

Table T3 (continued).

Core, section, interval (cm)	Age	Zone	Fasciculithaceae/Heliolithaceae					Prinsiaceae					Rhabdosphaeraceae		Sphenolithaceae																					
			<i>Fasciculithus magnicordis</i>	<i>Fasciculithus pileatus</i>	<i>Fasciculithus schaubii</i>	<i>Fasciculithus tympaniformis</i>	<i>Bomololithus elegans</i>	<i>Heliolithus klempellii</i>	<i>Cyclargolithus floridanus</i>	<i>Dictyococites bisectus</i>	<i>Dictyococites scrippsae</i>	<i>Neobiscutum</i> sp.	<i>Prinsius bisulcus</i>	<i>Prinsius dimorphosus</i>	<i>Prinsius martinii</i>	<i>Reticulofenestra dictyoda</i>	<i>Reticulofenestra hillae</i>	<i>Reticulofenestra reticulata</i>	<i>Reticulofenestra umbilica</i>	<i>Toweius callosus</i>	<i>Toweius eminus</i>	<i>Toweius gammaion</i>	<i>Toweius pertusus</i>	<i>Rhabdosphaera inflata</i>	<i>Triquetrorhabdulus carinatus</i>	<i>Sphenolithus anarrhopus</i>	<i>Sphenolithus editus</i>	<i>Sphenolithus furcatolithoides</i>	<i>Sphenolithus moriformis</i>	<i>Sphenolithus obtusus</i>	<i>Sphenolithus predistens</i>	<i>Sphenolithus primus</i>	<i>Sphenolithus pseudoradians</i>	<i>Sphenolithus radians</i>	<i>Sphenolithus spiniger</i>	
1211C-8H-6, 30–31	early Oligocene	CP16c							A	F	F				C	R		R										C			R		R			
1211C-8H-7, 30–31		CP16a/CP16b							C	R	R				A	R		R										F		R		R				
1211A-9H-3, 100–101										C	F	R				C	R		R									C		R		R				
1211A-9H-4, 45–46										C	A	F				C	A	F	R	C								A		R		R				
1211A-9H-5, 45–46										C	A	R				A	R		R									C		R		R				
1211A-9H-6, 106–107										F	R	C				C	F		F																	
1211A-9H-7, 22–23	late Eocene		CP15							C	C	F				A	R	R	C										C		R		R			
1211C-9H-4, 52–53										C	R	F				A	C	R	C									R		R		R				
1211C-9H-5, 102–103										F	F	C				A	F	R	C									C		R		R				
1211C-9H-6, 22–23										F	R	C				A	R	R	C									R		R		R				
1211A-10H-1, 105–106										C	F	A				A	F		A										R							
1211A-10H-2, 133–134		middle Eocene		CP13c/CP14a/CP14b							C	R	R				C		R	F										F						
1211A-10H-3, 107–108									F	R	F				F		R		R									F								
1211A-10H-4, 108–109									F	R	C				C			R	R									R								
1211A-10H-5, 45–46									F	R	C				A			R	R									C								
1211A-10H-6, 45–46									F	R	C				C			R	F									C								
1211A-10H-7, 45–46									F	R	C				A			F	F									F								
1211C-10H-4, 120–121									F	R	C				A			F	F									F								
1211C-10H-5, 0–1											C				A			F	R	F								F		R						
1211C-10H-5, 100–101											C				A			F		F								F		R						
1211C-10H-6, 0–1	CP13b								R						C	VR												R								
1211C-10H-6, 50–51									C						F													R								
1211A-11H-2, 45–46									C						A													C								
1211A-11H-3, 45–46			CP13a						A																			R		F						
1211A-11H-4, 45–46									C																			R		C						
1211A-11H-5, 45–46									F							C													R		C					
1211A-11H-6, 45–46																R													R		F					
1211B-11H-4, 140–141										R						R													R		F					
1211B-11H-5, 45–46				CP12b						R							F													R		F				
1211B-11H-6, 45–46														R													R		F							
1211B-11H-7, 20–21														R													R		F							
1211C-11H-5, 100–101								R							F												R		C							
1211C-11H-6, 50–51															R												R		C							
1211A-12H-3, 45–46	CP12a																											R		F						
1211A-12H-4, 45–46																											R		C							
1211A-12H-5, 45–46																																				
1211A-12H-6, 45–46																																				
1211B-12H-5, 45–46		early Eocene	CP11																									R		F						
1211B-12H-6, 45–46			CP9/CP10																										R		F					

Table T3 (continued).

