APPENDIX 2: DISTRIBUTION OF SPECIES

Samples (Field Number)	B 7-1	B 9-3.2	I 9/8/05-1	J 13-1.5	J 13-1.7	F 16-3.1	F 17-4.1	A 24-2.1	B 32-33	B 37-5.2	E 67-2.4 (29/06)	E 75-5.2	B A7012a	A A7030b	B A7035d	A A7037a	B A7038a	G A7041d	A A7045a	I B503	C B507a	H B509	B B512a	K B524	F B539	E B542	E B543	E B567	A B572b	I B574a	A B575a	B B603a	E B606c	C B606d	C B607a	A B608a	A B609a	A B609b	C B611a	A B612a	A B613b	A B614a	C B616a	C B616b	A B617a	A B624b	A B624c	A B625a	I B633b	A B634b	D B635a	A B636a	A B636b	A B636c	E B637c	C B637d	C B637g	A B637h
Facies Association (see Table 1)	wr	wr	wr	wr	wr	wr	wr	wr	wr	wr	wr	wr	ar	ar	ar	ar	ar	ar	ar	wr	wr	wr	wr	wr	wr	wr	wr	wr	wr	wr	wr	ar	wr	wr	ar	ar	wr	wr	ar	ar	ar	ar	wr	ar	ar	ar	ar	ar	wr	ar	ar	ar	ar	ar	wr	ar	ar	ar
Preparation type (ar = acid digestion residue; wr = washed residue)	wr	wr	wr	wr	wr	wr	wr	wr	wr	wr	wr	wr	ar	ar	ar	ar	ar	ar	ar	wr	wr	wr	wr	wr	wr	wr	wr	wr	wr	wr	wr	ar	wr	wr	ar	ar	wr	wr	ar	ar	ar	ar	wr	ar	ar	ar	ar	ar	wr	ar	ar	ar	ar	ar	wr	ar	ar	ar
Palynological zones (C - *S. quadrifidus* Zone; D - *S. speciosus* Zone; E - *M. crenulatus* Zone; F - *A. reducta* Zone; Helby and others, 1987 - identified by J. Backhouse)				C	C															C	D	C	D?	C	C	D?	C-D	Fup		C	D?	D?	F	F+				C	C	C?				F?	F?					C						D-	D	D	D
Foraminiferal based age (based on known ranges elsewhere of species belonging to *Gsollbergella*, *Ophthalmidium*, *Variostoma*, and "*Frondicularia rhaetica*" - Haig and McCartain, unpublished data)				Carnian	Carnian								Carnian													Middle Triassic			Norian-Rhaetian														Late Triassic				Norian-Rhaetian		Rhaetian						Norian-Rhaetian	Norian-Rhaetian	Rhaetian	Norian-Rhaetian			
Conodont based age: (based on McCartain, unpublished data)			Early Norian											Norian	Middle Norian ?	Late Triassic	Norian									Middle Triassic						Ladinian-Carnian						Carnian	Carnian									?Rhaetian						Early Norian			Norian	Early Norian	
Radiolarian age: (based on Haig and McCartain, unpublished data)																																																														
Species																																																															
Aaptotoichus mutinensis n. sp.																																													X					X													
Aaptotoichus vallis (Trifonova)																								X																			X																X		
Ammobaculites duncani Schroeder							?					X	X																				X										X		X			X				X				X				X	X
Ammobaculites rhaeticus Kristan-Tollmann	X											X																X					X	X														X					?									
