

Expedition 318 Methods, Table T3. Stratigraphic ranges for selected Cenozoic dinocyst species. (See table notes.)

Cenozoic dinocyst species	Northern Hemisphere								Equatorial				Southern Hemisphere							
	High latitude				Mid latitude				Low latitude				Mid latitude				High latitude			
	FO (Ma)	Ref	LO (Ma)	Ref	FO (Ma)	Ref	LO (Ma)	Ref	FO (Ma)	Ref	LO (Ma)	Ref	FO (Ma)	Ref	LO (Ma)	Ref	FO (Ma)	Ref	LO (Ma)	Ref
<i>Achilleodinium bifurcoides</i> (Eisenack, 1954b) Eaton, 1976					54.6	37	30.65?	45	33.92	48	26.2	77					35.7	59		
<i>Achomospaera alcornu</i> (Eisenack, 1954b) Davey and Williams, 1966a					58.5	37	13.00	35	33.9	48	26.7?	38								
<i>Achomospaera andalousiensis</i> Jan du Chêne, 1977					13.3	80	0.00		12.3	38										
<i>Adnotosphaeridium multispinosum</i> Williams and Downie, 1966									56.00	66										
<i>Alterbidinium? distinctum</i> (Wilson, 1967a) Lentini and Williams, 1985													36.9	54	33.93	54	FCO, 35.7	59	33.7?	59
<i>Amiclosphaera umbraculum</i> Harland, 1979b					12.5	38	1.44	79	12.5	38	2.55	34			1.6	58				
<i>Apectodinium augustum</i> (Harland, 1979c) Lentini and Williams, 1981					55.2	40, 41.34	55.4	40, 41.34							48.60	82	58.60	81	48.60	81
<i>Apectodinium homomorphum</i> (Deflandre and Cookson, 1955) Lentini and Williams, 1977															36.9	34	51.5	59	38.4	59
<i>Arachnodinium antarcticum</i> Wilson and Clowes, 1982													55.4	54						
<i>Areoligera gippingensis</i> Jolley, 1992					58.8	35	57.9	35												
<i>Areoligera semicirculata</i> (Morgenroth, 1966b) Stover and Evitt, 1978	38.2	62			33.9	45	25.5	63	33.7	48	27.00	77	29.6	58	28.2	58				
<i>Areosphaeridium diktyoplokum</i> (Klumpff, 1953) Eaton, 1971	33.6	62			50.2	56	33.5	40			33.3	77								
<i>Artemisocysta cladodichotoma</i> (Benedek, 1972)									27.1	77										
<i>Ataxiodinium choane</i> Reid, 1974					6.6	34	0.00	34												
<i>Ataxiodinium confusum</i> Versteegh and Zevenboom in Versteegh, 1995							2.63	79	4.95	34	2.59	72								
<i>Barsoidinium evangelinae</i> Lentini et al., 1994					8.4	34	5.33	34												
<i>Barsoidinium plicocenicum</i> (Head, 1993) Head, 1994							1.8	70												
<i>Barsoidinium</i> spp.							2.6	65												
<i>Batiacospaera micropapillata</i> Stover, 1977/B. <i>minuta</i> (Matsuoka, 1983) Matsuoka and Head, 1992							3.74	79												
<i>Biconidinium longissimum</i> Islam, 1983c					54.9	35	50.8	35												
<i>Cannosphaeropsis passio</i> de Verteuil and Norris, 1996a					12.73	78	11.4	36	12.15	38	11.4	38								
<i>Carpatella cornuta</i> Crigorigovich, 1969a					65.2	50	60.6	35	65.1	52, 53	58.5?	34								
<i>Cerebrocysta bartonensis</i> Bujak in Bujak et al., 1980					40.2	39	37.7	39									40.2?	34	37.7?	34
<i>Cerebrocysta poulsenii</i> de Verteuil and Norris, 1996a					17.9	36	11.05	36	16.1	38	11.6	38								