Core, section, interval (cm)	Age	Zone	Zygodiscaceae					Incertae Sedis	
			<i>Chiphragmalithus acanthodes</i> <i>Lophodololithus nascens</i> <i>Neochiastozygus bukryi</i> <i>Neochiastozygus distentus</i> <i>Neocrepidolithus</i> sp. <i>Placozygus sigmoides</i> <i>Ellipsolithus bollii</i> <i>Ellipsolithus distichus</i> <i>Ellipsolithus macellus</i>				<i>Nannotetrina fulgens</i> <i>Nannotetrina</i> sp. <i>Thoracosphaera</i> spp. <i>Tribrachiatus orthostylus</i> <i>Zygarhablithus bijugatus</i>		
1211C-8H-6, 30–31 1211C-8H-7, 30–31 1211A-9H-3, 100–101 1211A-9H-4, 45–46 1211A-9H-5, 45–46 1211A-9H-6, 106–107 1211A-9H-7, 22–23 1211C-9H-4, 52–53 1211C-9H-5, 102–103 1211C-9H-6, 22–23 1211A-10H-1, 105–106 1211A-10H-2, 133–134 1211A-10H-3, 107–108 1211A-10H-4, 108–109 1211A-10H-5, 45–46 1211A-10H-6, 45–46 1211A-10H-7, 45–46 1211C-10H-4, 120–121 1211C-10H-5, 0–1 1211C-10H-5, 100–101 1211C-10H-6, 0–1 1211C-10H-6, 50–51 1211A-11H-2, 45–46 1211A-11H-3, 45–46 1211A-11H-4, 45–46 1211A-11H-5, 45–46 1211A-11H-6, 45–46 1211B-11H-4, 140–141 1211B-11H-5, 45–46 1211B-11H-6, 45–46 1211B-11H-7, 20–21 1211C-11H-5, 100–101 1211C-11H-6, 50–51 1211A-12H-3, 45–46 1211A-12H-4, 45–46 1211A-12H-5, 45–46 1211A-12H-6, 45–46 1211B-12H-5, 45–46 1211B-12H-6, 45–46	early Oligocene 								

Table T3 (continued).

Core, section, interval (cm)	Age	Zone	Coccolithaceae														Discoasteraceae																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
			<i>Calcidiscus protoannula</i>	<i>Coccolithus crassus</i>	<i>Ericsonia formosa</i>	<i>Ericsonia robusta</i>	<i>Ericsonia subdisticha</i>	<i>Ericsonia subpertusa</i>	<i>Markalius inversus</i>	<i>Pedinocyclus larvalis</i>	<i>Bramletteius serraculoides</i>	<i>Campylosphaera dela</i>	<i>Campylosphaera eodela</i>	<i>Chiasmolithus altus</i>	<i>Chiasmolithus bidens</i>	<i>Chiasmolithus consuetus</i>	<i>Chiasmolithus danicus</i>	<i>Chiasmolithus eograndis</i>	<i>Chiasmolithus gigas</i>	<i>Chiasmolithus grandis</i>	<i>Chiasmolithus solitus</i>	<i>Cruciplacolithus cribellum</i>	<i>Cruciplacolithus primus</i>	<i>Cruciplacolithus tenuis</i>	<i>Cruciplacolithus vanheckii</i>	<i>Cruciplacolithus asymmetricus</i>	<i>Discoaster barbadensis</i>	<i>Discoaster deflandrei</i>	<i>Discoaster diastypus</i>	<i>Discoaster elegans/salisburgensis</i>	<i>Discoaster kuepperi</i>	<i>Discoaster lodoensis</i>	<i>Discoaster mohleri</i>	<i>Discoaster multiradiatus</i>	<i>Discoaster nobilis</i>	<i>Discoaster okadai</i>	<i>Discoaster saipanensis</i>	<i>Discoaster strictus</i>	<i>Discoaster sublodoensis</i>	<i>Discoasteroides bramlettei</i>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
1211B-12H-7, 20–21 1211C-12H-5, 100–101 1211C-12H-6, 97–98 1211C-12H-7, 0–1 1211A-13H-3, 40–42 1211A-13H-4, 40–42 1211A-13H-5, 102–104	early Eocene	CP9/CP10	R	R				R	R	R	R		R							R	R	R						R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R