Ammobaculites zlambachensis Kristan-Tollmann	X																																				X																									
Ammodiscus inaequabilis Styk													X																			X					X																									
Ammodiscus parapriscus Ho			X	X	?		X					X	X		X	X			X		X							X	X	X			X	X			X	X	X		X	X	X	X			X	X	X	X	X		X		X		X	X	X	X
Ammodiscus silicea (Terquem)																												X					X	X																													
Ammovertellina perplexa (Franke)																												X																																			
Bathysiphon salebrosa (Kristan-Tollmann)																																																															
Bathysiphon stabilis (Kristan-Tollmann)			X	X	X			X		X										X	X				X																											X									
Bathysiphon sp.	X		X			X	X	X		X		X								X							X	X	X	X	X	X	X	X		X	X	X						X	X				X	X	X		X		X	X	X		X	X	
Budashevaella pachyspirus (Nagy and Johansen)												X																X					X	X																					X	X						
Bulbobaculites tzankovi (Trifonova)												X																X					X	X																						X						
Carteriella manelobasensis n. gen. n. sp.									X											X		X	X			?											X		X																							
Conglophragmium canningensis (Tappan)											?	X																X					X	X								X		X				X															
Gaudryinella elegantissima Kristan-Tollmann																																																															
Gaudryinopsis kelleri (Tappan)																																																															
Gaudryinopsis triassica (Trifonova)			X								?														X														X					X	X							X										
Glomospira heimi Singh												X				X			X									X					X		X								X													X						
Glomospirella gansseri Singh			X																		X																							X																		
Haplophragmoides kingakensis Tappan		X	X																													X																																
Hyperammina pediformis Scherp																														X			X	X					X					X	X																		
Kechenotiske liassica (Brand)			X				X					X																					X	X						X	X	X	X	X			X	X		X	X				X					X
Kechenotiske mauritkensis n. sp.			X																														X						X																				X			
Kutsevella bezgi (Strong)			X				?	?	?				X																	X																												X				
Lagenammina asper (Ziegler)			X			X						X															X	X					X	X																													
Lagenammina guttaformis (Ziegler)																																												X																		
Palustrella exigua (Schwager)																			X																																											
Palustrella piketrsi (Terquem)															X																																		X												
Palustrella racemata (Terquem and Berthelin)																																												X																		
Palustrella taylori (Tosk and Anderson).																																																															
Placentammina soibadaensis n. sp.																												X					X																															
Pseudobolivina tornata Kristan-Tollmann															X																											X									X					?		?			X	X
Reophax metensis Franke																																	X	X										X																			
Reophax suevica Franke													X																																X																		
Scherochorella eominutus (Kristan-Tollmann)												X																					X	X																						X						
Spiroplectammina dobrudzhiana Trifonova																																												X																		
Subreophax bariquiensis n. sp.																																												X																		
Subreophax thuringica (Franke)																																	X	X																													
Thuramminoides metensis (Terquem)		X	X			X	?	X		X	X										X				?			X		?	X						X		X											X	X								X		
Tolypammina persica (Oberhauser)	X		X	X				X		X		X			X	X	X		X									X	X	X		X					X	X	X		X				?	X	X	X	X		X		X	X	X	X	X		X	X	X
Tolypammina glareosa Tappan													X	X	X	X		X	X										X			X			X	X	X	X		X		X		X	X		X	X		X		X	X	X	X			X	X	X
Trochammina eoparva Nagy and Johansen			X				X																																																							
Trochammina sp.																																									X																						
Trochammina semiturgida Nagy and Johansen																																																				X										
Trochamminopsis manatutensis n.sp.			X																											X							X																									
Verneuilinoides mauritti (Terquem)																				X										X																													X	X		
Verneuilinoides sp.													X																																																	

APPENDIX 2: DISTRIBUTION OF SPECIES

Samples (Field Number)	A B638a	A B640a	A B643a	A B643c	A B644a	F B645a	A B649a	J B650a	K B652b	B B655a	B B655c	B B657a	B B658a	A B660a	A B662a	A B663a	C515	J C516	F C517	A C540c	J C567a	J C567b	C C571	E C583	E C588c	C C599b	B C615a	H C618a	B C621a	B C621b	C C626a	C C628a
Facies Association (see Table 1)	ar	ar	ar	wr	ar	wr	ar	ar	wr	wr	ar	ar	ar	ar	ar	ar	wr	wr	wr	wr	wr	wr	wr	wr	wr	wr	ar	ar	ar	wr	ar	ar
Preparation type (ar = acid digestion residue; wr = washed residue)																																
Palynological zones (C - *S. quadrifidus* Zone; D - *S. speciosus* Zone; E - *M. crenulatus* Zone; F - *A. reducta* Zone; Helby and others, 1987 - identified by J. Backhouse)	D?		D?	D?	D?	D?	C	C?	C?	C-D	C-D?									D			C-D	F?	F?	C-F						C-F
