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**ASPECTS OF THE PALAEOECOLOGY AND
PALAEOENVIRONMENTAL SETTING OF
WAULSORTIAN CARBONATE BUILDUPS IN IRELAND**

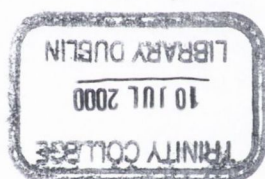
VOLUME 2

JEFFREY LORD

A thesis submitted for the degree of Doctor in Philosophy
to the University of Dublin, Trinity College.

November 1999

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/HESIS



DECLARATION

This thesis is entirely my own work, except where stated otherwise. It has not previously been submitted to this or any other university. All references and sources are duly acknowledged.

I agree that this thesis may be lent in accordance with College regulations.

A handwritten signature in cursive script, reading "Jeffrey Lord". The signature is written in dark ink and is positioned above the printed name.

Jeffrey Lord

Contents

APPENDIX 1:	Catalogue of samples, thin-sections and fossils	i
APPENDIX 2:	Petrographic data	xiii
APPENDIX 3:	Component distribution maps	xxxvii
APPENDIX 4:	Faunal list (Mullawornia Quarry) (Mullawornia Quarry)	lx
APPENDIX 5:	Field sketches	lxiv

PHOTOGRAPHIC PLATES

Appendix 1

Catalogue of Samples, Thin-Sections and Fossils

Sample localities

Mullawornia Quarry, Co. Longford:	(INGR N 130 590)
Canal Locality (Mullawornia):	(INGR N 129 582)
Pake Bridge, Co. Longford:	(INGR N 129 597)
Knockastia Quarry, Co. Westmeath:	(INGR N 242 430)
East Camp, Co. Kerry:	(INGR Q 710 105)
West Camp, Co. Kerry:	(INGR Q 692 105)
Carrahane Strand, Barrow, Co. Kerry:	(INGR Q 726 185)

Petrographic samples

All of the samples listed below are Waulsortian facies limestones, unless otherwise indicated. For an explanation of the locality numbers used (e.g. Loc. 392) refer to the relevant sections of the thesis.

<u>TCD No:</u>	<u>JL No:</u>	<u>Locality:</u>	<u>Remarks:</u>
50244 A	M15/S1	Mullawornia (Loc. 392)	Hand specimen
50244 B	M15/S1	Mullawornia (Loc. 392)	Thin-section
50245 A	M15/S3	Mullawornia (Loc. 392)	Hand specimen
50245 B	M15/S3	Mullawornia (Loc. 392)	Thin-section
50246 A	M16/S1	Mullawornia (Loc. 5)	Hand specimen
50246 B	M16/S1	Mullawornia (Loc. 5)	Thin-section
50247 A	M16/S2	Mullawornia (Loc. 10)	Hand specimen
50247 B	M16/S2	Mullawornia (Loc. 10)	Thin-section
50248 A	M16/S3	Mullawornia (Loc. 15)	Hand specimen
50248 B	M16/S3A	Mullawornia (Loc. 15)	Thin-section
50248 C	M16/S3B	Mullawornia (Loc. 15)	Thin-section
50249 A	M16/S4	Mullawornia (Loc. 20)	Hand specimen
50249 B	M16/S4	Mullawornia (Loc. 20)	Thin-section
50250 A	M16/S5	Mullawornia (Loc. 25)	Hand specimen
50250 B	M16/S5	Mullawornia (Loc. 25)	Thin-section
50251	M16/S6	Mullawornia (Loc. 30)	Thin-section
50252 A	M16/S7	Mullawornia (Loc. 35)	Hand specimen
50252 B	M16/S7	Mullawornia (Loc. 35)	Thin-section
50253 A	M16/S8	Mullawornia (Loc. 40)	Hand specimen
50253 B	M16/S8A	Mullawornia (Loc. 40)	Thin-section
50253 C	M16/S8C	Mullawornia (Loc. 40)	Thin-section
50254 A	M16/S9	Mullawornia (Loc. 45)	Hand specimen
50254 B	M16/S9	Mullawornia (Loc. 45)	Thin-section

50255 A	M16/S10	Mullawornia (Loc. 50)	Hand specimen
50255 B	M16/S10	Mullawornia (Loc. 50)	Thin-section
50256 A	M16/S11	Mullawornia (Loc. 55)	Hand specimen
50256 B	M16/S11	Mullawornia (Loc. 55)	Thin-section
50257 A	M16/S12	Mullawornia (Loc. 60)	Hand specimen
50257 B	M16/S12	Mullawornia (Loc. 60)	Thin-section
50257 C	M16/S12	Mullawornia (Loc. 60)	Thin-section
50258 A	M16/S13	Mullawornia (Loc. 65)	Hand specimen
50258 B	M16/S13	Mullawornia (Loc. 65)	Thin-section
50259 A	M16/S14	Mullawornia (Loc. 70)	Hand specimen
50259 B	M16/S14	Mullawornia (Loc. 70)	Thin-section
50260 A	M16/S15	Mullawornia (Loc. 75)	Hand specimen
50260 B	M16/S15	Mullawornia (Loc. 75)	Thin-section
50261 A	M16/S16	Mullawornia (Loc. 80)	Hand specimen
50261 B	M16/S16	Mullawornia (Loc. 80)	Thin-section
50262 A	M16/S17	Mullawornia (Loc. 85)	Hand specimen
50262 B	M16/S17	Mullawornia (Loc. 85)	Thin-section
50263 A	M16/S18	Mullawornia (Loc. 90)	Hand specimen
50263 B	M16/S18	Mullawornia (Loc. 90)	Thin-section
50264 A	M16/S19	Mullawornia (Loc. 95)	Hand specimen
50264 B	M16/S19	Mullawornia (Loc. 95)	Thin-section
50265 A	M16/S20	Mullawornia (Loc. 100)	Hand specimen
50265 B	M16/S20	Mullawornia (Loc. 100)	Thin-section
50266 A	M17/S1	Mullawornia (Loc. 100)	Hand specimen
50266 B	M17/S1	Mullawornia (Loc. 100)	Thin-section
50267 A	M17/S2	Mullawornia (Loc. 105)	Hand specimen
50267 B	M17/S2	Mullawornia (Loc. 105)	Thin-section
50268 A	M17/S3	Mullawornia (Loc. 110)	Hand specimen
50268 B	M17/S3	Mullawornia (Loc. 110)	Thin-section
50269 A	M17/S4	Mullawornia (Loc. 115)	Hand specimen
50269 B	M17/S4A	Mullawornia (Loc. 115)	Thin-section
50269 C	M17/S4B	Mullawornia (Loc. 115)	Thin-section
50270 A	M17/S5	Mullawornia (Loc. 120)	Hand specimen
50270 B	M17/S5	Mullawornia (Loc. 120)	Thin-section
50271 A	M17/S6	Mullawornia (Loc. 125)	Hand specimen
50271 B	M17/S6	Mullawornia (Loc. 125)	Thin-section
50272	M17/S7	Mullawornia (Loc. 130)	Hand specimen

50273 A	M17/S8	Mullawornia (Loc. 135)	Hand specimen
50273 B	M17/S8	Mullawornia (Loc. 135)	Thin-section
50274 A	M17/S9	Mullawornia (Loc. 140)	Hand specimen
50274 B	M17/S9	Mullawornia (Loc. 140)	Thin-section
50275 A	M17/S10	Mullawornia (Loc. 145)	Hand specimen
50275 B	M17/S10	Mullawornia (Loc. 145)	Thin-section
50276 A	M17/S11	Mullawornia (Loc. 150)	Hand specimen
50276 B	M17/S11	Mullawornia (Loc. 150)	Thin-section
50277 A	M17/S12	Mullawornia (Loc. 155)	Hand specimen
50277 B	M17/S12	Mullawornia (Loc. 155)	Thin-section
50278 A	M17/S13	Mullawornia (Loc. 160)	Hand specimen
50278 B	M17/S13	Mullawornia (Loc. 160)	Thin-section
50279 A	M17/S14	Mullawornia (Loc. 165)	Hand specimen
50279 B	M17/S14	Mullawornia (Loc. 165)	Thin-section
50280 A	M17/S15	Mullawornia (Loc. 170)	Hand specimen
50280 B	M17/S15	Mullawornia (Loc. 170)	Thin-section
50281 A	M17/S16	Mullawornia (Loc. 175)	Hand specimen
50281 B	M17/S16	Mullawornia (Loc. 175)	Thin-section
50282 A	M17/S17	Mullawornia (Loc. 180)	Hand specimen
50282 B	M17/S17A	Mullawornia (Loc. 180)	Thin-section
50282 C	M17/S17B	Mullawornia (Loc. 180)	Thin section
50283 A	M17/S18	Mullawornia (Loc. 185)	Hand specimen
50283 B	M17/S18	Mullawornia (Loc. 185)	Thin-section
50284 A	M17/S19	Mullawornia (Loc. 190)	Hand specimen
50284 B	M17/S19	Mullawornia (Loc. 190)	Thin-section
50285 A	M17/S20	Mullawornia (Loc. 195)	Hand specimen
50285 B	M17/S20	Mullawornia (Loc. 195)	Thin-section
50286 A	M17/S21	Mullawornia (Loc. 200)	Hand specimen
50286 B	M17/S21	Mullawornia (Loc. 200)	Thin-section
50287 A	M17/S22	Mullawornia (Loc. 205)	Hand specimen
50287 B	M17/S22	Mullawornia (Loc. 205)	Thin-section
50288 A	M17/S23	Mullawornia (Loc. 210)	Hand specimen
50288 B	M17/S23	Mullawornia (Loc. 210)	Thin-section
50289 A	M19/S1	Mullawornia (Loc. 35)	Hand specimen
50289 B	M19/S1	Mullawornia (Loc. 35)	Thin-section

50290 A	M19/S2	Mullawornia (Loc. 37)	Hand specimen
50290 B	M19/S2	Mullawornia (Loc. 37)	Thin-section
50291 A	M19/S3	Mullawornia (Loc. 42)	Hand specimen
50291 B	M19/S3	Mullawornia (Loc. 42)	Thin-section
50292 A	M19/S4	Mullawornia (Loc. 45)	Hand specimen
50292 B	M19/S4	Mullawornia (Loc. 45)	Thin-section
50293 A	M19/S5	Mullawornia (Loc. 250)	Hand specimen
50293 B	M19/S5	Mullawornia (Loc. 250)	Thin-section
50294 A	M19/S6	Mullawornia (Loc. 392)	Hand specimen
50294 B	M19/S6	Mullawornia (Loc. 392)	Thin-section
50295 A	M19/S7	Mullawornia (Loc. 405)	Hand specimen
50295 B	M19/S7	Mullawornia (Loc. 405)	Thin-section
50296 A	M19/S8	Mullawornia (Loc. 215)	Hand specimen
50296 B	M19/S8	Mullawornia (Loc. 215)	Thin-section
50297 A	M19/S9	Mullawornia (Loc. 220)	Hand specimen
50297 B	M19/S9A	Mullawornia (Loc. 220)	Thin-section
50297 C	M19/S9B	Mullawornia (Loc. 220)	Thin-section
50298 A	M19/S11	Mullawornia (Loc. 225)	Hand specimen
50298 B	M19/S11A	Mullawornia (Loc. 225)	Thin-section
50298 C	M19/S11B	Mullawornia (Loc. 225)	Thin-section
50299 A	M19/S12	Mullawornia (Loc. 230)	Hand specimen
50299 B	M19/S12	Mullawornia (Loc. 230)	Thin-section
50300 A	M19/S13	Mullawornia (Loc. 235)	Hand specimen
50300 B	M19/S13	Mullawornia (Loc. 235)	Thin-section
50301 A	M19/S14	Mullawornia (Loc. 240)	Hand specimen
50301 B	M19/S14	Mullawornia (Loc. 240)	Thin-section
50302 A	M19/S15	Mullawornia (Loc. 245)	Hand specimen
50302 B	M19/S15	Mullawornia (Loc. 245)	Thin-section
50303 A	M19/S16	Mullawornia (Loc. 250)	Hand specimen
50303 B	M19/S16	Mullawornia (Loc. 250)	Thin-section
50304 A	M19/S17	Mullawornia (Loc. 255)	Hand specimen
50304 B	M19/S17	Mullawornia (Loc. 255)	Thin-section
50305 A	M19/S18	Mullawornia (Loc. 260)	Hand specimen
50305 B	M19/S18	Mullawornia (Loc. 260)	Thin-section
50306 A	M19/S19	Mullawornia (Loc. 265)	Hand specimen
50306 B	M19/S19	Mullawornia (Loc. 265)	Thin-section

50307 A	M19/S20	Mullawornia (Loc. 270)	Hand specimen
50307 B	M19/S20	Mullawornia (Loc. 270)	Thin-section
50308 A	M20/S1	Mullawornia (Loc. 275)	Hand specimen
50308 B	M20/S1	Mullawornia (Loc. 275)	Thin-section
50309 A	M20/S2	Mullawornia (Loc. 280)	Hand specimen
50309 B	M20/S2	Mullawornia (Loc. 280)	Thin-section
50310 A	M20/S3	Mullawornia (Loc. 285)	Hand specimen
50310 B	M20/S3	Mullawornia (Loc. 285)	Thin-section
50311 A	M20/S4	Mullawornia (Loc. 290)	Hand specimen
50311 B	M20/S4	Mullawornia (Loc. 290)	Thin-section
50312 A	M20/S5	Mullawornia (Loc. 295)	Hand specimen
50312 B	M20/S5	Mullawornia (Loc. 295)	Thin-section
50313 A	M20/S6	Mullawornia (Loc. 300)	Hand specimen
50313 B	M20/S6	Mullawornia (Loc. 300)	Thin-section
50314 A	M20/S7	Mullawornia (Loc. 305)	Hand specimen
50314 B	M20/S7	Mullawornia (Loc. 305)	Thin-section
50315 A	M20/S8	Mullawornia (Loc. 310)	Hand specimen
50315 B	M20/S8	Mullawornia (Loc. 310)	Thin-section
50316 A	M20/S9	Mullawornia (Loc. 315)	Hand specimen
50316 B	M20/S9	Mullawornia (Loc. 315)	Thin-section
50317 A	M20/S10	Mullawornia (Loc. 320)	Hand specimen
50317 B	M20/S10A	Mullawornia (Loc. 320)	Thin-section
50317 C	M20/S10B	Mullawornia (Loc. 320)	Thin-section
50318 A	M20/S11	Mullawornia (Loc. 325)	Hand specimen
50318 B	M20/S11A	Mullawornia (Loc. 325)	Thin-section
50318 C	M20/S11B	Mullawornia (Loc. 325)	Thin-section
50319 A	M20/S12	Mullawornia (Loc. 330)	Hand specimen
50319 B	M20/S12	Mullawornia (Loc. 330)	Thin-section
50320 A	M20/S13	Mullawornia (Loc. 335)	Hand specimen
50320 B	M20/S13	Mullawornia (Loc. 335)	Thin-section
50321 A	M20/S14	Mullawornia (Loc. 340)	Hand specimen
50321 B	M20/S14	Mullawornia (Loc. 340)	Thin-section
50322 A	M20/S15	Mullawornia (Loc. 345)	Hand specimen
50322 B	M20/S15	Mullawornia (Loc. 345)	Thin-section
50323 A	M20/S16	Mullawornia (Loc. 350)	Hand specimen
50323 B	M20/S16	Mullawornia (Loc. 350)	Thin-section

50324 A	M20/S17	Mullawornia (Loc. 355)	Hand specimen
50324 B	M20/S17	Mullawornia (Loc. 355)	Thin-section
50325 A	M20/S18	Mullawornia (Loc. 360)	Hand specimen
50325 B	M20/S18	Mullawornia (Loc. 360)	Thin-section
50326 A	M20/S19	Mullawornia (Loc. 365)	Hand specimen
50326 B	M20/S19	Mullawornia (Loc. 365)	Thin-section
50327 A	M20/S20	Mullawornia (Loc. 370)	Hand specimen
50327 B	M20/S20	Mullawornia (Loc. 370)	Thin-section
50328 A	M20/S21	Mullawornia (Loc. 375)	Hand specimen
50328 B	M20/S21	Mullawornia (Loc. 375)	Thin-section
50329 A	M20/S22	Mullawornia (Loc. 380)	Hand specimen
50329 B	M20/S22	Mullawornia (Loc. 380)	Thin-section
50330 A	M20/S23	Mullawornia (Loc. 385)	Hand specimen
50330 B	M20/S23	Mullawornia (Loc. 385)	Thin-section
50331 A	M20/S24	Mullawornia (Loc. 390)	Hand specimen
50331 B	M20/S24	Mullawornia (Loc. 390)	Thin-section
50332 A	M20/S25	Mullawornia (Loc. 395)	Hand specimen
50332 B	M20/S25	Mullawornia (Loc. 395)	Thin-section
50333 A	M20/S26	Mullawornia (Loc. 400)	Hand specimen
50333 B	M20/S26	Mullawornia (Loc. 400)	Thin-section
50334 A	M20/S27	Mullawornia (Loc. 405)	Hand specimen
50334 B	M20/S27	Mullawornia (Loc. 405)	Thin-section
50335	M25/S1	Pake Bridge (Glannagh Formation)	Thin-section
50336	M25/S2	Pake Bridge (Glannagh Formation)	Thin section
50337 A	K1/S1	Knockastia (Loc. 1)	Hand specimen
50337 B	K1/S1A	Knockastia (Loc. 1)	Thin-section
50337 C	K1/S1B	Knockastia (Loc. 1)	Thin-section
50338 A	K1/S2	Knockastia (Loc. 2)	Hand specimen
50338 B	K1/S2A	Knockastia (Loc. 2)	Thin-section
50338 C	K1/S2B	Knockastia (Loc. 2)	Thin-section
50338 D	K1/S2C	Knockastia (Loc. 2)	Thin-section
50339 A	K1/S3	Knockastia (Loc. 3)	Hand specimen
50339 B	K1/S3A	Knockastia (Loc. 3)	Thin-section
50339 C	K1/S3B	Knockastia (Loc. 3)	Thin-section
50340 A	K1/S4	Knockastia (Loc. 4)	Hand specimen
50340 B	K1/S4A	Knockastia (Loc. 4)	Thin-section

50340 C	K1/S4B	Knockastia (Loc. 4)	Thin-section
50341 A	K1/S5	Knockastia (Loc. 5)	Hand specimen
50341 B	K1/S5A	Knockastia (Loc. 5)	Thin-section
50341 C	K1/S5B	Knockastia (Loc. 5)	Thin-section
50342	K1/S6	Knockastia (Loc. 6)	Hand specimen
50343 A	K1/S7	Knockastia (Loc. 7)	Hand specimen
50343 B	K1/S7A	Knockastia (Loc. 7)	Thin-section
50343 C	K1/S7B	Knockastia (Loc. 7)	Thin-section
50344 A	K1/S8	Knockastia (Loc. 8)	Hand specimen
50344 B	K1/S8A	Knockastia (Loc. 8)	Thin-section
50344 C	K1/S8B	Knockastia (Loc. 8)	Thin-section
50345 A	K1/S9	Knockastia (Loc. 9)	Hand specimen
50345 B	K1/S9	Knockastia (Loc. 9)	Thin-section
50346 A	WC1/S1	West Camp (Loc. 1)	Hand specimen
50346 B	WC1/S1	West Camp (Loc. 1)	Thin-section
50347 A	WC1/S2	West Camp (Loc. 2)	Hand specimen
50347 B	WC1/S2	West Camp (Loc. 2)	Thin-section
50348 A	WC1/S3	West Camp (Loc. 3)	Hand specimen
50348 B	WC1/S3	West Camp (Loc. 3)	Thin-section
50349 A	WC1/S4	West Camp (Loc. 4)	Hand specimen
50349 B	WC1/S4	West Camp (Loc. 4)	Thin-section
50350 A	WC1/S5	West Camp (Loc. 5)	Hand specimen
50350 B	WC1/S5	West Camp (Loc. 5)	Thin-section
50351 A	WC1/S6	West Camp (Loc. 6)	Hand specimen
50351 B	WC1/S6	West Camp (Loc. 6)	Thin-section
50352 A	WC1/S7	West Camp (Loc. 7)	Hand specimen
50352 B	WC1/S7	West Camp (Loc. 7)	Thin-section
50353 A	WC1/S8	West Camp (Loc. 8)	Hand specimen
50353 B	WC1/S8	West Camp (Loc. 8)	Thin-section
50354 A	EC1/S1	East Camp (Loc. 1)	Hand specimen
50354 B	EC1/S1	East Camp (Loc. 1)	Thin-section
50355 A	EC1/S2	East Camp (Loc. 2)	Hand specimen
50355 B	EC1/S2	East Camp (Loc. 2)	Thin-section
50356 A	EC1/S3	East Camp (Loc. 3)	Hand specimen
50356 B	EC1/S3	East Camp (Loc. 3)	Thin-section
50357 A	EC1/S4	East Camp (Loc. 4)	Hand specimen
50357 B	EC1/S4	East Camp (Loc. 4)	Thin-section

50358 A	EC1/S5	East Camp (Loc. 5)	Hand specimen
50358 B	EC1/S5	East Camp (Loc. 5)	Thin-section
50359 A	EC1/S6	East Camp (Loc. 6)	Hand specimen
50359 B	EC1/S6	East Camp (Loc. 6)	Thin-section
50360 A	B1/S2	Barrow (Loc. 1)	Hand specimen
50360 B	B1/S2	Barrow (Loc. 1)	Thin-section
50361 A	B1/S3	Barrow (Loc. 2)	Hand specimen
50361 B	B1/S3	Barrow (Loc. 2)	Thin-section
50362 A	B1/S4	Barrow (Loc. 3)	Hand specimen
50362 B	B1/S4	Barrow (Loc. 3)	Thin-section
50363 A	B1/S5	Barrow (Loc. 4)	Hand specimen
50363 B	B1/S5	Barrow (Loc. 4)	Thin-section
50364 A	B2/S1	Barrow (Loc. 5)	Hand specimen
50364 B	B2/S1	Barrow (Loc. 5)	Thin-section
50365 A	B2/S2	Barrow (Loc. 6)	Hand specimen
50365 B	B2/S2	Barrow (Loc. 6)	Thin-section
50366 A	B2/S3	Barrow (Loc. 7)	Hand specimen
50366 B	B2/S3	Barrow (Loc. 7)	Thin-section
50367 A	B2/S4	Barrow (Loc. 8)	Hand specimen
50367 B	B2/S4	Barrow (Loc. 8)	Thin-section
50368 A	B3/S1	Barrow (Loc. 9)	Hand specimen
50368 B	B3/S1	Barrow (Loc. 9)	Thin-section
50369 A	B3/S2	Barrow (Loc. 10)	Hand specimen
50369 B	B3/S2	Barrow (Loc. 10)	Thin-section
50370 A	B3/S3	Barrow (Loc. 11)	Hand specimen
50370 B	B3/S3	Barrow (Loc. 11)	Thin-section
50371 A	B3/S4	Barrow (Loc. 12)	Hand specimen
50371 B	B3/S4	Barrow (Loc. 12)	Thin-section
50372 A	B3/S5	Barrow (Loc. 13)	Hand specimen
50372 B	B3/S5	Barrow (Loc. 13)	Thin-section
50373 A	B3/S6	Barrow (Loc. 14)	Hand specimen
50373 B	B3/S6	Barrow (Loc. 14)	Thin-section

Conodonts and residues

<u>TCD No:</u>	<u>JL No:</u>	<u>Locality:</u>	<u>Remarks:</u>
50374 A	M27/S1	Mullawornia (Loc. 250)	Conodonts
50374 B	M27/S1c	Mullawornia (Loc. 250)	Coarse fraction residue
50374 C	M27/S1m	Mullawornia (Loc. 250)	Medium fraction residue
50374 D	M27/S1f	Mullawornia (Loc. 250)	Fine fraction residue
50375 A	M27/S2	Mullawornia (Loc. 310)	Conodonts
50375 B	M27/S2c	Mullawornia (Loc. 310)	Coarse fraction residue
50375 C	M27/S2m	Mullawornia (Loc. 310)	Medium fraction residue
50375 D	M27/S2f	Mullawornia (Loc. 310)	Fine fraction residue
50376 A	M27/S3	Mullawornia (Loc. 405)	Conodonts
50376 B	M27/S3c	Mullawornia (Loc. 405)	Coarse fraction residue
50376 C	M27/S3m	Mullawornia (Loc. 405)	Medium fraction residue
50376 D	M27/S3f	Mullawornia (Loc. 405)	Fine fraction residue
50377 A	M27/S4Low	Mullawornia (Loc. 37)	Conodonts
50377 B	M27/S4mLow	Mullawornia (Loc. 37)	Medium fraction residue
50377 C	M27/S4fLow	Mullawornia (Loc. 37)	Fine fraction residue
50378 A	M27/S4Mid	Mullawornia (Loc. 37)	Conodonts
50378 B	M27/S4mMid	Mullawornia (Loc. 37)	Medium fraction residue
50378 C	M27/S4fMid	Mullawornia (Loc. 37)	Fine fraction residue
50379 A	M27/S4Upp	Mullawornia (Loc. 37)	Conodonts
50379 B	M27/S4mUpp	Mullawornia (Loc. 37)	Medium fraction residue
50379 C	M27/S4fUpp	Mullawornia (Loc. 37)	Fine fraction residue
50380 A	M28/S1	Mullawornia (Canal Loc.)	Conodonts
50380 B	M28/S1c	Mullawornia (Canal Loc.)	Coarse fraction residue
50380 C	M28/S1m	Mullawornia (Canal Loc.)	Medium fraction residue
50380 D	M28/S1f	Mullawornia (Canal Loc.)	Fine fraction residue
50381 A	K2/S1	Knockastia (Loc. 1)	Conodonts
50381 B	K2/S1f	Knockastia (Loc. 1)	Fine fraction residue
50382 A	WC2/S1	West Camp (Loc. 1)	Conodonts
50382 B	WC2/S1f	West Camp (Loc. 1)	Fine fraction residue
50383 A	B4/S1	Barrow (Loc. 1)	Conodonts
50383 B	B4/S1f	Barrow (Loc. 1)	Fine fraction residue