Notes: Zonal markers are highlighted, and zones and ages are provided at left. Relative abundance is designated as follows: A = abundant, C = common, F = few, R = rare, and VR = very rare. rw = reworked specimens. Epoch boundaries placed following Berggren et al. (1995), except for Paleocene/Eocene Boundary, which was placed at the base of the PETM. See text for discussion.

Table T3 (continued).

Core, section, interval (cm)	Age	Zone	Fasciculithaceae/Heliolithaceae						Prinsiaceae								Rhabdosphaeraceae		Sphenolithaceae																
			<i>Fasciculithus magnicordis</i>	<i>Fasciculithus pileatus</i>	<i>Fasciculithus schaubii</i>	<i>Fasciculithus tympaniformis</i>	<i>Bomolithus elegans</i>	<i>Heliolithus klempellii</i>	<i>Cyclargolithus floridanus</i>	<i>Dictyococites bisectus</i>	<i>Dictyococites scrippsae</i>	<i>Neobiscutum</i> sp.	<i>Prinsius bisulcus</i>	<i>Prinsius dimorphosus</i>	<i>Prinsius martinii</i>	<i>Reticulofenestra dictyoda</i>	<i>Reticulofenestra hillae</i>	<i>Reticulofenestra reticulata</i>	<i>Reticulofenestra umbilica</i>	<i>Toweius callosus</i>	<i>Toweius emimens</i>	<i>Toweius gammatum</i>	<i>Toweius pertusus</i>	<i>Rhabdosphaera inflata</i>	<i>Triquetrorhabdulus carinatus</i>	<i>Sphenolithus anarrhopus</i>	<i>Sphenolithus editus</i>	<i>Sphenolithus furcatolithoides</i>	<i>Sphenolithus moriformis</i>	<i>Sphenolithus obtusus</i>	<i>Sphenolithus predistens</i>	<i>Sphenolithus primus</i>	<i>Sphenolithus pseudoradians</i>	<i>Sphenolithus radians</i>	<i>Sphenolithus spiniger</i>
1211B-12H-7, 20–21 1211C-12H-5, 100–101 1211C-12H-6, 97–98 1211C-12H-7, 0–1 1211A-13H-3, 40–42 1211A-13H-4, 40–42 1211A-13H-5, 102–104	early Eocene	CP9/CP10																	R	R	R	R					F	F					R	R	
1211A-13H-6, 101–103 1211A-13H-7, 40–42 1211C-13H-3, 140–141 1211C-13H-4, 0–1 1211C-13H-5, 0–1 1211C-13H-6, 0–1																				R	R	R	R					F	F					R	R
1211A-14H-2, 45–46 1211A-14H-3, 45–46 1211A-14H-4, 45–46 1211A-14H-5, 45–46 1211A-14H-6, 45–46																				R	R	R	R					F	F					R	R
1211B-14H-4, 60–61 1211B-14H-5, 60–61 1211B-14H-6, 60–61 1211B-14H-7, 10–11																				R	R	R	R					F	F					R	R
1211A-15H-1, 45–46 1211A-15H-2, 45–46 1211A-15H-3, 45–46 1211A-15H-4, 45–46																				R	R	R	R					F	F					R	R
	late Paleocene	CP8b																	R	R	R	R					F	F					R	R	
																				R	R	R	R					F	F					R	R
																				R	R	R	R					F	F					R	R
																				R	R	R	R					F	F					R	R
																				R	R	R	R					F	F					R	R
	early Paleocene	CP8a																	R	R	R	R					F	F					R	R	
																				R	R	R	R					F	F					R	R
																				R	R	R	R					F	F					R	R
																				R	R	R	R					F	F					R	R
																				R	R	R	R					F	F					R	R
	early Paleocene	CP6/CP7																	R	R	R	R					F	F					R	R	
																				R	R	R	R					F	F					R	R
																				R	R	R	R					F	F					R	R
																				R	R	R	R					F	F					R	R
																				R	R	R	R					F	F					R	R
	early Paleocene	CP5																	R	R	R	R					F	F					R	R	
																				R	R	R	R					F	F					R	R
																				R	R	R	R					F	F					R	R
																				R	R	R	R					F	F					R	R
																				R	R	R	R					F	F					R	R
	early Paleocene	CP4																	R	R	R	R					F	F					R	R	
																				R	R	R	R					F	F					R	R
																				R	R	R	R					F	F					R	R
																				R	R	R	R					F	F					R	R
																				R	R	R	R					F	F					R	R
	early Paleocene	CP2/CP3																	R	R	R	R					F	F					R	R	
																				R	R	R	R					F	F					R	R
																				R	R	R	R					F	F					R	R
																				R	R	R	R					F	F					R	R
																				R	R	R	R					F	F					R	R
	early Paleocene	CP1b																	R	R	R	R					F	F					R	R	
																				R	R	R	R					F	F					R	R
																				R	R	R	R					F	F					R	R
																				R	R	R	R					F	F					R	R
																				R	R	R	R					F	F					R	R
	early Paleocene	CP1a																	R	R	R	R					F	F					R	R	
																				R	R	R	R					F	F					R	R
																				R	R	R	R					F	F					R	R
																				R	R	R	R					F	F					R	R
																				R	R	R	R					F	F					R	R