Foraminiferal based age (based on known ranges elsewhere of species belonging to *Gsollbergella*, *Ophthalmidium, Variostoma*, and "*Frondicularia rhaetica*" - Haig and McCartain, unpublished data)														Norian-Rhaetian																		
Conodont based age: (based on McCartain, unpublished data)	Late Carnian	Early Norian	Late Carnian	Late Carnian				Early Carnian		Carnian	Carnian																	Middle Norian	Late Anisian?			Late Anisian-Ladinian
Radiolarian age: (based on Haig and McCartain, unpublished data)																																
Species																																
Aaptotoichus mutinensis n. sp.																X																
Aaptotoichus vallis (Trifonova)																																
Ammobaculites duncani Schroeder	X	X	X		?						X	?			X	?				X									X			X
Ammobaculites rhaeticus Kristan-Tollmann																																
Ammobaculites zlambachensis Kristan-Tollmann										X																						
Ammodiscus inaequabilis Styk																																X
Ammodiscus paraprisscus Ho	X	X	X					X	X	X	X	X		X		X				X			X		X				X			X
Ammodiscus siliceus (Terquaem)																																
Ammovertellina perplexa (Franke)																																
Bathysiphon salebrosa (Kristan-Tollmann)									X	X																						
Bathysiphon stabilis (Kristan-Tollmann)										X											X		X		X	X	X					
Bathysiphon sp.						X			X	X						X				X		X	X	X						X	X	
Budashevaella pachyspirus (Nagy and Johansen)												?	X											X	X							
Bulbobaculites tzankovi (Trifonova)																									X							
Carteriella manelobasensis n. gen. n. sp.																	X	X			X	X				X						
Conglophragmium canningensis (Tappan)								X									X							X	X							
Gaudryinella elegantissima Kristan-Tollmann																																
Gaudryinopsis kelleri (Tappan)																										X						
Gaudryinopsis triassica (Trifonova)									X																	X	X					X
Glomospira heimi Singh																								X	X							
Glomospirella gansseri Singh								X												X			X						X			X
Haplophragmoides kingakensis Tappan	X										?																					
Hyperammina pediformis Scherp												X																				
Kechenotiske liassica (Brand)			X					X				X			X	X				?											X	
Kechenotiske mauritkensis n. sp.																		X			X					X						
Kutsevella beggei (Strong)																																
Lagenammina asper (Ziegler)																									X							
Lagenammina guttaformis (Ziegler)																																
Palustrella exigua (Schwager)																																
Palustrella piketryi (Terquaem)											X																					
Palustrella racemata (Terquem and Berthelin)																																
Palustrella taylori (Tosk and Anderson).																																
Placentammina soibadaensis n. sp.																																
Pseudobolivina tornata Kristan-Tollmann	X	X	X		X			X					X		?																	
Reophax metensis Franke																																
Reophax suevica Franke															X	X													X			X
Scherochorella eominutus (Kristan-Tollmann)		?																													?	
Spiroplectammina dobrudzhiana Trifonova																																
Subreophax bariquiensis n. sp.																																
Subreophax thuringica (Franke)																																
Thurammoides metensis (Terquem)						X				X									X		X	X	X		X	X				?		
Tolypammina persica (Oberhauser)	X	X	X	X	X		X	X		X	X	X	X	X						X			X			X			X	X		X
Tolypammina glareosa Tappan	X	X	X		X	X	X	X			X	X	X	X	X	X											X	X	X		X	X
Trochammina eoparva Nagy and Johansen											X												X									
Trochammina sp.																																
Trochammina semiturgida Nagy and Johansen															X																	
Trochamminoapsis manatutensis n.sp.																							X									
Verneuilinoides mauritii (Terquem)	X				X					X					X	X	X						X									X
Verneuilinoides sp.																																

Samples (Field Number)	A C628b	C C636a	I C637b	H C638b	C C639a	C C640a	B C659a	F C667a	A C680b	A C685a	A C687a	C M514b	G M525C	G M525h	G M525L	G M525q	I M564	I M601a	C M624a	F M625a	C M626a	C M626b	C M636a	H M637a	I M639a	I M639b	A M641a
Facies Association (see Table 1)	wr	ar	ar	ar	ar	wr	ar	wr	ar	ar	ar	wr	ar	ar	ar	ar	wr	wr	ar	wr	ar	wr	ar	wr	wr	ar	ar
Preparation type (ar = acid digestion residue; wr = washed residue)																											
Palynological zones (C - *S. quadrifidus* Zone; D - *S. speciosus* Zone; E - *M. crenulatus* Zone; F - *A. reducta* Zone; Helby and others, 1987 - identified by J. Backhouse)	C-F		C	C	C-D		C-F					C-D								C				C	C	C	Tri
Foraminiferal based age (based on known ranges elsewhere of species belonging to *Gsollbergella*, *Ophthalmidium, Variostoma*, and "*Frondicularia rhaetica*" - Haig and McCartain, unpublished data)									Norian-Rhaetian	Norian-Rhaetian	Norian-Rhaetian																
Conodont based age: (based on McCartain, unpublished data)	Late Anisian-Ladinian						Middle Triassic						Early Olenekian (Spathian) Early Olenekian (Smithian)		Anisian	Late Indian (Dinerian)					Late Anisian-Early Ladinian	Late Anisian-Ladinian		Late Anisian-Ladinian			
Radiolarian age: (based on Haig and McCartain, unpublished data)																											
Species																											
Aaptotoichus mutinensis n. sp.																											
