-80	C	M						C				F						F		F		r									r							C	A	A		F			F		F		C					C		F				r			F			C	
			3, CC	C	G						A				C						F		F								r									r	C	A	A		F			F		F	F	A					C		C	r						F			C	
			4-1, 80-82	C	M						C				F						F		C		r									r							F	A	C		F			R		F		C					C		F							F			F	
			4-2, 80-82	C	P						F				F						R		F																		F	C	F		F							C					F									F			F	
	Calcidiscus macintyrei		4-3, 80-82	C	G						C	F			F								F																		F	C	C		F			F		F	R	C					C		C							F			C	
			4-4, 80-82	A	G						C	C			F						R		C		r						r											C	A		C			F		C	F	A					C		C	f						C			C	
			4-5, 80-82	A	G						C	C			F						R		C																			C	A		C			F		F		A					C		C							F			C	
			4-6, 80-82	C	G						C	C			F						R		C																	r		F	C		F			F		F		A					C		C	r						F			C	
			4, CC	C	M						F	C			F						F		C																			F	C		C			F		F		C					C		C							F			F	
			5-1, 75-77	C	M						F	F			F						R		F																	r		F	C		F			F		R		A					C		F							F			F	
late Pliocene	Discoaster brouweri CN12	Calcidiscus macintyrei	5-2, 75-77	A	G						C	C			F						F		A							R					r				R					R	C			F		C	F	A					A	R	C							F			C	
			5-3, 75-77	C	G						F	C			F						F		C							F									F						F			F		F		C					C		F							F			F	
			5-4, 75-77	C	M							R											C							F									F													F														R			F	
			5-5, 75-77	C	G						C	C			C						F		A							C									C						C			F		C		A					C		A							F			C	
			5-6, 75-77	A	G						C	C			C						F		A							C									C			R			C			F		C	R	A					C		C							F				
			5, CC	C	M						C	C									F		C							C															F			F				C					F			r						F			F	
			6-1, 80-82	C	G						C	C			F						F		C							C									F		F	F	F		C			F		F	R	C					C		C							F			C	
		Discoaster pentaradiatus CN12c	6-2, 80-82	C	G						C	C			F								C							C				R					F						C			F		F	R	A					C		C							F			C	
			6-3, 80-82	C	M						C	C			F						F		C							A				R					R						C			F		F		A					C		C							R			C	
			6-4, 80-82	C	M						F	F			F						F		C			r				C				F					F			R			C			R		R		C					C		C							F			C	
			6-5, 80-82	C	G						F	F			F						F		C							C				C					F						C			F		C	R	C					C	R	F							F			F	
		Discoaster surculus CN12b	6-6, 80-82	C	G						C	C			F						F		A			R				C				C		F									C			F				A					C		C							F			C	
			6, CC	A	M						C	C			F						F		A			F				C				A		C			F						C			F				A					C		C							F			C	
			7-1, 79-81	C	M						C	C			F						F		A			R				F				C		C			F						C			F				A					C		A							F			F	
			7-2, 79-81	A	M						C	F			F						F		A			R				C				A		C			R	R					C			F		F	R	A					C		C							F			F	
		Discoaster tamalis	7-3, 79-81	A	G						C	C			F						F		A			F				C				C		C	R		R	R					C			F		R		A					C		C							F				
			7-4, 79-81	A	G						C	C			F						F		A			F				C				C		C	F		F	R					C			F		F	R	A					C		C							F			F	
			7-5, 79-81	C	M						F	C			F						F		A			F				C				C		F	F		R	F					C			F		F		A					C		C							C			R	
			7, CC	A	G						C	C			F						F		A			C				C				A		C	F		F	F					C			F		F		A					C	R	A							C			R	
			8-1, 79-81	C	G						F	C			F						F		A			F				C				C		F	C		R						C			F		F		C					C		C							F				
			8-2, 79-81	C	M						C	C			F						F		A			F				C				C		F	C		F	R					C			F		F		A					C		C							F				
			8-3, 79-81	C	M						C	C			F						F		A			F				C				C		F	F		F	F					C			F		F		A					C		C							F				
			8-4, 79-81	C	M						F	F			F						F		A			F				C				C		C	C		F	F					F			F		R		A					C		F							R				
			8-5, 79-81	C	M						F	F			F						F		A			C				C				C		C	F		F	F					C					F		C					C		C							F				
			8-6, 79-81	C	G						C	C			F						F		A			C				C				A		C	C		F	F					C			F		F		A					F		C							F				
			8, CC	C	M						C	C			C						F		A			F				C				C		C	C		F	C					C			F		C		A					C		C							C				
			9-1, 78-80	C	G						C	C			F						C		A			C				C				C		C	C		F	C					C			F		F		A					C		C	r						F				
			9-2, 79-80	C	M						F	F			F						F		A			C				C				C		C	F		F	F					C							A					C		F							F				
			9-3, 78-80	C	M						F	F			R						F		C			F				C				C		F	F		R	R					F			R		F		C					F		F	r						F				
			9-4, 78-80	C	M						C	C			R						R		C			F				C				C		F	F			F					F			R				A					F		F	r						F				
			9-5, 78-80	C	M						C	C			F						F		A			F				C				A		C	C		F	F				R	F					R		A					C		C	r						F				
			9-6, 78-80	C	M						C	C											C			F				F				F		F	F		F	F					F					R		C					F			A										
			9, CC	A	M						C	C			F						F		A			C				A				A		C	C		C	C					F					F		A					F		C	A						F				
			10-1, 79-81	A	M						C	C			F						F		A			C				A				A		C	F		F	C		R			C					R		A					F		F	A						F				
early Pliocene	Reticulofenestra pseudoumbilica CN11		10-2, 79-81	A	G						C	C			F						F		A			C				C				C		C	F		F	C					C					F	R	A			F		C	R	F	C						F				
			10-3, 83-85	C	M						C	F			F						F		A		f	F				C				C		C	F		F	F					C					F		C			C		R		F	C						C				
			10-4, 79-81	C	M						C	F			F						F		A							C				C		F			F	F				R	F							C			F					C						C				
			10-5, 79-81	C	M						F	F			F						F		C			R				C				C		F	R		F	F					F							C			F		F			C						F				
			10-6, 13-15	C	M						F	F			F	R							C							C				C		F			F	F					F					F		C			F		F		R	C						F				
			10, CC	A	G						C	C			C						F		A			R				A				A		C			F	C				R	C					C		C			C		F		F	A						F				
			11-1, 79-81	A	G						C	C			F	R					F		C			C				C				C		C	F		F	C					C					F		A			F		C		C	C						F				
			11-2, 79-81	C	M		R				C	C			C						F		C			C				C				A		C	F		F	C					C					F		A			C		C	R	R	A						F				
			11-3, 79-81	C	M		R				C	C			C								A			F				C				A		C			F	C					F					F		F			F		F		R	C						F				
			11-4, 79-81	C	M			R			C	C			F								A			F				C				C		C	R		R	C					F							C			C		C		F	C						F				
			11-5, 79-81	C	M		R				C	C			F						F		A			R				C				C		F			F	C					C					F		C			C		C		F	A						F				
			11-6, 79-81	C	M		R				C	C			F						R		A			R				C				C		C			F	C					F										C					C						F				
	Amaurolithus tricorniculatus CN10	Ceratolithus rugosus CN10c	11, CC	A	M		R		R		A	F			F						F		A			R				C				A		C			F	C					F										C		C			A						F				
			12-1, 80-83	C	M		F		F		C	F		F	F						F		A			R				C				C		C			C	C					F				R						C					C						F				
		Ceratolithus acutus CN10b	12-2, 80-83	C	P		F						R								R		F							C				C		C			R	C															F					F										
			12-3, 80-83	C	M		F	F			C	R	F								C		C							C				C		C	R		F	C					F										F		C			C						F				
			12-4, 80-83	C	G		F	F			F	F	R								C		C							C				C		C			F	C					F															C						F				
			12-5, 80-83	C	G		F	F			C	R	R								C		F			R				C				C		C			F	C					R										F		F			F						F		R		
		T. rugosus CN10a	12, CC	C	G		F	C			C	F									C		C							A				A		A			F	A															F		R			C						F		C		
late Miocene	Discoaster quinqueramus CN9	Amaurolithus primus CN9b	13-1, 80-82	C	M		F	F			F	R									F		C							C				C	F	C			F	C					R										F		R			C						F		F		
			13-2, 80-82	C	M		F	F			C										F		C							C				C	C	C			F	C					R										F					F								F		
			13-3, 80-82	C	P		F	F			C	F									F		C							F				F	C	C			F	C															F					C								F		
			13-4, 80-82	C	P		F	F			F	R									F									C				C	C	F			F	C															F					C								F		
			13-5, 80-82	C	P			F			R										R									F				F	F	F				F															F					F								R		
			13-6, 80-82	C	P		F	F			F										F					R				F				F	C	C			F	C															F					C								F		
			13, CC	C	P		F	F			C	R									C		C							C				C	C	C			F	A															C					A								F		
			14-1, 74-76	C	P		F	F			F										F		C							F				C	A	C			F	A															C					F								F		
			14-2, 74-76	C	P		F	F			F	R									F		C							F				C	A	C			F	C															C					C						F		F		
			14-3, 74-76	C	P	R	R	R			F										F									F				F	C	F			F	C															C					F								F		
			14-4, 74-76	C	P		F	F			F	R									C		C							C				F	A	F			F	A															C					C								F		
			14-5, 74-76	C	P		F	F			F	R									F									F				F	A	C			F	C															C					F								F		
			14-6, 74-76	C	P	R	F	F			R										F									C				F	C	C			R	C															C					R								F		
early Pleistocene	Pseudoemiliania lacunosa		14, CC	C	M						C				F								A		f																	C	C		F					F		A			r		C	R	F							F				
			15-1, 82-84	B																																																																		
			15-2, 82-84	F	P						F												C																			F	F									F															F				
			15-3, 82-84	B																																																																		
			15-4, 82-84	C	G						F				F						R		C																			A	A									A					F									F			F	
			15-5, 82-84	C	M						C												C																			C										F																	F	
			15-6, 82-84	F	M										R																											F										F																		
			15, CC	C	M						F				R						F		C											r						r	F	A										C					F			r										
			16-6, 89-91	B																																																																			
			16-7, 6-8	F	P						R												C																			C	C									F								r									F	
			16, CC	C	G						C				F								C		r																	C	C		F					F		C					F	F	F							F			F	
			17-1, 80-82	B																																																																			
			17-2, 80-82	F	P																		F																			F																													
			17-3, 80-82	F	P																		F																			F																													
			17-4, 80-82	F	P																		F																			F										F																		
			17-5, 80-82	F	P																		F																			F										F																		
			17-6, 80-82	F	P						F				R								C																			C	C		R							F																	F	
			17, CC	C	P						C				R								C		r																	A	F		R							C							R	r									F	
			18-1, 80-82	C	M						C				F						R		A		r																		V		F					F	R	C					C		F	r			r						C	
			18-2, 80-82	C	G						C				F						R		A		r																		A		F					F	R	A					C		F							F			C	
			18-3, 80-82	F	P						F												C																													C																		
			18-4, 74-76	C	P						F				F								C												r							F	C		R						R	C														F			F	
			18, CC	F	P						F				F						R		C																		F	C										C								r						F			F	
			19-1, 83-85	C	P						F				F								C		r																C									R		C														F			F	
	Indeterminate		19-2, 81-83	B																																																																			
early Pleistocene	Calcidiscus macintyrei		19, CC	A	M						A	R			C						F		A																		F	A			C			F				C							F				r			C			C	
			20-1, 80-82	C	G						C	F			C								C		r																C	C	A		C			F		F	R	A					C		C							C			C	
			20-2, 80-82	C	G						C	F			F								C																		C	C	A		F			F		F	R	A	r				C		F							C			C	
			20-3, 80-82	C	G						C	F			F						F		C																		C	A	C		F			F				C					A		F							F			C	
			20-4, 80-82	C	G						C	F			C						F		A		r																A	A	C		F			F		F		A					A		F							C			C	
			20-5, 80-82	C	G						C	F			F						F		A												r						A	A	A		F			F		F	R	A					A		F							C			C	
			20-6, 80-82	C	G						A	F			F						F		A																		A	A	A		F			F		F		A					C		F							F			C	
			20, CC	C	M						C	R			C						F		C		r																C	C	C		F			F		F		A					C		F	r						C			C	
			21-1, 80-82	C	M						C	F			C						F		C																	r	F	C	F		F			F				C					C		F							F			F	
			21-2, 80-82	C	M						F	F									F		F																		F	F	F		F			F		R	R	C					F		F							F			F	
			21, CC	C	G						C	F			F								A																	r	C	C	A		F			F		F	F	A					A		C							C			C	
			22-1, 79-81	C	G						C	F			F						F		A							r				r		r				r		F	C		F			F				A					C		F							F			F	
			22-2, 79-81	C	G						C	F			F						R		A		r	r				r				r		r	r					C	A		C			F		F		A					C		F							F			C	
late Pliocene	Discoaster brouweri CN12	Calcidiscus macintyrei CN12d	22-3, 9-81	C	M						C	C			F						R		C							F									F						C			F				A					C		F							F			A	
			22-4, 76-78	C	M						C	C			F						F		C							F									F						C			F		F		A					F		C							C			C	
			22-5, 79-81	C	M						C	F			F						F		C							C									F	r					F			R		F		A					C		F							F			C	
			22-6, 79-81	C	M						C	C			F						R		A							R									R						C			F				A					C		F							C			C	
early Pleistocene	Calcidiscus macintyrei		22, CC	A	G						C	C			F						F		A							r				r								R	R		C			F		C	F	A					A		C							C			C	
			23-1, 78-81	C	G						C	F			F						F		A											r						r			R		C			F		F		A					C		F							C			C	
			23-2, 78-81	A	G						A	C			C						C		A																	r		F	F		C			F		F	R	A					A		C							C			C	
			23-3, 78-81	A	G						C	C			F						F		A													r						F	F		C			C		C	F	A					A		C							C			C	
			23, CC	A	G						C	C			F						F		A		r									r									R		C			F		F		A					A		F							C			C	

Table 1 (continued).