Fossils

<u>TCD No:</u>	<u>JL No:</u>	<u>Locality:</u>	<u>Remarks:</u>
50384	M1/S1	Mullawornia (Loc. 385)	<i>Plicatifera pseudoplicatilis</i>
50385	M1/S2	Mullawornia (Loc. 85)	<i>Pugnax pugnus</i>
50386	M1/S3	Mullawornia (Loc. 75)	<i>Brachythyris pinguis</i>
50387	M1/S4	Mullawornia (Loc. 50)	<i>Phillipsia gemmulifera</i>
50388	M1/S5	Mullawornia (Loc. 45)	<i>Syringothyris cuspidata</i>
50389	M2/S3	Mullawornia (Loc. 100)	<i>Schizophoria resupinata</i>
50390	M2/S4	Mullawornia (Loc. 385)	<i>Amplexus coralloides</i>
50391	M2/S5	Mullawornia (Loc. 10)	<i>Brachythyris pinguis</i> <i>Pleuropugnoides pleurodon</i>
50392	M2/S6	Mullawornia (Loc. 35)	<i>Brachythyris pinguis</i>
50393	M2/S7A	Mullawornia (Loc. 155)	<i>Mooreoceras</i> sp.
50394	M2/S7B	Mullawornia (Loc. 155)	<i>Mooreoceras</i> sp.
50395	M2/S8	Mullawornia (Loc. 390)	<i>Amplexus coralloides</i>
50396	M2/S10	Mullawornia (Loc. 30)	<i>Dictyoclostus semireticulatus</i>
50397	M2/S11	Mullawornia (Loc. 30)	<i>Antiquatonia antiquatus</i>
50398	M2/S12	Mullawornia (Loc. 5)	<i>Dictyoclostus semireticulatus</i>
50399	M3/S1	Mullawornia (Loc. 410)	<i>Spirifer attenuatus</i>
50400	M3/S2	Mullawornia (Loc. 405)	<i>Linoproductus corrugatus</i>
50401	M3/S3	Mullawornia (Loc. 400)	<i>Amplexus coralloides</i>
50402	M3/S4	Mullawornia (Loc. 390)	<i>Spirifer attenuatus</i>
50403	M3/S5	Mullawornia (Loc. 380)	<i>Caninia</i> sp.
50404	M3/S6	Mullawornia (Loc. 15)	<i>Syringothyris cuspidata</i>
50405	M3/S7	Mullawornia (Loc. 35)	<i>Brachythyris pinguis</i>
50406	M3/S8	Mullawornia (Loc. 35)	<i>Fenestella</i> s.l. <i>plebeia</i>
50407	M3/S9	Mullawornia (Loc. 35)	<i>Dictyoclostus semireticulatus</i>
50408	M4/S1	Mullawornia (Loc. 30)	<i>Cleiothyridina glabistria</i>
50409	M4/S2	Mullawornia (Loc. 30)	<i>Amplexus coralloides</i>
50410	M4/S3	Mullawornia (Loc. 30)	<i>Euomphalus pentangulatus</i>
50411	M4/S4	Mullawornia (Loc. 30)	<i>Brachythyris pinguis</i>
50412	M4/S5	Mullawornia (Loc. 33)	<i>Pleuropugnoides pleurodon</i>
50413	M4/S6	Mullawornia (Loc. 85)	<i>Pugnax pugnus</i>
50414	M4/S7	Mullawornia (Loc. 85)	<i>Pugnax pugnus</i>
50415	M4/S8	Mullawornia (Loc. 85)	<i>Phricodothyris lineata</i>
50416	M4/S9	Mullawornia (Loc. 85)	<i>Pleuropugnoides pleurodon</i>
50417	M4/S10	Mullawornia (Loc. 90)	<i>Amplexus coralloides</i>
50418	M5/S1A	Mullawornia (Loc. 74)	<i>Fenestella</i> s.l. <i>frutex</i>
50419	M5/S1B	Mullawornia (Loc. 74)	<i>Fenestella</i> s.l. <i>plebeia</i>
50420	M5/S2	Mullawornia (Loc. 85)	<i>Pleuropugnoides pleurodon</i>
50421	M6/S2	Mullawornia (Loc. 30)	<i>Beyrichoceras</i> sp.
50422	M6/S3	Mullawornia (Loc. 30)	<i>Dielasma securiforme</i>
50423	M7/S1	Mullawornia (Loc. 360)	<i>Dictyoclostus semireticulatus</i>
50424	M8/S1	Mullawornia (Loc. 16)	<i>Acanthoplecta mesoloba</i>
50425	M13/S1	Mullawornia (Loc. 135)	<i>Pugnax pugnus</i>
50426	M15/S4	Mullawornia (Loc. 250)	<i>Amplexus coralloides</i>
50427	M16/S17	Mullawornia (Loc. 85)	<i>Pustula tenuipustulosa</i>
50428	M19/S10A	Mullawornia (Loc. 220)	<i>Fenestella</i> s.l. <i>quadridecimalis</i>
50429	M19/S10B	Mullawornia (Loc. 220)	<i>Vestinautilus</i> sp.
50430	M19/S15	Mullawornia (Loc. 245)	<i>Mooreoceras</i> sp.

50431	M20/S28	Mullawornia (Loc. 85)	<i>Martinia glabra</i> <i>Phricodothyris lineata</i> (x2) <i>Pleuropugnoides pleurodon</i> <i>Brachythyris pinguis</i> <i>Pugnax pugnus</i>
50432	M21/S1	Mullawornia (Loc. 87)	<i>Acanthoplecta mesoloba</i>
50433	M24/S1	Mullawornia (Loc. 40)	<i>Pustula pustulosa</i>
50434	M25/S1	Mullawornia (Loc. 57)	<i>Pinna flabelliformis</i>
50435	M26/S2	Mullawornia (Loc. 405)	<i>Pugnax pugnus</i>
50436	M26/S3	Mullawornia (Loc. 405)	<i>Acanthoplecta mesoloba</i> (x2)
50437	M27/S1	Mullawornia (Loc. 250)	<i>Euomphalus pentangulatus</i>
50438	M27/S2	Mullawornia (Loc. 305)	<i>Acanthoplecta mesoloba</i>
50439	M29/S1	Mullawornia (Canal Loc.)	<i>Amplexizaphrentis</i> <i>enniskilleni</i>
50440	M29/S2	Mullawornia (Canal Loc.)	<i>Pugnax pugnus</i>
50441	M29/S3	Mullawornia (Canal Loc.)	<i>Martinia glabra</i>
50442	M29/S4	Mullawornia (Canal Loc.)	<i>Syringothyris cuspidata</i> <i>Amplexus coralloides</i>
50443	M29/S5	Mullawornia (Canal Loc.)	<i>Pustula pustulosa</i>
50444	M29/S6	Mullawornia (Canal Loc.)	<i>Euomphalus pentangulatus</i>
50445	M29/S7	Mullawornia (Canal Loc.)	Crinoid stem section
50446	M29/S8	Mullawornia (Canal Loc.)	<i>Vestinautilus semiglaber</i>
50447	M29/S9	Mullawornia (Canal Loc.)	Crinoid stem section

Appendix 2

Petrographic Data

Skeletal components:	ranked in order of their importance: 1: most important skeletal component; 2: second most important component; 3: third most important component; 4: skeletal grains present, but of lower rank than 3; 4?: questionable identification; 0: absence of skeletal grains.
Non-skeletal grains:	their presence is denoted by X .
Texture:	M - mudstone; W - wackestone; P - packstone. M/W , for example; mudstone grading towards wackestone. encr. - encrinite.
Dolomite:	the presence of dolomite is denoted by X . Xf denotes the presence of ferroan dolomite.
Cavity development:	the degree of development of various calcite-filled cavities is ranked accordingly: 1: poor cavity development (<10% total rock volume); 2: moderate development (10-35% total rock volume); 3: well-developed cavities (>35% total rock volume).
Facies:	MC - mound-core facies, PM - prograding marginal facies, IM - inter-mound.

Slide/Sample No:	M16/S1	M16/S2	M16/S3	M16/S4	M16/S5	M16/S6
Locality:	L 5	L 10	L 15	L 20	L 25	L 30
Facies:	PM	PM	PM	PM	PM	PM
Skeletal grains:	Rank:	Rank:	Rank:	Rank:	Rank:	Rank:
Fenestrate bryozoans	1	4	4	3	1	1
Fenestrate hash	2	2	1	1	2	2
Stick/ramose bryozoans	0	4	4	0	0	4
Encrusting bryozoans	0	0	0	0	0	0
Crinoids	0	1	4	4	4	4
Echinoid spines	0	0	0	0	4	4
Brachiopods	4	3	4	4	4	4
Molluscs	4	4	4	0	4	4
Corals	0	0	0	4	0	0
Ostracods	4	4	3	2	4	0
Trilobites	0	0	0	0	0	0
Hyalosteliid spicules	4	0	4	0	4	0
Other sponge spicules	3	4	2	4	3	3
Plurilocular foraminifera	0	0	0	0	0	0
<i>Earlandia</i>	0	0	0	0	0	0
Algae (<i>Globochaetes</i>)	0	0	0	0	0	0
Moravaminids	0	0	0	0	0	0
Worm tubes	0	0	0	0	0	0
Aoujgaliids	0	0	0	0	0	0
<i>Rectangulina</i>	0	0	4	0	0	0
Salebrids	0	0	0	0	0	0
<i>Sphaerinvia</i>	0	0	0	0	0	0
<i>Asphaltina</i>	0	4	0	0	0	0
Calcispheres (<i>Mendipsia</i>)	0	4	0	0	0	0
Problematicum 1	0	0	0	0	0	0
Problematicum 2	0	0	0	0	0	0
Problematicum 3	0	0	0	0	0	0
Non-skeletal grains:						
Intraclasts						
Lithoclasts						
Geopetal peloids						X
Matrix peloids	X	X	X		X	
Micritized grains			X	X	X	
Micritized cements	X		X	X	X	
Micritized cavity walls				X		
Comments:						
Texture	M	W	M	W	M/W	W
Dolomite		Xf				Xf
Cavity development	2	2	2	2	2	2

Slide/Sample No:	M19/S1	M16/S7	M19/S2	M16/S8	M19/S3	M19/S4
Locality:	L 35	L 35	L 37	L 40	L 42	L 45
Facies:	MC	MC	MC	MC	MC	MC
Skeletal grains:	Rank:	Rank:	Rank:	Rank:	Rank:	Rank:
Fenestrate bryozoans	0	1	0	2	2	2
Fenestrate hash	3	3	1	3	4	1
Stick/ramose bryozoans	4	0	0	0	3	4
Encrusting bryozoans	4	0	0	0	0	0
Crinoids	1	2	2	1	1	4
Echinoid spines	4	4	4	4	4	0
Brachiopods	4	4	4	4	0	0
Molluscs	4	0	4	4	4	4
Corals	0	4	0	0	0	0
Ostracods	4	0	0	4	4	0
Trilobites	0	0	0	0	4	0
Hyalosteliid spicules	0	0	0	4	0	0
Other sponge spicules	2	0	3	4	0	4
Plurilocular foraminifera	0	0	0	0	0	0
<i>Earlandia</i>	0	0	0	0	0	0
Algae (<i>Globochaetes</i>)	0	0	0	0	0	0
Moravamminids	0	0	0	0	0	0
Worm tubes	0	0	0	0	0	0
Aoujgaliids	0	0	0	0	0	0
<i>Rectangulina</i>	0	0	4	4	0	0
Salebrids	0	0	0	0	0	0
<i>Sphaerinvia</i>	0	0	0	0	0	0
<i>Asphaltina</i>	0	0	4	0	0	0
Calcspheres (<i>Mendipsia</i>)	4	4	4	4	4	4
Problematicum 1	0	0	0	0	0	0
Problematicum 2	0	0	0	0	0	0
Problematicum 3	0	0	0	0	4	0
Non-skeletal grains:						
Intraclasts						
Lithoclasts						
Geopetal peloids					X	
Matrix peloids	X					X
Micritized grains						
Micritized cements						
Micritized cavity walls				X		
Comments:						
Texture	W	W	W	W	M	M/W
Dolomite		X	Xf		Xf	
Cavity development	3	3	3	3	3	3

Slide/Sample No:	M16/S9	M16/S10	M16/S11	M16/S12	M16/S13	M16/S14
Locality:	L 45	L 50	L 55	L 60	L 65	L 70
Facies:	MC	MC	MC/PM	PM	PM	PM
Skeletal grains:	Rank:	Rank:	Rank:	Rank:	Rank:	Rank:
Fenestrate bryozoans	4	0	3	4	0	3
Fenestrate hash	1	2	2	1	1	1
Stick / ramose bryozoans	0	0	4	4	4	0
Encrusting bryozoans	0	4	0	0	0	0
Crinoids	2	1	1	2	2	2
Echinoid spines	0	4	4	4	4	0
Brachiopods	0	4	4	4	4	4
Molluscs	0	3	4	4	4	0
Corals	0	0	0	0	0	0
Ostracods	4	4	4	3	3	4
Trilobites	0	0	0	0	0	0
Hyalosteliid spicules	3	0	0	4	0	0
Other sponge spicules	4	4	0	4	0	0
Plurilocular foraminifera	0	4	0	0	4	0
<i>Earlandia</i>	0	0	0	0	0	0
Algae (<i>Globochaetes</i>)	0	0	0	0	0	0
Moravamminids	0	0	0	0	0	0
Worm tubes	0	0	0	0	0	0
Aoujgaliids	0	0	0	4	0	0
<i>Rectangulina</i>	0	0	0	0	0	0
Salebrids	0	0	0	0	4	0
<i>Sphaerinvia</i>	0	0	0	0	0	0
<i>Asphaltina</i>	0	0	0	4	0	0
Calcispheres (<i>Mendipsia</i>)	4	4	4	4	4	0
Problematicum 1	0	0	0	0	0	0
Problematicum 2	0	0	0	0	0	0
Problematicum 3	0	0	0	0	0	0
Non-skeletal grains:						
Intraclasts						
Lithoclasts						
Geopetal peloids						
Matrix peloids			X		X	
Micritized grains					X	
Micritized cements						
Micritized cavity walls					X	
Comments:						
Texture	M/W	W/P	W	W	W	W
Dolomite		X	X		X	X
Cavity development	3	3	3	2	2	2

Slide/Sample No:	M16/S15	M16/S16	M16/S18	M16/S19	M17/S1	M17/S2
Locality:	L 75	L 80	L 90	L 95	L 100	L 105
Facies:	PM	PM	PM	PM	PM	PM
Skeletal grains:	Rank	Rank	Rank	Rank	Rank	Rank
Fenestrate bryozoans	1	3	4	1	0	1
Fenestrate hash	3	1	1	3	1	2
Stick/ramose bryozoans	4	0	4	0	0	0
Encrusting bryozoans	0	0	0	0	0	0
Crinoids	2	0	4	2	2	4
Echinoid spines	4	0	0	0	4	0
Brachiopods	4	0	4	4	4	0
Molluscs	4	4	4	0	4	4
Corals	0	0	0	0	0	0
Ostracods	4	4	2	0	4	3
Trilobites	0	0	4	0	0	0
Hyalosteliid spicules	0	4	0	0	0	0
Other sponge spicules	4	2	3	4	3	4
Plurilocular foraminifera	0	0	0	0	0	0
<i>Earlandia</i>	0	0	4	0	0	0
Algae (<i>Globochaetes</i>)	0	0	0	0	4	0
Moravamminids	0	0	0	0	0	0
Worm tubes	0	0	0	0	0	0
Aoujgaliids	0	0	0	0	4	0
<i>Rectangulina</i>	0	0	4	0	0	0
Salebrids	0	0	0	0	0	0
<i>Sphaerinvia</i>	0	0	0	0	0	0
<i>Asphaltina</i>	0	0	0	0	4	0
Calcspheres (<i>Mendipsia</i>)	0	0	0	0	4	0
Problematicum 1	0	0	0	0	4	0
Problematicum 2	0	0	0	0	0	0
Problematicum 3	0	0	0	0	0	0
Non-skeletal grains:						
Intraclasts						
Lithoclasts						
Geopetal peloids		X		X		
Matrix peloids	X					X
Micritized grains						
Micritized cements		X				
Micritized cavity walls		X				
Comments:						
Texture	M/W	M	M	M	W	W/M
Dolomite			X			
Cavity development	2	2	2	3	3	2

Slide/Sample No:	M17/S3	M17/S4	M17/S5	M17/S6	M17/7	M17/S8
Locality:	L 110	L 115	L 120	L 125	L 130	L 135
Facies:	PM	PM	PM	PM	PM	PM
Skeletal grains:	Rank:	Rank:	Rank:	Rank:	Rank:	Rank:
Fenestrate bryozoans	0	4	0	0	3	1
Fenestrate hash	3	3	2	1	2	4
Stick/ramose bryozoans	2	4	4	4	0	4
Encrusting bryozoans	0	4	0	4	4	0
Crinoids	0	2	1	2	1	4
Echinoid spines	4	0	0	4	4	4
Brachiopods	4	4	4	4	4	4
Molluscs	4	4	4	3	0	0
Corals	0	0	0	0	0	0
Ostracods	4	4	3	4	4	4
Trilobites	4	0	4	0	4	0
Hyalosteliid spicules	0	0	4	0	0	3
Other sponge spicules	1	1	0	4	0	2
Plurilocular foraminifera	0	0	0	0	4	0
<i>Earlandia</i>	0	0	0	0	0	0
Algae (<i>Globochaetes</i>)	0	0	0	0	0	0
Moravaminids	0	0	0	0	0	0
Worm tubes	0	0	0	0	0	0
Aoujgaliids	0	0	0	0	0	0
<i>Rectangulina</i>	0	0	0	0	0	0
Salebrids	0	4	4	0	0	0
<i>Sphaerinvia</i>	4	0	0	0	0	0
<i>Asphaltina</i>	0	0	0	0	0	0
Calcspheres (<i>Mendipsia</i>)	4	4	0	4	0	0
Problematicum 1	0	0	4	4	0	0
Problematicum 2	0	0	0	0	0	0
Problematicum 3	0	0	0	0	0	0
Non-skeletal grains:						
Intraclasts						
Lithoclasts						
Geopetal peloids	X					
Matrix peloids		X				X
Micritized grains						
Micritized cements						
Micritized cavity walls						
Comments:						
Texture	W	M/W	M/W	W	P(incr.)	M
Dolomite		X			X	X
Cavity development	2	2	2	1	1	2

Slide/Sample No:	M17/S9	M17/S10	M17/S11	M17/S12	M17/13	M17/S14
Locality:	L 140	L 145	L 150	L 155	L 160	L 165
Facies:	PM	PM	PM	PM	PM	PM
Skeletal grains:	Rank:	Rank:	Rank:	Rank:	Rank:	Rank:
Fenestrate bryozoans	4	0	0	0	4	0
Fenestrate hash	1	1	3	1	3	3
Stick/ramose bryozoans	3	4	2	2	0	4
Encrusting bryozoans	0	0	4	0	0	0
Crinoids	4	4	4	0	4	4
Echinoid spines	0	4	0	0	0	0
Brachiopods	0	4	0	4	4	4
Molluscs	0	4	4	4	4	0
Corals	0	0	0	0	0	0
Ostracods	4	3	1	4	2	2
Trilobites	0	0	0	0	0	0
Hyalosteliid spicules	0	0	0	0	0	0
Other sponge spicules	2	2	4	3	1	1
Plurilocular foraminifera	0	0	0	0	0	0
<i>Earlandia</i>	0	0	0	0	4	0
Algae (<i>Globochaetes</i>)	0	0	0	0	0	0
Moravamminids	0	0	0	0	0	0
Worm tubes	0	0	0	0	0	0
Aoujgaliids	0	0	0	0	0	0
<i>Rectangulina</i>	0	0	0	4	0	0
Salebrids	0	0	0	0	0	0
<i>Sphaerinvia</i>	0	0	0	0	0	0
<i>Asphaltina</i>	0	0	0	0	0	4
Calcispheres (<i>Mendipsia</i>)	0	0	0	0	0	0
Problematicum 1	0	0	0	0	0	0
Problematicum 2	0	4	0	4	0	0
Problematicum 3	0	0	0	0	0	0
Non-skeletal grains:						
Intraclasts	X					
Lithoclasts						
Geopetal peloids		X				
Matrix peloids	X		X	X		X
Micritized grains						X
Micritized cements						X
Micritized cavity walls						
Comments:						
Texture	W/M	M/W	W	W	M/W	M
Dolomite						
Cavity development	2	1	3	3	2	3

Slide/Sample No:	M17/S15	M17/S16	M17/S17	M17/S18	M17/S19	M17/S20
Locality:	L 170	L 175	L 180	L 185	L 190	L 195
Facies:	PM	PM	IM	IM	PM	PM
Skeletal grains:	Rank:	Rank:	Rank:	Rank:	Rank:	Rank:
Fenestrate bryozoans	0	0	0	2	3	0
Fenestrate hash	2	3	2	3	1	1
Stick /ramose bryozoans	4	4	4	4	4	0
Encrusting bryozoans	0	0	0	0	0	4
Crinoids	4	2	1	1	2	2
Echinoid spines	0	0	0	0	0	0
Brachiopods	4	4	4	4	4	4
Molluscs	0	4	3	4	4	3
Corals	0	0	0	0	0	0
Ostracods	3	4	4	0	4	4
Trilobites	4	0	0	0	0	0
Hyalosteliid spicules	4	0	0	0	0	4
Other sponge spicules	1	1	0	0	4	0
Plurilocular foraminifera	0	0	4?	4	4	0
<i>Earlandia</i>	0	0	0	0	4?	0
Algae (<i>Globochaetes</i>)	0	0	0	0	0	0
Moravamminids	0	0	0	0	0	0
Worm tubes	0	0	0	0	0	0
Aoujgaliids	0	0	0	0	0	4?
<i>Rectangulina</i>	0	4	0	0	0	0
Salebrids	0	0	0	0	0	0
<i>Sphaerinvia</i>	4	0	4	0	0	0
<i>Asphaltina</i>	0	0	0	0	0	0
Calcispheres (<i>Mendipsia</i>)	0	0	4	0	0	4
Problematicum 1	0	4	4	4	4	4
Problematicum 2	0	4	0	0	0	0
Problematicum 3	0	0	0	0	0	0
Non-skeletal grains:						
Intraclasts						
Lithoclasts						
Geopetal peloids		X				
Matrix peloids	X		X		X	
Micritized grains	X					
Micritized cements	X					
Micritized cavity walls	X					
Comments:						
Texture	M/W	W	P	W	W/P	W
Dolomite						X
Cavity development	3	2	2	2	2	2

Slide/Sample No:	M17/S21	M17/S22	M17/S23	M19/S8	M19/S9	M19/S11
Locality:	L 200	L 205	L 210	L 215	L 220	L 225
Facies:	PM	PM	PM	PM	PM	PM
Skeletal grains:	Rank:	Rank:	Rank:	Rank:	Rank:	Rank:
Fenestrate bryozoans	0	1	1	2	0	1
Fenestrate hash	3	3	2	1	1	2
Stick/ramose bryozoans	2	0	0	4	0	4
Encrusting bryozoans	4	0	0	0	0	0
Crinoids	0	4	4	4	2	4
Echinoid spines	0	4	4	0	0	0
Brachiopods	4	2	3	4	4	4
Molluscs	4	0	4	4	4	3
Corals	0	0	0	0	0	0
Ostracods	4	0	4	3	3	0
Trilobites	0	0	0	0	0	4
Hyalosteliid spicules	0	0	0	0	0	0
Other sponge spicules	1	1	4	4	0	0
Plurilocular foraminifera	0	0	0	0	0	0
<i>Earlandia</i>	0	0	0	0	0	0
Algae (<i>Globochaetes</i>)	0	0	0	0	0	0
Moravamminids	0	0	0	0	0	0
Worm tubes	0	0	0	0	0	0
Aoujgaliids	0	0	0	0	0	0
<i>Rectangulina</i>	0	0	0	0	0	0
Salebrids	0	0	0	0	0	0
<i>Sphaerinvia</i>	0	0	0	0	0	0
<i>Asphaltina</i>	0	0	4?	0	0	0
Calcispheres (<i>Mendipsia</i>)	0	0	0	0	0	0
Problematicum 1	0	0	4	0	0	4
Problematicum 2	0	0	0	0	0	0
Problematicum 3	0	0	0	0	0	0
Non-skeletal grains:						
Intraclasts						
Lithoclasts						
Geopetal peloids	X					
Matrix peloids			X	X	X	X
Micritized grains				X	X	
Micritized cements				X	X	
Micritized cavity walls				X		
Comments:						
Texture	M/W	M/W	W/P	W	M	W
Dolomite			X	X		X
Cavity development	2	2	2	2	2	2

Slide/Sample No:	M19/S12	M19/S3	M19/S14	M19/S15	M19/S5	M19/S16
Locality:	L 230	L 235	L 240	L 245	L 250	L 250
Facies:	PM	PM	PM/MC	MC	MC	MC
Skeletal grains:	Rank:	Rank:	Rank:	Rank:	Rank:	Rank:
Fenestrate bryozoans	0	4	1	1	0	0
Fenestrate hash	1	1	3	0	2	1
Stick/ramose bryozoans	0	4	0	4	0	4
Encrusting bryozoans	0	0	4	0	0	0
Crinoids	2	2	4	2	1	3
Echinoid spines	4	4	4	0	4	0
Brachiopods	3	4	4	0	4	4
Molluscs	4	4	2	4	4	4
Corals	0	0	0	0	0	0
Ostracods	4	3	0	4	3	2
Trilobites	0	0	4	0	0	0
Hyalosteliid spicules	0	0	0	0	4	0
Other sponge spicules	0	4	0	3	4	4
Plurilocular foraminifera	0	0	4	0	4	0
<i>Earlandia</i>	0	0	0	0	0	0
Algae (<i>Globochaetes</i>)	0	0	0	0	0	0
Moravaminids	0	0	0	0	0	0
Worm tubes	0	0	4	0	0	0
Aoujgaliids	0	0	0	0	0	0
<i>Rectangulina</i>	0	0	0	0	0	0
Salebrids	0	0	0	0	0	0
<i>Sphaerinvia</i>	0	0	4	4	0	0
<i>Asphaltina</i>	0	4?	0	0	4?	4
Calcspheres (<i>Mendipsia</i>)	4	4	4	4	4	4
Problematicum 1	4	4	0	0	0	4
Problematicum 2	0	0	4	0	0	0
Problematicum 3	0	0	0	0	0	0
Non-skeletal grains:						
Intraclasts						
Lithoclasts						
Geopetal peloids	X	X				X
Matrix peloids		X	X	X		
Micritized grains		X				
Micritized cements		X			X	
Micritized cavity walls		X				
Comments:						
Texture	W/M	W	W	W	W/M	W
Dolomite	X	X	X			
Cavity development	2	1	1	2	3	3