<i>Cerodinium diebelii</i> (Alberti, 1959b) Lentini and Williams, 1987					78.5	34	60.6	35			62.00	34	78.9?	20, 51						
<i>Cerodinium wardenense</i> (Williams and Downie, 1966c) Lentini and Williams, 1987					56.8	35	53.6	40												
<i>Charlesdowniea clathrata</i> (Eisenack, 1938) Lentini and Vozzhennikova, 1989							32.30	79												
<i>Charlesdowniea columna</i> (Michoux, 1988) Lentini and Vozzhennikova, 1990			48.6	62	51.9	40.34	49.6	40	51?	34	32.3	77					52.2	59	49.8	59
<i>Charlesdowniea crassiramosa</i> (Williams and Downie, 1966b) Lentini and Vozzhennikova, 1989					54.25	34, 40	53.5	34, 40	54?	34							52.2	59	49.8	59
<i>Charlesdowniea edwardsii</i> (Wilson, 1967c) Lentini and Vozzhennikova, 1989					51.6	34, 40	47.2	34, 40									52.2	59	49.8	59
<i>Chichouadinium vestitum</i> (Brideaux, 1971) Bujak and Davies, 1983					108.00	34	99.6	34												
<i>Chiropteridium galea</i> (Maier, 1959) Sarjeant, 1983	33.5	62			33.7	45	21.6	34	31.1	55	23.2	38	25.3	58	23.00	58				
<i>Cleistosphaeridium placacanthum</i> (Deflandre and Cookson, 1955) Eaton et al., 2001							13	36			11.6	38								
<i>Cordosphaeridium cantharellus</i> (Brosius, 1963) Gocht, 1969					40.1	39	17.5	64			17.5	38								
<i>Cordosphaeridium funiculatum</i> Morgenroth, 1966a					51.2	43	35.1?	34			35.2	48								
<i>Corrudinium devernaliae</i> Head and Norris, 2003			35.4	62	5	71	3.9	79												
<i>Corrudinium harlandii</i> Matsuoka, 1983b					87	34			4.5	34			8?	34	2.65?	34				
<i>Corrudinium incompositum</i> (Drugg, 1970b) Stover and Evitt, 1978					40.00	39	31.5	45			31.2	48			29.5	58				
<i>Coosteodinium aubryae</i> de Verteuil and Norris, 1996a					21.4	36	15.05	36	19.6	38	14.9	38								
<i>Cyclapophysis monmouthensis</i> Benson, 1976					67.00	34	58.3	42	67.00	34	58.5?	34								
<i>Damassadinium californicum</i> (Drugg, 1967) Fensome et al., 1993b					65.1	34	61.00	42	65.1	50, 53	58.52?	34								
<i>Deflandrea antarctica</i> Wilson, 1967a																	55.6?	44	28.45?	44
<i>Deflandrea convexa</i> Wilson, 1988																	54.00	59	39.4?	34
<i>Deflandrea cygniformis</i> Pöthe de Baldi, 1966											35.8	58			35.8	58	55.6?	44	28.45?	44
<i>Deflandrea oebisfeldensis</i> Alberti, 1959b					58.6	37	53.2	40												
<i>Deflandrea phosphorica</i> Eisenack, 1938b					54.6	37	21.2	34	54.6?	34	21.2	38					54.6?	34		
<i>Dinogymnium</i> spp.					90.8	23	65.4	34					87.3?	51	67?	51				
<i>Dinopteridium cladoideis</i> Deflandre, 1935					108.8	2, 12	72.3	34												
<i>Diphyes colligerum</i> (Deflandre and Cookson, 1955) Cookson, 1965a			40.45	62	59.7	24	36.9	40			33.48	48					57.4	59		
<i>Diphyes ficusoides</i> Islam, 1983b	49.2	62	44.6	62	50.00	34	44.3	40												
<i>Distatodinium apenninum</i> Brinkhuis et al., 1992									21.8	34	21.05	38								
<i>Distatodinium bifii</i> s.l. sensu Pross et al., 2010									28.6	77	24.6	77								