Age	Zone	Subzone	Core-section, (interval in cm)	Abundance	Preservation	*Amaurolithus* c	*A. delicatus*	*A. primus*	*A. tricorniculatus*	*Braarudosphaera* spp.	*Calcidiscus*	*C. macintyrei*	*Ceratolithus*	*C. armatus*	*C. cristatus*	*C. rugosus*	*Clausicoccus*	*Coccolithus*	*C. formosus*	*C. miopelagicus*	*C. pelagicus*	*Coronocyclus*	*Crenalithus*	*Cyclicargolithus*	*C. floridanus*	*Discoaster asymmetricus*	*D. barbadiensis*	*D. berggrenii*	*D. bollii*	*D. brouweri*	*D. deflandrei*	*D. hamatus*	*D. neohamatus*	*D. pentaradiatus*	*D. quinqueramus*	*D. surculus*	*D. tamalis*	*D. tanii* s.l.	*D. triradiatus*	*D. variabilis*
late Pliocene	*Discoaster brouweri* CN12	*Calcidiscus macintyrei* CN12d	24-1, 80-82	C	M						C	F			F						F		C							C									C	
			24-2, 80-82	C	M						C	F			F						F		C		r					C									F	r
			24, CC	A	G						C	C			F						F		A							C				r					F	r
			25-1, 80-82	C	M						C	C			F						F		C		r					C									C	
		Discoaster pentaradiatus CN12c	25-2, 80-82	C	M						C	C			F						C		C		r	r				A				R					F	
			25-3, 80-82	C	M						C	C			F						F		A							A				F					F	
			25-4, 80-82	C	M						F	C			F						F		C							C				F					R	
			25-5, 80-82	C	M						C	C			F						F		C	r						C				F					R	r
			25-6, 80-82	C	M						C	C			F						F		A							C				F						r
			25, CC	A	M						C	C			F						C		A							C				C						
		Discoaster surculus CN12b	26-1, 79-81	C	M						A	C			F						F		A							C				A		F			R	r
			26-2, 79-81	C	M						C	C			F						F		A							C				C		C			R	
			26-3, 79-81	C	M						C	F			F						F		V							C				C		C				
			26, CC	A	M						C	C			F						F		A							C				C		C			F	
		Discoaster tamalis CN12a	27-1, 80-82	C	M						C	C			F						F		A			F				C				C		C	F		F	
			27-2, 80-82	C	M						C	C			F						F		A			F				A				A		C	C		F	F
			27-3, 80-82	C	M						C	C			F						F		A			F				C				A		C	F		F	R
			27-4, 80-82	C	M						C	C			F						F		A			R				C				C		C	F		F	F
			27, CC	A	M						C	A			F						C		A			F				A				A		C	C		F	
			28-1, 62-64	C	M						C	C			F						F		A			F				C				A		C	F		R	F
			28-2, 62-64	C	P						C	C			F						F		A			F				C				C		F	F		R	F
			28-3, 62-64	C	P						C	F			R						F		A			F				C				C		C	F		F	F
			28-4, 62-64	C	M						C	C			F						F		A		r	F				C				C		F	C		F	F
			28-5, 62-64	C	M						C	C			R						F		A			F				C				C		C	F		F	F
			28-6, 62-64	C	M						C	C			R						F		A			F				C				C		C	C		F	F
			28, CC	A	G						C	C			F	R					F		C			C				A				A		C	C		F	F
			29-1, 80-82	C	M						C	C			F	R					F		A			C				C				C		C	C		F	F
			29-2, 80-82	C	G						C	C			F						F		A			F				C				C		C	C		F	F
			29-3, 80-82	C	M						C	C			F						F		A			C				C				C		C	C		F	F
early Pliocene	*Reticulofenestra pseudoumbilica*	*Discoaster asymmetricus* CN11b	29, CC	A	M						C	C			F						F		A		r	C				C				C		C	C		C	F
			30-1, 79-81	C	M						C	C			F						F		A			C				C				C		C	F		F	F
			30-2, 79-81	C	M						C	C			R						F		C			C				C				C		F			F	F
			30-3, 97-81	C	P						F	C			F						F		A			C				C				C		F			F	C
			30-4, 79-81	C	M						C	C			F	R					F		A			C				C				C		C	F		C	F
			30-5, 79-81	C	M						C	C			F	R					F		A			C				C				C		C	F		F	C
			30-6, 76-78	C	M						C	C			F						F		A			C				C				C		C			F	F
			30, CC	A	M						C	C			R						F		A			C				A				C		C			F	C
		Sphenolithus neoabies CN11a	31-1, 80-82	C	M						C	C			F						F		C			R				C				C		F	R		F	F
			31, CC	C	M						C	C			F	R					F		C			F				C				C		F	R		F	F
			32-1, 96-98	C	M						C	F			F						F		C							C				C		F	R		F	F
			32-2, 96-98	C	M						C	C			F								A		r	R				C				C		F			F	F
			32-3, 96-98	C	M						C	C			F						R		A							C				C		C			F	C
			32-4, 96-98	C	P						C	F			F						R		C							C				C		F				F
			32-5, 96-98	B																																				
			32-6, 96-98	C	M						F	F			F						R		C							C				C		F				F
			32, CC	A	M						A	A			F	R					F		A			R				C				C		C			F	C
			33-1, 79-81	C	M						C	C			R								C							C				C		F				F
			33-2, 85-87	C	M						C	C			F						F		C							C				C		C			F	F
			33, CC	A	M						C	C			F						F		A		r					A				A		C			F	C
	Amaurolithus tricorniculatus CN10	*Ceratolithus rugosus* CN10c	34-1, 79-81	C	M				R		C	C			F						F		A							C				C		C			F	F
			34-2, 79-81	C	M				F		C	C			F						F		A			R				C				C		C			F	F
			34-3, 79-81	C	M				F		C	C			F								A			R				C				C		F			F	F
			34-4, 79-81	C	P				F		F	F			F						R		F							C				C		C			F	C
			34-5, 79-81	C	M		F		F		F	C			F								C							C				C		F			F	C
			34-6, 79-81	C	P		R		F		F	C											C							C				C		C			F	C
			34, CC																																					
			35-1, 77-79	C	M		R		F		F	F											F			R				C				C		C			F	C
			35-2, 79-81	C	M		R		F		C	C											C							C				C		C			F	C
			35-3, 79-81	C	M		R	R	F		F	F			R						R		F			R				C				C		C			F	C
			35-4, 79-81	C	M		R		F		F	F			R						F		F							C				C		C			F	C
			35-5, 79-81	C	P		R	R	F		F	F											F							C				C		C			R	C
			35-6, 79-81	C	P		R	R	F		C	C									R									C				C		C			F	C
		Ceratolithus acutus CN10b	35, CC	C	M		F	F	F		C	C	R								F		F							C				A		C			F	C
			36-1, 90-92	C	M		F	F	R		C	F	R								C									C				C		C			F	A
			36-2, 90-92	C	M		F	F			F	R	R								A									C				C		C			F	A
			36-3, 90-92	C	M		F	F			C	F	R								C									C				C		C			F	C
			36-4, 90-92	B																																				
			36-5, 90-92	C	M		F	F			C	F	R								C									C				C		C			F	C
			36-6, 90-92	C	P			R			F	F	R								C									C				C		F			R	C
			36, CC	C	M		F	F			F	F	R								C									C				C		C				A
			37-1, 79-81	C	M		F	F			C	F	R								C									A				A		C			F	A
late Miocene		*T. rugosus* CN10a	37-2, 79-81	C	M		F	F			F	F									C									A				C		C			F	A
			37-3, 79-81	C	M		F	F			C	C									C									C				C		C			F	C
			37, CC	C	M		C	C			F	F									C					R				C				C		C			F	C
	Discoaster quinqueramus CN9	*Amaurolithus primus* CN9b	38-1, 78-81	C	P		F	F			R										F									C				F	F	C			F	C
			38-2, 78-81	C	P		F	F			R										F									C				C	C	C			F	C
			38-3, 77-80	C	P	R	F	F			F	F									F									F				C	C	C			F	C
			38, CC	C	P		R																							C				C	C	F			F	C
			39, CC	C	P	R	R	R													R									C				C	C	F			F	A
			40-1, 80-82	B																																				
			40-2, 80-82	C	P																									F					F	F				C
			40-3, 80-82	B																																				
			40-4, 80-82	C	P			R													R									C				C	C	C			R	C
			40, CC	C	P		R	R			F	F									F									C				F	C	C			F	C
			41-1, 56-68	C	P			R																						F					F	F			R	C
			41-2, 56-58	C	P			R																						F					F	F			R	C
			41-3, 56-58	C	P	R																								F					F					C
			41-4, 56-58	B																																				
			41-5, 56-58	C	P		F	F			F	F									F									F				F	C	C			F	A
			41-6, 56-58	C	P		R	F			F	F									C									C				F	C	C			F	C
			41, CC	C	P		F	F			F	F									C									C				C	C	C			F	A
			42-1, 79-81	F	P		R				R	R									R									F				F	F	F				C
			42-2, 76-78	F	P	R																								F				F	C	F			F	A
			42-3, 79-81	F	P																									F				R	F	F				C
			42-4, 79-81	F	P	R	R														R									F				R	F	F				C
			42-5, 79-81	F	P		R														R									F					F	R				C
			42-6, 98-100	C	P		R	R			F	F									F									F				F	F	F			F	C
			42, CC	F	P			R																						C				F	C	C			F	A
	Indeterminate		43-1, 79-81	B																																				
			43-2, 74-76	B																																				
			43-3, 79-81	B																																				
			43-4, 79-81	B																																				
			43, CC	B																																				
			44-1, 76-78	B																																				
			44-2, 81-83	B																																				
			44-3, 78-80	B																																				
			44-4, 78-80	B																																				
			44-5, 77-79	B																																				
			44, CC	B																																				
			45-2, 81-83																																					
			45-3, 81-83	B																																				
			45, CC	B																																				
			46-1, 74-77	B																																				
			46-2, 74-77	B																																				
			46-3, 74-77	B																																				
late Miocene	*Discoaster quinqueramus* CN9	*Discoaster berggrenii* CN9a	46-4, 77-80	F	P																							R		F					R					F
			46-5, 7-9	C	P																							F		C				F	F					A
			46, CC	C	M						F	F									C							A		C				F	C				F	A
	Indeterminate		47-1, 80-82	B																																				
			47-2, 80-82	B																																				
			47-3, 80-82	B																																				
			47-4, 80-82	B																																				
			47-5, 80-82	B																																				
			47-6, 80-82	B																																				
late Miocene	*Discoaster hamatus* CN7		47, CC	F	P						F	F									C									C		R	F	F					F	A
			48-1, 80-82	F	P							F									F								F	F		R	F	F					R	F
			48-2, 80-82	C	P						F	F									C								F	C		F	C	F					F	C
	Indeterminate		48-3, 80-82	B																														R						
			48-4, 80-82	B																																				
			48-5, 80-82	B																																				
			48-6, 80-82	F	P							F									R								F	F			F	R						C
			48, CC	B																																				
			49-1, 79-81	B																																				
			49-2, 80-82	B																																				
			49-3, 82-84	B																																				
			49, CC	B																																				
			50-1, 80-82	B																																				
			50-2, 80-82	B																																				
			50-3, 80-82	B																																				
			50-4, 80-82	B																																				
			50-5, 80-82	B																																				
			50-6, 80-82	B																																				
			50, CC	B																																				
			51-1, 81-83	B																																				
			51-2, 81-83	B																																				
			51-4, 81-83	B																																				
			51-5, 81-83	B																																				
			51-6, 81-83	B																																				
			51, CC	B																																				
			52-1, 79-82	B																																				
			52-2, 79-82	B																																				
			52-3, 79-82	B																																				
			52-4, 79-82	B																																				
			52, CC	B																																				
			53, CC	B																																				
			54-1, 80-82	B																																				
			54-2, 80-82	B																																				
			54-3, 80-82	B																																				
			54-4, 80-82	B																																				
			54-5, 80-82	B																																				
			54-6, 80-82	B																																				
			54, CC	B																																				
			55-1, 80-82	B																																				
			55-2, 80-82	B																																				
			55-3, 80-82	B																																				
			55-4, 80-82	B																																				
			55-5, 80-82	B																																				
			55-6, 80-82	B																																				
			55, CC	B																																				
			56-1, 76-81	B																																				