Slide/Sample No:	M19/S17	M19/S18	M19/S19	M19/S20	M20/S1	M20/S2
Locality:	L 255	L 260	L 265	L 270	L 275	L 280
Facies:	MC	MC	MC/PM	IM	PM	PM
Skeletal grains:	Rank:	Rank:	Rank:	Rank:	Rank:	Rank:
Fenestrate bryozoans	0	0	0	0	0	0
Fenestrate hash	3	1	1	2	2	2
Stick/ramose bryozoans	4	4	4	4	4	0
Encrusting bryozoans	0	0	0	0	0	0
Crinoids	1	2	2	1	1	1
Echinoid spines	0	4	0	4	4	4
Brachiopods	4	3	4	3	4	3
Molluscs	4	4	0	4	3	4
Corals	0	0	0	0	0	0
Ostracods	2	4	3	4	0	4
Trilobites	0	0	0	0	0	0
Hyalosteliid spicules	4	0	0	0	0	0
Other sponge spicules	4	0	0	0	0	0
Plurilocular foraminifera	0	0	4	4	4	0
<i>Earlandia</i>	0	0	0	0	0	0
Algae (<i>Globochaetes</i>)	0	0	4	0	0	0
Moravaminids	0	0	0	0	0	4
Worm tubes	0	0	0	4?	0	0
Aoujgaliids	0	0	0	0	0	4
<i>Rectangulina</i>	0	4	0	0	0	4
Salebrids	0	0	0	0	0	0
<i>Sphaerinvia</i>	0	0	0	0	0	0
<i>Asphaltina</i>	0	4	0	0	0	0
Calcispheres (<i>Mendipsia</i>)	4	4	4	4	4	4
Problematicum 1	0	0	0	0	0	4
Problematicum 2	0	0	4	0	0	0
Problematicum 3	0	0	0	0	0	0
Non-skeletal grains:						
Intraclasts						
Lithoclasts						
Geopetal peloids	X					
Matrix peloids					X	
Micritized grains						
Micritized cements						
Micritized cavity walls						
Comments:						
Texture	W/M	P/W	W	P/W	M/W	W/P
Dolomite	X	X	X		X	
Cavity development	3	3	2	1	2	3

Slide/Sample No:	M20/S3	M20/S4	M20/S5	M20/S6	M20/S7	M20/S8
Locality:	L 285	L 290	L 295	L 300	L 305	L 310
Facies:	PM	PM	PM	MC	MC	MC
Skeletal grains:	Rank:	Rank:	Rank:	Rank:	Rank:	Rank:
Fenestrate bryozoans	0	0	0	0	0	0
Fenestrate hash	2	1	1	2	0	2
Stick/ramose bryozoans	0	3	4	3	0	4
Encrusting bryozoans	0	0	0	4	0	0
Crinoids	1	2	2	1	0	1
Echinoid spines	4	4	4	4	0	4
Brachiopods	4	4	3	4	0	0
Molluscs	4	4	4	4	0	4
Corals	0	0	0	0	0	0
Ostracods	3	0	4	4	1	4
Trilobites	4?	4?	0	0	0	0
Hyalosteliid spicules	0	0	0	0	0	0
Other sponge spicules	4	0	0	4	2	3
Plurilocular foraminifera	0	4	0	4	0	0
<i>Earlandia</i>	0	0	0	0	0	0
Algae (<i>Globochaetes</i>)	0	4	4	0	0	0
Moravaminids	0	0	0	0	0	0
Worm tubes	0	0	0	0	0	0
Aoujgaliids	0	0	4	4	0	4
<i>Rectangulina</i>	0	0	0	0	0	0
Salebrids	0	0	4?	0	0	0
<i>Sphaerinvia</i>	0	0	0	0	0	0
<i>Asphaltina</i>	0	0	4	0	0	0
Calcispheres (<i>Mendipsia</i>)	4	4	4	4	0	0
Problematicum 1	0	0	4	0	0	0
Problematicum 2	0	0	4	0	0	4
Problematicum 3	0	0	0	0	0	0
Non-skeletal grains:						
Intraclasts					X	
Lithoclasts						
Geopetal peloids		X				
Matrix peloids					X	
Micritized grains						
Micritized cements						
Micritized cavity walls						
Comments:						
Texture	W/P	M/W/P	P/W	W/P	M	W
Dolomite						
Cavity development	3	2	2	2	1	2

Slide/Sample No:	M20/S9	M20/S10	M20/S11	M20/S12	M20/S13	M20/S14
Locality:	L 315	L 320	L 325	L330	L 335	L 340
Facies:	MC/PM	PM	PM	PM	PM	PM
Skeletal grains:	Rank:	Rank:	Rank:	Rank:	Rank:	Rank:
Fenestrate bryozoans	0	1	1	1	0	0
Fenestrate hash	2	0	2	3	1	1
Stick/ramose bryozoans	4	2	4	4	4	2
Encrusting bryozoans	0	0	0	0	0	4
Crinoids	3	4	4	4	4	4
Echinoid spines	0	0	0	0	4	0
Brachiopods	4	3	3	4	4	4
Molluscs	0	4	0	4	4	4
Corals	0	0	4	0	0	0
Ostracods	0	4	0	2	3	3
Trilobites	0	0	0	0	0	0
Hyalosteliid spicules	4	0	0	0	0	4
Other sponge spicules	1	0	0	4	2	2
Plurilocular foraminifera	4?	0	0	0	0	0
<i>Earlandia</i>	0	0	0	0	0	0
Algae (<i>Globochaetes</i>)	0	0	0	0	4	4
Moravamminids	0	0	0	0	0	0
Worm tubes	0	0	0	0	0	0
Aoujgaliids	0	0	0	0	4	0
<i>Rectangulina</i>	0	0	0	0	0	0
Salebrids	0	0	0	0	0	0
<i>Sphaerinvia</i>	0	0	0	0	0	0
<i>Asphaltina</i>	0	0	0	0	0	0
Calcispheres (<i>Mendipsia</i>)	0	0	4	4	0	4
Problematicum 1	4	0	0	0	0	0
Problematicum 2	0	4	0	0	0	0
Problematicum 3	0	0	0	0	0	0
Non-skeletal grains:						
Intraclasts		X				
Lithoclasts						
Geopetal peloids	X					X
Matrix peloids		X	X	X	X	
Micritized grains						X
Micritized cements		X	X	X		X
Micritized cavity walls						
Comments:						
Texture	W	W	W	W/P	W	W
Dolomite		X	X	Xf		X
Cavity development	2	2	2	2	3	3

Slide/Sample No:	M20/S15	M20/S16	M20/S17	M20/S18	M20/S19	M20/S20
Locality:	L 345	L 350	L 355	L 360	L365	L370
Facies:	PM	PM	PM	PM	PM	PM
Skeletal grains:	Rank:	Rank:	Rank:	Rank:	Rank:	Rank:
Fenestrate bryozoans	0	1	1	0	0	0
Fenestrate hash	1	2	4	2	2	2
Stick/ramose bryozoans	4	4	4	4	0	4
Encrusting bryozoans	0	0	0	0	4	4
Crinoids	2	3	0	1	3	1
Echinoid spines	4	0	0	4	4	4
Brachiopods	4	4	2	4	4	4
Molluscs	4	4	3	0	4	4
Corals	0	0	0	0	0	4
Ostracods	4	3	4	3	4	3
Trilobites	4?	0	0	0	4?	4?
Hyalosteliid spicules	4	0	0	4	0	0
Other sponge spicules	3	4	0	4	1	4
Plurilocular foraminifera	0	0	0	0	0	0
<i>Earlandia</i>	4	0	0	0	0	0
Algae (<i>Globochaetes</i>)	0	0	0	0	0	0
Moravamminids	0	0	0	0	0	0
Worm tubes	0	0	0	0	0	0
Aoujgaliids	0	0	0	0	0	0
<i>Rectangulina</i>	0	0	0	0	4	0
Salebrids	0	4	0	0	0	0
<i>Sphaerinvia</i>	0	0	0	0	0	0
<i>Asphaltina</i>	0	0	0	0	0	4
Calcispheres (<i>Mendipsia</i>)	4	4	4	0	0	0
Problematicum 1	0	4	0	0	4	0
Problematicum 2	0	0	0	0	0	0
Problematicum 3	0	0	4	0	0	0
Non-skeletal grains:						
Intraclasts						
Lithoclasts						
Geopetal peloids						
Matrix peloids	X		X		X	
Micritized grains						
Micritized cements						
Micritized cavity walls						
Comments:						
Texture	W	W	W	W/P	M/W	W
Dolomite	X	X	X		Xf	X
Cavity development	3	3	2	2	2	2

Slide/Sample No:	M20/S21	M20/S22	M20/S23	M20/S24	M19/S6	M15/S3
Locality:	L 375	L 380	L 385	L 390	L 392	L 392
Facies:	PM	PM	PM	PM	PM	PM
Skeletal grains:	Rank:	Rank:	Rank:	Rank:	Rank:	Rank:
Fenestrate bryozoans	0	0	1	1	0	0
Fenestrate hash	2	2	3	3	2	2
Stick/ramose bryozoans	4	4	2	2	0	4
Encrusting bryozoans	4	0	0	0	0	4
Crinoids	1	1	4	4	1	1
Echinoid spines	0	4	4	0	4	4
Brachiopods	4	4	4	4	4	4
Molluscs	0	0	4	4	4	4
Corals	0	0	0	0	0	0
Ostracods	3	4	4	4	4	3
Trilobites	0	0	4?	0	4?	0
Hyalosteliid spicules	0	0	4	4	0	0
Other sponge spicules	4	3	0	0	3	4
Plurilocular foraminifera	0	0	0	0	0	0
<i>Earlandia</i>	0	0	0	0	0	0
Algae (<i>Globochaetes</i>)	0	0	0	0	0	0
Moravamminids	0	0	0	0	0	0
Worm tubes	0	0	4	0	0	4?
Aoujgaliids	0	4	0	0	0	0
<i>Rectangulina</i>	0	0	0	0	0	0
Salebrids	0	0	0	0	0	0
<i>Sphaerinvia</i>	0	0	0	0	0	0
<i>Asphaltina</i>	0	0	0	0	0	0
Calcispheres (<i>Mendipsia</i>)	4	0	4	4	4	0
Problematicum 1	0	4	0	0	4	0
Problematicum 2	4	0	4	0	0	0
Problematicum 3	0	4	4	0	0	0
Non-skeletal grains:						
Intraclasts				X		
Lithoclasts						
Geopetal peloids			X			
Matrix peloids				X		
Micritized grains						
Micritized cements						
Micritized cavity walls						
Comments:						
Texture	W	W	W	W	W	W
Dolomite	X	Xf		X		
Cavity development	2	1	1	1	1	1

Slide/Sample No:	M15/S1	M20/S25	M20/S26	M19/S7	M20/S27	
Locality:	L 392	L 395	L 400	L 405	L 405	
Facies:	PM	PM	PM	PM	PM	
Skeletal grains:	Rank:	Rank:	Rank:	Rank:	Rank:	
Fenestrate bryozoans	0	0	0	0	0	
Fenestrate hash	0	2	1	2	2	
Stick/ramose bryozoans	4	0	3	0	0	
Encrusting bryozoans	0	0	4	0	4	
Crinoids	4	1	4	3	1	
Echinoid spines	0	0	0	0	4	
Brachiopods	0	3	4	4	3	
Molluscs	0	4	4	0	4	
Corals	0	0	4	0	0	
Ostracods	1	4	2	1	0	
Trilobites	0	0	0	0	4	
Hyalosteliid spicules	0	0	0	4	0	
Other sponge spicules	0	0	0	4	0	
Plurilocular foraminifera	0	0	0	0	0	
<i>Earlandia</i>	0	0	0	0	0	
Algae (<i>Globochaetes</i>)	0	0	0	0	0	
Moravamminids	0	0	0	0	0	
Worm tubes	0	0	0	0	0	
Aoujgaliids	0	4?	0	0	0	
<i>Rectangulina</i>	0	0	4	0	0	
Salebrids	0	0	0	0	0	
<i>Sphaerinvia</i>	0	0	0	0	0	
<i>Asphaltina</i>	0	0	0	0	0	
Calcispheres (<i>Mendipsia</i>)	0	4	0	0	0	
Problematicum 1	0	4	4	0	0	
Problematicum 2	0	0	0	0	0	
Problematicum 3	0	0	0	0	0	
Non-skeletal grains:						
Intraclasts				X		
Lithoclasts						
Geopetal peloids			X		X	
Matrix peloids				X		
Micritized grains						
Micritized cements			X			
Micritized cavity walls				X		
Comments:						
Texture	M	W	W/M	M	P/W	
Dolomite				X	Xf	
Cavity development	1	1	1	1	1	

Slide/Sample No:	K1/S1A	K1/S1B	K1/S2A	K1/S2C	K1/S2B	K1/S3A
Locality:	Knockastia	Knockastia	Knockastia	Knockastia	Knockastia	Knockastia
Facies:	PM	PM	PM	PM	PM	PM
Skeletal grains:	Rank:	Rank:	Rank:	Rank:	Rank:	Rank:
Fenestrate bryozoans	2	1	1	1	1	1
Fenestrate hash	1	2	2	2	2	2
Stick/ramose bryozoans	4	0	4	4	0	0
Encrusting bryozoans	4	4	0	0	0	0
Crinoids	3	4	3	3	4	4
Echinoid spines	0	0	0	0	4	0
Brachiopods	4	3	4	4	0	4
Molluscs	4	0	4	0	0	0
Corals	0	4	0	0	0	0
Ostracods	4?	0	4	4	4	4
Trilobites	0	0	0	0	0	0
Hyalosteliid spicules	0	0	0	0	4	0
Other sponge spicules	4	4	4	0	3	3
Plurilocular foraminifera	0	0	0	0	0	0
<i>Earlandia</i>	4?	4	0	0	0	0
Algae (<i>Globochaetes</i>)	0	0	0	0	0	0
Moravamminids	0	0	0	0	0	0
Worm tubes	0	4?	0	0	0	0
Aoujgaliids	0	0	0	4	0	0
<i>Rectangulina</i>	0	0	0	0	0	0
Salebrids	4	0	0	0	0	0
<i>Sphaerinvia</i>	0	0	0	0	0	0
<i>Asphaltina</i>	0	0	0	0	4	0
Calcspheres (<i>Mendipsia</i>)	0	0	4	0	0	0
Problematicum 1	0	0	0	0	0	0
Problematicum 2	0	0	0	0	0	0
Problematicum 3	0	0	0	0	0	0
Non-skeletal grains:						
Intraclasts					X	
Lithoclasts						
Geopetal peloids				X		X
Matrix peloids			X	X	X	
Micritized grains						
Micritized cements						
Micritized cavity walls						
Comments:						
Texture	W	W	M/W	M/W	M/W	M
Dolomite		Xf	X	X	Xf	X
Cavity development	2	3	3	3	3	3

Slide/Sample No:	K1/S3B	K1/S4A	K1/S4B	K1/S5A	K1/S5B	K1/S7A
Locality:	Knockastia	Knockastia	Knockastia	Knockastia	Knockastia	Knockastia
Facies:	PM	PM	PM	PM	PM	PM
Skeletal grains:	Rank:	Rank:	Rank:	Rank:	Rank:	Rank:
Fenestrate bryozoans	1	1	3	1	2	3
Fenestrate hash	3	2	1	3	1	2
Stick/ramose bryozoans	4	4	2	0	4	0
Encrusting bryozoans	4	4	4	0	0	4
Crinoids	2	4	4	4	4	4
Echinoid spines	0	0	4	4	0	0
Brachiopods	4	0	4	0	3	4
Molluscs	0	4	4	4	4	4
Corals	0	0	0	0	0	0
Ostracods	4	4	4	4	4	4
Trilobites	0	4	4	0	4	4
Hyalosteliid spicules	0	4	0	0	4	4
Other sponge spicules	4	3	4	2	4	1
Plurilocular foraminifera	0	0	0	0	0	0
<i>Earlandia</i>	0	0	4	0	4	0
Algae (<i>Globochaetes</i>)	0	0	0	0	0	0
Moravamminids	0	0	0	0	0	0
Worm tubes	0	0	0	0	0	0
Aoujgaliids	0	0	0	0	0	0
<i>Rectangulina</i>	0	0	0	0	0	0
Salebrids	0	0	0	0	0	0
<i>Sphaerinvia</i>	0	4	4	0	4	0
<i>Asphaltina</i>	0	0	4	0	0	0
Calcspheres (<i>Mendipsia</i>)	0	0	0	0	4	4
Problematicum 1	0	0	0	0	0	0
Problematicum 2	4	0	0	0	0	0
Problematicum 3	0	0	0	0	0	0
Non-skeletal grains:						
Intraclasts					X	
Lithoclasts						
Geopetal peloids		X			X	X
Matrix peloids				X		X
Micritized grains						
Micritized cements				X		
Micritized cavity walls						
Comments:						
Texture	M	W	W	M	W	M
Dolomite	X	Xf		Xf	Xf	Xf
Cavity development	3	2	2	3	3	1

Slide/Sample No:	K1/S7B	K1/S8A	K1/S8B	K1/S9	WC1/S1	WC1/S2
Locality:	Knockastia	Knockastia	Knockastia	Knockastia	West Camp	West Camp
Facies:	PM	PM	PM	PM	PM	PM
Skeletal grains:	Rank:	Rank:	Rank:	Rank:	Rank:	Rank:
Fenestrate bryozoans	4	4	2	4	0	1
Fenestrate hash	2	1	1	1	1	3
Stick/ramose bryozoans	0	3	4	2	4	4
Encrusting bryozoans	4	4	0	0	0	0
Crinoids	4	4	4	4	4	4
Echinoid spines	0	0	0	0	4	4
Brachiopods	4	0	4	3	2	2
Molluscs	4	2	4	4	3	4
Corals	0	0	0	0	0	0
Ostracods	4	4	4	0	0	0
Trilobites	4	0	0	4	0	4
Hyalosteliid spicules	3	4	4	0	0	0
Other sponge spicules	1	4	3	4	4	4
Plurilocular foraminifera	0	0	0	0	0	0
<i>Earlandia</i>	0	0	0	0	0	0
Algae (<i>Globochaetes</i>)	0	0	0	0	0	0
Moravamminids	0	0	0	0	0	0
Worm tubes	0	0	0	0	4	0
Aoujgaliids	0	0	0	0	0	0
<i>Rectangulina</i>	0	0	0	0	0	0
Salebrids	0	0	0	0	0	0
<i>Sphaerinvia</i>	0	0	0	0	0	0
<i>Asphaltina</i>	0	0	0	0	0	0
Calcispheres (<i>Mendipsia</i>)	0	0	4	4	0	0
Problematicum 1	0	0	0	0	0	0
Problematicum 2	0	0	0	0	0	0
Problematicum 3	0	0	0	0	0	0
Non-skeletal grains:						
Intraclasts		X				
Lithoclasts						
Geopetal peloids	X	X	X	X		
Matrix peloids					X	X
Micritized grains						X
Micritized cements						
Micritized cavity walls						
Comments:						
Texture	M	M/W	W	W	W	M/W
Dolomite	X	X	Xf	X	X	
Cavity development	1	2	2	2	2	2

Slide/Sample No:	WC1/S3	WC1/S4	WC1/S5	WC1/S6	WC1/S7	WC1/S8
Locality:	West Camp	West Camp	West Camp	West Camp	West Camp	West Camp
Facies:	PM	PM	PM	PM	PM	PM
Skeletal grains:	Rank:	Rank:	Rank:	Rank:	Rank:	Rank:
Fenestrate bryozoans	0	0	1	0	2	0
Fenestrate hash	1	3	2	1	1	1
Stick/ramose bryozoans	4	4	4	0	0	4
Encrusting bryozoans	3	0	0	0	3	0
Crinoids	2	1	3	2	4	2
Echinoid spines	0	0	4	0	0	0
Brachiopods	4	4	4	3	4	0
Molluscs	0	4	4	4	4	3
Corals	0	0	0	0	0	0
Ostracods	4	2	0	0	0	4
Trilobites	0	0	0	4	0	4
Hyalosteliid spicules	0	0	0	0	0	0
Other sponge spicules	4	0	0	0	0	4
Plurilocular foraminifera	0	0	0	0	0	0
<i>Earlandia</i>	0	0	0	0	0	4
Algae (<i>Globochaetes</i>)	0	0	0	0	0	0
Moravamminids	0	0	0	0	0	0
Worm tubes	0	0	0	0	0	0
Aoujgaliids	0	0	0	0	0	0
<i>Rectangulina</i>	0	0	4	0	0	0
Salebrids	0	0	0	0	0	0
<i>Sphaerinvia</i>	0	0	0	0	0	0
<i>Asphaltina</i>	4	0	0	0	0	0
Calcispheres (<i>Mendipsia</i>)	0	0	0	0	0	0
Problematicum 1	0	0	0	0	0	0
Problematicum 2	0	0	0	0	0	0
Problematicum 3	0	0	0	0	0	0
Non-skeletal grains:						
Intraclasts						
Lithoclasts						
Geopetal peloids						
Matrix peloids		X	X		X	X
Micritized grains			X			
Micritized cements						
Micritized cavity walls						
Comments:						
Texture	W	W	W	W	M/W	M
Dolomite				X		
Cavity development	3	2	3	2	2	2

Slide/Sample No:	EC/S1	EC/S2	EC/S3	EC/S4	EC/S5	EC/S6
Locality:	East Camp	East Camp	East Camp	East Camp	East Camp	East Camp
Facies:	PM	PM	PM	PM	PM	PM
Skeletal grains:	Rank:	Rank:	Rank:	Rank:	Rank:	Rank:
Fenestrate bryozoans	0	0	0	1	0	2
Fenestrate hash	2	2	2	2	2	0
Stick/ramose bryozoans	0	4	0	0	0	0
Encrusting bryozoans	0	0	0	0	0	0
Crinoids	1	1	1	3	1	1
Echinoid spines	0	0	4	0	0	0
Brachiopods	3	3	3	4	3	0
Molluscs	0	0	4	4	4	0
Corals	0	0	0	0	0	0
Ostracods	0	0	4	0	0	0
Trilobites	4	4	0	0	0	0
Hyalosteliid spicules	0	0	4	0	0	0
Other sponge spicules	4	0	0	0	0	3
Plurilocular foraminifera	0	0	0	0	0	0
<i>Earlandia</i>	0	0	0	0	0	0
Algae (<i>Globochaetes</i>)	0	0	0	0	0	0
Moravamminids	0	4	0	0	0	0
Worm tubes	4?	4	0	0	0	0
Aoujgaliids	0	0	0	0	0	4?
<i>Rectangulina</i>	0	0	0	0	0	0
Salebrids	0	0	0	0	0	0
<i>Sphaerinvia</i>	0	0	0	0	0	0
<i>Asphaltina</i>	0	0	0	0	0	0
Calcspheres (<i>Mendipsia</i>)	0	4	4	4	0	0
Problematicum 1	0	0	0	0	0	0
Problematicum 2	0	0	0	0	0	0
Problematicum 3	0	0	0	0	0	0
Non-skeletal grains:						
Intraclasts		X	X		X	
Lithoclasts						
Geopetal peloids					X	X
Matrix peloids				X	X	X
Micritized grains						X
Micritized cements						X
Micritized cavity walls						X
Comments:						
Texture	W	P	W/P	M	P	W
Dolomite						
Cavity development	1	1	1	1	2	2

Slide/Sample No:	B1/S2	B1/S3	B1/S4	B1/S5	B2/S1	B2/S2
Locality:	Barrow	Barrow	Barrow	Barrow	Barrow	Barrow
Facies:	PM	PM	PM	PM	PM	PM
Skeletal grains:	Rank:	Rank:	Rank:	Rank:	Rank:	Rank:
Fenestrate bryozoans	4	0	0	1	1	1
Fenestrate hash	2	1	1	2	4	2
Stick/ramose bryozoans	1	4	4	3	3	3
Encrusting bryozoans	0	0	0	0	0	0
Crinoids	3	2	0	0	0	4
Echinoid spines	0	4	0	0	4	0
Brachiopods	4	3	2	0	2	4
Molluscs	4	4	3	0	4	3
Corals	0	0	0	0	0	0
Ostracods	0	4	0	0	0	4
Trilobites	0	0	0	0	0	4
Hyalosteliid spicules	0	0	0	0	0	0
Other sponge spicules	4	0	0	0	4	0
Plurilocular foraminifera	4	0	0	0	0	0
<i>Earlandia</i>	4	0	0	0	0	0
Algae (<i>Globochaetes</i>)	0	0	0	0	0	0
Moravamminids	0	0	0	0	4?	0
Worm tubes	4	0	4	0	4?	0
Aoujgaliids	4	0	4	0	0	0
<i>Rectangulina</i>	0	0	0	0	0	0
Salebrids	0	0	0	0	0	0
<i>Sphaerinvia</i>	0	0	0	0	0	0
<i>Asphaltina</i>	0	0	0	0	0	0
Calcispheres (<i>Mendipsia</i>)	0	0	0	0	0	4
Problematicum 1	0	0	0	0	0	0
Problematicum 2	0	0	0	0	0	0
Problematicum 3	0	0	0	0	0	0
Non-skeletal grains:						
Intraclasts						
Lithoclasts						
Geopetal peloids						X
Matrix peloids	X		X		X	X
Micritized grains			X	X		
Micritized cements						
Micritized cavity walls						
Comments:						
Texture	W	W	W	Biosparite	W	M/W
Dolomite				X		
Cavity development	2	2	3	3+	2	2

Slide/Sample No:	B2/S3	B2/S4	B3/S1	B3/S2	B3/S3	B3/S4
Locality:	Barrow	Barrow	Barrow	Barrow	Barrow	Barrow
Facies:	PM	PM	PM	PM	MC	MC
Skeletal grains:	Rank:	Rank:	Rank:	Rank:	Rank:	Rank:
Fenestrate bryozoans	1	2	3	1	1	1
Fenestrate hash	2	4	0	0	2	2
Stick/ramose bryozoans	4	1	1	4	3	4
Encrusting bryozoans	0	0	0	0	0	0
Crinoids	3	4	2	4	4	4
Echinoid spines	0	4	0	0	0	0
Brachiopods	4	3	0	4	0	3
Molluscs	4	0	0	3	4	4
Corals	0	0	0	0	0	0
Ostracods	0	4	0	0	4	4
Trilobites	0	4	0	0	4	4
Hyalosteliid spicules	0	0	4	4	0	0
Other sponge spicules	0	4	4	0	0	4
Plurilocular foraminifera	0	0	0	0	0	0
<i>Earlandia</i>	4	0	0	0	0	0
Algae (<i>Globochaetes</i>)	0	0	0	0	0	0
Moravamminids	0	0	0	0	0	0
Worm tubes	0	0	0	4?	4	0
Aoujgaliids	0	0	0	0	0	0
<i>Rectangulina</i>	0	0	0	0	0	0
Salebrids	0	0	0	0	0	0
<i>Sphaerinvia</i>	0	0	0	0	0	0
<i>Asphaltina</i>	0	0	0	0	0	0
Calcspheres (<i>Mendipsia</i>)	4	4	0	4	4	4
Problematicum 1	0	0	0	0	0	0
Problematicum 2	0	0	0	0	0	0
Problematicum 3	0	0	0	0	0	0
Non-skeletal grains:						
Intraclasts						
Lithoclasts						
Geopetal peloids				X		X
Matrix peloids		X		X		X
Micritized grains						
Micritized cements						
Micritized cavity walls				X		
Comments:						
Texture	W	W	W	W	W	W
Dolomite	X					
Cavity development	3	3	2	2	2	2