Table T3 (continued).

Core, section, interval (cm)	Age	Zone	Zygodiscaceae						Incertae Sedis							
			<i>Chiphragmalithus acanthodes</i>	<i>Lophodolithus nascens</i>	<i>Neochiastozygus bukryi</i>	<i>Neochiastozygus distentus</i>	<i>Neocrepidolithus</i> sp.	<i>Placozygus sigmoides</i>	<i>Ellipsolithus bollii</i>	<i>Ellipsolithus distichus</i>	<i>Ellipsolithus macellus</i>	<i>Nannotetrina fulgens</i>	<i>Nannotetrina</i> sp.	<i>Thoracosphaera</i> spp.	<i>Tribrachiatus orthostylus</i>	<i>Zygrrhablithus bijugatus</i>
1211B-12H-7, 20–21	early Eocene	CP9/CP10	R	R			R				R				F	A
1211C-12H-5, 100–101			R	R			R				R				C	F
1211C-12H-6, 97–98			R	R			R				R				C	F
1211C-12H-7, 0–1				R			R			R	R				C	C
1211A-13H-3, 40–42				R			R			R	R				C	F
1211A-13H-4, 40–42											R				C	C
1211A-13H-5, 102–104	late Paleocene	CP8b		R			R				R				C	C
1211A-13H-6, 101–103					R		R		R	R						
1211A-13H-7, 40–42								R	R		R					
1211C-13H-3, 140–141					R		R		R		R					
1211C-13H-4, 0–1							R				R					
1211C-13H-5, 0–1									R		R					
1211C-13H-6, 0–1								R	R		R					
1211A-14H-2, 45–46		CP6/CP7		R				R	R		R					
1211A-14H-3, 45–46								R	R		R					
1211A-14H-4, 45–46					R		R	R	R		R					
1211A-14H-5, 45–46							R	R	R		R					
1211A-14H-6, 45–46					R		R	C								
1211B-14H-4, 60–61			CP4	R	R		R		A			R				
1211B-14H-5, 60–61								F								
1211B-14H-6, 60–61								F	R							
1211B-14H-7, 10–11		CP2/CP3						A	R							
1211A-15H-1, 45–46							C									
1211A-15H-2, 45–46							C									
1211A-15H-3, 45–46	CP1b							F								
1211A-15H-4, 45–46	CP1a						R						A			