Core-section, (interval in cm)	*Gephyrocapsa caribbeanica*	*G. oceanica*	Small gephyrocapsids	*Hayaster perplexus*	*Helicosphaera*	*H. compacta*	*H. recta*	*H. sellii*	*Micrantholithus*	*Pontosphaera*	*P. japonica*	*Pseudoemiliania*	*Reticulofenestra*	*R. hillae*	*R. pseudoumbilica*	*R. umbilica*	*Rhabdosphaera*	*Scapholithus*	*Scyphosphaera*	*Sphenolithus*	*S. ciperoensis*	*S. distentus*	*S. moriformis*	*S. predistentus*	*S. pseudoradians*	*Thoracosphaera*	*Triquetrorhabdulus carinatus*	*T. rugosus*	*Umbilicosphaera*	*Zeugrhablithus*
24-1, 80-82		F	R		C			F		F		A					A		F							F			C	
24-2, 80-82					C							A					C		F							F			F	
24, CC					C			F		C	R	A					A	R	A	r						C			C	
25-1, 80-82					C			R				A					A		C							F			C	
25-2, 80-82			R		C			F		F		A					A		F							R			C	
25-3, 80-82					C			F				A					A		F							R			F	
25-4, 80-82					F			F				C					C									F			C	
25-5, 80-82					F			F				A					C		F							F			C	
25-6, 80-82					C			F				A					A		F							F			C	
25, CC					C			F		F		A					A		C							F			F	
26-1, 79-81					C			F		R		A					C		C							F			C	
26-2, 79-81					C			F		R		A					C		C							F			F	
26-3, 79-81					F			F				C					C									F			F	
26, CC				R	C			F		F	R	A					C		C							C			F	
27-1, 80-82					C			F		F		A					C		F							C			F	
27-2, 80-82					C			F				C					C		F							F			F	
27-3, 80-82					C			F		F	R	C					C		C							F				
27-4, 80-82					C			F		F		A					C		C							F				
27, CC					C			R		F	R	A					C		C							C				
28-1, 62-64					C			F		F	R	A					C		F							F				
28-2, 62-64					C					F		C					C		F							F				
28-3, 62-64					C			R		F		A					C		F							F				
28-4, 62-64					C					F		A					C		F							F				
28-5, 62-64					C			R		F		A					C		C							F				
28-6, 62-64					C					F		A					C		F							F				
28, CC				R	C					F	R	A					A	R	C							C				
29-1, 80-82					C					F		A					C		F							C				
29-2, 80-82					C					F		A					C		F							F				
29-3, 80-82				R	C					F		A					C		C							F				
29, CC					C					F		A			R		C			R						F			F	
30-1, 79-81					C					F		A			R		C		F	C						F			A	
30-2, 79-81					C							A			R		C			C						F				
30-3, 97-81					F							A			R		C		F	C						F				
30-4, 79-81				R	C							A			R		C		F	C						F				
30-5, 79-81					F					F		A			F		F		F	A						F				
30-6, 76-78					F							A			C		R			C						F				
30, CC					F							A			C		F		F	C						F				
31-1, 80-82					F					F	R	A			C		C		F	A						F				
31, CC					C					F		C			C		A		F	A						F				
32-1, 96-98					F							C			C		F		F	C						F				
32-2, 96-98					F						R	C			C		F		F	A						F				
32-3, 96-98					F							C			C		C		F	C						F				
32-4, 96-98					F					R		F			C					C						F				
32-6, 96-98					F							C			F		F		F	C						F				
32, CC					C					R		F			C		C		F	A						C				
33-1, 79-81					F										F		C			C						F				
33-2, 85-87					F										F		F		F	C						F				
33, CC					F										C		C		F	A						F				
34-1, 79-81					F										C		C			C						F			F	
34-2, 79-81					C										C		F		F	A						F				
34-3, 79-81					C										C		C		F	C						F			R	
34-4, 79-81					R										C					C						F				
34-5, 79-81					R										C		F			C						F				
34-6, 79-81															C					F						R				
35-1, 77-79															C		F			F										
35-2, 79-81					R										C		F			F						F				
35-3, 79-81															C					F						F				
35-4, 79-81															C					R										
35-5, 79-81															C					F						F				
35-6, 79-81															C					F						F				
35, CC															C		F			F						F				
36-1, 90-92															C		F			F						F				
36-2, 90-92															C		F			F								R		
36-3, 90-92					R										C		F			F						F		R		
36-5, 90-92															F		F			F								F		
36-6, 90-92															F					F								F		
36, CC															C					F						R		F		
37-1, 79-81															C		C			A						F		F		
37-2, 79-81															C		F			C						F		F		
37-3, 79-81															C		F			C						F		F		
37, CC															C		F			C								C		
38-1, 78-81															F					F								R		
38-2, 78-81															F					F								F		
38-3, 77-80															C					F						F		F		
38, CC															F											R		F		
39, CC																										R		F		
40-4, 80-82															F															
40, CC															C					F										
41-5, 56-58														F														F		
41-6, 56-58																	F									F		C		
41, CC															C					F								C		
42-3, 79-81													r		R															
42-4, 79-81															R															
42-6, 98-100															F					F								F		
46, CC															R					C						F		F		
47, CC															F													F		
48-1, 80-82															F					C								C		
48-2, 80-82															C															
48-6, 80-82															R															

Table 1 (continued).

| Age | Zone | Subzone | Core-section, (interval in cm) | Abundance | Preservation | *Amaurolithus c* | *A. delicatus* | *A. primus* | *A. tricorniculatus* | *Braarudosphaera* spp. | *Calcidiscus* | *C. macintyrei* | *Ceratolithus* | *C. armatus* | *C. cristatus* | *C. rugosus* | *Classicoccus* | *Coccolithus* | *C. formosus* | *C. miopelagicus* | *C. pelagicus* | *Coronocyclus* | *Crenalithus* | *Cyclicargolithus* | *C. floridanus* | *Discoaster asymmetricus* | *D. barbadiensis* | *D. berggrenii* | *D. bollii* | *D. brouweri* | *D. deflandrei* | *D. hamatus* | *D. neohamatus* | *D. pentaradiatus* | *D. quinqueramus* | *D. surculus* | *D. tamalis* | *D. tani* sl. | *D. triradiatus* | *D. variabilis* | *Gephyrocapsa caribbeanica* | *G. oceanica* | *Small gephyrocapsids* | *Hayaster perplexus* | *Helicosphaera* | *H. compacta* | *H. recta* | *H. sellii* | *Marcinhollithus* | *Pontosphaera* | *P. japonica* | *Pseudoemiliania* | *Reticulofenestra* | *R. hillae* | *R. pseudoumbilica* | *R. umbilica* | *Rhabdosphaera* | *Scapholithus* | *Scyphosphaera* | *Sphenolithus* | *S. ciperoensis* | *S. distentus* | *S. morjformis* | *S. predistentus* | *S. pseudoradians* | *Thoracosphaera* | *Triquetrorhabdulus carinatus* | *T. rugosus* | *Umbilicosphaera* | *Zygrhablithus* |
|---|---|---

Table 2. Distribution of nannofossil species in Hole 672A. R = rare; F = few; C = common; A = abundant; V = very abundant. Lower case letters represent individual abundances of reworked species.

Hole 672A

Age	Zone	Subzone	Core-section, interval in cm	Abundance	Preservation	Amaurolithus delicatus	A. primus	A. tricorniculatus	Braarudosphaera spp.	Calcidiscus leptoporus	C. macintyrei	Campylosphaera dela	Ceratolithus acutus	C. armatus	C. cristatus	C. rugosus	Chiasmolithus grandis	C. solitus	C. titus	Clausicoccus fenestratus	Coccolithus eopelagicus	C. formosus	C. pelagicus	Coronocyclus nitescens	Crenalithus doronicoides	Cribrocentrum reticulatum	Cyclicargolithus abisectus	C. floridanus
early Pliocene	*Pseudoemiliania lacunosa*		1-1, 71-73	C	M					C					C								F		C			r
			1-2, 71-73	C	M					C					C										C			r
			1, CC	C	M					A					F								F		C			r
			2-1, 81-83	F	P					F					R								R		F			
			2-2, 81-83	C	M					C					F								F		A			r
			2-3, 81-83	A	G					C					F								R		C			r
			2-4, 81-83	C	M					C					F								R		C			r
			2-5, 81-83	C	G					C					F								F		F			r
			2-6, 81-83	A	G					C					F										C			
			2, CC																									
			3-1, 99-101	A	G					A					F								F		C			
			3-2, 99-101	C	G					C					F										C			r
			3-3, 99-101	A	G					C					F										A			
			3-4, 99-101	C	G					A					F								R		A			r
			3-5, 99-101	A	G					C					F								F		A			r
			3-6, 99-101	A	G					A					F								F		A			r
			3, CC	A	G					A					F								C		F			r
			4-1, 79-81	C	G					C					F								R		C			r
			4-2, 79-81	C	M					A					F								R		A			
			4-3, 79-81	A	G					C					F								F		A			
			4-4, 79-81	A	G					C					C										A			
			4-5, 79-81	A	G					A	r				F								F		A			r
			4-6, 9-81	A	G					A					F										A			r
			4, CC	A	M				R	C					F								F		A			r
	Calcidiscus macintyrei		5-1, 80-82	A	M					C	C				F								F		A			
			5-2, 80-82	A	G					C	C				F								F		A			
			5-3, 80-82	A	G					C	C				C								C		A			
		Calcidiscus macintyrei Subzone CN12d	5-4, 80-82	C	G					C	C				F								R		A			r
			5-5, 68-70	C	G					C	C				C								F		A			
			5-5, 80-82	A	G					A	C				F								F		A			
			5-6, 80-82	C	G					C	C				F								F		A			
			5, CC	C	G					C	C				C								C		A			
			6-1, 98-100	C	G					A	C				C								C		A			
			6-2, 98-100	A	G					A	C				F								F		A			
			6-3, 98-100	A	M					A	C				F								F		A			
		Discoaster pentaradiatus CN12c	6-4, 98-100	A	M					C	A				C								C		A			r
			6-5, 98-100	A	G					C	C				C								C		A			
			6-6, 98-100	C	M					C	C				F								F		A			r
		Discoaster surculus CN12b	6, CC	C	M					C	C				F								R		C			
			7-1, 80-82	A	M					C	A				C								F		A			
			7-2, 80-82	A	M					C	C				C								F		V			
			7-3, 80-82	A	M					A	C				C								F		A			
	Discoaster brouweri	*Discoaster tamalis* CN12a	7-4, 80-82	A	G					C	C				F								C		V			
			7-5, 80-82	C	M					C	C				F								F		A			
			7-6, 80-82	A	G					A	C				C								F		A			
			7-7, 14-16	A	G					A	A				C								F		A			
			7, CC	A	G					A	A				F								F		A			
			8-1, 79-81	A	G					C	C				F								F		A			
			8-2, 79-81	A	G					C	C				F								C		A			
			8-3, 79-81	A	M					C	C				C								C		A			
			8-4, 79-81	A	G					A	C				C								C		A			
			8-5, 79-81	A	M					A	C				F								C		A			
			8-6, 79-81	A	G					C	C				C								F		A			
			8, CC	A	M					A	C				F								F		A			
			9-1, 80-82	A	G					A	C				C								F		A			
			9-2, 80-82	A	G					A	C				F								F		A			r
			9-4, 80-82	A	G					C	C				C								F		A			r
			9-5, 80-82	A	G					C	C				F								F		A			
			9-6, 80-82	A	M					A	C				F								F		A			
			9, CC	C	G					A	C				F								F		A			
			10-1, 80-82	C	G					A	C				F								F		A			
			10-2, 80-82	A	G					A	C				F								F		A			r
			10-3, 80-82	A	M					C	C				C								F		A			
	Reticulofenestra pseudoumbilica CN11	*Discoaster asymmetricus* CN11b	10-4, 80-82	A	M					A	C				F								F		A			
			10-5, 80-82	A	G					A	A				C								C		A			
			10-6, 80-82	A	G					A	C				C								F		A			
			10, CC	A	M					A	C				F								F		A			
			11-1, 76-78	A	M					A	C				F								F		A			
		Sphenolithus CN11a	11-2, 76-78	A	M					A	C				C								C		A			
			11-3, 76-78	A	M					A	C				F								F		A			
			11-4, 76-78	A	M					C	C				C								F		A			
			11-5, 76-78	A	M	R				A	C			R	F	R							F		A			
			11-6, 76-78	A	M					A	C			R	C								F		A			
			11, CC	A	G					A	C			R	C								F		A			
			12-1, 82-84	A	G	R	R			A	C				F										A			
	Amaurolithus tricorniculatus CN10	*Ceratolithus rugosus* CN10c	12-2, 82-84	A	M	R		F		A	C				C								F		A			
			12-3, 82-84	C	M	R	R	F		C	C				F										A			
			12-4, 82-84	A	G	F	F	F		A	C				C								R		A			
			12-5, 82-84	C	P	F	F	F		C	C				F										C			
		Ceratolithus acutus CN10b	12-6, 82-84	C	P	R	R			F			R															
			12, CC	C	M	F	F			C	C		F										F		C			
			13-1, 97-99	C	M	F	C			C	C		R										C		C			
			13-2, 87-89	C	M	F	F			C	C		R										C		C			
		T. rugosus CN10a	13-3, 97-99	C	M	F	C			C	C												C					
	Discoaster quinqueramus CN9	*Amaurolithus primus* CN9b	13-4, 97-99	C	M		C			F													C					
			13, CC	C	M		F			F	R												C					
			14-1, 71-73	C	P	R	R			R													R					
			14-3, 71-73	C	M	R	F			C	R												C					
			14-4, 54-56	C	P	F	F			F	R												C					
			14-5, 71-73	C	P	R	R			R																		
			14, CC	B																								
			15-1, 70-72	F	P																							
			15-2, 70-72	F	P		R																					
	Indeterminate		15-3, 70-72	B																								
			15-4, 70-72	B																								
			15, CC	B																								
			16, CC	B																								
			17-1, 110-112	B																								
			17-2, 110-112	B																								
Miocene	*Discoaster quinqueramus* CN9	*Discoaster berggrenii* CN9a	17-3, 110-112	F	P																							
			17-4, 53-55	F	P																							
			17, CC	F	P																							
			18-3, 107-109	F	P																F					
			18-4, 39-41	C	P					F	R												C					
	Discoaster hamatus CN7		18-4, 50-52	C	P																							
			18, CC	F	P					R	R												F					
	Indeterminate		19-1, 79-81	B																								
			19-2, 78-81	B																								
			19-3, 78-81	B																								
			19-4, 78-81	B																								
			19-5, 78-81	B																								
			19, CC	B																								
			20-1, 100-102	B																								
			20-2, 99-101	B																								
			20-3, 91-93	B																								
			20, CC	B																								
			21-1, 80-82	B																								
			21-2, 80-82	B																								
			21-3, 80-82	B																								
			21-4, 80-82	B																								
			21, CC	B																								
			22-1, 78-80	B																								
			22-2, 78-80	B																								
			22-3, 78-80	B																								
			22-4, 78-80	B																								
			22-5, 78-80	B																								
			22, CC	B																								
			23-1, 80-82	B																								
			23-2, 80-82	B																								
			23-3, 80-82	B																								
			23-4, 80-82	B																								
			23-5, 80-82	B																								
			23-6, 80-82	B																								
			23, CC	B																								
			24-1, 83-85	B																								
			24-2, 83-85	B																								
			24-3, 83-85	B																								
			24-4, 83-85	B																								
			24-5, 83-85	B																								
			24-6, 83-85	B																								
			24, CC	B																								
			25-1, 90-92	B																								
			25-2, 90-92	B																								
			25-3, 90-92	B																								
			25, CC	B																								

Table 2 (continued).