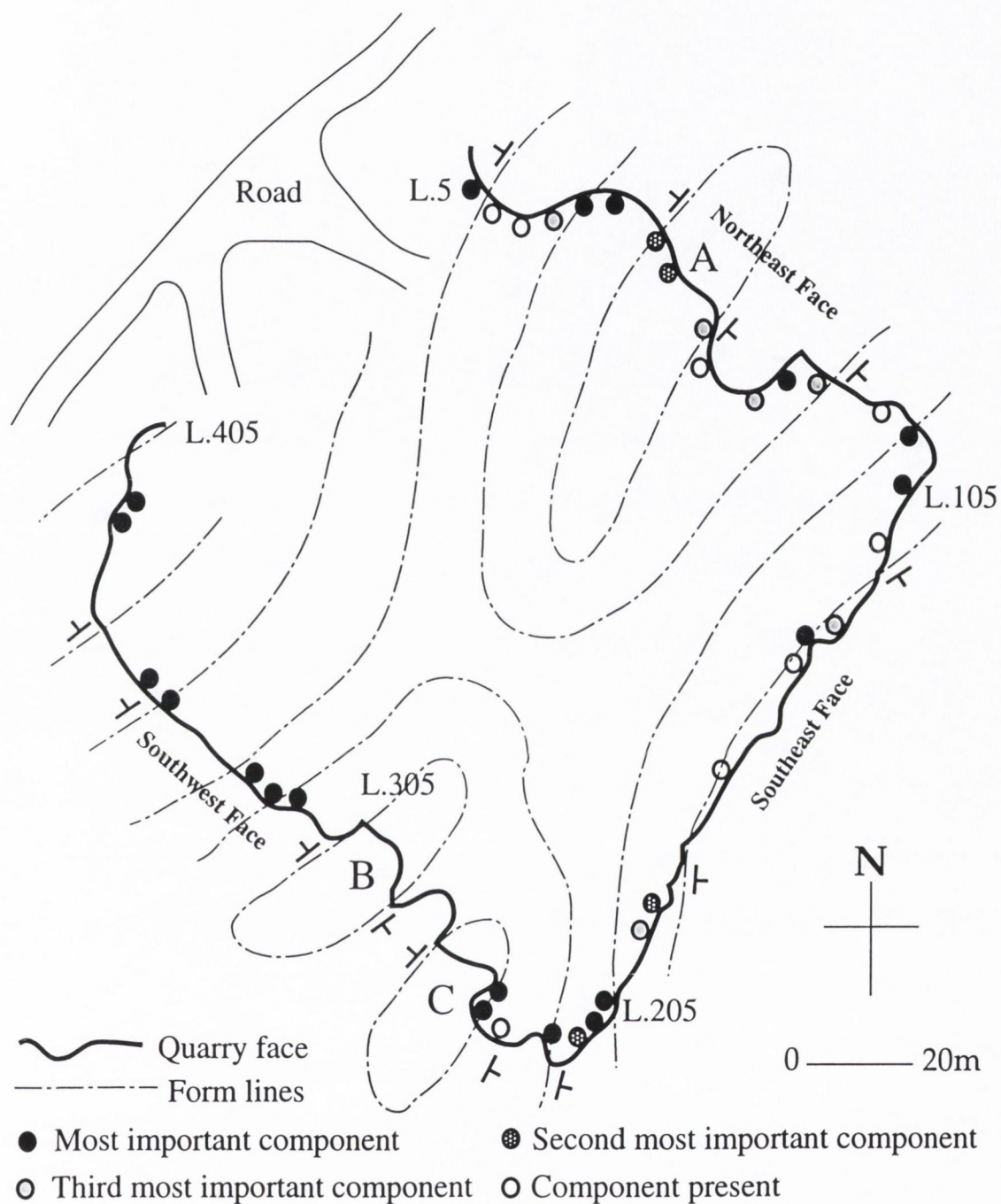
Slide/Sample No:	B3/S5	B3/S6				
Locality:	Barrow	Barrow				
Facies:	PM	PM				
Skeletal grains:	Rank:	Rank:				
Fenestrate bryozoans	3	1				
Fenestrate hash	0	3				
Stick/ramose bryozoans	0	0				
Encrusting bryozoans	0	0				
Crinoids	2	4				
Echinoid spines	0	0				
Brachiopods	4	2				
Molluscs	4	0				
Corals	0	0				
Ostracods	4	4				
Trilobites	0	4				
Hyalosteliid spicules	1	0				
Other sponge spicules	0	0				
Plurilocular foraminifera	0	0				
<i>Earlandia</i>	0	0				
Algae (<i>Globochaetes</i>)	0	0				
Moravamminids	0	0				
Worm tubes	0	0				
Aoujgaliids	0	0				
<i>Rectangulina</i>	0	0				
Salebrids	0	0				
<i>Sphaerinvia</i>	0	4?				
<i>Asphaltina</i>	0	0				
Calcispheres (<i>Mendipsia</i>)	4	0				
Problematicum 1	0	0				
Problematicum 2	0	0				
Problematicum 3	0	0				
Non-skeletal grains:						
Intraclasts						
Lithoclasts						
Geopetal peloids						
Matrix peloids	X?					
Micritized grains						
Micritized cements						
Micritized cavity walls	X					
Comments:						
Texture	M	W				
Dolomite						
Cavity development	2	2				

Appendix 3

Component Distribution Maps (Mullawornia Quarry)

	Page:
Map 1: Fenestrate bryozoans:	xxxvii
Map 2: Fenestrate hash:	xxxix
Map 3: Stick/ramose bryozoans:	xl
Map 4: Encrusting bryozoans:	xli
Map 5: Crinoids:	xlii
Map 6: Echinoid spines:	xliii
Map 7: Brachiopods:	xliv
Map 8: Molluscs:	xlvi
Map 9: Ostracods:	xlvi
Map 10: Trilobites:	xlvi
Map 11: Hyalosteliid spicules:	xlvi
Map 12: Other sponge spicules:	xlvi
Map 13: Plurilocular foraminifera:	l
Map 14: Globochaetes, moravamminids, and aoujgaliids:	li
Map 15: Worm tubes and salebrids:	lii
Map 16: <i>Rectangulina</i> , <i>Sphaerinvia</i> and <i>Asphaltina</i> :	liii
Map 17: Calcispheres (<i>Mendipsia leesi</i>):	liv
Map 18: Problematica:	lv
Map 19: Peloidal fabrics:	lvi
Map 20: Micritization:	lvii
Map 21: Depositional textures:	lviii
Map 22: Dolomite:	lix

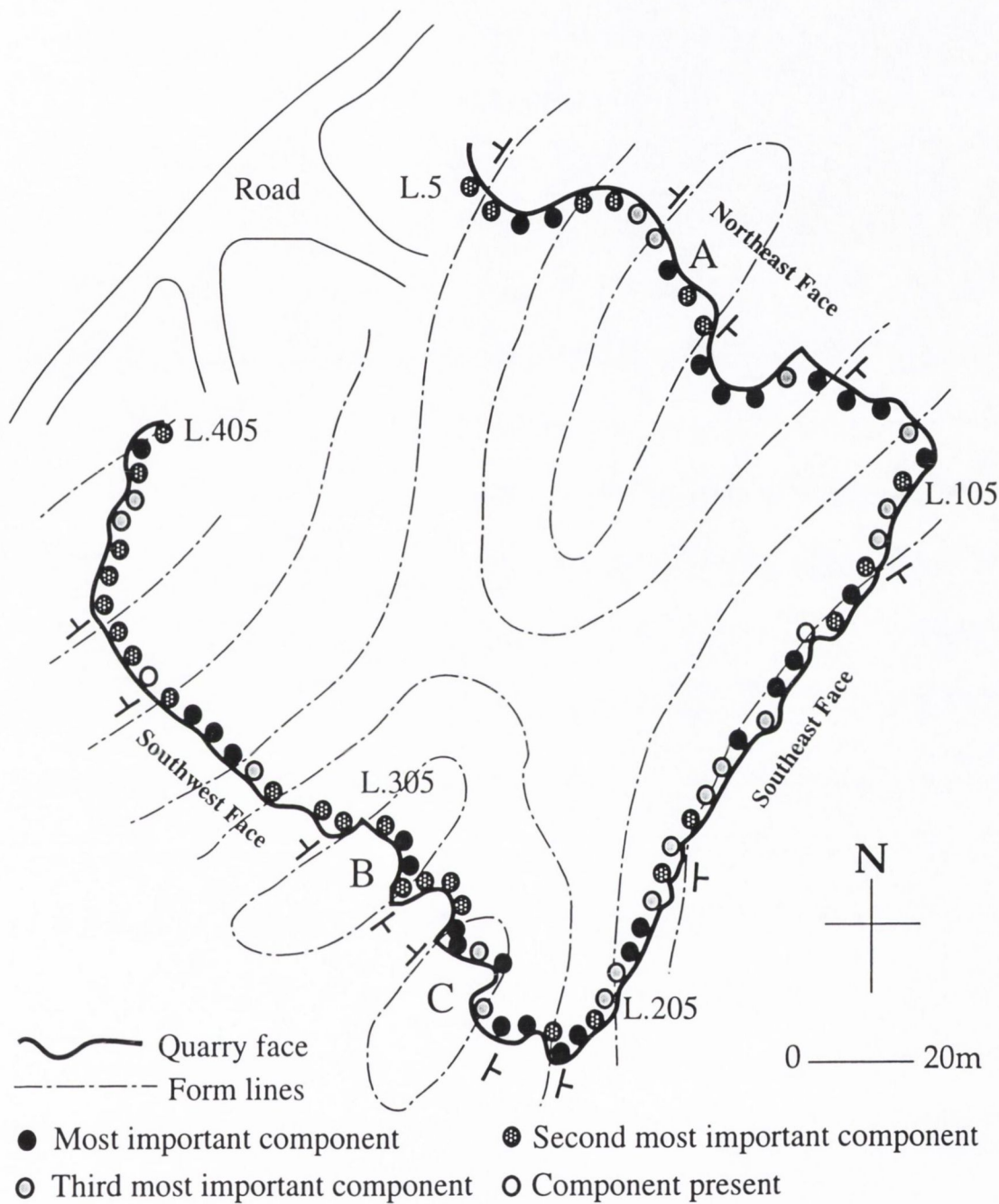
Fenestrate bryozoans:



Rank:	Sample count:	Percentage:
1	20	22.47
2	05	5.62
3	06	6.74
4	09	10.11
Total:	40	44.94

(Sample population = 89)

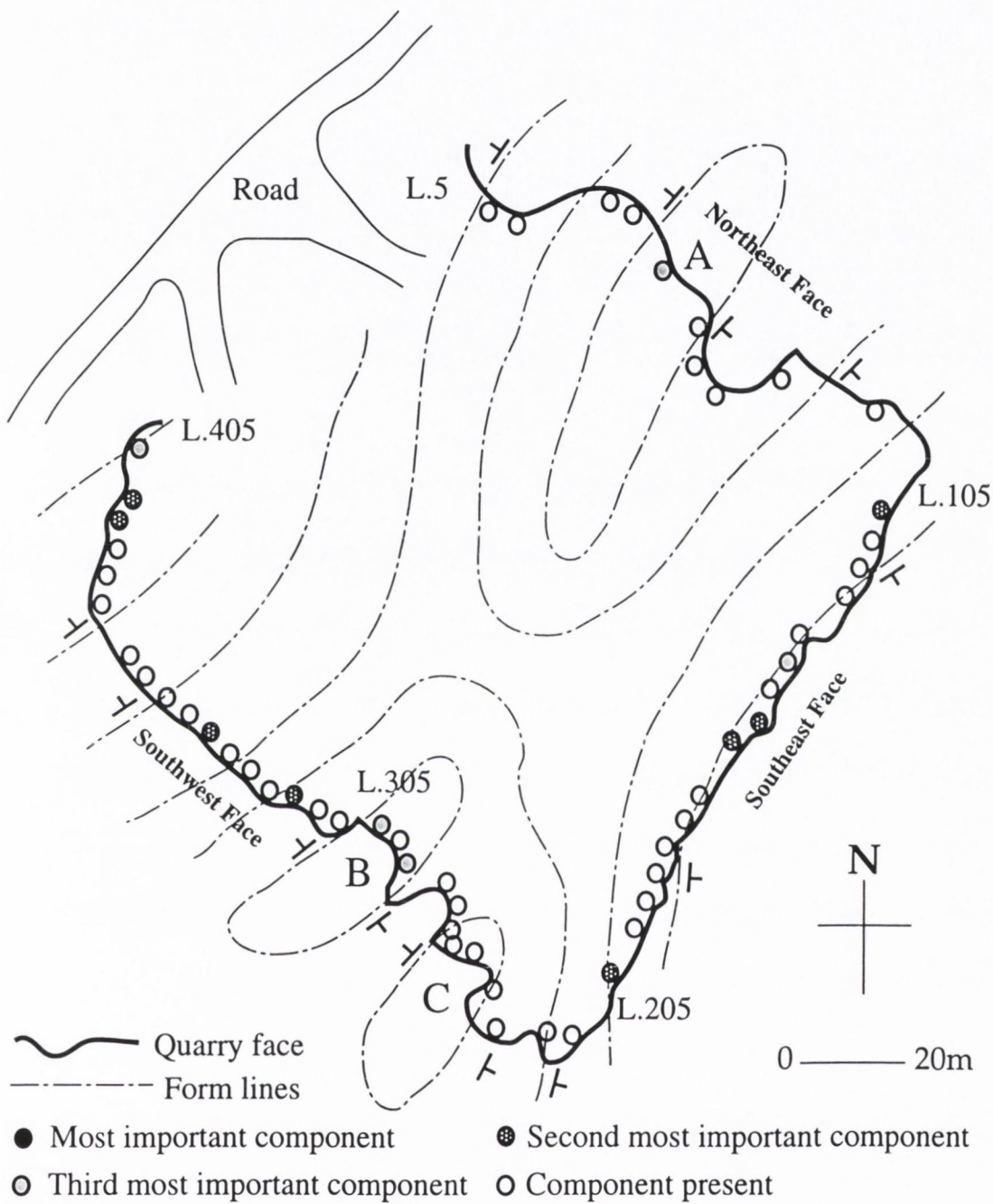
Fenestrate hash:



Rank:	Sample count:	Percentage:
1	30	33.71
2	33	37.08
3	19	21.35
4	03	3.37
Total:	85	95.91

(Sample population = 89)

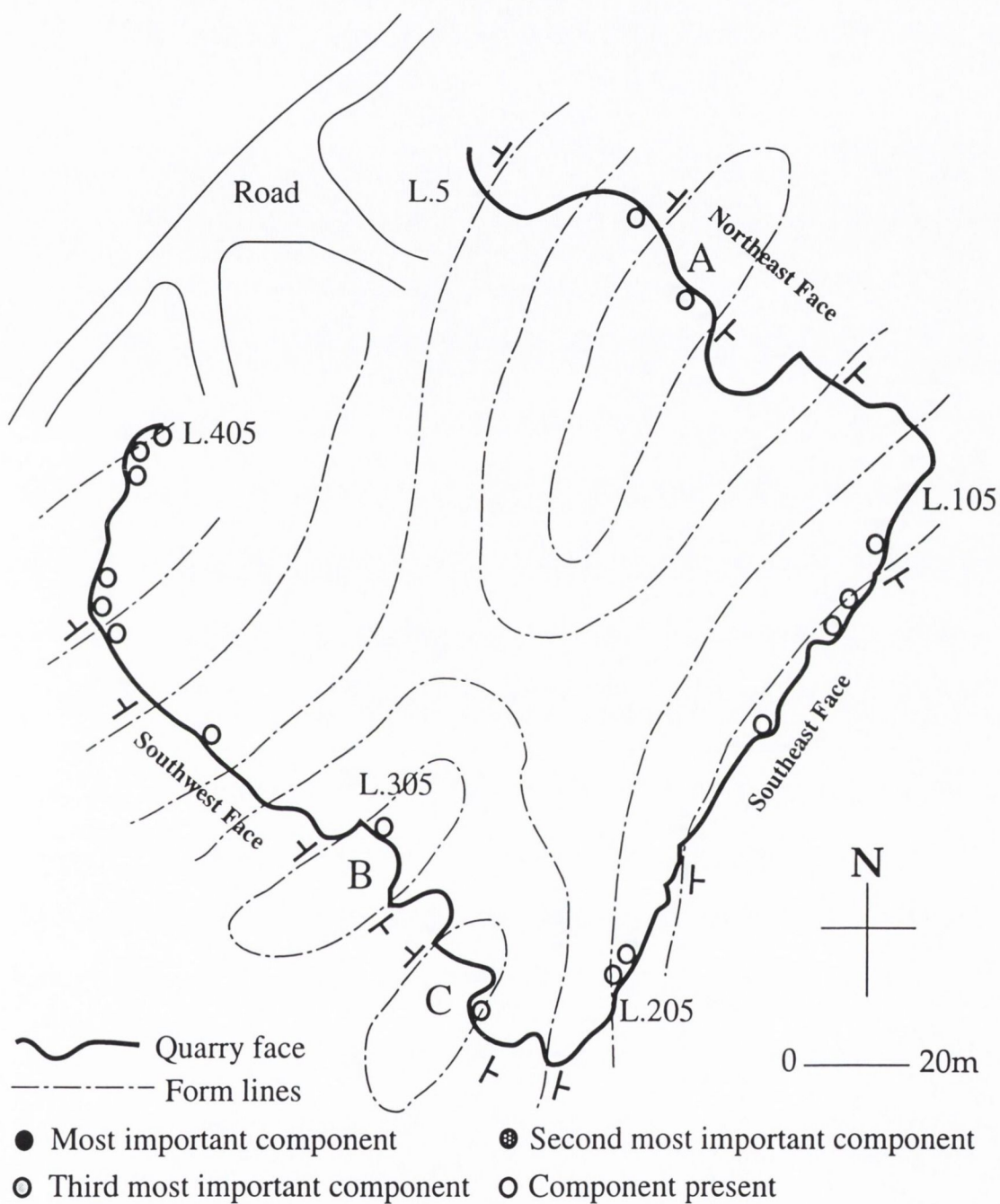
Stick/ramose bryozoans:



Rank:	Sample count:	Percentage:
1	0	0.00
2	08	8.99
3	05	5.62
4	46	51.68
Total:	59	66.29

(Sample population = 89)

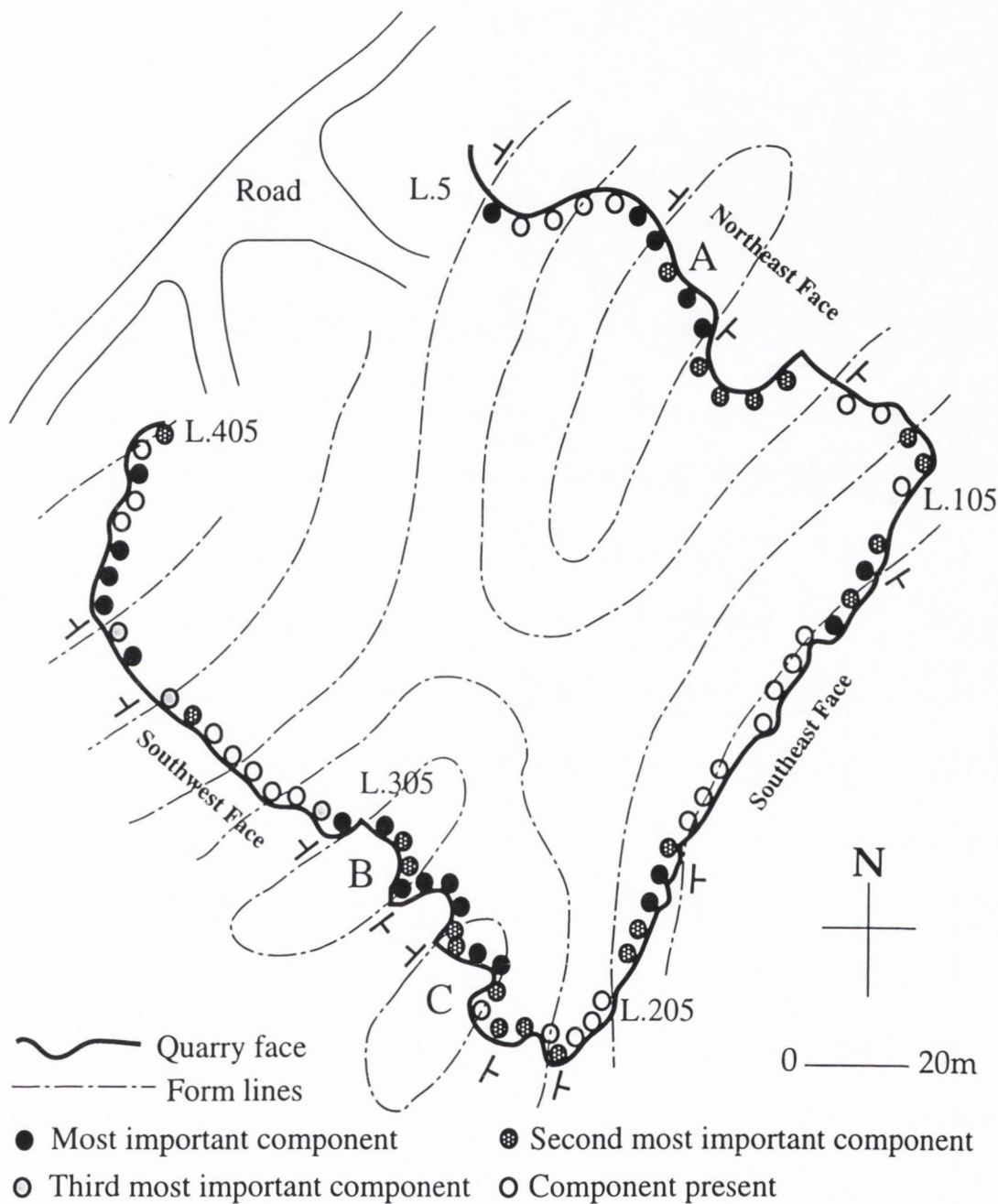
Encrusting bryozoans:



Rank:	Sample count:	Percentage:
1	0	0.00
2	0	0.00
3	0	0.00
4	17	19.10
Total:	17	19.10

(Sample population = 89)

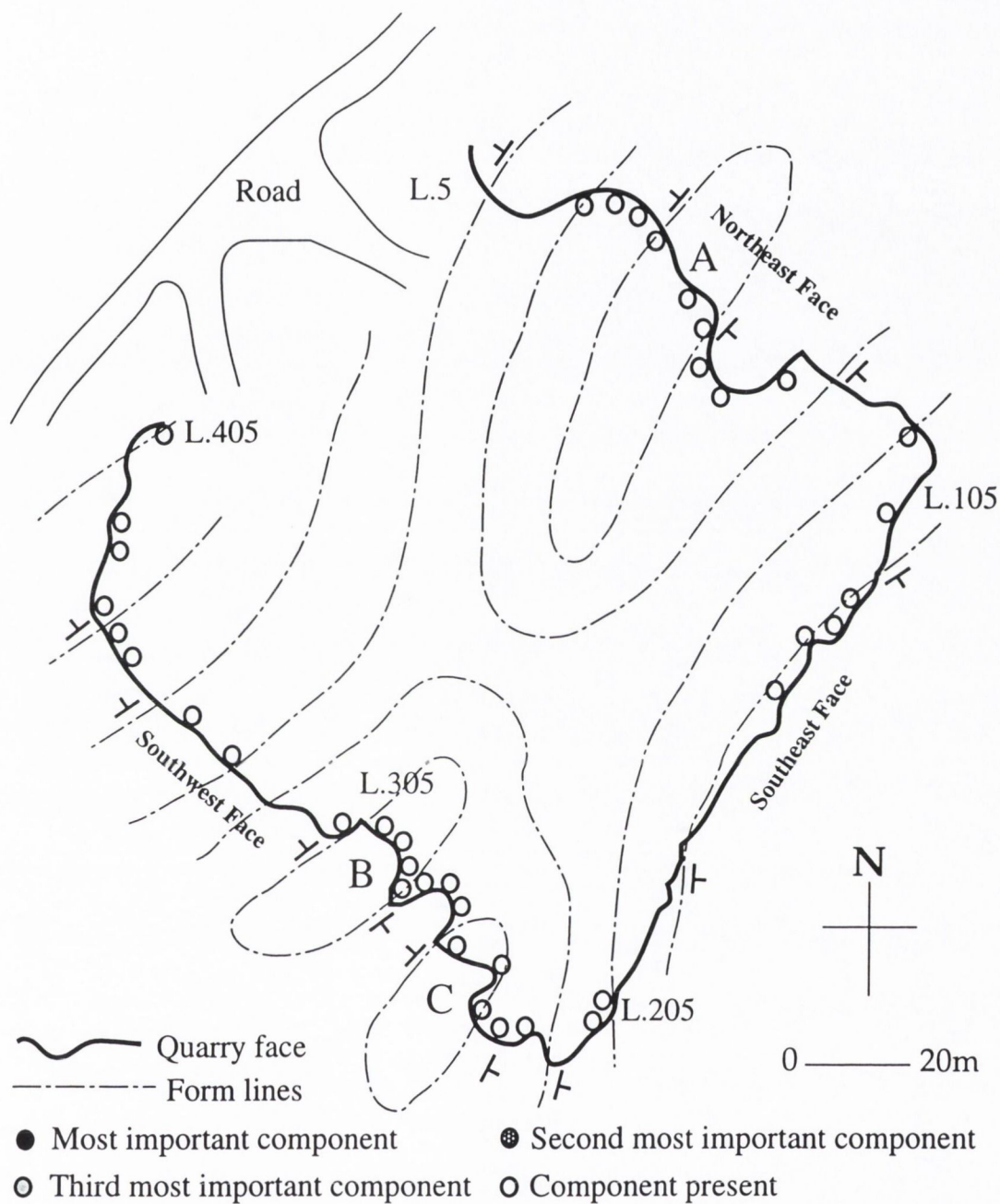
Crinoids:



Rank:	Sample count:	Percentage:
1	26	29.21
2	23	25.84
3	05	5.62
4	28	31.46
Total:	82	92.13

(Sample population = 89)