Aaptotoichus vallis (Trifonova)																											
Ammobaculites duncani Schroeder			X		X									?									X				?
Ammobaculites rhaeticus Kristan-Tollmann				X								?															
Ammobaculites zlambachensis Kristan-Tollmann																											
Ammodiscus inaequabilis Styk					X																						
Ammodiscus paraprisscus Ho		X	X	X	X		X					X			X	?	X	X		X	X	X		X	X	X	
Ammodiscus siliceus (Terquaem)																											
Ammovertellina perplexa (Franke)																						X					
Bathysiphon salebrosa (Kristan-Tollmann)												X														X	
Bathysiphon stabilis (Kristan-Tollmann)												X					X								X		
Bathysiphon sp.	X	X	X	X	X	X						X					X	X				X			X	X	
Budashevaella pachyspirus (Nagy and Johansen)																											X
Bulbobaculites tzankovi (Trifonova)																											
Carteriella manelobasensis n. gen. n. sp.																											
Conglophragmium canningensis (Tappan)		X						X				X														X	
Gaudryinella elegantissima Kristan-Tollmann																											
Gaudryinopsis kelleri (Tappan)				X	?																				X		
Gaudryinopsis triassica (Trifonova)						?		X				X			X		X							X	X	X	
Glomospira heimi Singh									?							?											
Glomospirella gansseri Singh					X				X			X					X					X		X			
Haplophragmoides kingakensis Tappan			X									X					X								X		
Hyperammina pediformis Scherp																											
Kechenotiske liassica (Brand)				X	X													X									
Kechenotiske mauritkensis n. sp.			X									X														X	
Kutsevella beggei (Strong)												X													X	X	
Lagenammina asper (Ziegler)																											
Lagenammina guttaformis (Ziegler)																											
Palustrella exigua (Schwager)																											
Palustrella piketryi (Terquaem)		X																								X	
Palustrella racemata (Terquem and Berthelin)																											
Palustrella taylori (Tosk and Anderson).															X												
Placentammina soibadaensis n. sp.																									?		
Pseudobolivina tornata Kristan-Tollmann				X	?																						
Reophax metensis Franke																									X		
Reophax suevica Franke																											
Scherochorella eominutus (Kristan-Tollmann)																											
Spiroplectammina dobrudzhiana Trifonova																											
Subreophax bariquiensis n. sp.																											
Subreophax thuringica (Franke)																											
Thurammoides metensis (Terquem)						X						X					X							X	X	X	
Tolypammina persica (Oberhauser)	X		X		X				X		X	X			?	?	X		X		X			X	X	X	X
Tolypammina glareosa Tappan		X		X	X				X	X	X		X	X	X	?			X	X	X		X			X	X
Trochammina eoparva Nagy and Johansen												X						X									
Trochammina sp.																											
Trochammina semiturgida Nagy and Johansen																											
Trochamminoapsis manatutensis n.sp.																	X							X	X		
Verneuilinoides mauritii (Terquem)															X												
Verneuilinoides sp.																											