Core-section, interval in cm	Discoaster asymmetricus	D. barbadiensis	D. berggrenii	D. bollii	D. brouweri	D. deflandrei	D. hamatus	D. neohamatus	D. pentaradiatus	D. quinqueramus	D. siparensis	D. surculus	D. tamalis	D. tanii s.l.	D. triradiatus	D. variabilis	Gephyrocapsa caribbeanica	G. oceanica	Small gephyrocapsids	Hayaster perplexus	Helicosphaera carteri	H. compacta	H. recta	H. reticulata
1-1, 71-73									r			r						A	A		F			
1-2, 71-73																		A	A		F			
1, CC									r							r		A	C		C			
2-1, 81-83																		A			R			
2-2, 81-83																	F	A	F		F			
2-3, 81-83																	C	V	A		F			
2-4, 81-83									r									A	A		F			
2-5, 81-83									r								C	A	A		F			
2-6, 81-83									r								C	A	A		F			
2, CC																								
3-1, 99-101																		A	A		F			
3-2, 99-101																		A	A		F			
3-3, 99-101																		F	V		F			
3-4, 99-101																		F	V		R			
3-5, 99-101																		F	V		F			
3-6, 99-101																	C	A	V		F			
3, CC																	C	A	V		F			
4-1, 79-81																		A	V		F			
4-2, 79-81					r													A	A		F			
4-3, 79-81																		A	A		F			
4-4, 79-81									r									C	V		F			
4-5, 79-81																			V		F			
4-6, 9-81																		F	V		F			
4, CC																	F	C	A		F			
5-1, 80-82																			A		C			
5-2, 80-82																			A		C			
5-3, 80-82																		F	A		F			
5-4, 80-82					F										F	r		F	f		C			
5-5, 68-70					A										C			R	R		C			
5-5, 80-82					A										C						C			
5-6, 80-82					C										F						C			
5, CC					C										F			R			C			
6-1, 98-100					A				r				r		C			R			A			
6-2, 98-100	r				A				r			r			C						A			
6-3, 98-100	r				A				r						C			F			A			
6-4, 98-100					A				F						C	r					C			
6-5, 98-100					A				A						F						C			
6-6, 98-100					F				C						F						A			
6, CC					F				C			C			R	f					C			
7-1, 80-82	R				C				A			A			C						C			
7-2, 80-82					C				A			C			F	r					C			
7-3, 80-82	R				C				A			C			F						A			
7-4, 80-82	R				A				A			C	F			F					A			
7-5, 80-82	R				C				C			C	F								C			
7-6, 80-82	F				C				A			C	C			R					A			
7-7, 14-16	C				A				A			C	C		F						A			
7, CC	C				C				A			C	F		F						A			
8-1, 79-81	C				C				A			C	C		C						A			
8-2, 79-81	C				A				A			C	C		F	F					C			
8-3, 79-81	C				A				A			C	C		F	F					A			
8-4, 79-81	C				C				A			C	C		F	C					C			
8-5, 79-81	C				C				A			C	C		F	C					A			
8-6, 79-81	C				A				A			A	C		F	C					C			
8, CC	A				C				A			C	A		C	F					F			
9-1, 80-82	C				C				A			C	C		F	F					C			
9-2, 80-82	C				C				A			C	C		F	F					A			
9-4, 80-82	A				C				A			C	C		F	C					A			
9-5, 80-82	C				C				A			C	C		F	F					C			
9-6, 80-82	C				C				A			C	C		F	C				R	C			
9, CC	A				C				A			C	C		C	F					C			
10-1, 80-82	C				C				A			C	C		F	C					C			
10-2, 80-82	C				A				A			C	C		F	F					C			
10-3, 80-82	C				A				A			C	C		C	C					C			
10-4, 80-82	C				C				A			C	C		F	C					C			
10-5, 80-82	C				A				A			C	F		C	C					C			
10-6, 80-82	C				A				A			C	F		C	C					C			
10, CC	C				A				A			C	F		F	F				R	C			
11-1, 76-78	C				A				A			C	R		C	C					C			
11-2, 76-78	F				A				A			C	F		F	C					C			
11-3, 76-78	F				C				A			C			F	C					F			
11-4, 76-78	F				A				A			C			F	C					C			
11-5, 76-78	R				C				A			C			F	C				R	C			
11-6, 76-78	F			r	C				A			C			F	C					F			
11, CC	F				C				A			A	R		F	C					C			
12-1, 82-84	F				C				A			C			C	C				R	C			
12-2, 82-84	F				C				A			C			C	C					F			
12-3, 82-84	R				C				A			C			F	C								
12-4, 82-84	R				A				A			C			F	C								
12-5, 82-84	F				C				A			C			R	C								
12-6, 82-84					C				C			C			F									
12, CC	R				A				A			A			C	C								
13-1, 97-99	F				C				A			A	R		F	C								
13-2, 87-89	R				C				C			C			F	C								
13-3, 97-99					C				C			C			F	A								
13-4, 97-99					C				C	C		C			R	A								
13, CC					C				C	C		C			F	A								
14-1, 71-73					C				C	F		F			F	A								
14-3, 71-73	R				C				C	C		A			C	A								
14-4, 54-56					C				C	C		C			C	A								
14-5, 71-73					C				C	F		C			F	A								
14, CC																								
15-1, 70-72												R				F								
15-2, 70-72			F		F				F	F		F				C								
15-3, 70-72																								
15-4, 70-72																								
15, CC																								
16, CC																								
17-1, 110-112																								
17-2, 110-112																								
17-3, 110-112			C		C				F							A								
17-4, 53-55			C		C				F							A								
17, CC			C		C			F	F						F	A								
18-3, 107-109			F		F			R	C						F	A								
18-4, 39-41			A		C			F	C						F	A								
18-4, 50-52					F		R	C	C						F	C								
18, CC					F		R	F	C						F	C								
19-1, 79-81																								
19-2, 78-81																								
19-3, 78-81																								
19-4, 78-81																								
19-5, 78-81																								
19, CC																								
20-1, 100-102																								
20-2, 99-101																								
20-3, 91-93																								
20, CC																								
21-1, 80-82																								
21-2, 80-82																								
21-3, 80-82																								
21-4, 80-82																								
21, CC																								
22-1, 78-80																								
22-2, 78-80																								
22-3, 78-80																								
22-4, 78-80																								
22-5, 78-80																								
22, CC																								
23-1, 80-82																								
23-2, 80-82																								
23-3, 80-82																								
23-4, 80-82																								
23-5, 80-82																								
23-6, 80-82																								
23, CC																								
24-1, 83-85																								
24-2, 83-85																								
24-3, 83-85																								
24-4, 83-85																								
24-5, 83-85																								
24-6, 83-85																								
24, CC																								
25-1, 90-92																								
25-2, 90-92																								
25-3, 90-92																								
25, CC																								

Table 2 (continued).

Core-section, interval in cm	H. sellii	Micrantholithus flos	Pontosphaera spp.	P. japonica	Pseudoemiliania lacunosa	Reticulofenestra bisecta	R. pseudoumbilica	R. umbilica	Rhabdosphaera clavigera	Scapholithus fossilis	Scyphosphaera spp.	S. abies	S. ciperoensis	S. distentus	S. moriformis	S. predistentus	S. pseudoradians	Thoracosphaera spp.	Triquetrorhabdulus carinatus	T. rugosus	Umbilicosphaera sibogae	Zygrhablithus bijugatus
1-1, 71-73					R				C	R	C	r						F			C	
1-2, 71-73			R		R				C		C							C			C	
1, CC					F				C		F	r						F			C	
2-1, 81-83					R													F			F	
2-2, 81-83					F				C	R	F							F			C	
2-3, 81-83			R		A				C	R	F				r			F			C	
2-4, 81-83					A				C		C	r						F			C	
2-5, 81-83			F		A				C	R	C	r						F			C	
2-6, 81-83			F	R	A				C		C	r						C			C	
2, CC																						
3-1, 99-101			C	F	A				A	F	C	r						F			C	
3-2, 99-101					A				A	R	C	r						F			C	
3-3, 99-101			F		A				A	F	C							F			A	
3-4, 99-101			F		V				A		C	r						C			C	
3-5, 99-101			F	F	V				A	F	C							C			C	
3-6, 99-101			C	F	A				A	R	C	r						C			A	
3, CC			C	F	A				A	F	A	r						C			A	
4-1, 79-81			F	F	A				C	R	C							F			C	
4-2, 79-81			F		A				F		F							F			F	
4-3, 79-81			R		A				A	R	A							F			C	
4-4, 79-81			F	R	A				A	F	A	r						F			C	
4-5, 79-81			C	R	V				A	F	A							F			A	
4-6, 9-81			C	F	V				A	F	C							C			A	
4, CC			F	R	A				A		A							C			C	
5-1, 80-82	F		C	F	A				A	F	A							C			C	
5-2, 80-82	F		C		A				A	R	C							C			C	
5-3, 80-82	F		C	R	A				A	F	A							C			A	
5-4, 80-82	F		C		A				C	R	C							C			C	
5-5, 68-70	F		F		A				A		A							C			C	
5-5, 80-82	F		F		A				A	R	A	r						C			C	
5-6, 80-82	F		F		A				A	R	A							C			C	
5, CC	F		F	R	A				A		C							C			C	
6-1, 98-100	F		F		A				A	F	A							F			A	
6-2, 98-100	F		C	R	A				A	F	A							C			A	
6-3, 98-100	F		C	R	A				A	R	C							F			A	
6-4, 98-100	F				A				A		C							F			A	
6-5, 98-100	F		C	F	A				A	R	A							C			A	
6-6, 98-100	F		F	R	C				A		A							F			C	
6, CC	F		R		C				C		C							F			F	
7-1, 80-82	F				C				A		A							F			C	
7-2, 80-82	F		F		C				A		A							C			F	
7-3, 80-82	F		F		A				A		A							C			F	
7-4, 80-82	F		F		A				A		A							C			F	
7-5, 80-82	F				C				A		F							C				
7-6, 80-82	F		F	R	A				A		A							C				
7-7, 14-16	F		F		A				A		A							C				
7, CC	F		C	R	C				A	R	A							C				
8-1, 79-81	F		F		C				A		A							C				
8-2, 79-81	F		F		C				A		A							F				
8-3, 79-81	R		F		C				C		C							C			R	
8-4, 79-81	F		C		A				A		A							C				
8-5, 79-81	F		C	R	A				A		A							C				
8-6, 79-81	R		C		A				A		A							C				
8, CC	R				C				A		C							F				
9-1, 80-82	R		C	R	C				A		A							C				
9-2, 80-82	F		F		A				A		A							F				
9-4, 80-82	F		F		A				A		A							C				
9-5, 80-82	R		F		A				A		C							C				
9-6, 80-82	F		F		A				A	R	C	F						F				
9, CC	F				A				A		C	C						F				
10-1, 80-82	F		C		A				A	R	C	C						C			R	
10-2, 80-82	R		C	R	A				A	R	C	A						C			R	
10-3, 80-82	F		F		A				A		A	A						C				
10-4, 80-82	R		F		A		F		A		C	V						C				
10-5, 80-82			F		A		C		A		C	A						C				
10-6, 80-82					C		C		A		C	A						C				
10, CC			C		C		C		A		C	A						F				
11-1, 76-78			F		C		C		C		C	A						C				
11-2, 76-78			F		C		C		C		C	A						C				
11-3, 76-78			F		F		C		C		F	A						C				
11-4, 76-78			F				C		C		F	A						F				
11-5, 76-78			F		F		C		C		C	A						F				
11-6, 76-78			F		F		C		A		C	A						C				
11, CC							A		A		C	A						C				
12-1, 82-84			F				A		A		C	A						F				
12-2, 82-84			R				A		C		C	A						F				
12-3, 82-84							C					A						F				
12-4, 82-84							A		C		F	A						F				
12-5, 82-84							C					C										
12-6, 82-84																						
12, CC			R				C				F	A						F				
13-1, 97-99			R				C		C		F	A						F				
13-2, 87-89							F		F			A						R		R		
13-3, 97-99							C					A						R		F		
13-4, 97-99							F					R								F		
13, CC							F				R	C								F		
14-1, 71-73							F					F								R		
14-3, 71-73							C					A								F		
14-4, 54-56							F					F								F		
14-5, 71-73																						
14, CC																						
15-1, 70-72																						
15-2, 70-72																				R		
15-3, 70-72																						
15-4, 70-72																						
15, CC																						
16, CC																						
17-1, 110-112																						
17-2, 110-112																						
17-3, 110-112																						
17-4, 53-55																						
17, CC																						
18-3, 107-109																						
18-4, 39-41																						
18-4, 50-52																						
18, CC																						
19-1, 79-81																						
19-2, 78-81																						
19-3, 78-81																						
19-4, 78-81																						
19-5, 78-81																						
19, CC																						
20-1, 100-102																						
20-2, 99-101																						
20-3, 91-93																						
20, CC																						
21-1, 80-82																						
21-2, 80-82																						
21-3, 80-82																						
21-4, 80-82																						
21, CC																						
22-1, 78-80																						
22-2, 78-80																						
22-3, 78-80																						
22-4, 78-80																						
22-5, 78-80																						
22, CC																						
23-1, 80-82																						
23-2, 80-82																						
23-3, 80-82																						
23-4, 80-82																						
23-5, 80-82																						
23-6, 80-82																						
23, CC																						
24-1, 83-85																						
24-2, 83-85																						
24-3, 83-85																						
24-4, 83-85																						
24-5, 83-85																						
24-6, 83-85																						
24, CC																						
25-1, 90-92																						
25-2, 90-92																						
25-3, 90-92																						
25, CC																						

Table 2 (continued).