<i>Distatodinium bifii</i> Brinkhuis et al., 1992					27.7	63	23.8	64	27.7	63, 71	25.2	77	27.6	58	26.4	58				
<i>Distatodinium paradoxum</i> (Brosius, 1963) Eaton, 1976							14.9	64												
<i>Dracodinium? condylas</i> (Williams and Downie, 1966b) Costa and Downie, 1979					52.8	35	51.4	40												
<i>Dracodinium politum</i> Bujak et al., 1980					52.3	39	51.4	40												
<i>Dracodinium varietalatum/wajawaense</i> (Williams and Downie, 1966b) Costa and Downie, 1979					53.3	35	51.4	40	58.00	68	52.6	68					53.3	59	52.2	59
<i>Eatonocysta furensis</i> (Heilmann-Clausen in Heilmann-Clausen and Costa, 1989) Stover and Williams, 1995					51.5	34, 47	50.00	40												
<i>Eatonocysta ursulae</i> (Morgenroth, 1966a) Stover and Evitt, 1978			47.9	62	54.1	34	47.9	40												
<i>Ectosphaeropsis burdigalensis</i> Londeix and Jan du Chêne, 1988					26.00	63			24.9	77	13.8	38	26.00	58	23.8	58				
<i>Edwardsiella sexispinosa</i> Versteegh and Zevenboom in Versteegh, 1995							2.81	79	26.8?	34	3.00	38	26.00	58	23.8	58				
<i>Eisenackia circumtabulata</i> (Drugg, 1967) Quattrocchio and Sarjeant, 2003					65.4	52, 53	59.4	37	65.4	52, 53			67?	51			68.2	59	LCO, 57.8	59
<i>Eisenackia margarita</i> (Harland, 1979a) Quattrocchio and Sarjeant, 2003					62.3	35	58.15	37									68.2	59	LCO, 54.0	59
<i>Eisenackia reticulata</i> (Damassa, 1979b) Quattrocchio and Sarjeant, 2003					65.4	28	62.05	24					67?	34			LCO, 55.2	59		59
<i>Erneadocysta alkyostyla</i> (Menendez, 1965) Fensome et al., 2007															31.00	58	FCO, 48.0	59		59
<i>Erneadocysta pectiniformis</i> (Gerlach, 1961) Stover and Williams, 1995					36.4	56	29.4	56			27.5	77								
<i>Exochosphaeridium insigne</i> de Verteuil and Norris, 1996					20.4	36	18	36												
<i>Fillsphaera fillera</i> Bujak, 1984					23.95	34														
<i>Galeacysta etrusca</i> Corradini and Biffi, 1988							2.1	74	6.7	38	5.6	38								
<i>Geonettia waltonensis</i> Head, 2000																				
<i>Gerdiocysta conopeum</i> Liengjaren et al., 1980					34.00	45	29.4	45												
<i>Glaphyrocysta exuberans</i> (Deflandre and Cookson, 1955) Stover and Evitt, 1978					53.5	66														
<i>Glaphyrocysta semitecta</i> (Bujak in Bujak et al., 1980) Lentini and Williams, 1981					40.6	39	32.3	34	33.9	48	32.6	48, 77								
<i>Gramocysta verrucosa</i> (Plasecki, 1980) Lund and Lund-Christensen in Daniels et al., 1990					13.11	38	11.00	38												
<i>Habibocysta tectata</i> Head et al., 1989b			0.78	75	14	36	1.7?	79												
<i>Hemiplacophora semilifera</i> Cookson and Eisenack, 1965a									36.3?	48	35.3	58	36?	34	35.3	58	40.4	59	35.5	59
<i>Heteraulacysta porosa</i> Bujak in Bujak et al., 1980	44.4	62	36.3	62	40.25	39	36.3	40												
<i>Homotryblum floripes</i> (Deflandre and Cookson, 1955) Stover, 1975							21.00	64	48.00	34	6									