APPENDIX 2: DISTRIBUTION OF SPECIES

Samples (Field Number)	F M642a	E M643c	A M644a	G M655b	D M659a	C M673a	C M677a	B M681a	B M683a	A M6114a	F S517	A S532b	A S542	A S551b	F S565	A S575a	A S630a	A S634a	A S646c	A S647a	A S649b	C S652a	A S653a	A S653b	A S656a	A S657b	A S658a	A S661a	A S661b	A S662a	A S665a	A S672a	A S689b	A S692a	A S693a	A S697b	A S6100a	C S6101a	C S6103a	A S6104a	E S6107a	B S6109a
Facies Association (see Table 1)																																										
Preparation type (ar = acid digestion residue; wr = washed residue)	wr	ar	ar	wr	wr	ar	ar	ar	ar	ar	wr	ar	ar	wr	wr	ar	ar	ar	ar	ar	ar	ar	wr	wr	ar	ar	ar	ar	ar	ar	ar	ar	ar	ar	ar	ar	ar	ar	ar	ar	ar	ar
Palynological zones (C - *S. quadrifidus* Zone; D - *S. speciosus* Zone; E - *M. cremulatus* Zone; F - *A. reducta* Zone; Helby and others, 1987 - identified by J. Backhouse)																																										
Foraminiferal based age (based on known ranges elsewhere of species belonging to *Gsollbergella*, *Ophthalmidium*, *Variostoma*, and "*Frondicularia rhaetica*" - Haig and McCartain, unpublished data)	C		Late Triassic		C	C?				C		Norian-Rhaetian	Norian-Rhaetian			Norian-Rhaetian							D-E	D-E	Norian-Rhaetian							Norian-Rhaetian	Norian-Rhaetian	Norian-Rhaetian			Late Triassic				
Conodont based age: (based on McCartain, unpublished data)	Early Carnian		Late Carnian			Carnian <										M Norian-Rhaetian		Early Norian	Late Carnian								Early Norian			Late Carnian						Late Carnian					Early Carnian
Radiolarian age: (based on Haig and McCartain, unpublished data)																																										
Species																																										
Aaptotoichus mutinensis n. sp.																																										
Aaptotoichus vallis (Trifonova)																																										
Ammobaculites duncani Schroeder	X					X				X							?		X	X		X					X	X	X			X					?				?
Ammobaculites rhaeticus Kristan-Tollmann																																								X		
Ammobaculites zlambachensis Kristan-Tollmann	X													?																										X		
Ammodiscus inaequabilis Styk																																										
Ammodiscus parapriscus Ho	X													X			X	X					X	X		X	X		X		X	X				X		X	X	X	X	X
Ammodiscus silicea (Terquem)																																									X	X
Ammovertellina perplexa (Franke)																																										
Bathysiphon salebrosa (Kristan-Tollmann)	X																																									
Bathysiphon stabilis (Kristan-Tollmann)	X										X								X						X													X				
Bathysiphon sp.	X					X					X						X		X		X								X							X				X	X	X
Budashevaella pachyspirus (Nagy and Johansen)																																				?					X	
Bulbobaculites tzankovi (Trifonova)																																									X	
Carteriella manelobasensis n. gen. n. sp.																						?																X				
Conglophragmium canningensis (Tappan)	?					X																																				
Gaudryinella elegantissima Kristan-Tollmann																																									X	
Gaudryinopsis kelleri (Tappan)																																										
Gaudryinopsis triassica (Trifonova)											X						?																									
Glomospira heimi Singh															X														?												X	
Glomospirella gansseri Singh						X								X										X						X												X
Haplophragmoides kingakensis Tappan	X				X																																					
Hyperammina pediformis Scherp																																										
Kechenotiske liassica (Brand)	X		X						X					X			X										X															X
Kechenotiske mauritkensis n. sp.						X											X																									
Kutsevella beggi (Strong)	X					X																?																			X	
Lagenammina asper (Ziegler)																	X												X													
Lagenammina guttaformis (Ziegler)																																										
Palustrella exigua (Schwager)																													X													
Palustrella pikettyi (Terquem)																					X																					
Palustrella racemata (Terquem and Berthelin)																																										
Palustrella taylori (Tosk and Anderson).																																										
Placentammina soibadaensis n. sp.																								X																		
Pseudobolivina tornata Kristan-Tollmann																																X										X
Reophax metensis Franke																																										
Reophax suevica Franke										X							X									X			X		X											
Scherochorella eominutus (Kristan-Tollmann)						?																																			X	
Spiroplectammina dobrudžhiana Trifonova																																										
Subreophax bariquiensis n. sp.																															X											
Subreophax thuringica (Franke)																																										
Thurammina oides metensis (Terquem)											X			X	X																					X						
Tolypammina persica (Oberhauser)			X	X		X			X			X	X	X		X		X	X			X			X					X		X	X	X	X		X	X	X		X	X
Tolypammina glareosa Tappan		X				X	X	X		X						X	X	X	X		X	X				X	X		X	X	X	X	X	X	X		X	X	X		X	X
Trochammina eoparva Nagy and Johansen	X					X																X	X	X			X															
Trochammina sp.																																										
Trochammina semiturgida Nagy and Johansen																																										
Trochamminopsis manatutensis n.sp.																																										
Verneuilinoides mauritii (Terquem)	X																																									
Verneuilinoides sp.																																										