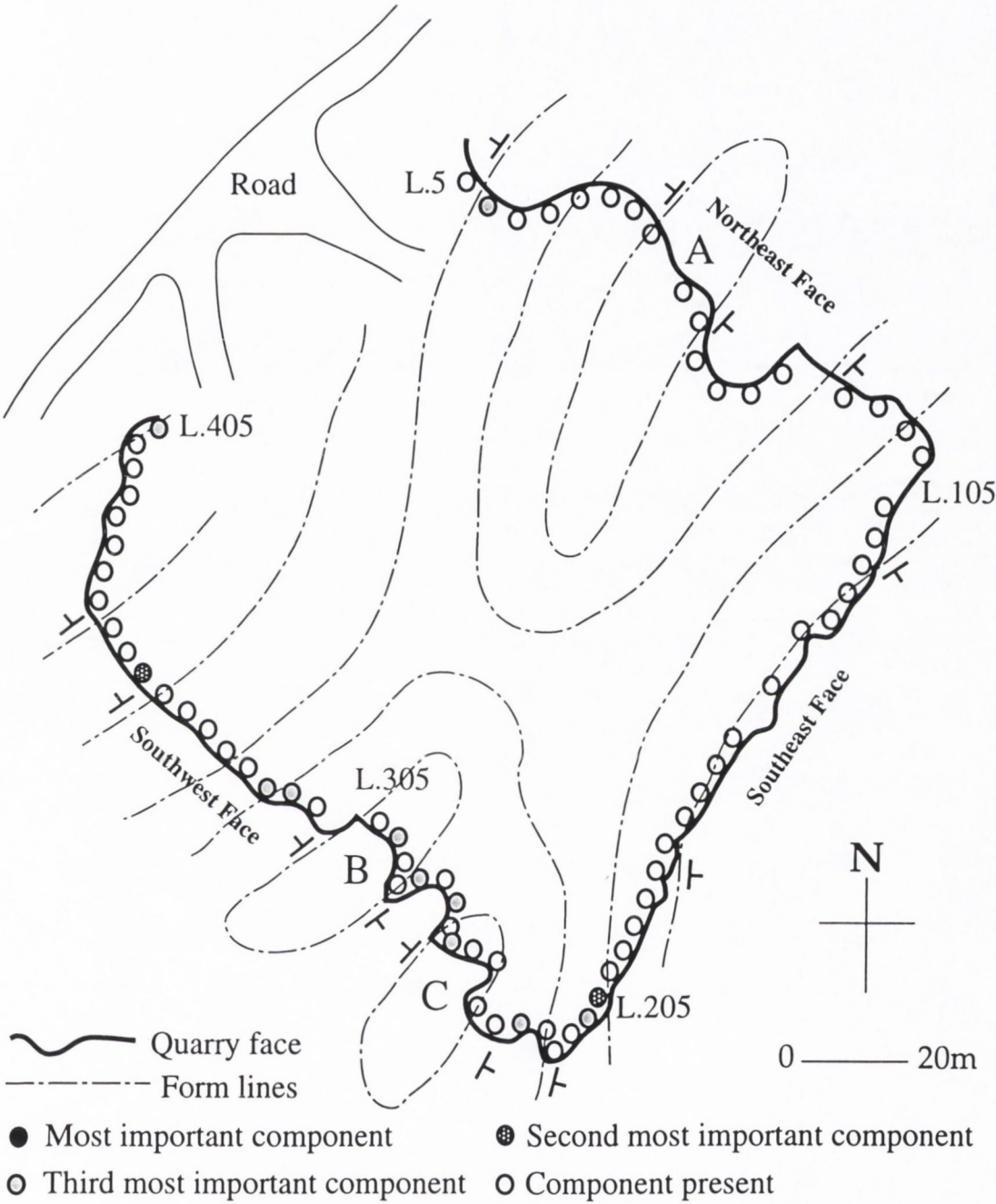
Echinoid spines:



Rank:	Sample count:	Percentage:
1	0	0.00
2	0	0.00
3	0	0.00
4	43	48.31
Total:	43	48.31

(Sample population = 89)

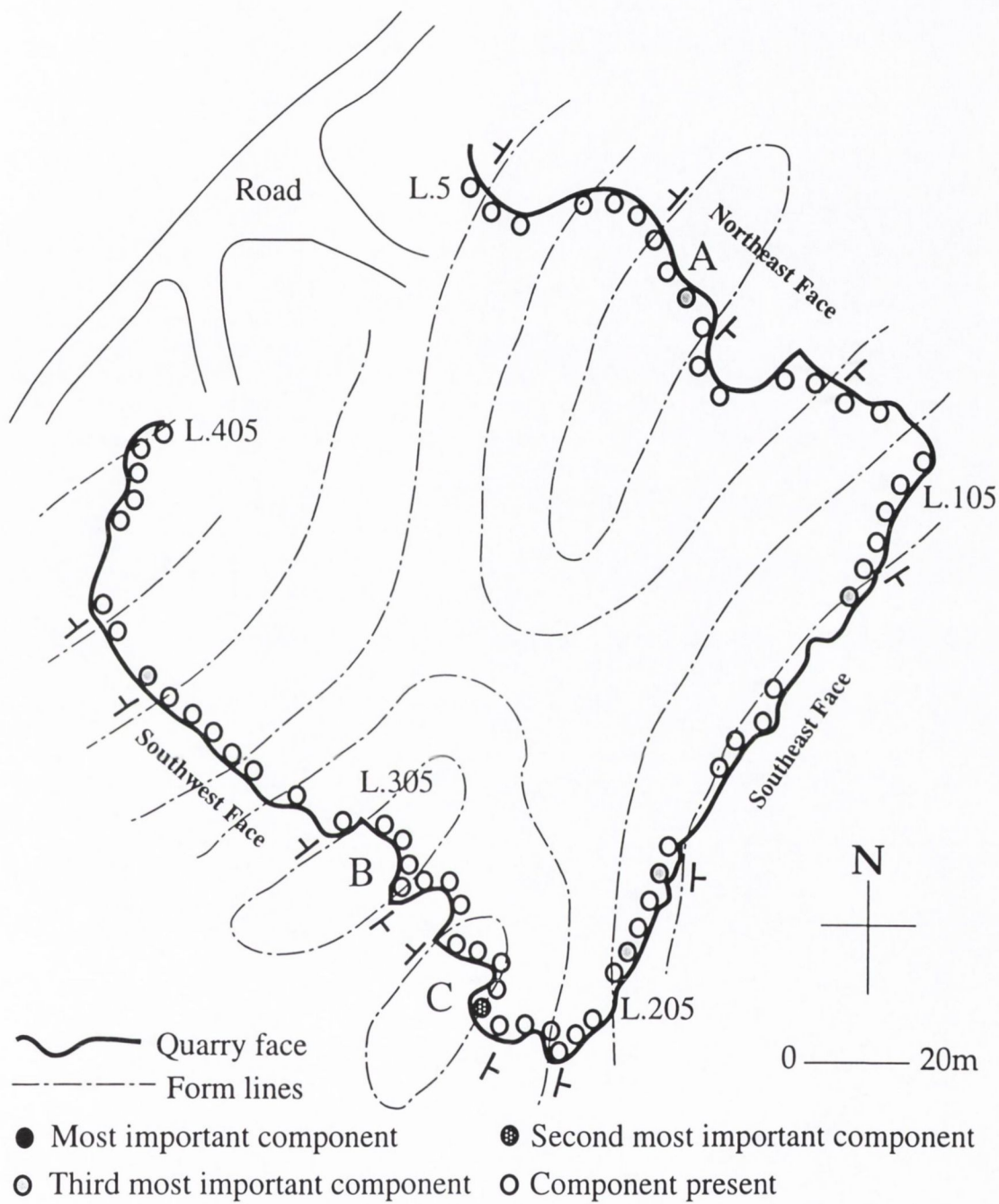
Brachiopods:



Rank:	Sample count:	Percentage:
1	0	0.00
2	02	2.25
3	11	12.36
4	65	73.03
Total:	78	87.64

(Sample population = 89)

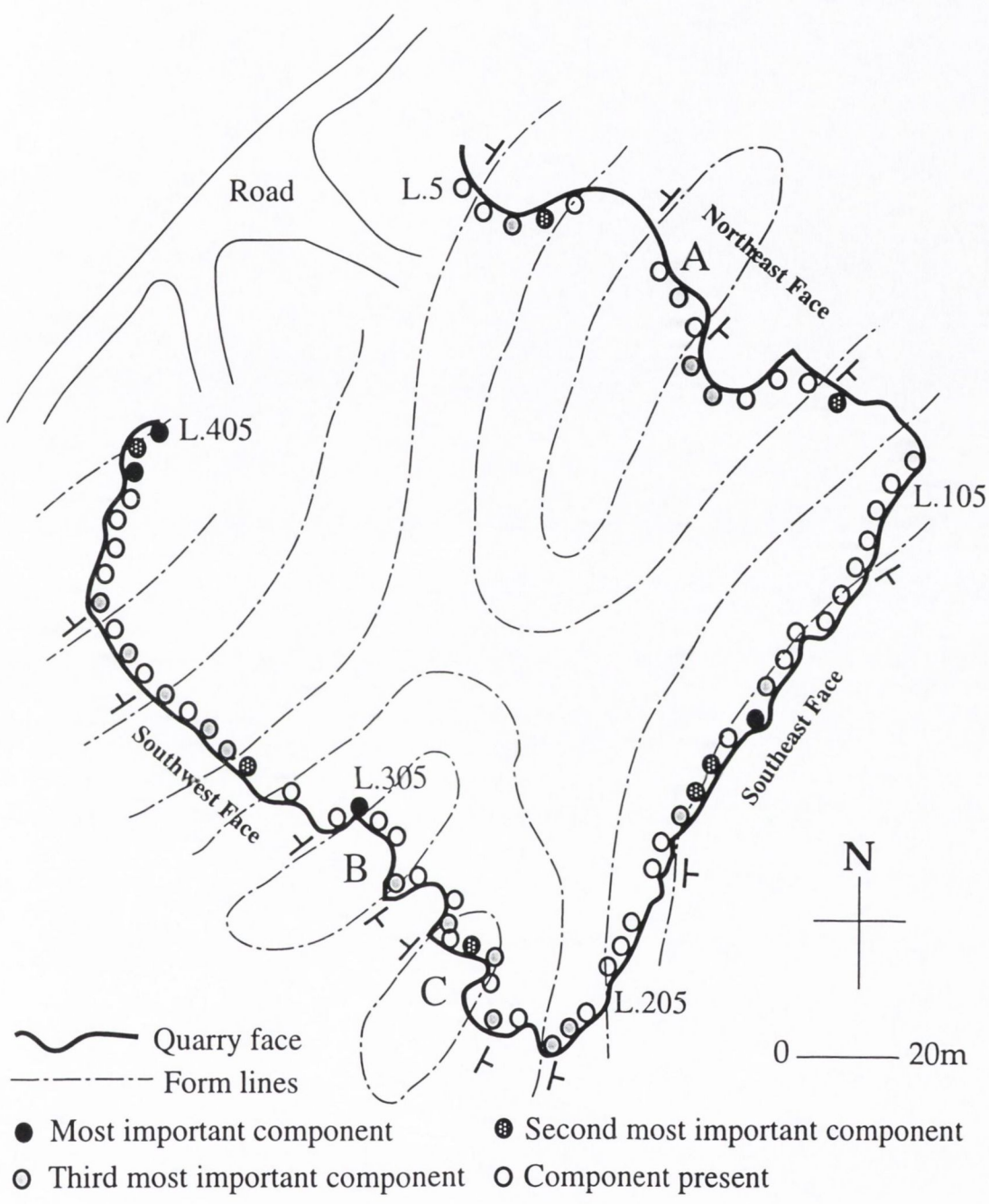
Molluscs:



Rank:	Sample count:	Percentage:
1	0	0.00
2	01	1.12
3	07	7.87
4	60	67.42
Total:	68	76.41

(Sample population = 89)

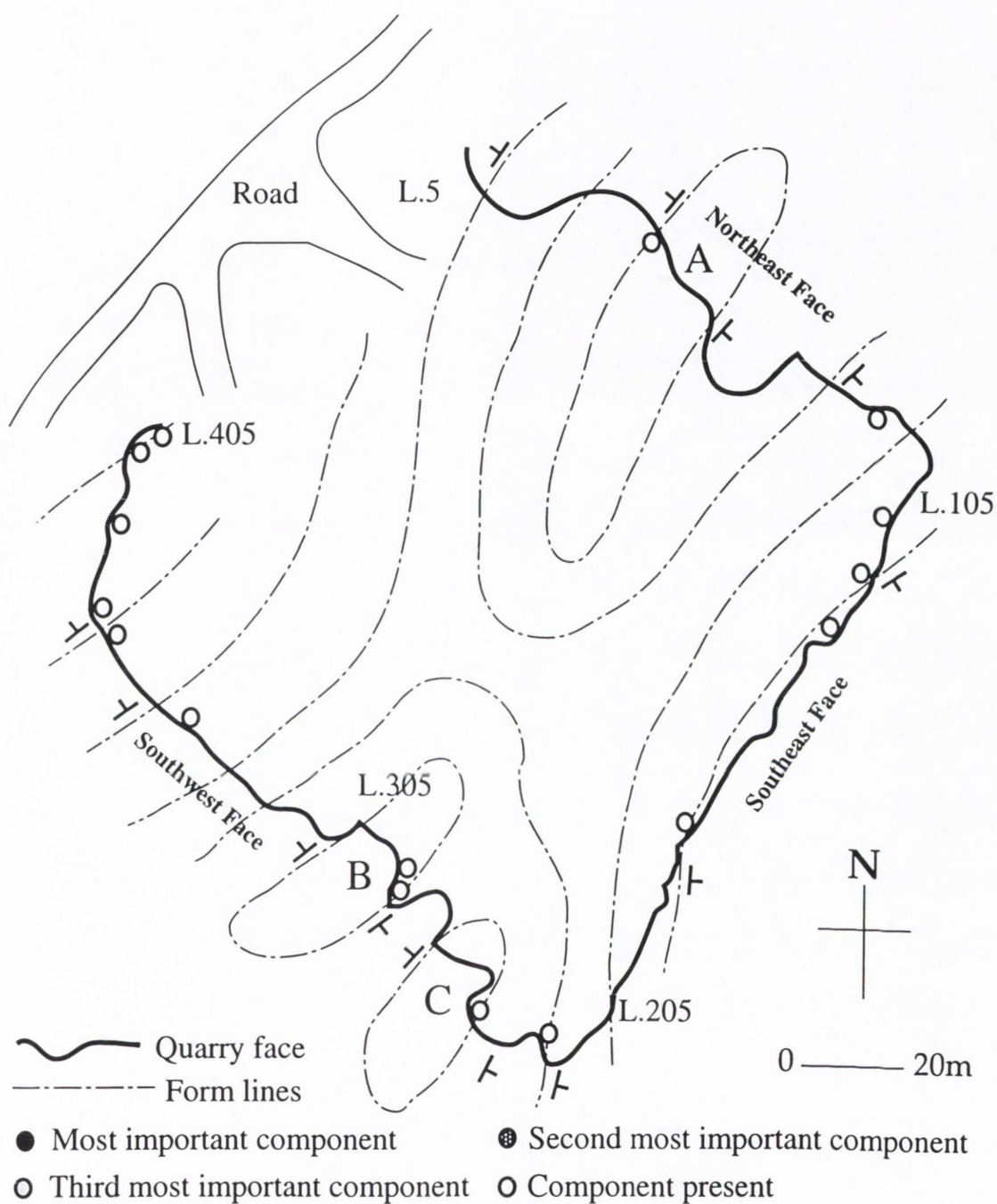
Ostracods:



Rank:	Sample count:	Percentage:
1	04	4.49
2	08	8.99
3	20	22.47
4	43	48.31
Total:	75	84.26

(Sample population = 89)

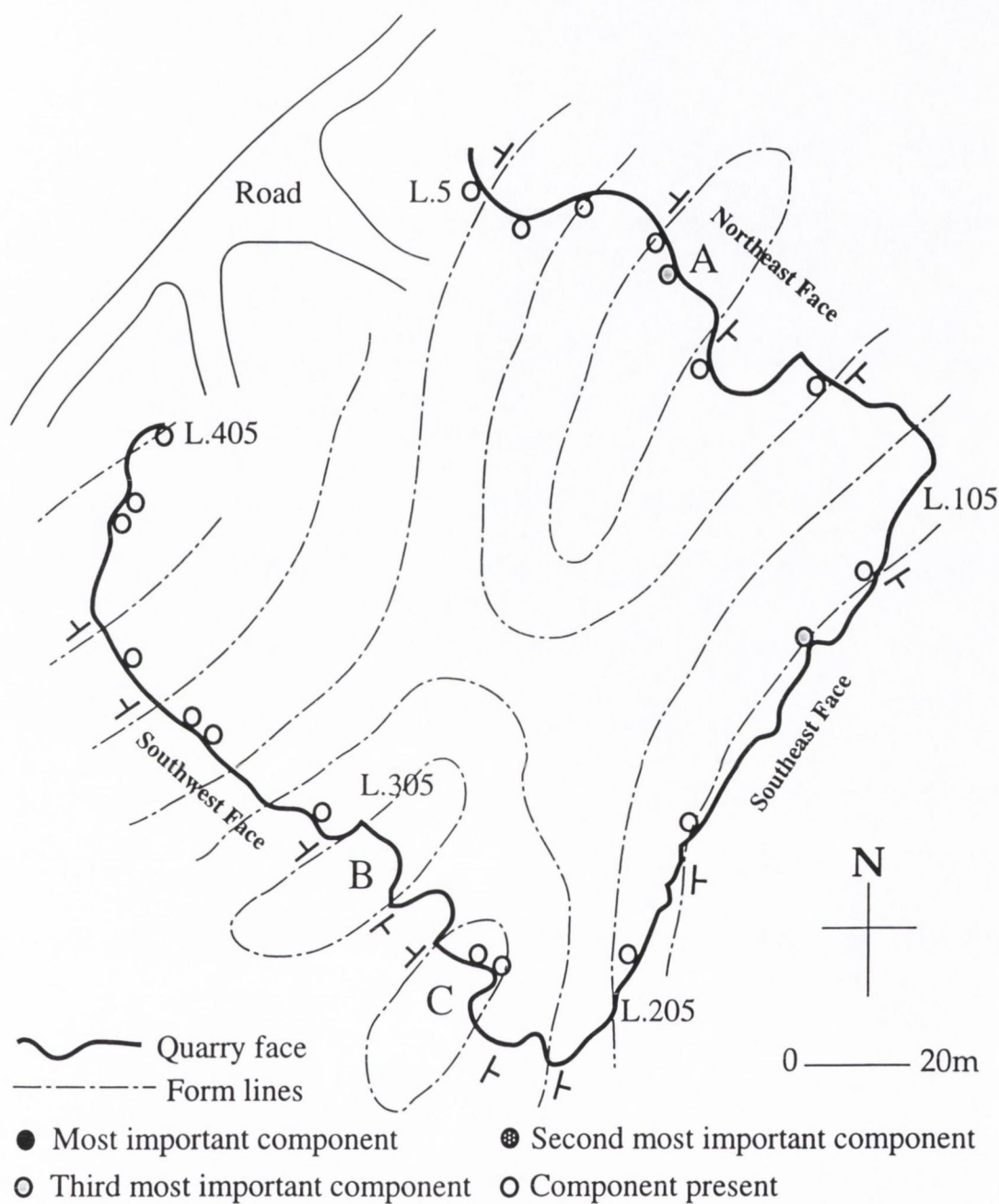
Trilobites:



Rank:	Sample count:	Percentage:
1	0	0.00
2	0	0.00
3	0	0.00
4	16	17.98
Total:	16	17.98

(Sample population = 89)

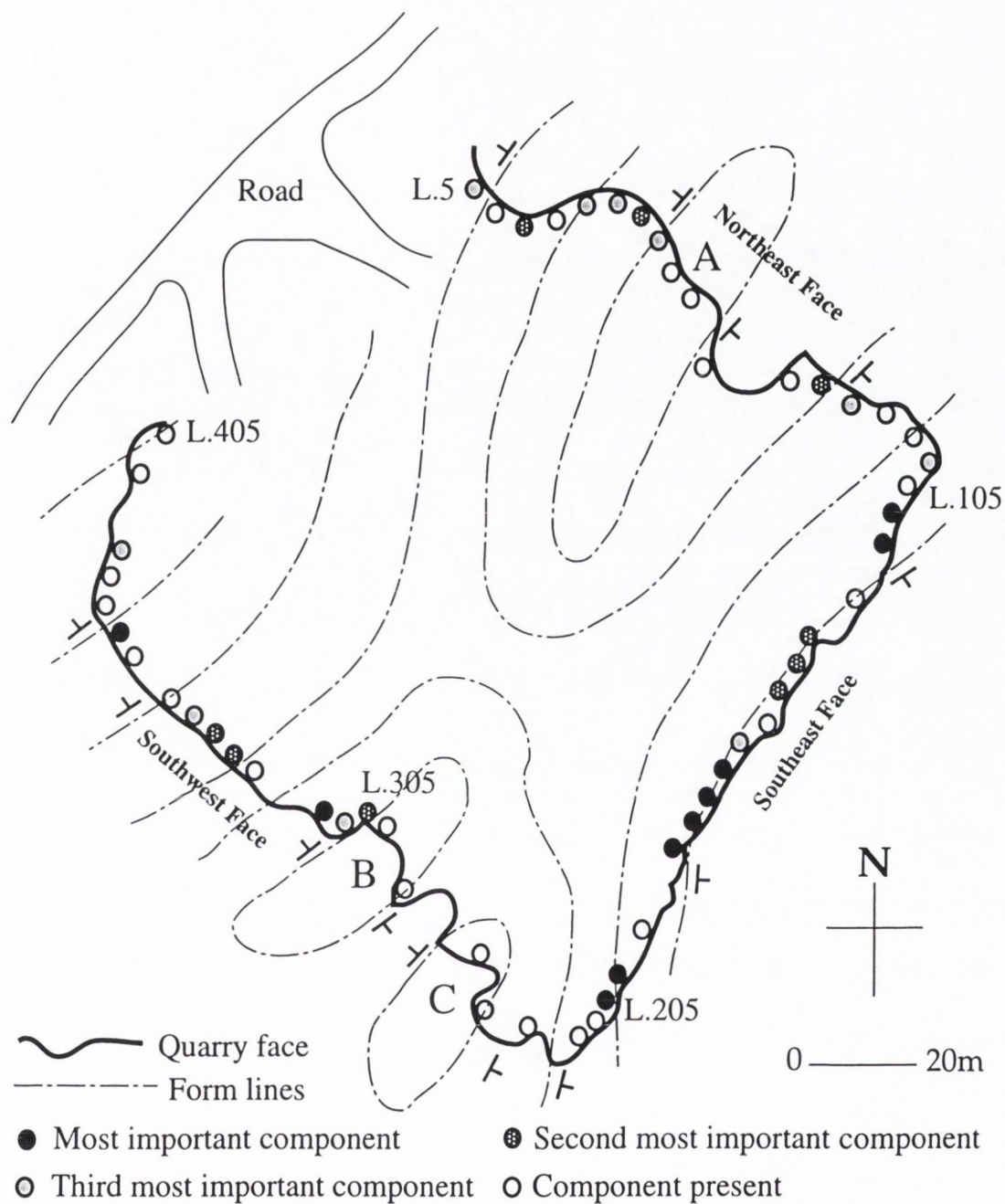
Hyalosteliid spicules:



Rank:	Sample count:	Percentage:
1	0	0.00
2	0	0.00
3	02	2.25
4	18	20.22
Total:	20	22.47

(Sample population = 89)

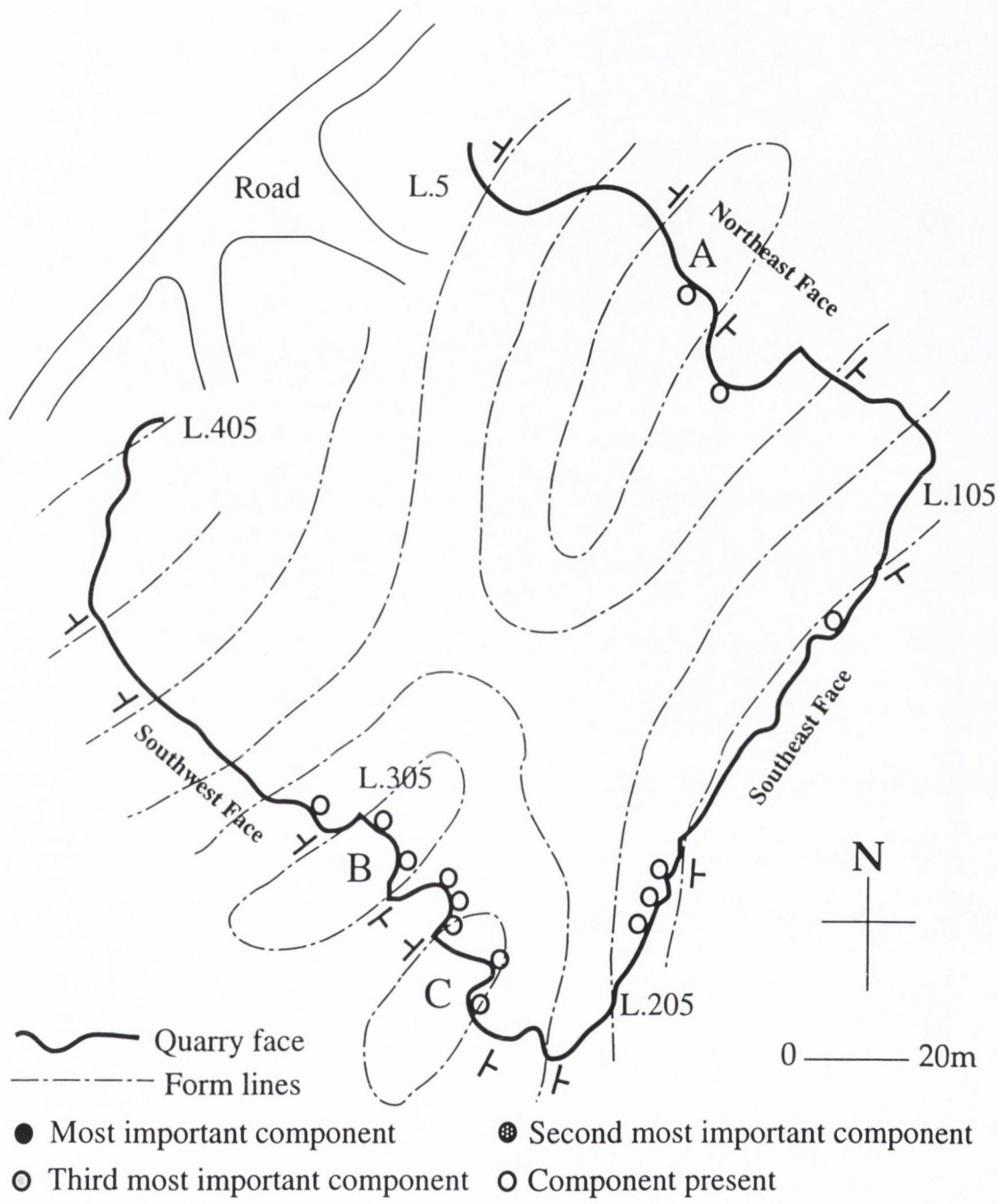
Other sponge spicules:



Rank:	Sample count:	Percentage:
1	10	11.24
2	09	10.11
3	12	13.48
4	28	31.46
Total:	59	66.29