Age	Zone	Subzone	Core-section, interval in cm	Abundance	Preservation	*Amaurolithus delicatus*	*A. primus*	*A. tricorniculatus*	*Braarudosphaera* spp.	*Calcidiscus leptoporus*	*C. macintyrei*	*Campylosphaera dela*	*Ceratolithus acutus*	*C. armatus*	*C. cristatus*	*C. rugosus*	*Chiasmolithus grandis*	*C. solitus*	*C. titus*	*Clausicoccus fenestratus*	*Coccolithus eopelagicus*	*C. formosus*	*C. pelagicus*	*Coronocyclus nitescens*	*Crenalithus doronicoides*	*Cribrocentrum reticulatum*	*Cyclicargolithus abisectus*	*C. floridanus*	*Discoaster asymmetricus*	*D. barbadiensis*	*D. bergrenii*	*D. bollii*	*D. brouweri*	*D. deflandrei*	*D. hamatus*	*D. neohamatus*	*D. pentaradiatus*	*D. quinqueramus*	*D. sipanensis*	*D. surculus*	*D. tamalis*	*D. tanii* s.l.	*D. triradiatus*	*D. variabilis*	*Gephyrocapsa caribbeanica*	*G. oceanica*	Small gephyrocapsids	*Hayaster perplexus*	*Helicosphaera carteri*	*H. compacta*	*H. recta*	*H. reticulata*	*H. sellii*	*Micrantholithus flos*	*Pontosphaera* spp.	*P. japonica*	*Pseudoemiliania lacunosa*	*Reticulofenestra bisecta*	*R. pseudoumbilica*	*R. umbilica*	*Rhabdosphaera clavigera*	*Scapholithus fossilis*	*Scyphosphaera* spp.	*S. abies*	*S. ciperoensis*	*S. distentus*	*S. moriformis*	*S. predistentus*	*S. pseudoradians*	*Thoracosphaera* spp.	*Triquetrorhabdulus carinatus*	*T. rugosus*	*Umbilicosphaera sibogae*	*Zygrhablithus bijugatus*
late Oligocene	*Sphenolithus ciperoensis* CP19	*Dictyococcites bisectus* CP19b	26-1, 86-88	A	G															C	F		A	R			C	V						C					r												F				C			F		r					C		C			F	F			
			26-2, 98-100	A	G															C	F		A	F			C	V						C																	F				C			F							C		C			F	C			
			26-3, 98-100	A	M															F	F		A	F			C	A						C																	F				C			F							F		C			F	C			
			26-4, 98-100	F	P																		F				R	C						F																	F																F							
			26, CC	R	P																		R				R	F																											R																					
			27-1, 48-50	A	G															F	F		A	R			C	A						A																	F				F			F							C		C			F	C			R
			27-2, 48-50	B																																																																					
			27-3, 48-50	B																																																																					
			27-4, 48-50	B																																																																					
			27-5, 48-50	A	G															C	C		A	F			C	A						A																	F				C			F		r					C		C			F	C			R
			27-6, 48-50	R	P																							F																																													
			27, CC	B																																																																					
			28-1, 137-139	B																																																																					
			28-2, 137-139	C	M															F	C		A	F			C	A						C																	F				F			F							C		C			F	F			
			28-3, 137-139	B																																																																					
			28-4, 116-118	A	M															R	C		A	F			C	A						A																	F				F			F							C		C	r		C	R			
			28-5, 116-118	R	P																							F																																													
			28, CC	C	M															C	F		A	F			C	A						C																	F			R	C										C		C	r		F	F			R
early Oligocene	*Sphenolithus distentus* CP18		29-1, 85-87	A	M												r			F	F		A	F			C	A						A					r			R									F			F	C			R								C	A	C	R	F	F			R
			29-2, 85-87	A	M															C	F		A	F			C	A						C								F									F				F			F								C	A	C		F	F			
			29-3, 85-87	B																																																																					
			29-4, 85-87	B																																																																					
			29, CC	A	M															C	C		A	F			C	A						A																	F				C			F		r						C	C	C		F	R			R
			30-2, 77-79	A	M												r			F	C		A	F			A	A						A								F									F			F	F			F								C	A	C		C	F			
			30-3, 85-87	A	M															F	F		A	F			A	A						A								F								R	F				F			F								C	A	A		F	F			
			30-4, 141-143	A	M				F											F	C		A	F			A	A						A																	F				F			R								F	C	C	R	F				
			30-5, 100-102	C	M												r			F	C		A	F			A	A						A								R									F							F								C	C	C	R	F	R			
			30-6, 112-114	A	M															F	C		A	F			C	A						A								F									F				C			R								C	C	C		F	R			
			30, CC	R	P																		R					F																																														
			31-1, 73-75	A	M				R											F	C		A	F			A	A						A																R	F				C			R								F	C	C	R	F	R			R
			31-3, 39-41	A	M															F	F		A	F			A	A						A																	F				C			R								C	A	C		F				F
			31, CC	A	G															F	C		A	F			C	A						C																F	F				C			R								C	A	C		F	R			R
			32-2, 12-14	A	G															F	F		A	C			C	A						C																F	F				F											C	C	A	F	F	R			
			32-5, 53-55	A	M															C	F		A	F			C	A						C								R								R	F				F			R		r						C	C	C	F	F	R			
			32, CC	A	M																C		A	F			C	A						C																F	F				C											C	A	A		F				F
			33-1, 85-87	B																																																																				
			33-2, 85-87	B																																																																					
			33-3, 85-87	B																																																																					
			33-4, 85-87	A	M															C	C		A	F			F	A						C																R	F															F	C	F	R	F				
			33-5, 85-87	B																																																																					
			33, CC	B																																																																					
			34-1, 62-64	A	M				R											F	C		A	F			C	A						A								R								F	F				F											C	A	C		F				R
			34-2, 62-64	A	M				R											F	C		A				C	A						C								R								F	F			R	F			R		r						F	A	F	R	F				R
			34-3, 62-64	B																																																																					
			34-4, 62-64	B																																																																						
			34-5, 62-64	A	M															C	C		A	F			C	A						C								F								C	F				C			R								F	C	C		F				
			34, CC	A	M												r			C	C		A	F			F	V						A								F								F	F				C					r						F	C	C	R	F				R
			35-1, 141-143	A	M															F	F		A	F			F	A						C								R								F	F				C			R		r						F	A	C		R				F
			35-2, 141-143	B																																																																					
			35-3, 141-143	B																																																																						
			35-4, 141-143	A	M				R								f	r		F	C		A	F			F	V		r				C								C								C	F				F			F		f						R	A	C	F	F	R			F
			35-5, 141-143	C	M				R											C	F		A	F			F	A						F								C								F	F			R	C											F	C	C	R	F				F
			35-6, 121-123	C	M																C		A	R			F	A						C								C								R								C									C	F	R	F				
			35, CC	C	M				R											F	F		A	F			F	A						C								F								C	F				F											F	C	C	R	F				R
			36-1, 48-50	C	P															R	F		A				C	A						C								F								F	F			R	F			F		r						F	C	C	R	F				R
			36-3, 48-50	B																																																																					
			36-4, 48-50	F	P																						R	F																																													
			36-5, 48-50	C	M				R											F	F		A	F			C	A						C								F								C	C				F			F								F	A	C	F	F				R
			36-6, 48-50	C	P				F												F		A				C	A						C								R								F	F			R	F			F		r						R	C	C	R	F				
			36, CC	B																																																																					
			37-1, 67-69	C	M															F	F	r	A				F	A						C								R								C	R				F			F		r						R	A	C	R	F				R
	Indeterminate		37-2, 67-69	B																																																																					
			37-3, 67-69	B																																																																					
			37-4, 67-69	B																																																																					
			37-5, 67-69	B																																																																					
Olig.	*Helicosphaera reticulata* CP16		37-6, 67-69	C	P																F		A				F	A						C								F																F		F								F						
	Indeterminate		37, CC	B																																																																					
			38-1, 82-84	B																																																																					
			38-3, 82-84	B																																																																					
			38-4, 82-84	B																																																																					
			38, CC	B																																																																					
Eocene	*Discoaster barbadiensis* CP15		39-2, 26-28	C	P															F	F	C	A					A		R				F					R			F								F		F			F			C		C							C	F		F				R
			39-3, 26-28	B																																																																					
			39, CC	B																																																																					
			40-1, 102-104	C	P													r	R		C	C	A			F		A		F									F			F								F								C		C							F	R		F				
			40-2, 102-104	C	M																F	C	A			F		A		C				F					C			F								R		C			F			C		F							F		R	F				R
			40-3, 102-104	C	P																F	C	C			F		C		F				F					F			F								R					R			F		C													
			40-4, 102-104	C	P																F	C	A			C		A		F				F					F			R								R		F			F			C		C							F		R	F				
			40-5, 13-15	C	P														R	R	C	C	C	R		C		C		F									R			R								R		F			C			C		C							C		R	F				
middle Eocene	*Reticulofenestra umbilica* CP14	*Discoaster sipanensis* CP14b	40-6, 44-46	C	P							R					R				C	C	C			C		C		C				F					F													F			F			C		C							C			F				R
			40, CC	F	P				R								R	r				R	R					F																								R			R			R		F										F				
			41-1, 110-112	F	P																F	R	F					F																																F							F			F				
			41-2, 147-149	C	P												R		R		F	C	C			C		A		F				F					F			R								R		F			F			F		C							F	R	R	F				R
			41, CC	C	P																F	C	C			C		C																						F		R			R			F		C							C			F				
			42-1, 87-89	F	P																F	F	F			F		C		R																									R			F											F				
			42-2, 142-144	B																																																																					
			42-3, 137-139	F	P																F	C	C			C		C		R																				R							F		C							C							
			42, CC	C	P												R	r	R		F	F	C			C				R									F											F					R			F		C							F	R		F				R
			43-2, 76-78	B																																																																					
			43-3, 76-78	F	P												R				F	C	F			F		F		R									R											F					R					F							R			F				
			43-4, 76-78	C	P																C	C	C			C		A		F									F											C					F			F		C							F		R	F				
			43-5, 76-78	C	P																F	C	C					C		F									F											F					F			F		C							F			F				
			43-6, 76-78	C	P																C	C	C					F		F				R					F											F							F		C							F			F				
			43, CC	B																																																																					
			44-1, 49-51	C	P												R		R		C	C	C					C		F									F											F					F			C		F							F		R	F				
			44-2, 59-61	C	M				R								R		F		C	C	C	R		R		A		C									C											F		R			F			C		C							C		F	F				F
		Discoaster bifax CP14a	44-3, 59-61	C	P				R								R	R			C	C	C					C		F									F											F		R			F			F		C							F		R	F				
			44, CC	C	M												R		R		C	C	C					C		F									F											F		R			F			F		C							C		F	F				R
			45-1, 37-39	C	P				F								F	R	R		F	C	C					A		F									F			R								F		R					F		C							F	F	R	F				
			45, CC																																																																						
			46-1, 98-100	C	P												F				C	F	C					C		F									F											F					F			F		F								F	R	F				
			46, CC	C	P												R				F	F	C					A		R																											F		R							F	F	R	F				
			47, CC	C	P												R	R			F	F	C					A		F									F											R					R			F		F							F	R		F				
			48-1, 60-62	C	P				R			R					R	R	R		F	F	F					C		F																				R		R			R			F		F										F				
			48-2, 60-62	C	M							F					F	R	R		F	F	F			R		C		C									C			F								F		F			F			R		C							F	C	F	C				F
			48-3, 60-62	C	P							R					R	R	R		C	C	F			F		A		F									F			R								F		F			F			F		C							F	F	F	F				F
			48-4, 60-62	C	P							R					F	F	R		C	C	C			F		A		F									F											F		F					F		C							F	F	F	F				F
			48, CC	C	M				R			R					R	F	R		F	C	F					A		C									C			F								F		F			F			F		F							R	F	F	R				F
			49-1, 96-98	C	P				R								F	F	R		F	F	F					C		F									F			R								R									F							F			F				F
			49-2, 70-72	F	P													R	R			R	R							R																														R							R			R				
	Indeterminate		49-3, 79-81	B																																																																					
			49-4, 79-81	B																																																																						
			49, CC	B																																																																					
			50-1, 102-104	B																																																																						
			50-2, 102-104	B																																																																					
			50-3, 102-104	B																																																																					
			50, CC	B																																																																					
			51-1, 80-82	B																																																																						
			51-2, 80-82	B																																																																						
			51-3, 80-82	B																																																																						
			51, CC	B																																																																						
			52-1, 18-20	B																																																																						
			52, CC	B																																																																						
			53-1, 76-78	B																																																																						

Table 3. Distribution of nannofossil species in Hole 673B. R = rare; F = few; C = common; A = abundant; V = very abundant. Lower case letters represent individual abundances of reworked species.