(Sample population = 89)

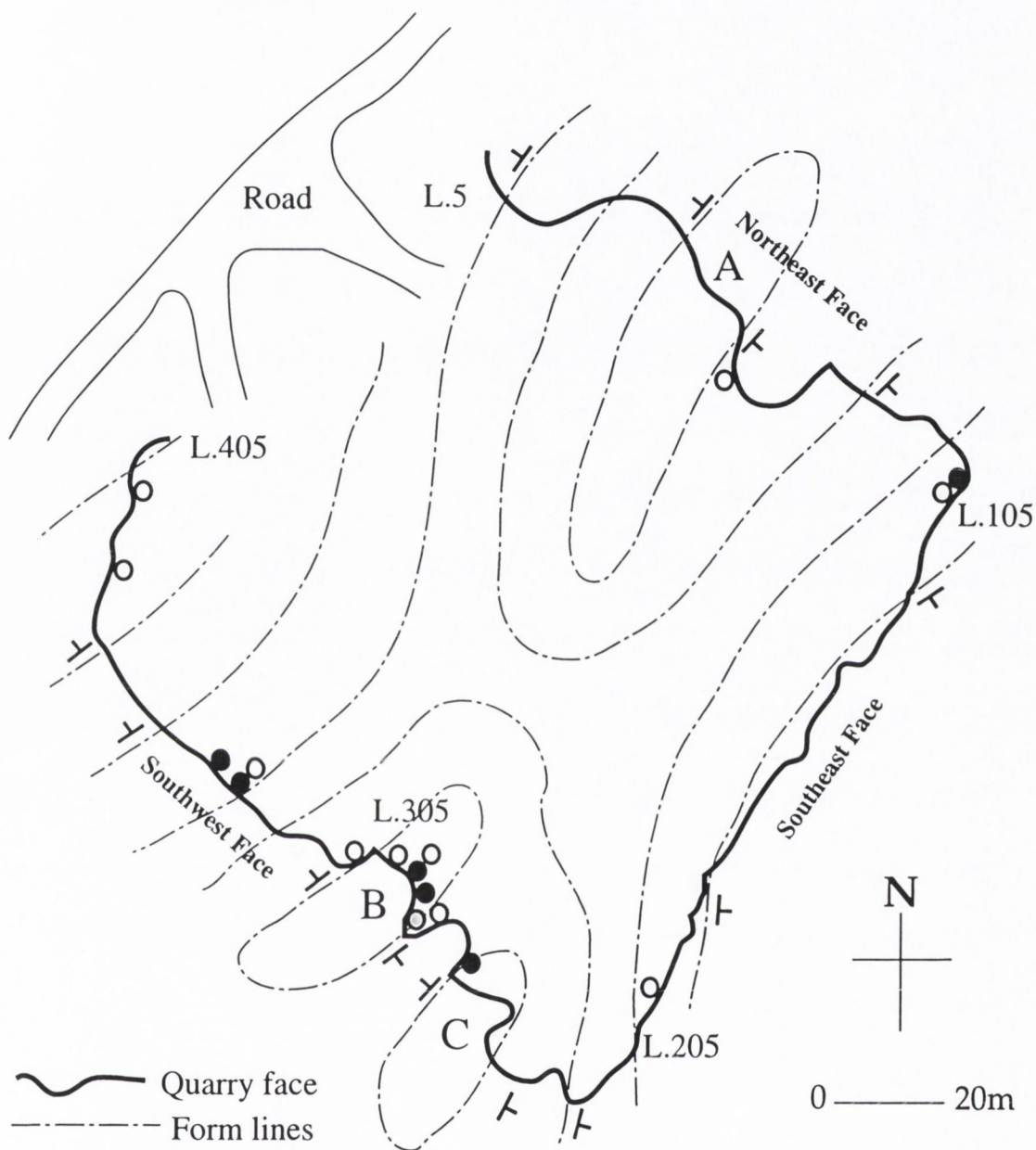
Plurilocular foraminifera:



Rank:	Sample count:	Percentage:
1	0	0.00
2	0	0.00
3	0	0.00
4	14	15.73
Total:	14	15.73

(Sample population = 89)

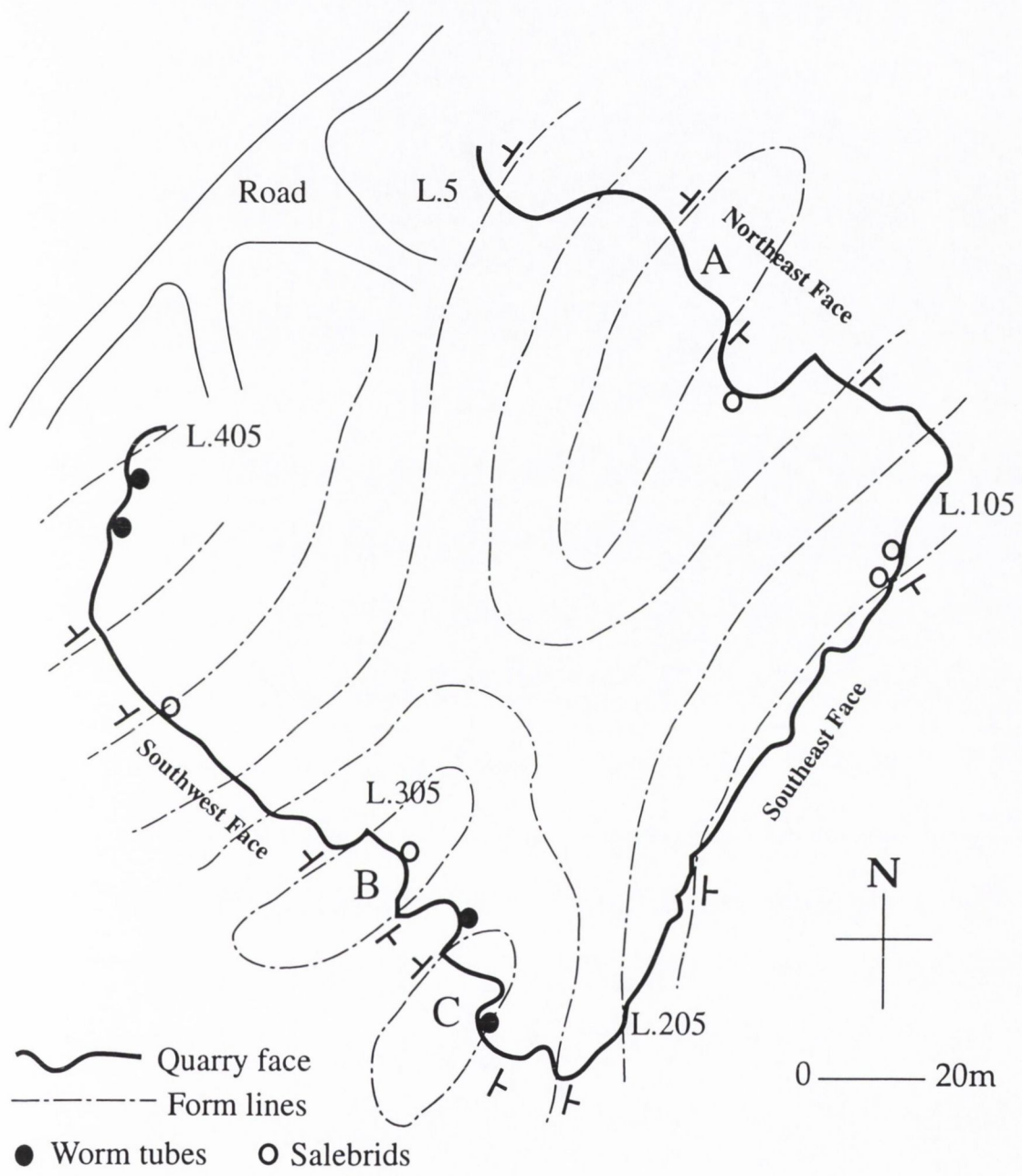
Globochaetes, moravamminids, and aoujgaliids.



● Globochaetes ○ Moravamminids ○ Aoujgaliids

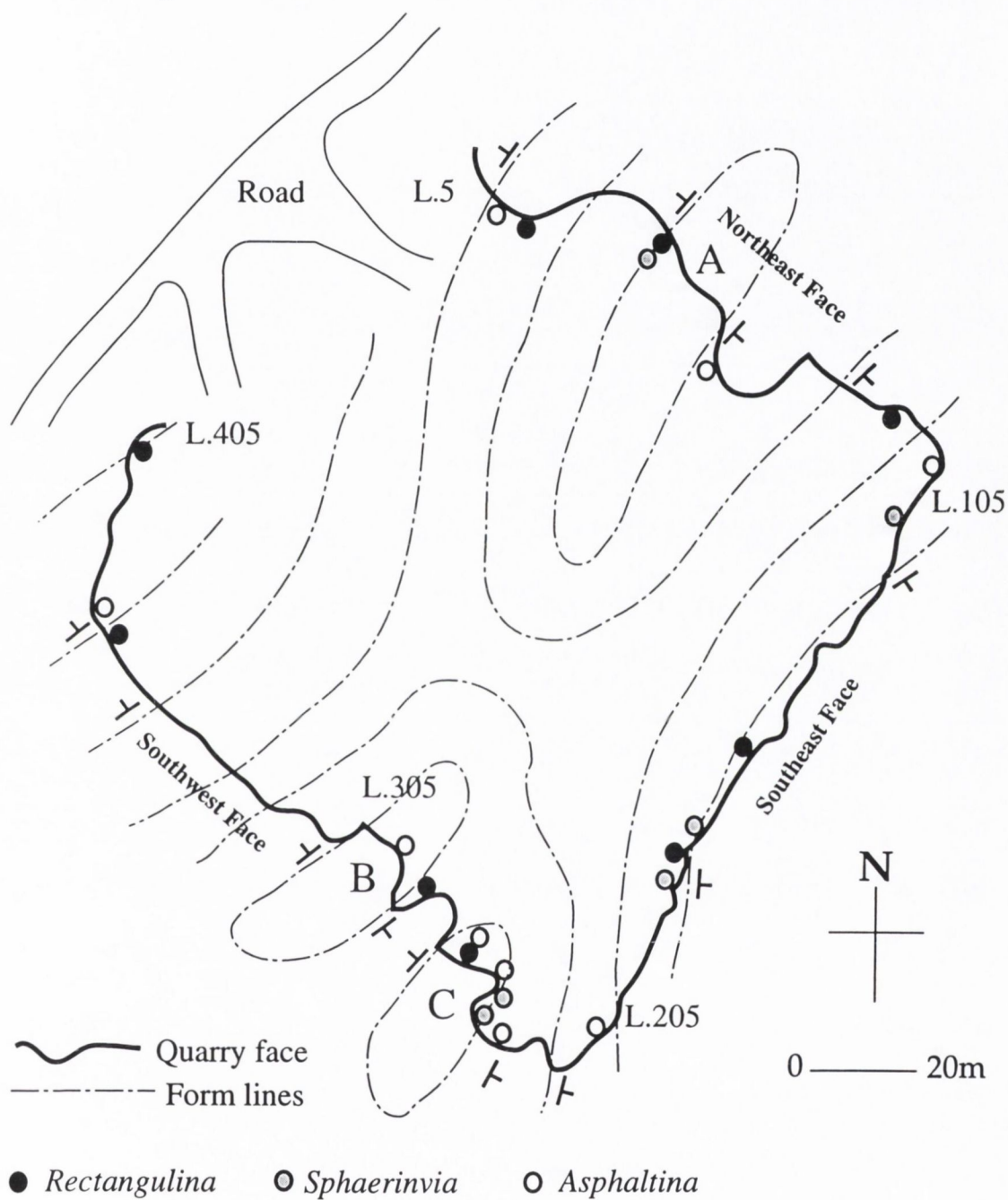
(Sample population = 89)	Sample count:	Percentage:
Globochaetes:	06	6.74
Aoujgaliids:	10	11.24
Moravamminids:	01	1.12

Worm tubes and salebrids:



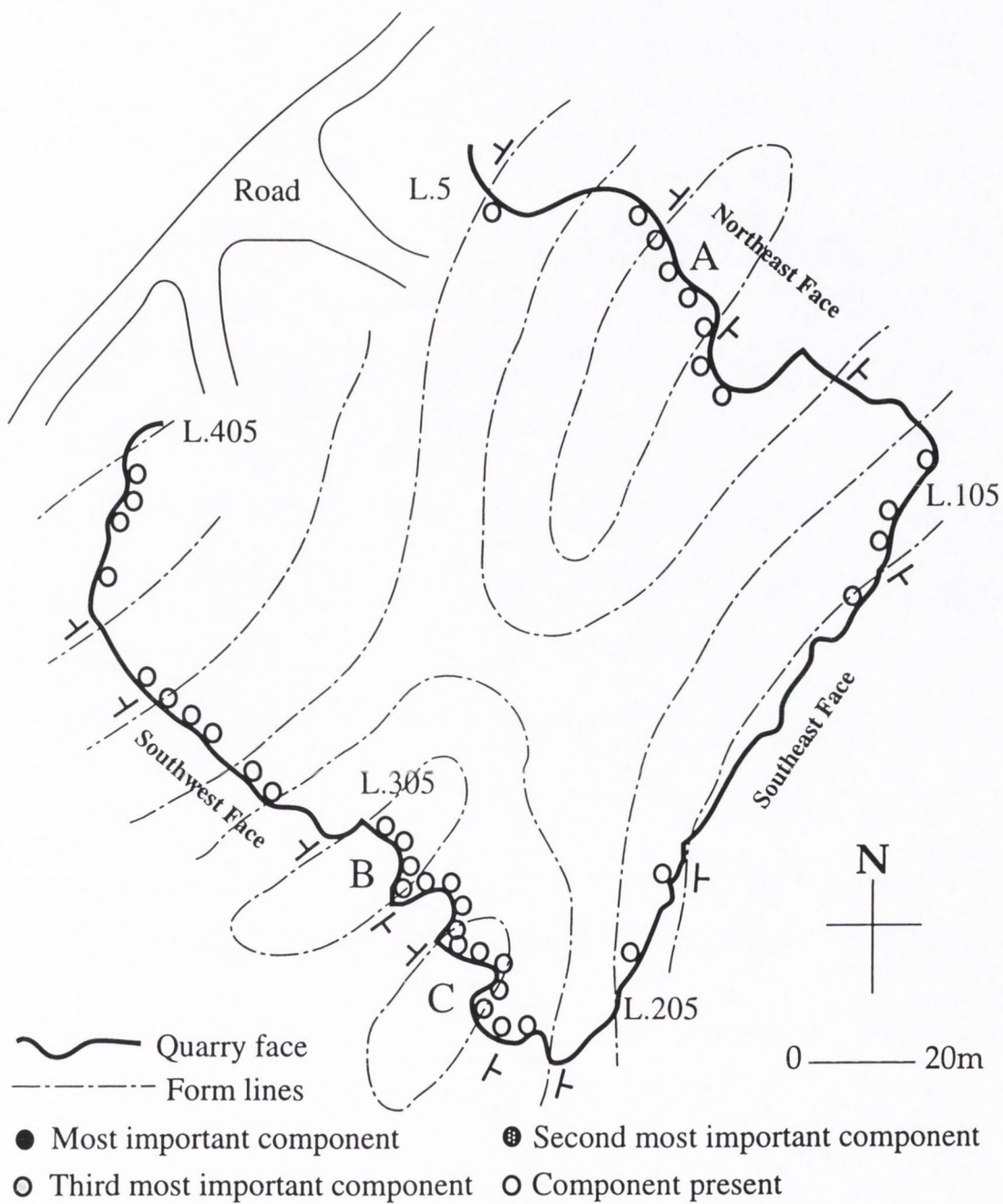
(Sample population = 89)	Sample count:	Percentage:
Worm tubes:	04	4.49
Salebrids:	05	5.62

Rectangulina, *Sphaerinvia*, and *Asphaltina*:



(Sample population = 89)	Sample count:	Percentage:
<i>Rectangulina</i> :	09	10.11
<i>Sphaerinvia</i> :	06	6.74
<i>Asphaltina</i> :	09	10.11

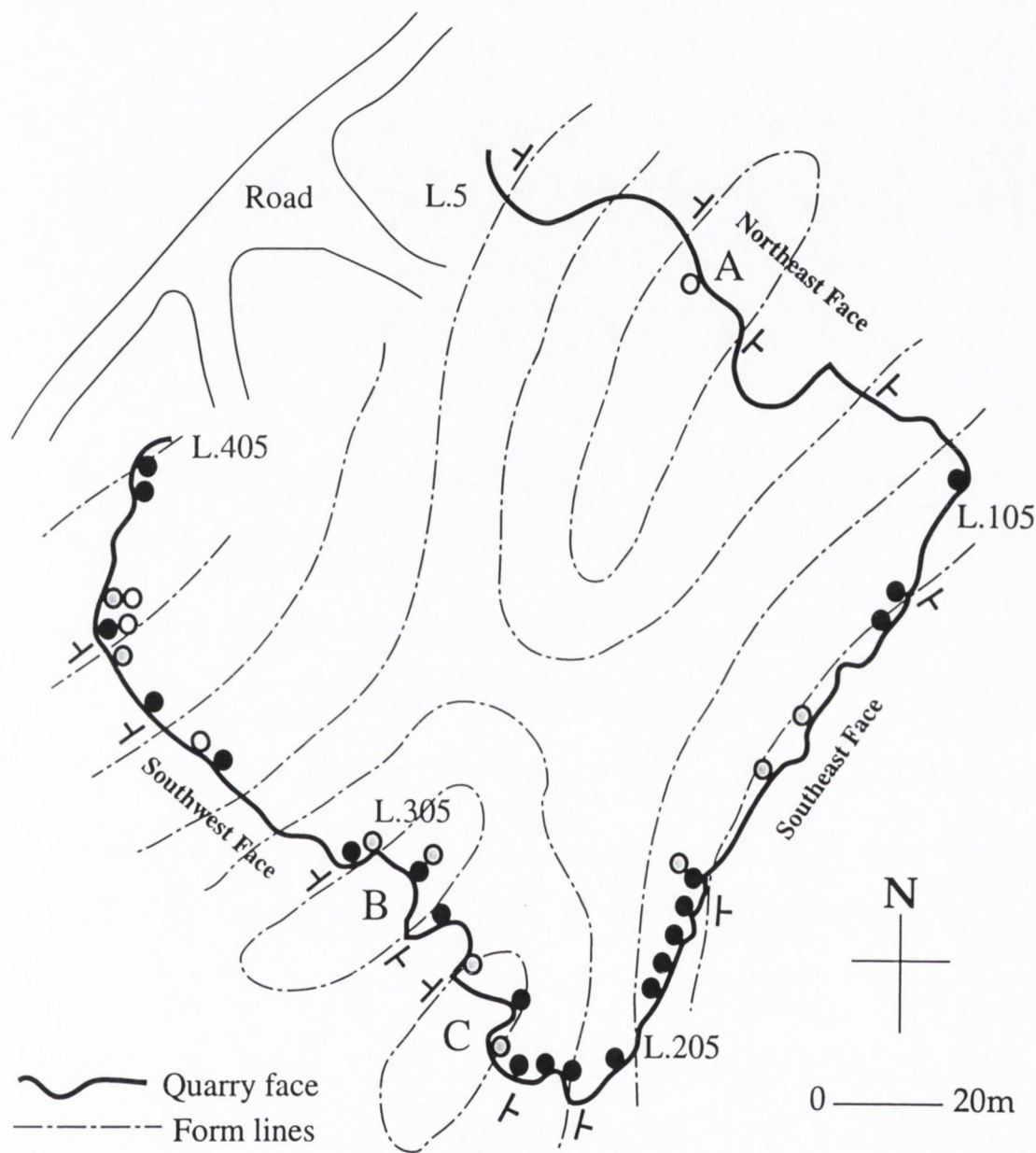
Calcispheres (*Mendipsia leesi*):



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2	0	0.00
3	0	0.00
4	39	43.82
Total:	39	43.82

(Sample population = 89)

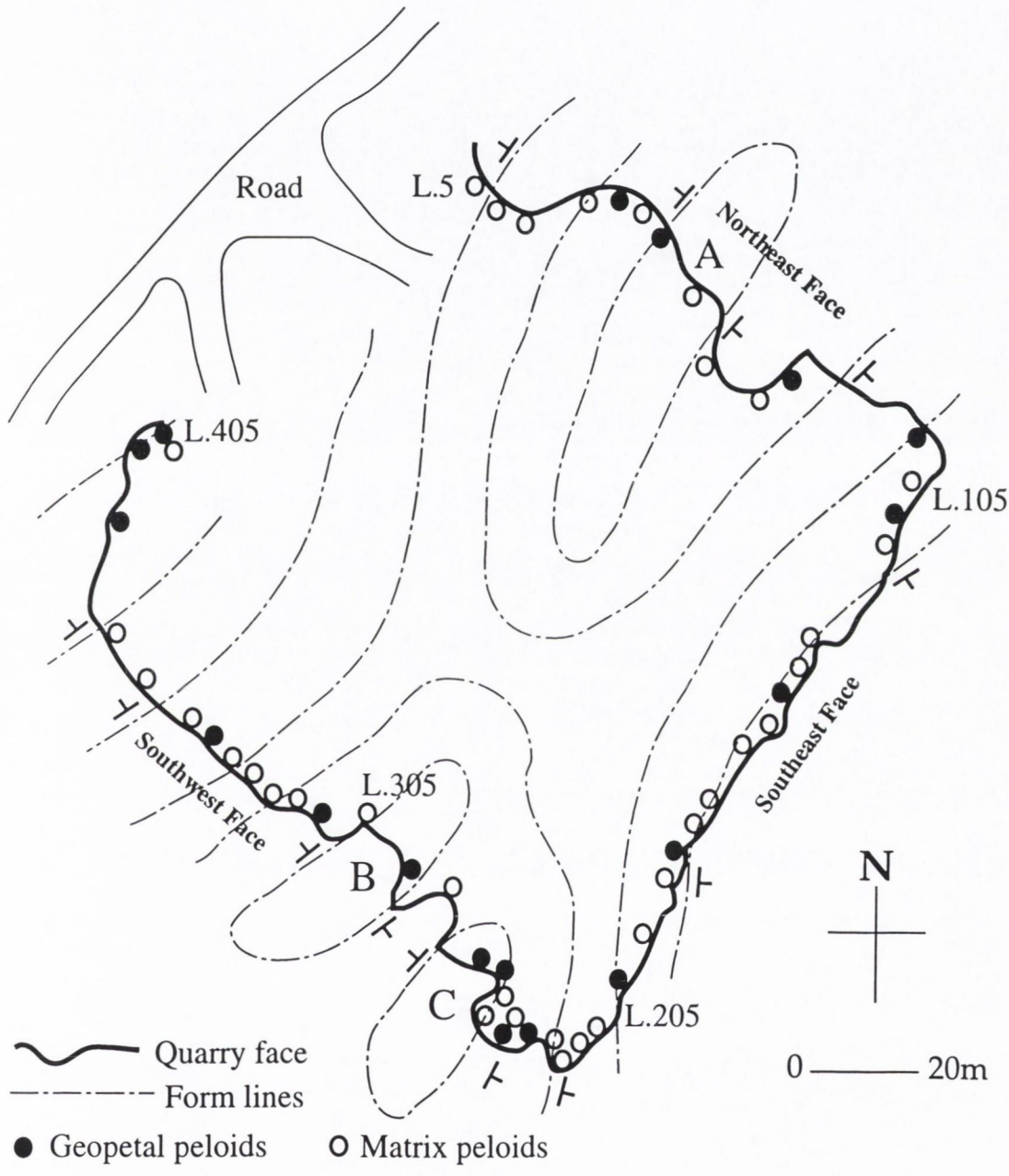
Problematica:



● Problematicum 1 ● Problematicum 2 ○ Problematicum 3

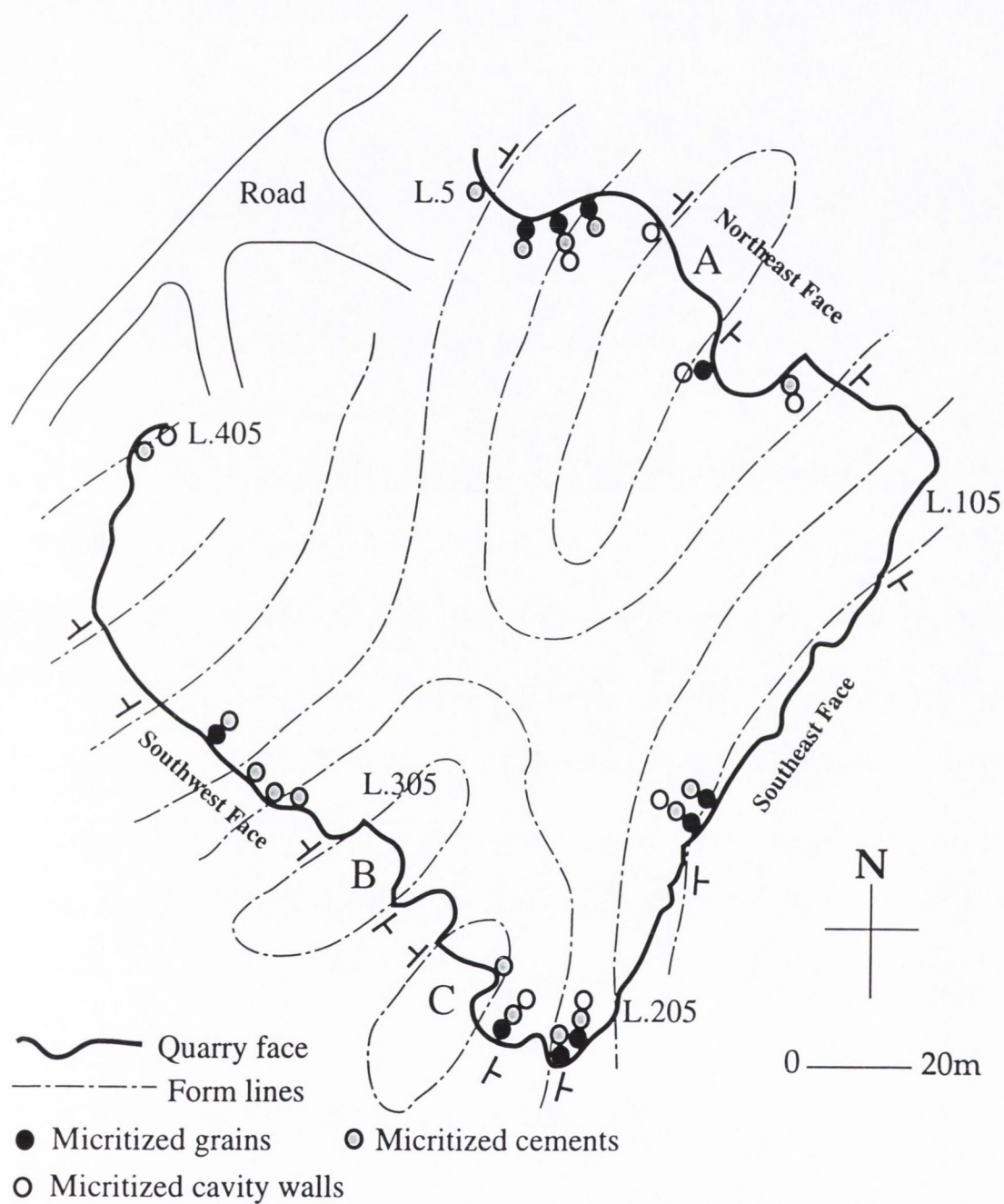
(Sample population = 89)	Sample count:	Percentage:
Problematicum 1:	21	23.60
Problematicum 2:	09	10.11
Problematicum 3:	04	4.49