Hole 673B

Age	Zone	Subzone	Sample (core-section, interval in cm)	Abundance	Preservation	*Calcidiscus leptoporus*	*C. macintyrei*	*Ceratolithus cristatus*	*Coccolithus pelagicus*	*Coronocyclus nitescens*	*Crenalithus doronicoides*	*Cyclicargolithus floridanus*	*Discoaster asymmetricus*	*D. brouweri*	*D. deflandrei*	*D. pentaradiatus*	*D. surculus*	*D. tamalis*	*D. triradiatus*	*D. variabilis*	*Gephyrocapsa caribbeanica*	*G. oceanica*	Small gephyrocapsids	*Hayaster perplexus*	*Helicosphaera ampliaperta*	*H. carteri*	*H. sellii*	*Pontosphaera* spp.	*P. japonica*	*Pseudoemiliania lacunosa*	*Reticulofenestra pseudoumbilica*	*Rhabdosphaera clavigera*	*Scapholithus fossilis*	*Scyphosphaera* spp.	*Sphenolithus abies*	*S. heteromorphus*	*S. moriformis*	*Thoracosphaera* spp.	*Umbilicosphaera sibogae*
early Pleistocene	*Pseudoemiliania lacunosa*		1-1, 80-82	C	G	A		F	F		A	r				r	r			r		A	A			F		F		R		C	F	A	r			F	A
			1-2, 80-82	A	G	A		C	F		C	r		r						r		V	A			F		F		R		C	R	C	r			C	A
			1-3, 80-82	A	G	C		F	F		C	r				r				r	A	V	A			F		F		A		F	R	C				C	C
			1-4, 80-82	A	G	A		F	F		C										F	V	A	R		F		C		A		F	F	C	r			C	C
			1-5, 80-82	F	P	F					C										F	A	C							F				F					F
	Indeterminate		1, CC	B																																			
			2-1, 80-82	B																																			
			2-2, 80-82	B																																			
			2-3, 80-82	B																																			
			2-4, 80-82	B																																			
early Pleistocene	*Pseudoemiliania lacunosa*		2-5, 80-82	A	G	A		F			C	r				r				r		A	V	R		F		F	R	V		C	F	F	r	r		F	C
			2-6, 80-82	C	G	C		F	F		C	r									A	A	A			C		C	R	A		C		F	r			F	C
			2, CC	B																																			
			3-1, 80-82	C	G	C		F	F		C									r	F	A	A			C		F	R	A		A		C	r			F	C
			3-2, 80-82	C	G	C		F	R		F	r		r								A	V			F		C	R	A		C	F	C				F	C
			3-3, 80-82	C	G	F		F			C	r				r				r		C	A			C		C	F	A		C		C				F	F
			3-4, 80-82	A	G	C		F			A	r				r						A	A			C		F		A		C	R	C	r			F	C
	Helicosphaera sellii		3-5, 80-82	C	G	A		F	F		C	r									C	A	v			C	F	C	F	A		C	R	C	r			F	A
			3-6, 80-82	C	G	A		F	F		C	r									C	A	V			F	F	A		A		A		C	r			F	C
			3, CC	C	G	C		F	F		C										C	A	C			C	F	F	R	A		C		C				F	F
			4-1, 80-82	A	G	A		C	F		C	r		r		r					F	A	A			C	F	F		A		A	R	C				F	C
			4-2, 80-82	A	G	C		C	F		C			r							C	A	A			C	F	C	F	A		A		C	r			F	C
	Calcidiscus macintyrei		4-3, 80-82	A	G	C	C	F	F		A	r		r		r					F	A	A			C	F	C	F	A		A		C	r			C	C
			4-4, 80-82	C	G	C	C	F	F		A	r				r				r	R	A	A			C	F	C	F	A		A	R	C				F	C
			4-5, 80-82	A	G	C	C	C	F		A	r		r						r		C	C			C	F	C		A		C		C	r			F	C
late Pliocene	*Discoaster brouweri* CN12	*Calcidiscus macintyrei* CN12d	4-6, 80-82	C	G	C	C	F	F		A	r		F		r			F			F	C			C	C	F	R	A		C		C	r			C	C
			5-1, 80-82	C	M	C	C	F	F		C	r		C					F				C			C	F	F		A		C		C	r			F	C
		Discoaster tamalis CN12a	5-2, 79-82	C	M	A	C	F	F		A	r	F	C		A	F	F	C	F			C			F	F	F		A				F	r			F	C
	Indeterminate		5-3, 79-82	B																																			
			5-4, 79-82	B																																			
			5-5, 79-82	B																																			
			5-6, 79-82	B																																			
			5-7, 79-82	B																																			
			5, CC	B																																			
			6-1, 80-82	B																																			
			6-2, 80-82	B																																			
			6-3, 80-82	B																																			
			6-4, 80-82	B																																			
			6-5, 80-82	B																																			
			6, CC	B																																			
			7-1, 73-75	B																																			
			7-2, 73-75	B																																			
			7-3, 73-75	B																																			
			7, CC	B																																			
			8-1, 142-144	B																																			
early Miocene	*Helicosphaera ampliaperta* CN3		8-2, 142-144	C	M		R		C	R		A			F									R	F						F					C	F		
			8-3, 29-31	F	M		R		C	R		C			F										F						F					C	F		
	Indeterminate		8-4, 29-31	B																																			
			8, CC	B																																			
			9-1, 81-83	B																																			
			9-2, 81-83	B																																			
			9-3, 81-83	B																																			
			9, CC	B																																			
			10-1, 88-90	B																																			
			10-2, 88-90	B																																			
			10, CC	B																																			
			11-1, 74-76	B																																			
			11-2, 74-76	B																																			
			11, CC	B																																			
			12-1, 80-83	B																																			
			12-2, 80-83	B																																			
			12-3, 80-83	B																																			
			12, CC	B																																			
			13-1, 79-82	B																																			
			13-2, 76-78	B																																			
			13-4, 8-11	B																																			
			13, CC	B																																			
			14-1, 80-82	B																																			
			14-2, 81-83	B																																			
			14-3, 80-82	B																																			
			14-4, 80-82	B																																			
			14, CC	B																																			
			15-4, 88-92	B																																			
			15-5, 90-92	B																																			
			15-6, 125-127	B																																			
			15-7, 18-20	B																																			
			15, CC	B																																			
			16-4, 80-82	B																																			
			16-5, 80-82	B																																			
			16, CC	B																																			
			17-4, 50-53	B																																			
early Miocene	*Helicosphaera ampliaperta* CN3		17-4, 127-130	F	P		F		C	F		A			F										F			R			R				F	C	F		
	Indeterminate		17, CC	B																																			
			18-1, 30-32	B																																			
			18-2, 30-32	B																																			
early Miocene	*Helicosphaera ampliaperta* CN3		18-3, 30-32	C	M		F		C	F		A			F										F			R			R				F	C	F	F	
	Indeterminate		18, CC	B																																			
			19-1, 56-58	B																																			
			19-2, 56-58	B																																			
			19-3, 56-58	B																																			
			19-4, 56-58	B																																			
			19-6, 56-58	B																																			
			19, CC	B																																			
			20-1, 84-86	B																																			
			20, CC	B																																			
			21-1, 55-57	B																																			
			21, CC	B																																			
			22-1, 68-70	B																																			
			22-2, 68-70	B																																			
			23-3, 68-70	B																																			
			22, CC	B																																			
			23-1, 61-63	B																																			
			23-2, 61-63	B																																			
			23-3, 61-63	B																																			
			23-4, 61-63	B																																			
			23-5, 61-63	B																																			
			23, CC	B																																			

Table 4. Distribution of nannofossil species in Hole 674A. R = rare; F = few; C = common; A = abundant; V = very abundant. Lower case letters represent individual abundances of reworked species.

Hole 674A

Age	Zone	Subzone	Core-section, interval in cm	Abundance	Preservation	*Amaurolithus delicatus*	*Braarudosphaera* spp.	*Calcidiscus leptoporus*	*C. macintyrei*	*Campylosphaera dela*	*Ceratolithus cristatus*	*C. rugosus*	*Chiasmolithus grandis*	*C. solitus*	*C. titus*	*Coccolithus eopelagicus*	*C. formosus*	*C. pelagicus*	*Crenalithus doronicoides*	*Cribrocentrum reticulatum*	*Cyclicargolithus abisectus*	*C. floridanus*	*Discoaster asymmetricus*	*D. barbadiensis*	*D. brouweri*	*D. deflandrei*	*D. pentaradiatus*	*D. quinqueramus*	*D. sipanensis*	*D. surculus*	*D. tamalis*	*D. tanii* s.l.	*D. triradiatus*	*D. variabilis*	*Gephyrocapsa caribbeanica*	*G. oceanica*	Small gephyrocapsids	*Hayaster perplexus*	*Helicosphaera ampliaperta*	*H. carteri*	*H. compacta*	*H. reticulata*	*H. sellii*	*Pontosphaera* spp.	*P. japonica*	*Pseudoemiliania lacunosa*	*Reticulofenestra bisecta*	*R. pseudoumbilica*	*R. umbilica*	*Rhabdosphaera clavigera*	*Scapholithus fossilis*	*Scyphosphaera* spp.	*Sphenolithus abies*	*S. heteromorphus*	*S. moriformis*	*S. pseudoradians*	*S. predistentus*	*Thoracosphaera* spp.	*Umbilicosphaera sibogae*	*Zygrhablithus bijugatus*
early Pleistocene	*Pseudoemiliania lacunosa*		1-1, 68-70	C	G			C			F							F	F								r								F	V	C			F						R				A		C	r					F	F	
			1-2, 68-70	C	G			C			F							F	C															r	F	A	A			F						C				A	R	C						C	F	
			1-3, 68-70	C	G			C			F							F	C																F	A	A			C				C		C				A		C	r					C	C	
			1-4, 68-70	F	P			R																												C	C																							
			1, CC	F	P			A			R								F			r														C								F		C						R						F		
			2-1, 86-88	C	G			A			F					r			C			r														A	A			C				R		A			r	A		A						C	F	
			2-2, 86-88	C	G			C			F							F	F			r														A	A			F				C	F	A				A	F	C	r					C	C	
			2-4, 86-88	B																																																								
			2-5, 86-88	B																																																								
			2-6, 86-88	B																																																							
			2-7, 86-88	B																																																							
			2, CC	F	P			R											C																	C	C									C												F		
	Indeterminate		3-1, 72-77	B																																																							
			3-2, 72-77	B																																																							
			3-3, 72-77	B																																																							
			3-4, 72-77	B																																																							
			3-5, 72-77	B																																																							
			3-7, 72-77	B																																																						
			3, CC	B																																																							
			4-1, 82-84	B																																																						
			4-2, 82-84	B																																																						
			4-3, 82-84	B																																																						
			4-4, 82-84	B																																																						
			4-5, 82-84	B																																																						
			4, CC	B																																																						
			5-1, 99-101	F	P														C								f									C																R								
			5-2, 99-101	B																																																						
			5-3, 99-101	B																																																						
early Pleistocene	*Calcidiscus macintyrei*		5-4, 99-101	C	G			C	R		F								C						f		f			f						A	V			F			R	C	F	A				A	F	C						C	C	
			5, CC	C	G			C	F		F							R	C			r			r		f							r		V	V			F			R	C	F	A				A	R	C						C	C	
			6-1, 80-82	C	M			C	F		F								C						r					r						C	A			F			R	C	R	A				C	R	F	r					C	F	
			6-2, 80-82	A	G			A	C		F							R	C								r							r		C	A			C			F	C	F	A				A	R	A						C	C	
late Pliocene	*Discoaster brouweri* CN12	*D. brouweri* CN12d	6-3, 80-82	C	M			C	C		F							R	A						R					f				r						C			F	F		A				A	R	C						C	C	
			6-4, 80-82	C	M			C	C		F							F	A		r	r			C		f						C							C			F	C	R	A				A		A	r					C	C	
			6, CC	A	G			C	C		C							F	A				r		C		f						C							C			F	F		A	r			A	R	A	r					C	C	
		D. pentaradiatus CN12c	7-1, 78-80	A	G			C	C		F							F	A						A		A						F	r						C			F	F		A				A	R	A						C	C	
		D. surculus CN12b	7-2, 78-80	C	M			A	C		F							F	A				F		C		A			F										C			F	F		A				A		C	r					F	F	
		D. tamalis CN12a	7-3, 78-80	A	M			A	A		F							F	A				F		A		A			C	F		F							F			F			A				A		C						C		
			7-4, 78-80	A	G			C	C		F							C	A				F		A		A			C	C		F							F						A				A		C						F		
			7, CC	C	M			C	C		F							C	A				C		A		A			C	F			R												C														
	Indeterminate		8-1, 78-80	B																																																							
l. Plio.	*D. brouweri* CN12	*D. pentaradiatus* CN12c	8-1, 85-87	A	G			C	C		C							C	A						A		C						F							C			F	C	R	A				A		A						F	C	
	Indeterminate		9-1, 80-81	B																																																							
			9-2, 80-81	B																																																							
			9-3, 80-81	B																																																						
			9-4, 80-81	B																																																						
			9-5, 80-81	B																																																						
			9-6, 80-81	B																																																						
			9, CC	B																																																						
			10-1, 80-82	B																																																						
			10, CC	B																																																						
			11-1, 90-92	B																																																						
			11, CC	B																																																						
late Pliocene	*Discoaster brouweri* CN12	*D. tamalis* CN12a	12-1, 70-72	C	M			C	C		F							C	A				C		A		C			C	C		F	R						R						A												F		
			12-2, 70-72	C	M			C	C		R							C	A				C		C		C			C	C		F	R						F						A												F		
			12-3, 70-72	C	M			C	C		F							C	A				C		C		C			F	C		F							F						A				R		r						F		
			12-4, 70-72	C	M			C	C		F							C	A				C		C		C			C	C		F	R						F			R		R	A				F								F		
			12, CC	C	M			C	C		F							C	A				C		C		C			C	C		F	F						C				R		A				C								F		
			13-1, 80-82	C	P			F	C									F	A				C		C		C			C	C		F	R						R						A														
			13-2, 80-82	C	M			C	C		C							F	A				C		C		C			C	C		F	F										R		A				R								F		
			13-3, 80-82	C	M			C	C		F							F	C				C		C		C			C	F		F	F												C												F		
			13-4, 80-82	F	P				F		R								F				F		C		C			C	R		R	F												F														
	Indeterminate		13, CC	B																																																							
e. Pliocene	*Reticulofenestra pseudoumbilica* CN11	*Discoaster asymmetricus* CN11b	14-1, 13-15	C	M			A	C		F	R						F	A				C		C		A			C	F		F	F														C					C					F		
	Indeterminate		14-2, 81-83	B																																																							
			14-3, 81-83	B																																																						
			14-4, 81-83	B																																																						
			14, CC	B																																																						
			15-1, 80-82	B																																																						
			15-2, 80-82	B																																																						
			15, CC	B																																																						
			16-1, 80-82	B																																																						
			16-2, 80-82	B																																																						
			16, CC	B																																																						
			17-2, 39-41	B																																																						
			17, CC	B																																																						
			18-2, 46-48	B																																																						
			18, CC	B																																																						
			19, CC	B																																																						
			20-1, 100-102	B																																																						
			20, CC	B																																																						
			21-2, 80-82	B																																																						
			21, CC	B																																																						
			22-2, 82-84	B																																																						
			22, CC	B																																																						
			23-2, 101-103	B																																																						
			23, CC	B																																																						
			24-5, 94-96	B																																																						
			24, CC	B																																																						
			25-2, 76-78	B																																																						
			25, CC	B																																																						
			26-2, 90-92	B																																																						
			26, CC	B																																																						
			27-3, 60-62	B																																																						
			27, CC	B																																																						
middle Eocene	*Reticulofenestra umbilica* CP14	*Discoaster bifax* CP14a	28-3, 4-7	C	P		R						F	F	F	F	C	F				F		F		R			F												R	R							F						F	F	F		F
			28, CC	F	P								R	R	R	R	F	F				F							R												R			R					R						R	F		R		
			29-1, 74-76	F	P													F				F		F					F																															
			29-2, 136-138	A	M								F	F	R	C	C	F		F		A							C			R									R			F			R		C						R	F	F	F		F
			29, CC	A	M								F	C		C	C	C		R		A		F					C												F	F					F		C						C	F	F	F		
			30-1, 85-87	C	M		R			R			F	R	R	C	A	A				A		C					C			F									F	F		C			F		C						C	F	C	F		F
			30, CC	C	P								F	F	F	F	C	C		F		A							F												F	F		F			F		C						F	F	F	F		
			31-2, 107-109	C	P		R						R		R	F	F	C		F		C		R					R													R		F			F		F						F			F		
	Indeterminate		31, CC	B																																																							
			32-3, 67-69	B																																																							
			32, CC	B																																																							
			33-2, 28-30	B																																																							
late Miocene	*Discoaster quinqueramus* CN9	*Amaurolithus primus* CN9b	33-2, 50-52	F	P	R		F										F				F			F		F	F		F				F														F					F	F				F		
			33-3, 68-70	F	P																	F																																				R		
	Indeterminate		33, CC	B																																																							
			34-2, 64-66	B																																																						
			34, CC	B																																																						
			35-2, 69-71	B																																																						
			35, CC	B																																																						
			36-1, 102-104	B																																																						
			36, CC	B																																																						
			37-1, 30-32	B																																																						
			37, CC	B																																																						
			38-1, 43-45	B																																																						
			38, CC	B																																																						
			39-1, 37-40	B																																																						
			39, CC	B																																																						
			40-1, 18-20	N																																																							
			40, CC	B																																																						
			41-2, 86-88	B																																																						
			41, CC	B																																																						
			42-1, 120-122	B																																																						
			42, CC	B																																																						
			43-3, 65-67	B																																																						
			43, CC	B																																																						
			44-1, 43-45	B																																																						
			44, CC	B																																																						
			45, CC	B																																																						
			46, CC	B																																																						
			47, CC	B																																																						
			48-6, 2-4	B																																																						
			48-7, 20-22	B																																																						
			48, CC	B																																																						