Peloidal fabrics:



(Sample population = 89)	Sample count:	Percentage:
Geopetal peloids:	18	20.22
Matrix peloids:	35	39.33

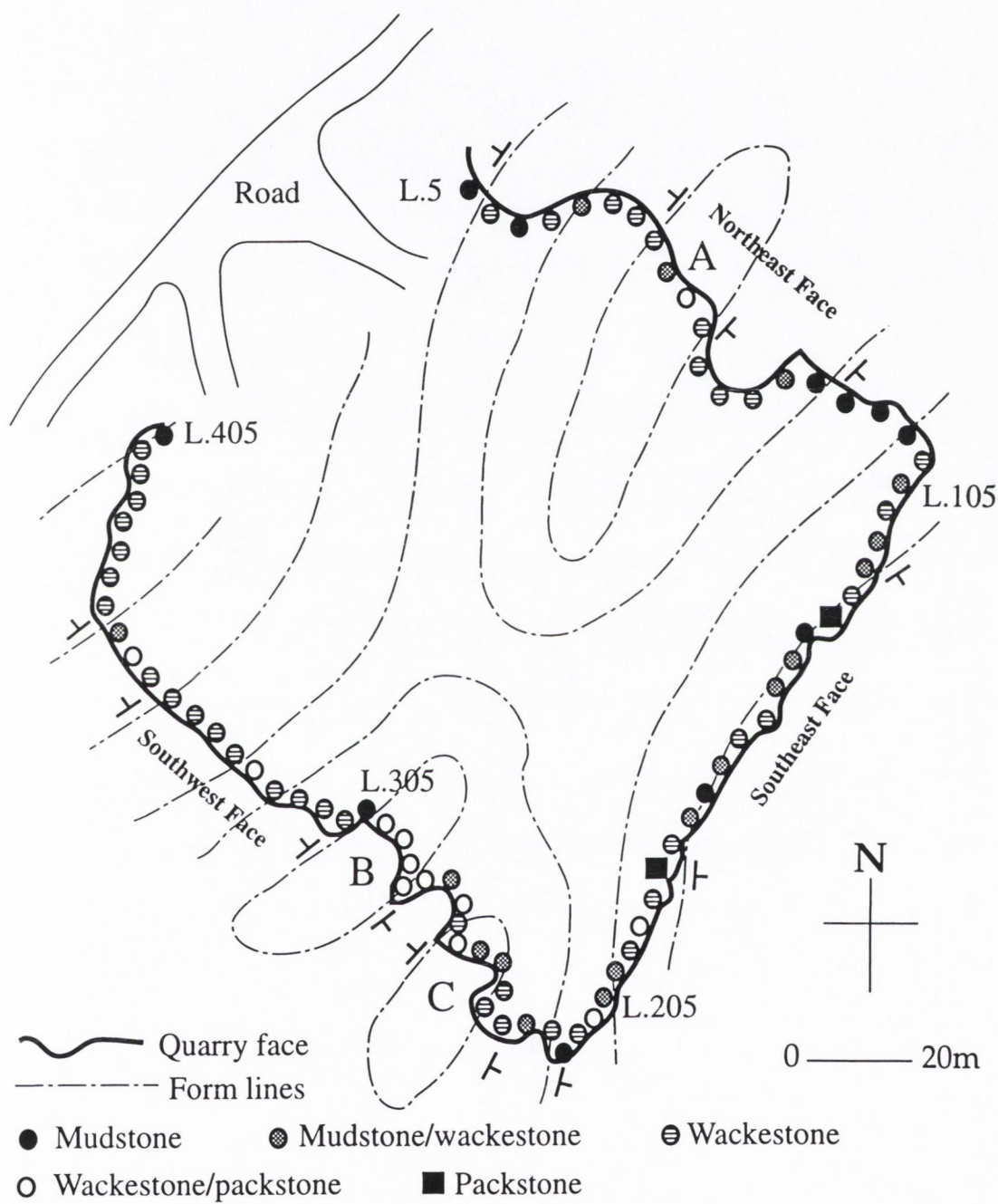
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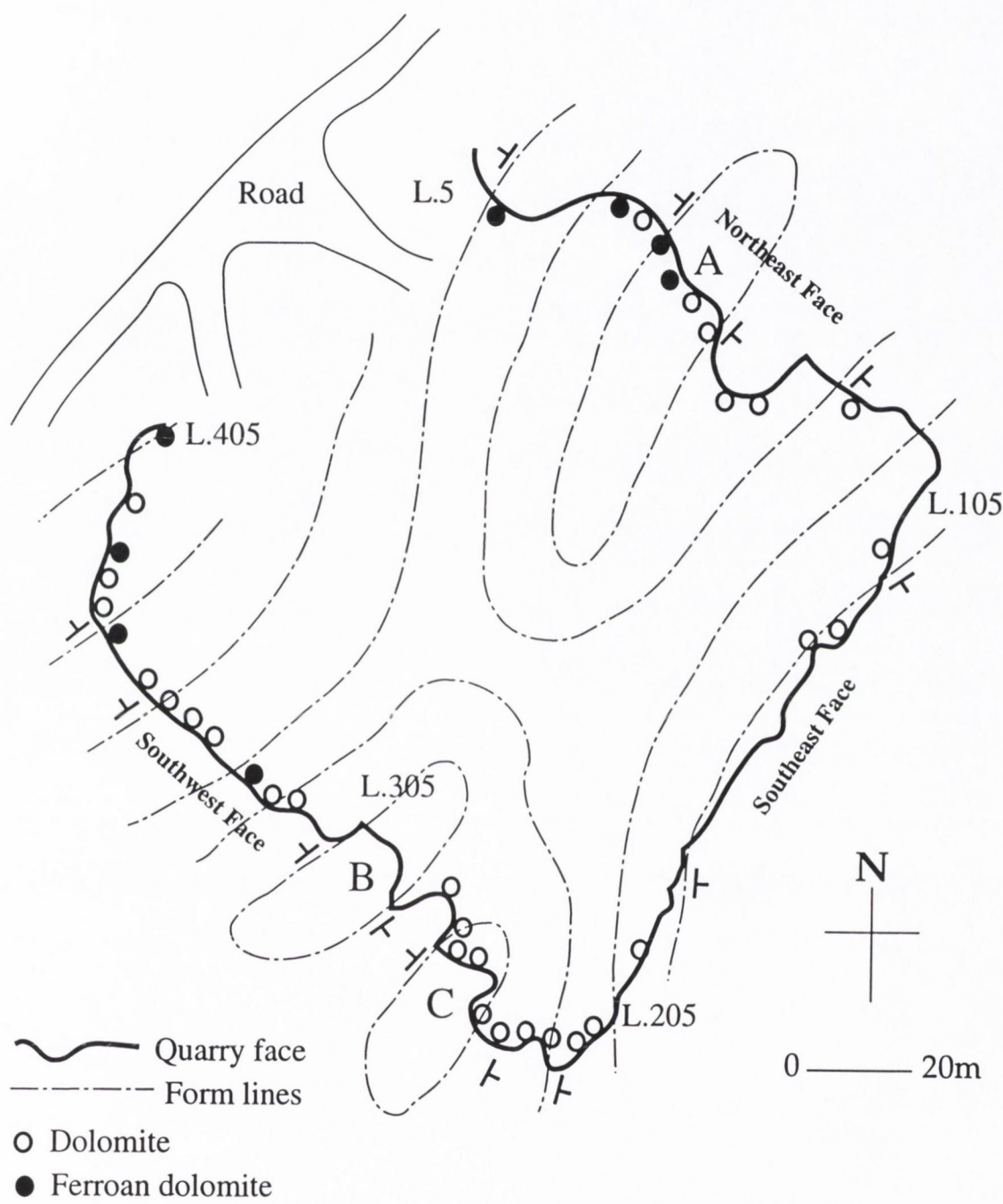
Micritized...	Sample count:	Percentage:
...grains:	10	11.24
...cements:	16	17.98
...cavities:	08	8.98
Total:	19	21.35

(Sample population = 89)

Depositional textures:



Dolomite:



(Sample population = 89)	Sample count:	Percentage:
Dolomite:	29	32.58
Ferroan dolomite:	08	8.99
Total:	37	41.57

Appendix 4

Faunal List (Mullawornia Quarry)

Faunal list - Mullawornia Quarry.

<u>Phylum Porifera:</u>		(Trophic group)
Hexactinellida:	<i>Hyalostelia</i> sp.	(S)
	Demosponges (unidentified macro- and microscleres)	(S)
<u>Phylum Cnidaria:</u>		
Rugosa:	<i>Amplexus coralloides</i> J. Sowerby	(S)
	<i>Amplexizaphrentis enniskilleni</i> (Edwards and Haime)	(S)
	<i>Caninia</i> sp.	(S)
	<i>Zaphrentites</i> sp.	(S)
<u>Phylum Bryozoa:</u>		
Fenestrata:	<i>Fenestella s.l. frutex</i> M'Coy	(S)
	<i>Fenestella s.l. plebeia</i> M'Coy	(S)
	<i>Fenestella s.l. quadridecimalis</i> M'Coy	(S)
	<i>Fenestella</i> sp.	(S)
	<i>Polypora</i> sp.	(S)
Cryptostomata:	<i>Pseudonematopora</i> sp.	(S)
	<i>Rhombopora</i> sp.	(S)
Trepostomata:	<i>Stenophragmidium</i> sp.	(S)
	<i>Stenopora</i> sp.	(S)
Cystoporata:	<i>Fistulipora incrustans</i> (Phillips)	(S)
	<i>Sulcoretopora</i> sp.	(S)
<u>Phylum Brachiopoda:</u>		
Orthida:	<i>Schizophoria resupinata</i> (Martin)	(S)
Strophomenida:	<i>Acanthoplecta mesoloba</i> (Phillips)	(S)
	<i>Antiquatonia antiquatus</i> (Sowerby)	(S)
	<i>Dictyoclostus semireticulatus</i> (Martin)	(S)
	<i>Linoproductus corrugatus</i> (McCoy)	(S)
	<i>Plicatifera pseudoplicatilis</i> (Muir-Wood)	(S)
	<i>Pustula pustulosa</i> (Phillips)	(S)
	<i>Pustula tenuipustulosa</i> Thomas	(S)
Rhynchonellida:	<i>Pugnax pugnus</i> (Martin)	(S)
	<i>Pleuropugnoides pleurodon</i> (Phillips)	(S)

Atrypida:	<i>Athyris (Cleiothyridina) glabistria</i> (Phillips)	(S)
Spiriferida:	<i>Brachythyris pinguis</i> (J. Sowerby)	(S)
	<i>Martinia glabra</i> (Martin)	(S)
	<i>Phricodothyris lineata</i> (J. Sowerby)	(S)
	<i>Spirifer attenuatus</i> J. de C. Sowerby	(S)
	<i>Syringothyris cuspidata</i> (J. Sowerby)	(S)
Terebratulida:	<i>Dielasma hastatum</i> (J. de C. Sowerby)	(S)
	<i>Dielasma securiforme</i> (de Koninck)	(S)
	<i>Actinoconchus paradoxus</i> M'Coy	(S)

Phylum Mollusca:

Bivalvia:	<i>Pinna flabelliformis</i> Martin	(S)
	<i>Cardiomorpha</i> sp.	(S)
Rostroconchs:	<i>Conocardium hibernicum</i> J. Sowerby	(S)
Gastropoda:	<i>Euomphalus pentangulatus</i> (J. Sowerby)	(D)
	<i>Soleniscus</i> sp.	(D)
Cephalopoda:	<i>Dolorthoceras difficile</i> (de Koninck)*	(P)
	<i>Mitorthoceras affine</i> (Portlock)*	(P)
	<i>Subvestinautilus crassimarginatus</i> (Foord)*	(P)
	<i>Vestinautilus cariniferus</i> (Sowerby)*	(P)
	<i>Vestinautilus semiglaber</i> (Foord)	(P)
	<i>Beyrichoceras</i> sp.	(P)
	<i>Dolorthoceras</i> sp.*	(P)
	<i>Mooreoceras</i> sp.	(P)

Phylum Echinodermata:

Pelmatazoa:	Various crinoid ossicles, calyx and pinnular plates	(S)
Eleutherozoa:	Echinoid plates and spines	(D)
	Holothurian spicules+	(D)

Phylum Arthropoda:

Trilobita:	<i>Phillipsia gemmulifera</i> (Phillips)	(D/S?)
Ostracoda:	Various unidentified ostracod shells	(D/S?)

Phylum Annelida:

Serpulidae:	<i>Tyranopora</i> sp.	(S)
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Polychaete worm tubes (S)

Phylum Protista:

Foraminifera: *Earlandia* sp. (S)
Endothyra sp. (S)
Pseudotaxis sp. (S)
Palaeospiroplectammina sp. (S)
Tetrataxis sp. (S)
Valvulinella sp. (S)
Eotextularia sp. (S)

Phylum Chordata:

Conodonts: *Gnathodus pseudosemiglaber* (Bischoff) (P)
Gnathodus simplicatus Rhodes *et al.* (P)
Polygnathus bischoffi Rhodes, Austin & Dance (P)
Polygnathus mehli Thompson (P)
Pseudopolygnathus minutus (P)
Kladognathus sp. (P)
Idiognathodus sp. (P)

Phylum Chordata:

Fish: *Thrinacodus* sp. (P)
Actinopterygian fish (unidentified fish teeth) (P)

Microproblematica:

Moravamminids
Aoujgaliids
Rectangulina
Sphaerinvia
Asphaltina

Trophic groups: (S) - suspension feeder; (D) - detritus feeder; (P) - predator.

*denotes material collected by Histon (1991).

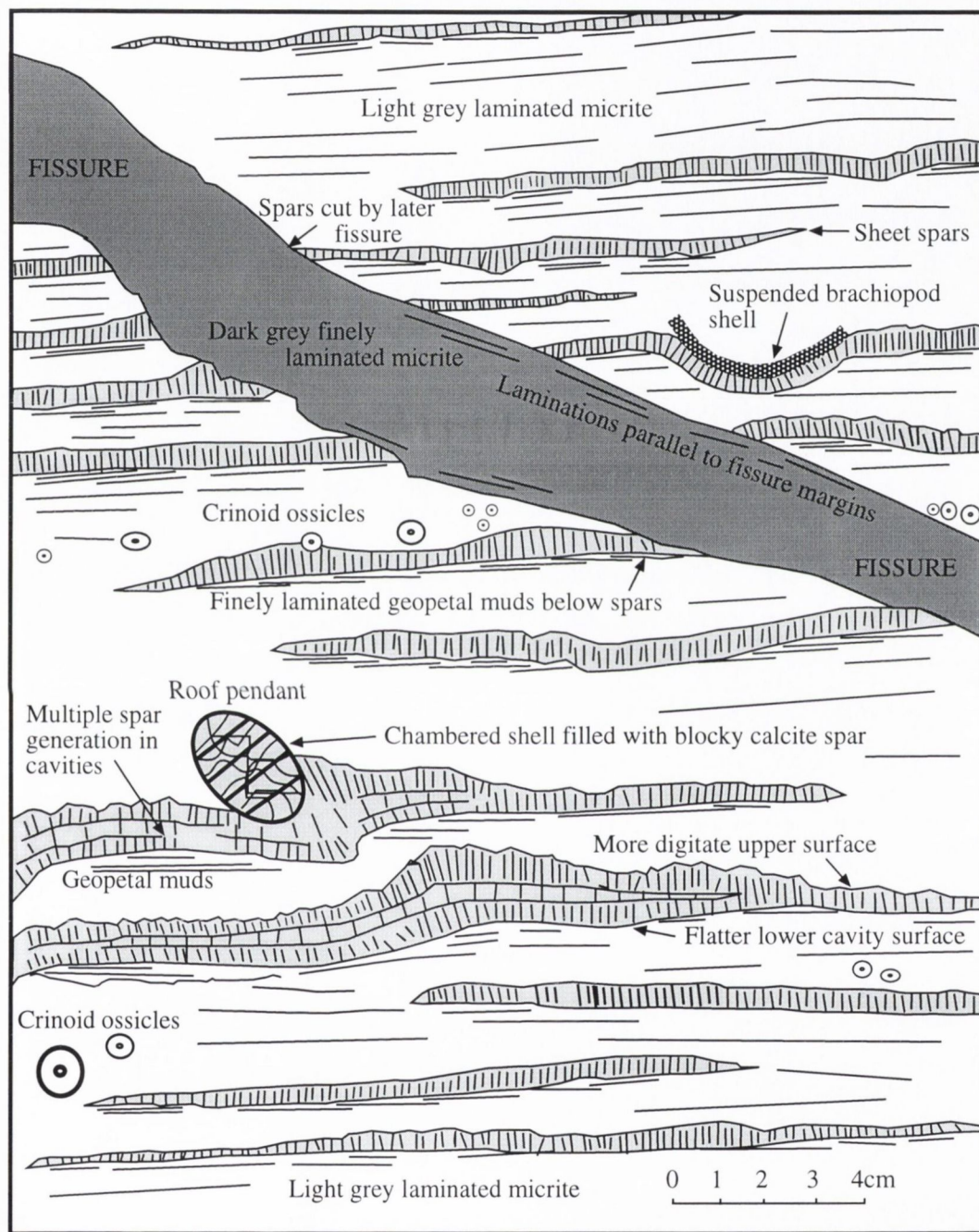
+denotes material collected by G.D. Sevastopulo, Trinity College, Dublin.

Appendix 5

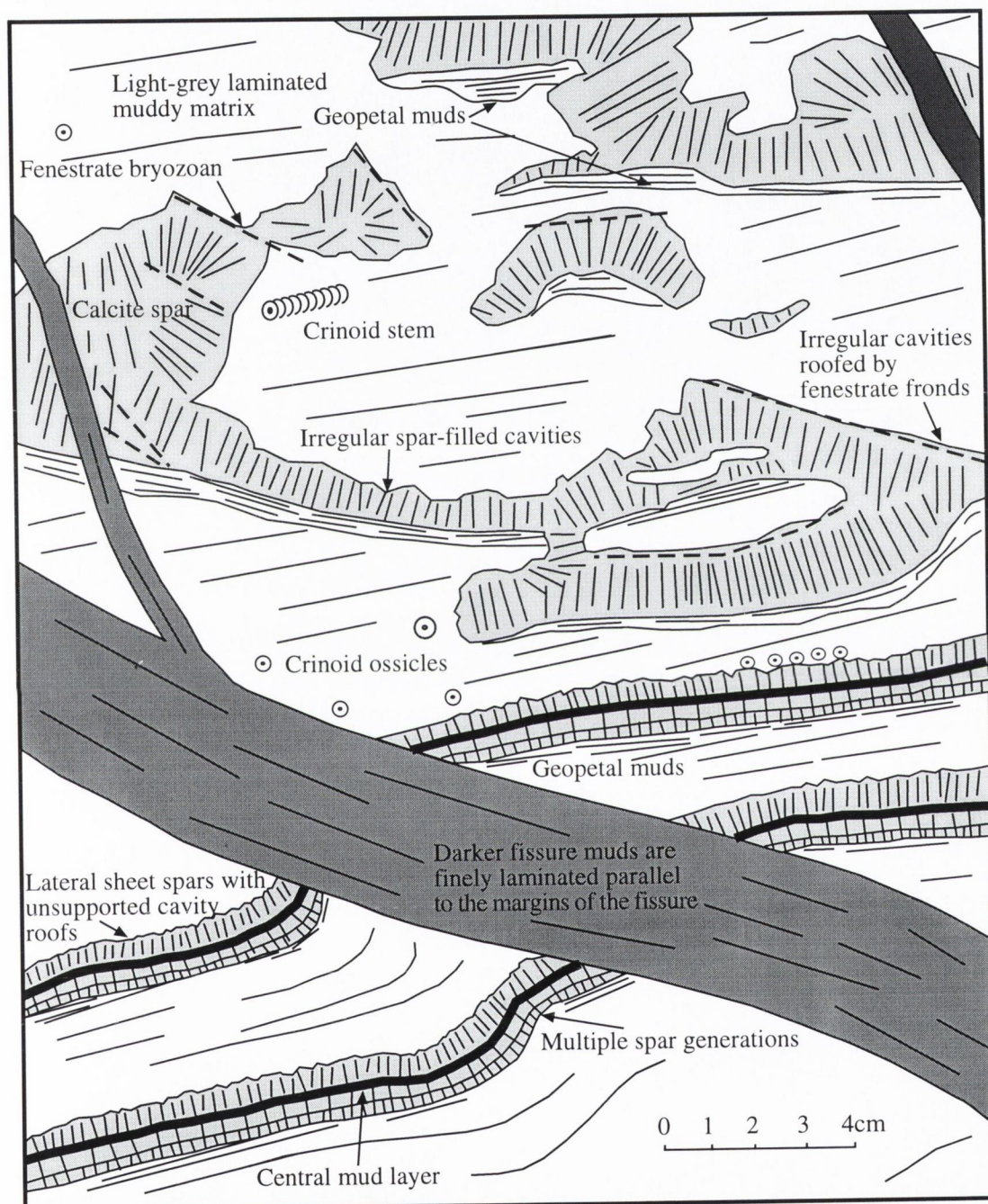
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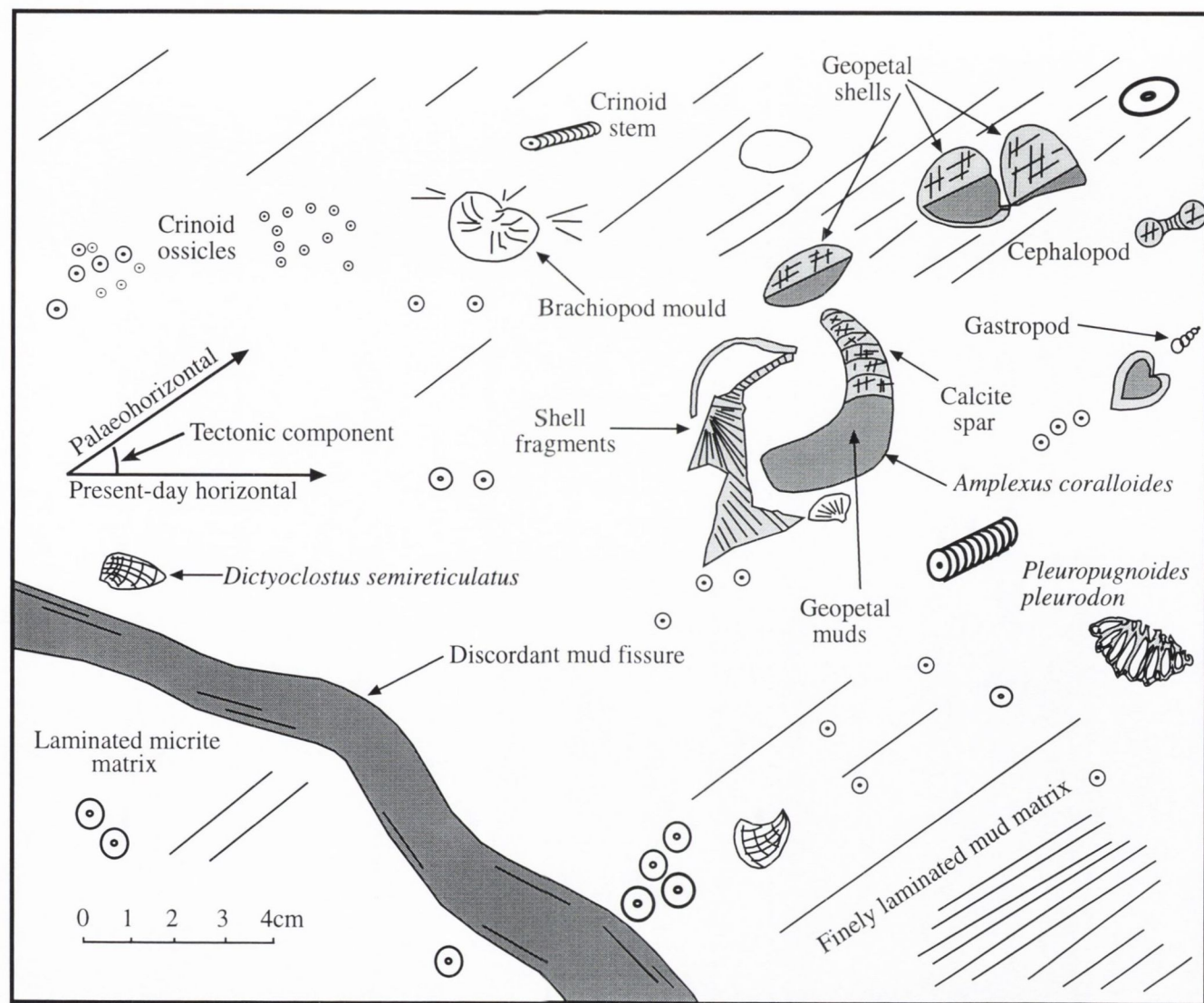
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M14/FS2: Locality 42, Mullawornia Quarry:	lxvi
M14/FS3: Locality 405, Mullawornia Quarry:	lxvii
M15/FS1: Locality 392, Mullawornia Quarry:	lxviii
M15/FS2: Locality 250, Mullawornia Quarry:	lxix
M15/FS4: Locality 37, Mullawornia Quarry:	lxx
M15/FS5: Locality 82, Mullawornia Quarry:	lxxi
M19/FS1: Locality 275, Mullawornia Quarry:	lxxii
M22/FS1: Locality 40, Mullawornia Quarry:	lxxiii
M22/FS2: Locality 40/41, Mullawornia Quarry:	lxxiv
M23/FS1: Locality 42, Mullawornia Quarry:	lxxv
M23/FS2: Locality 42, Mullawornia Quarry:	lxxvi
M24/FS1: Locality 41, Mullawornia Quarry:	lxxvii
M24/FS2: Locality 40, Mullawornia Quarry:	lxxviii
M24/FS3: Locality 39/40, Mullawornia Quarry:	lxxix
M25/FS1: Locality 39/40, Mullawornia Quarry:	lxxx
C1/FS1: West Camp, Co. Kerry:	lxxxii
C1/FS2: West Camp, Co. Kerry:	lxxxiii
B1/FS1: Carrahane Strand, Barrow, Co. Kerry:	lxxxiv
B1/FS2: Carrahane Strand, Barrow, Co. Kerry:	lxxxv
KN1/FS1: Knockastia Quarry, Co. Westmeath:	lxxxvi
KN1/FS2: Knockastia Quarry, Co. Westmeath:	