Table 5. Distribution of nannofossil species in Hole 676A. R = rare; F = few; C = common; A = abundant; V = very abundant. Lower case letters represent individual abundances of reworked species.

Hole 676A

Age	Zone	Subzone	Core-section (interval in cm)	Preservation	Abundance	*Amaurolithus amplificus*	*A. delicatus*	*A. primus*	*A. tricorniculatus*	*Calcidiscus leptoporus*	*C. macintyrei*	*Ceratolithus cristatus*	*C. rugosus*	*Coccolithus pelagicus*	*Crenalithus doronicoides*
early Pleistocene	*Pseudoemiliania lacunosa*		1-1, 66-68	M	C					C		C		F	C
			1-2, 66-68	M	C					C		F		F	C
			1-3, 66-68	P	R					F					F
			1-4, 66-68	P	R					F					F
			1, CC												
			2-1, 80-82		B										
			2-2, 80-82	M	C					F		F		R	C
			2-3, 80-82	G	C					F		F		F	C
			2-4, 80-82	G	C					C		C		F	C
			2-6, 80-82	G	C					C		F		F	C
			2, CC	G	C					C		C			C
			3-1, 84-86	G	C					C		F			A
			3-2, 84-86	G	C					C		R			A
			3-3, 84-86	G	C					C		R			A
			3-4, 84-86	G	A					C		F			A
			3-5, 84-86	G	A					C		F		R	A
	Helicosphaera sellii		3-6, 84-86	G	A					C		F		R	A
			3, CC	G	A					C		F		F	C
			4-1, 80-82	G	A					C		F		F	C
			4-2, 80-82	G	C					C	r	F		F	C
			4-3, 80-82	G	A					C	r	F		F	C
			4-4, 82-84	G	A					C	r	C		F	C
			4-5, 80-82	G	C					C	r	C		F	C
			4-6, 80-82	M	C					C		C		F	C
	Pseudoemiliania lacunosa		4, CC	M	C					C		F		F	C
			5-1, 88-90	P	F					F		R			F
			5-2, 88-90	G	C					C	r	F		F	C
			5-3, 88-90	P	F					F		R			F
			5-4, 88-90	M	C					C		F		F	F
			5-5, 88-90	M	C					C		F		F	C
			5-6, 88-90	G	A					A		F	R	F	A
			5, CC	G	A					A		F		F	A
			6-1, 81-83	G	A					A		F		F	C
			6-2, 81-83	G	A					C	r	F		F	C
	Helicosphaera sellii		6-3, 81-83	G	A					C		F		F	C
			6-4, 81-83	M	C					C	r	C		F	C
			6-5, 81-83	G	C					C		C		C	C
			6-6, 81-83	G	C					C	r	C		F	C
			6, CC	G	A					C	r	C		F	C
	Calcidiscus macintyrei		7-1, 80-82	G	A					A	F	F		F	C
			7-2, 80-82	G	A					C	C	F		F	C
			7-3, 80-82	G	A					C	C	C		R	A
			7-4, 80-82	G	A					F	A	F		F	A
			7-5, 80-82	G	C					C	C	F		F	C
			7-6, 80-82	G	C					C	C	F		F	C
late Pliocene	*Discoaster brouweri* CN12	*Calcidiscus macintyrei* CN12d	7-7, 60-62	G	C					C	A	C		F	A
			7, CC	G	C					C	C	F		F	A
			8-1, 80-82	G	C					C	C	F		F	A
			8-2, 80-82	G	C					C	C	F		F	A
			8-3, 80-82	G	C					C	C	C		F	A
			8-4, 80-82	M	C					C	C	F		F	A
			8-5, 80-82	M	C					F	C	F		F	A
			8-6, 80-82	M	C					C	A	F		F	A
			8, CC	M	C					C	C	C		F	A
			9-1, 80-82	M	C					C	C	F		F	C
		Discoaster pentaradiatus CN12c	9-2, 80-82	M	C					F	F	F		F	C
			9-3, 80-82	M	C					C	C	F		C	A
		Discoaster surculus CN12b	9-4, 80-82	M	C					C	C	F		F	A
			9-5, 80-82	G	C					C	C	F		F	A
			9-6, 80-82	M	A					C	C	R		C	A
			9, CC	M	C					C	C	C		F	G
			10-1, 16-18	M	A					F	C	F		C	A
			10-2, 16-18	M	A					C	C	F		C	A
			10-3, 16-18	M	C					C	C	F		C	A
			10-4, 16-18	M	C					C	C	F		C	A
			10-5, 16-18	G	C					C	C	C		C	A
		Discoaster tamalis CN12a	10-6, 16-18	M	C					C	C	F		C	A
			10-7, 16-18	M	C					C	C	F		C	A
			10, CC	M	C					C	C	F		C	A
			11-1, 78-80	G	C					C	C	F		F	A
			11-2, 79-81	M	C					C	C	F		C	A
			11-3, 79-91	G	C					C	C	F		C	A
			11-4, 79-81	G	A					C	C	C		C	A
			11-5, 79-81	G	A					A	C	F		C	A
			11-6, 79-81	M	C					C	C	F		C	A
			11, CC	M	A					C	C	F		C	A
			12-1, 80-82	M	A					C	C	F		C	A
			12-2, 80-82	M	A					C	C	F		F	A
			12-3, 80-82	M	C					C	C	F		F	A
			12-4, 80-82	M	C					C	C	F		F	A
			12, CC	G	A					C	C	C		F	A
			13-1, 80-82	G	A					C	C	F		F	A
			13-2, 81-83	G	A					C	C	F		F	A
			13-3, 80-82	M	C					C	C	F		R	A
			13-4, 80-82	M	C					C	C	C		F	A
			13-5, 80-82	M	A					C	C	C		F	A
early Pliocene	*Reticulofenestra pseudoumbilica* CN11	*Discoaster asymmetricus* CN11b	13-6, 80-82	M	C					C	C	F			A
			13, CC	M	A					C	C	C		F	A
		Sphenolithus neoabies CN11a	14-1, 8-10	G	C					C	F	F			A
			14, CC	M	C					C	C	C		F	A
			15-1, 79-81	M	C					C	F	F		F	A
			15-2, 79-81	G	C					C	C	F			A
			15-3, 79-81	G	C		R			C	C	F		F	A
			15, CC	G	C					C	C	C		F	A
	Ceratolithus tricorniculatus CN10	*Ceratolithus rugosus* CN10c	16-1, 80-82	P	C		R		R	C	C	F		F	A
			16-2, 80-82	M	A		R		C	C	C	F		F	A
			16-3, 80-82	P	C		F	R	F	F	F	R		R	R
			16-4, 80-82	M	C		F	R	F	C	F	F			A
			16, CC	M	C		F	F	F	C	C	R			V
late Miocene		*T. rugosus* CN10a	17-1, 100-102	P	C		F	F		F	F			C	C
	Discoaster quinqueramus CN9	*Amaurolithus primus* CN9b	17-2, 100-102	P	C		F	F		C	C			C	A
			17-3, 100-102	P	C			F		R	R			F	
			17-4, 100-102	P	C			C		F				C	F
			17-5, 100-102	P	C		R	F		F	R			F	C
			17, CC	P	C			F		F	F			C	C
			18-1, 30-32	P	C		R	F		R	R			R	
			18-2, 30-32	P	F					R				R	F
			18-3, 30-32	P	C	F	F	F		F				F	
			18-4, 30-32		B										
			18-5, 30-32		B										
			18-6, 30-32	P	C	F	R	R							
	Indeterminate		18-7, 30-32	P	F										
			18, CC	P	F										
			19-1, 80-82		B										
			19-3, 80-82		B										
			19, CC		B										
			20-1, 24-26		B										
			20-3, 24-26		B										
			20-5, 24-26		B										
			20, CC		B										
l. Mio.	*Discoaster quinqueramus* CN9	*Discoaster berggrenii* CN9a	21-1, 50-52	P	F										
			21-2, 50-52	P	F					R				F	
			21-3, 50-52	P	F					R	R				
	Indeterminate		21-4, 50-52		B										
			21, CC	P	F										
			22-1, 80-82		B										
late Miocene	*Discoaster neohamatus* CN8		22-2, 80-82	P	F					F	F			C	
			22-3, 80-82	P	F					F				F	
			22-4, 80-82		B										
			22-5, 80-82	P	F						R			F	
			22-6, 80-82		B										
	D. hamatus CN7		22, CC	P	F						R			C	
	Indeterminate		23-1, 80-82		B										
			23-2, 80-82		B										
			23-3, 80-82		B										
			23-4, 80-82		B										
			23-5, 80-82		B										
			23-6, 80-82		B										
late Miocene	*Discoaster quinqueramus* CN9	*Discoaster berggrenii* CN9a	23-7, 80-82	P	F										
			23, CC	P	F										
			24-1, 80-82	P	F					R				F	
			24-2, 80-82	P	F						R				
			24-3, 80-82	P	F										
			24-4, 80-82	P	R										
			24-5, 80-82	P	F										
	Indeterminate		24-6, 80-82	P	R										
	Discoaster neohamatus CN8		24, CC	P	F					F	F			F	
			25-1, 70-72	P	F					F	F			F	
			25-2, 70-72	P	F										
	Indeterminate		25, CC	P	R										
			26-1, 80-82		B										
			26-2, 80-82		B										
			26, CC		B										
			27-2, 60-62		B										
			27, CC		B										
			28-3, 60-62		B										
			28, CC		B										
			29, CC		B										
			30, CC		B										
			31, CC		B										
			31, CC		B										
			32-2, 53-55		B										
			32, CC		B										

Core-section (interval in cm)	*Cyclicargolithus floridanus*	*Discoaster asymmetricus*	*D. berggrenii*	*D. bolii*	*D. brouweri*	*D. hamatus*	*D. neohamatus*	*D. pentaradiatus*	*D. quinqueramus*	*D. surculus*	*D. tamalis*	*D. triradiatus*	*D. variabilis*	*Gephyrocapsa caribbeanica*	*G. oceanica*
1-1, 66-68								r		r					V
1-2, 66-68					r			r					r		V
1-3, 66-68													r		A
1-4, 66-68															A
1, CC															
2-1, 80-82															
2-2, 80-82	f				r			r					r	C	V
2-3, 80-82								r						C	V
2-4, 80-82															V
2-6, 80-82	f							r						F	V
2, CC	f							r					f	R	V
3-1, 84-86	f												r	R	V
3-2, 84-86										r			r		V
3-3, 84-86	r													R	V
3-4, 84-86	r														V
3-5, 84-86										r				F	A
3-6, 84-86	r							r						C	C
3, CC	r							r					r	C	A
4-1, 80-82								r						A	V
4-2, 80-82								r						A	V
4-3, 80-82	f				r								r	A	A
4-4, 82-84	f									r			r	A	A
4-5, 80-82														A	A
4-6, 80-82										r				C	A
4, CC	r				r			r					r		A
5-1, 88-90	r												r		
5-2, 88-90	r													F	A
5-3, 88-90	r														A
5-4, 88-90	r							r					r		A
5-5, 88-90	r							r					r	F	A
5-6, 88-90	f				r								r	F	V
5, CC														F	A
6-1, 81-83	f							r							A
6-2, 81-83	f				r			r					r		A
6-3, 81-83								r						C	A
6-4, 81-83	f				r			r						A	A
6-5, 81-83								r						C	A
6-6, 81-83	f				r									C	V
6, CC	f													C	V
7-1, 80-82													r	C	A
7-2, 80-82														A	C
7-3, 80-82	f							r						C	C
7-4, 80-82	f				r			r							
7-5, 80-82	f														
7-6, 80-82	f							r					r		
7-7, 60-62					F							F	r		
7, CC					F			r				F	f		
8-1, 80-82					C			r				F			
8-2, 80-82					A			r				C			
8-3, 80-82	r	r			C			r				C	r		
8-4, 80-82					C			r				C			
8-5, 80-82					A							F			
8-6, 80-82					A			r				F			
8, CC		R			A							C			
9-1, 80-82					A							C			
9-2, 80-82					A			F				F			
9-3, 80-82	f				A			A					r		
9-4, 80-82		R			C			C		R		F			
9-5, 80-82					C			A		F		R	F		
9-6, 80-82	f				C			C		C	r	F	F		
9, CC		F			C			A		F			R		
10-1, 16-18		F			C			A		C			R		
10-2, 16-18		F			C			A		C	r	F	F		
10-3, 16-18	f	F			C			A		C	r	R	R		
10-4, 16-18		F			C			A		C		F	F		
10-5, 16-18	f	R			C			A		C		F	F		
10-6, 16-18	f	F			A			A		C	R	F	F		
10-7, 16-18		F			C			A		C	F	F	F		
10, CC		F			C			A		F	F	F	F		
11-1, 78-80		C			C			A		C	C	F	F		
11-2, 79-81		F			C			A		C	C	F	F		
11-3, 79-91	f	C			C			A		C	C	F	F		
11-4, 79-81		C			A			A		C	C	F	F		
11-5, 79-81		C			C			A		C	C	F	F		
11-6, 79-81		C			C			A		C	C	F	C		
11, CC		C			C			A		C	C	F	C		
12-1, 80-82		C			C			A		C	C	F	C		
12-2, 80-82		C			C			C		C	C	F	C		
12-3, 80-82		C			A			A		C	C	F	C		
12-4, 80-82		C			A			A		C	C	F	C		
12, CC		C			A			A		C	C	F	C		
13-1, 80-82		C			A			A		C	C	F	C		
13-2, 81-83	f	A			A			A		C	C	F	F		
13-3, 80-82		C			C			A		F	F	F	C		
13-4, 80-82		C			C			A		C	F	F	C		
13-5, 80-82		A			A			A		C	C	C	C		
13-6, 80-82		C			C			A		C	C	F	C		
13, CC		C			C			A		C	C	F	C		
14-1, 8-10		F			C			A		C	R	F	F		
14, CC	f	F			C			A		C	F	F	C		
15-1, 79-81		F			C			A		C	R	F	F		
15-2, 79-81		F			C			A		C	R	R	C		
15-3, 79-81		F			C			A		C	R	F	C		
15, CC		F			C			A		C		F	C		
16-1, 80-82					C			A		C		F	C		
16-2, 80-82		F			C			A		C		F	C		
16-3, 80-82		R			A			A		C	R	F	A		
16-4, 80-82		R			C			A		A		F	C		
16, CC					C			A		A		F	C		
17-1, 100-102		R			C			C		C		F	A		
17-2, 100-102		R			C			C	R	C		F	C		
17-3, 100-102					C			C	F	C		F	A		
17-4, 100-102					C			C	C	C		F	A		
17-5, 100-102					C			C	C	C		F	C		
17, CC					C			C	C	C		F	C		
18-1, 30-32					R			C	C	C		F	C		
18-2, 30-32								R	F	R		R	C		
18-3, 30-32					F			C	A	C		F	A		
18-4, 30-32															
18-5, 30-32															
18-6, 30-32					R			F	C	F		R	C		
18-7, 30-32								R					F		
18, CC													C		
19-1, 80-82															
19-3, 80-82															
19, CC															
20-1, 24-26															
20-3, 24-26															
20-5, 24-26															
20, CC															
21-1, 50-52			C		F								A		
21-2, 50-52			C		C			C					C		
21-3, 50-52			C		C			C					C		
21-4, 50-52															
21, CC		R			C			F					A		
22-1, 80-82															
22-2, 80-82					F		C	F					A		
22-3, 80-82					F		C	F				F	C		
22-4, 80-82															
22-5, 80-82					F		C	F				F	C		
22-6, 80-82															
22, CC				F	F	F	A	F				R	C		
23-1, 80-82															
23-2, 80-82															
23-3, 80-82															
23-4, 80-82															
23-5, 80-82															
23-6, 80-82															
23-7, 80-82			F		C			F					C		
23, CC			C		C			F					C		
24-1, 80-82			A		C		F	F					A		
24-2, 80-82			C		C		F	F					A		
24-3, 80-82			R		F			F					A		
24-4, 80-82			R		R								F		
24-5, 80-82			R		F			F					A		
24-6, 80-82													R		
24, CC		R			F		C	F					A		
25-1, 70-72					F		F	F					A		
25-2, 70-72		R			F		F	F					C		
25, CC					R								R		
26-1, 80-82															
26-2, 80-82															
26, CC															
27-2, 60-62															
27, CC															
28-3, 60-62															
28, CC															
29, CC															
30, CC															
31, CC															
31, CC															
32-2, 53-55															
32, CC															

Core-section (interval in cm)	Small gephyrocapsids	*Hayaster perplexus*	*Helicosphaera carteri*	*H. sellii*	*Pontosphaera* spp.	*P. japonica*	*Pseudoemiliania lacunosa*	*Reticulofenestra pseudoumbilica*	*Rhabdosphaera clavigera*	*Scapholithus fossilis*	*Scyphosphaera* spp.	*Sphenolithus abies*	*Thoracosphaera* spp.	*Triquetrorhabdulus rugosus*	*Umbilicosphaera sibogae*
1-1, 66-68	A		F		R		R	r	A		C	f	F		C
1-2, 66-68	C		F		R		R	r	C		C	r	C		F
1-3, 66-68	F														R
1-4, 66-68	F														R
1, CC															
2-1, 80-82															
2-2, 80-82	A		F		R		C	r	C		F	f	F		F
2-3, 80-82	A		F				C		F		C	f	F		F
2-4, 80-82	A		F		F	F	A		C	R	C	f	C		F
2-6, 80-82	A		C		C	F	A		C	R	F	f	C		F
2, CC	A		F		F		A		R		R	f	C		C
3-1, 84-86	A		F		F		A	r	C	R	F	f	F		F
3-2, 84-86	C		F				A		F		F	f	R		F
3-3, 84-86	V		F		C	R	A		C	R	C		R		F
3-4, 84-86	V		F		F		V		C	R	R	f	F		C
3-5, 84-86	V	R	F		C		V		C	R	F	f	F		C
3-6, 84-86	V		C	F	C		A		C	F	F	f	C		C
3, CC	A		C	F	F		A		C		C	f	F		F
4-1, 80-82	V		C	F	C	F	A		C		C	f	F		C
4-2, 80-82	A		C	R	F		A		F	R	F	f	F		C
4-3, 80-82	A		C	F	F	F	A		C		C	f	C		C
4-4, 82-84	A		C	F	C	F	A		C		C	f	F		C
4-5, 80-82	A		C	F	C	F	A		C		F		F		C
4-6, 80-82	A		C	F	F		A		F		F	f	F		C
4, CC	A		F		F		A		F		F	f	F		C
5-1, 88-90							F								
5-2, 88-90	V		F		C	F	A		F	R	C	f	F		C
5-3, 88-90					R		C					f	R		F
5-4, 88-90	A		R		R		C				F	f	R		C
5-5, 88-90	A				F	R	A				F	f	F		F
5-6, 88-90	V		R		F	R	A		F		C	f	F		P
5, CC	A		F		F		A		C	R	C		F		F
6-1, 81-83	V		F		F	F	V		C	F	F	f	C		C
6-2, 81-83	A		F		F	R	A		F		C	f	F		C
6-3, 81-83	V		F	F	C	R	A		C		C	f	F		C
6-4, 81-83	V		F	F	F	F	A		C		C		F		C
6-5, 81-83	V		F	R	C	F	A		F		C	f	F		C
6-6, 81-83	V		C	F	F	F	A		F		C	f	C		C
6, CC	A		C	F	F	R	A		C		F	f	C		C
7-1, 80-82	A		C	F	C		A		F		C	f	C		C
7-2, 80-82	A		C	F	C	F	A		C	R	C		F		C
7-3, 80-82	V		C	F	F	R	V		C		C		C		C
7-4, 80-82	A		C	F	C	F	A		C	F	A	f	C		C
7-5, 80-82	A		C	F	F	R	A		F	F	C		C		C
7-6, 80-82	A		C	C	C	F	A		C	F	C		F		C
7-7, 60-62	A		C	F	F		A		F	F	C	f	C		C
7, CC	C		C	F	F	F	A		A		C		C		C
8-1, 80-82	A		C	F	F	F	A		A		C	f	C		C
8-2, 80-82	A		C	F	C	F	A		C		A		C		C
8-3, 80-82	A		F	F	F	F	A		A	R	C		C		C
8-4, 80-82	A		C	F	F		A		A		C	f	F		C
8-5, 80-82	A		C	F	F		A		C		C	f	F		C
8-6, 80-82	A		F	F	F		A		C		C		F		C
8, CC	A		C	F	F		A		A		C	f	F		A
9-1, 80-82	A		C	F	F		A		A		C	f	F		A
9-2, 80-82	C		F	F	F		C		C		F		F		C
9-3, 80-82	C		F	F	F		A		A		C	f	F		C
9-4, 80-82	C		C	F	F	F	C		A		A	r	F		F
9-5, 80-82	A		C	F	F		A		A		A		F		C
9-6, 80-82	A		C	C	R		A		C		C	f	F		F
9, CC	A			F	F		A		C		C		F		C
10-1, 16-18	C		C	F	F		A		C		C		F		F
10-2, 16-18	A		C	F	F		A		A		A		C		F
10-3, 16-18	A		C	F	F		A		A		A		F		C
10-4, 16-18	A		C	F	F		A		A		A		C		C
10-5, 16-18	A		C	F	F		A		A		A		C		C
10-6, 16-18	C		C	F	F		A		A		C		F		F
10-7, 16-18	A		C	F	F		A		A		C		C		R
10, CC	A		C	F	F		C		C		A	r	C		F
11-1, 78-80	A		C	F	F		C		C		A	r	F		R
11-2, 79-81	A		C	F	F		A		C		A		C		R
11-3, 79-91	A		C	F	F		C		A		C		F		F
11-4, 79-81	A		C	F	F		A		A		C		C		R
11-5, 79-81	A	R	C	F	F		A		A		C		F		
11-6, 79-81	A		C	R	F		A		C		C		F		
11, CC	A	R	C	R	C	R	A		C	R	C		F		
12-1, 80-82	A		C	R	C	R	A		C		C		F		
12-2, 80-82	A		C	R	F		A		C		F		F		
12-3, 80-82	A		C		F		A		C		F		F		
12-4, 80-82	A		C		F		A		C		C	f	F		
12, CC	A		C		F		A		C		C		C		
13-1, 80-82	A		C		C		A		A		C	C	f		
13-2, 81-83	A		C		F		A		C		C	C	F		
13-3, 80-82	C		F		F		A		C		C	A	F		
13-4, 80-82	A		F		R		A	r	C		C	A	F		
13-5, 80-82	A		F				A		C		C	A	F		
13-6, 80-82	A		C				A	F	C		C	A	F		
13, CC	A		C		F		A	C	C		C	A	F		
14-1, 8-10	A		F		C		C	C	C		F	A	F		
14, CC	A	R	F		F		C	C	C		F	A	F		
15-1, 79-81	C	R	F		F		C	C	F		F	A	F		
15-2, 79-81	C		F		F		C	C	C		F	A	F		
15-3, 79-81	A		F		F		F	C	F		F	A	F		
15, CC	C		F		F		F	C	F		F	A	F		
16-1, 80-82	A							C	F		R	C			
16-2, 80-82	A		R					C	F		F	A	F		
16-3, 80-82								C	F			A			
16-4, 80-82	C							C	R			C			
16, CC	A		F					A	F		R	A	R		
17-1, 100-102								C				C		F	
17-2, 100-102								C				A		F	
17-3, 100-102								F				R		F	
17-4, 100-102								C				F		F	
17-5, 100-102								C				A		F	
17, CC								C				C			
18-1, 30-32								F				R			
18-2, 30-32															
18-3, 30-32								F					R		
18-4, 30-32															
18-5, 30-32															
18-6, 30-32														R	
18-7, 30-32															
18, CC															
19-1, 80-82															
19-3, 80-82															
19, CC															
20-1, 24-26															
20-3, 24-26															
20-5, 24-26															
20, CC															
21-1, 50-52															
21-2, 50-52								R				R		F	
21-3, 50-52												F		F	
21-4, 50-52															
21, CC															
22-1, 80-82															
22-2, 80-82								C				F		F	
22-3, 80-82								F				F			
22-4, 80-82															
22-5, 80-82								F							
22-6, 80-82															
22, CC								C						F	
23-1, 80-82															
23-2, 80-82															
23-3, 80-82															
23-4, 80-82															
23-5, 80-82															
23-6, 80-82															
23-7, 80-82															
23, CC															
24-1, 80-82														R	
24-2, 80-82														F	
24-3, 80-82															
24-4, 80-82															
24-5, 80-82															
24-6, 80-82															
24, CC														R	
25-1, 70-72								F				R		F	
25-2, 70-72															
25, CC															
26-1, 80-82															
26-2, 80-82															
26, CC															
27-2, 60-62															
27, CC															
28-3, 60-62															
28, CC															
29, CC															
30, CC															
31, CC															
31, CC															
32-2, 53-55															
32, CC															