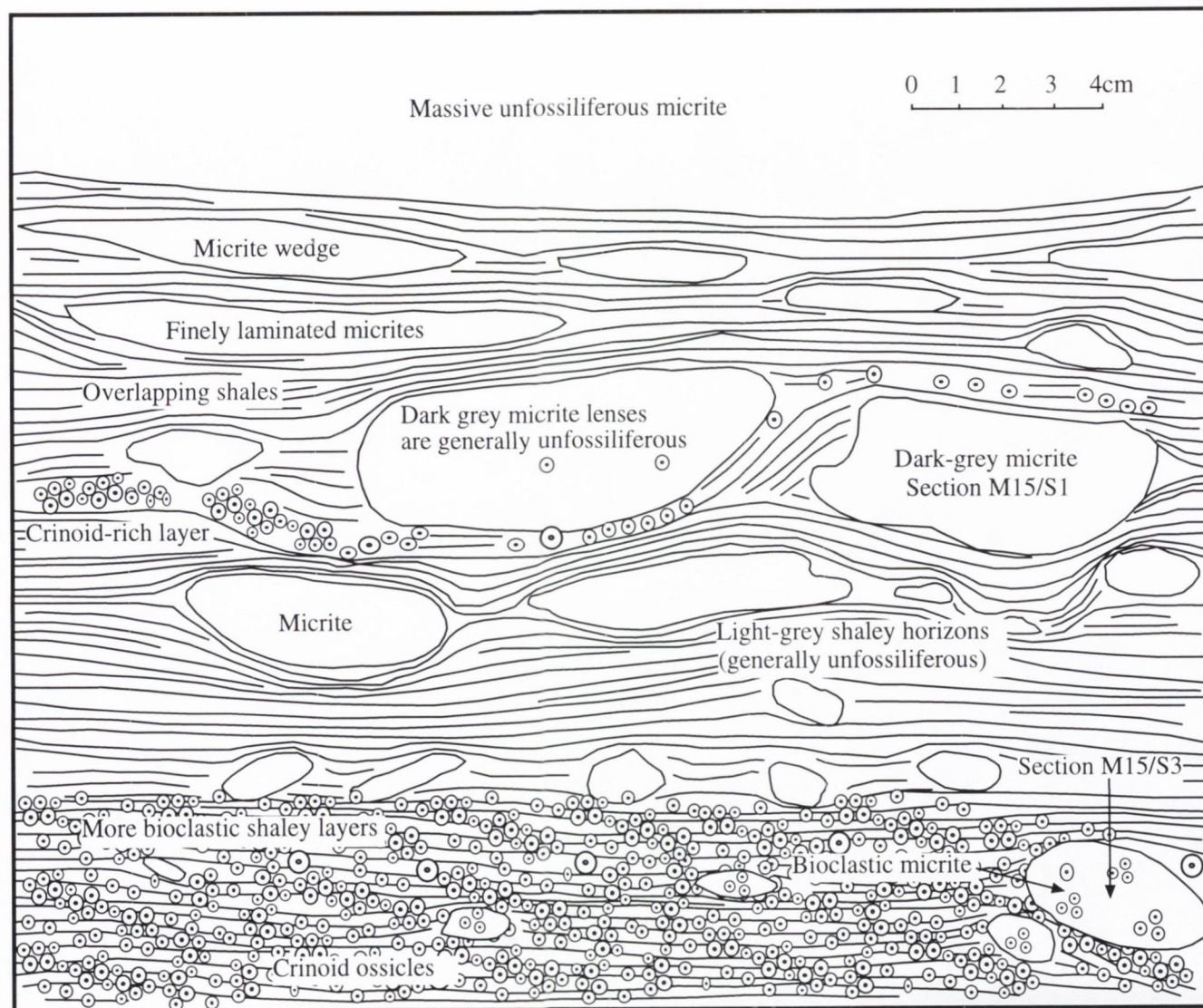
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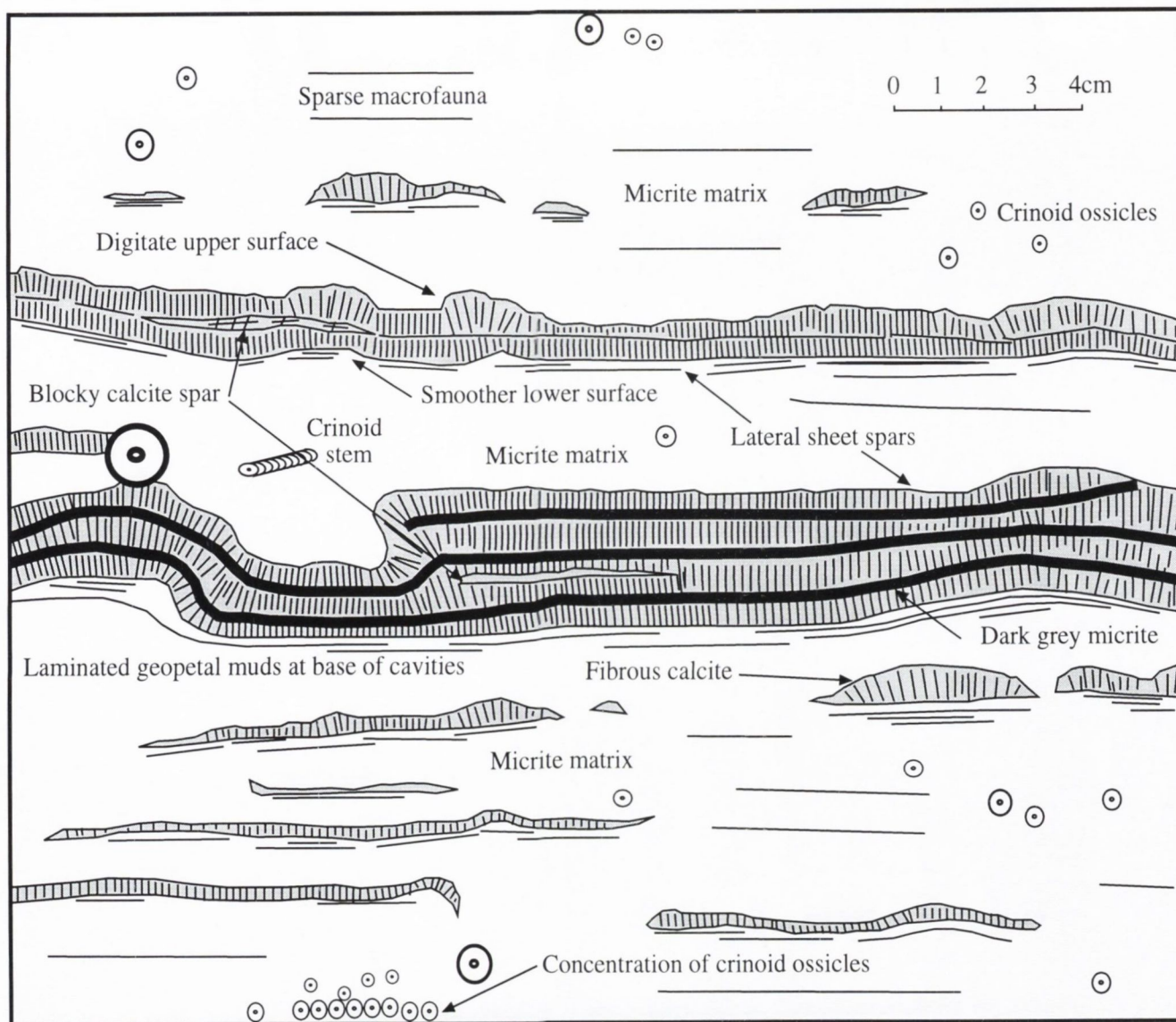
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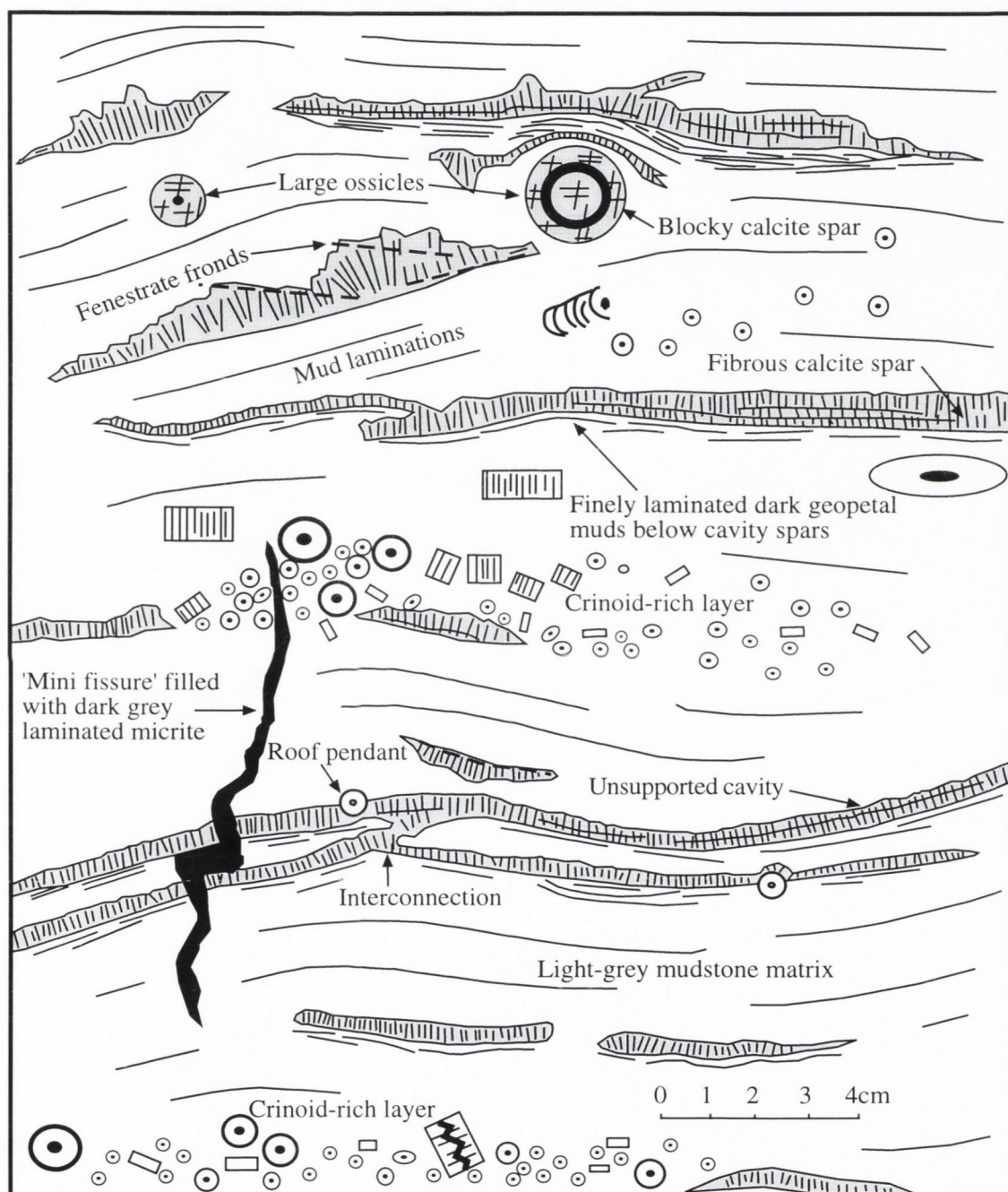




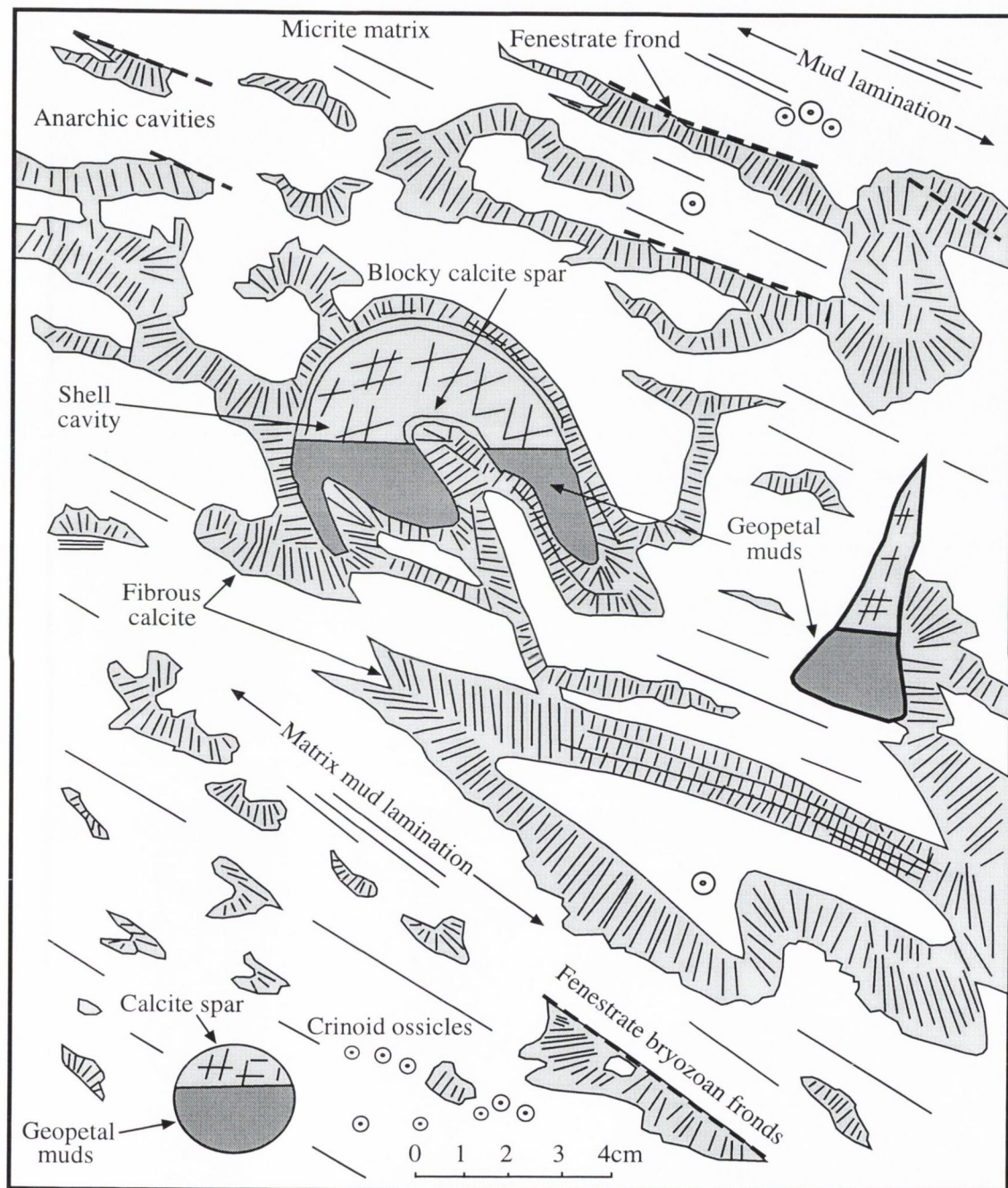
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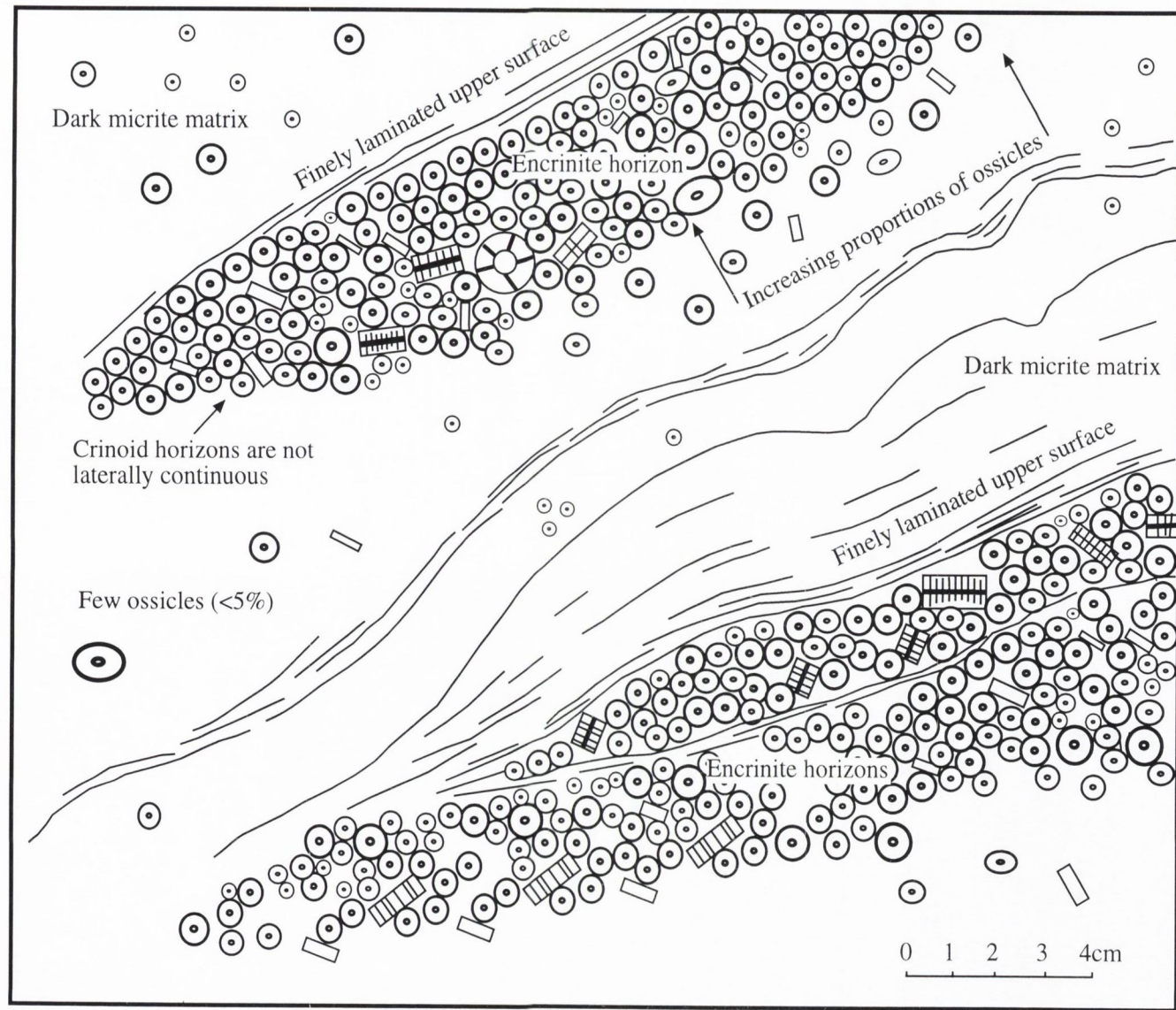


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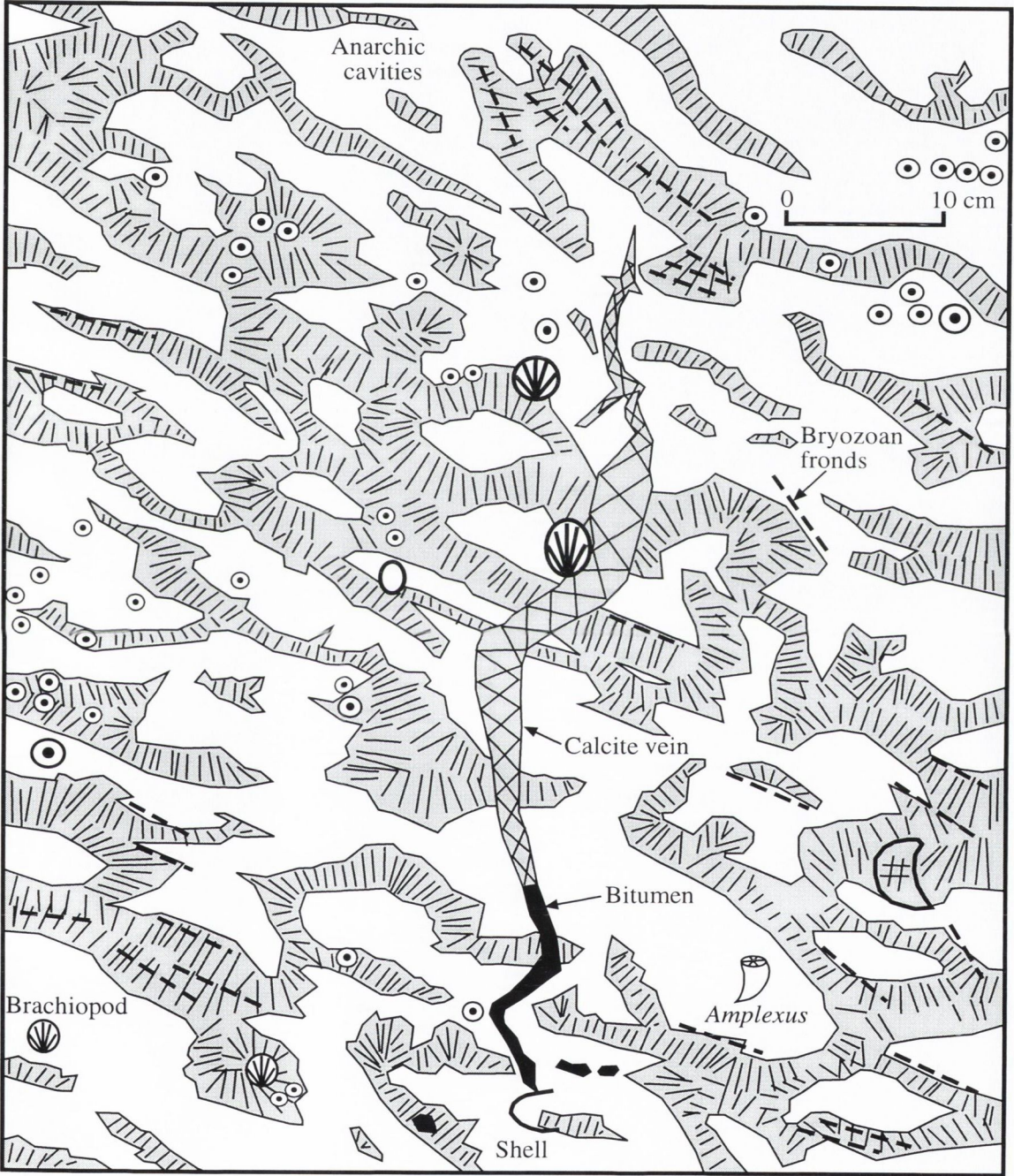


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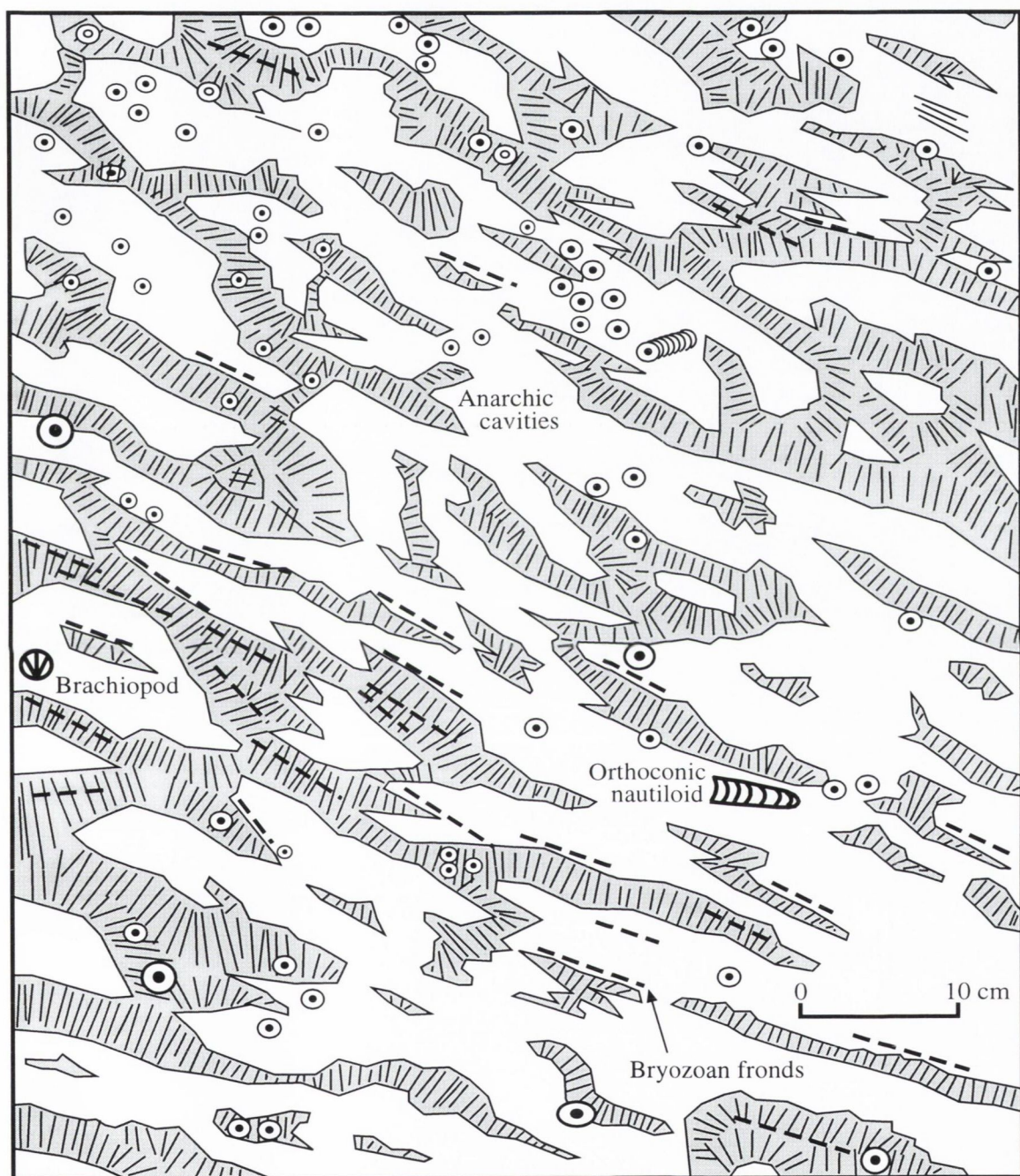




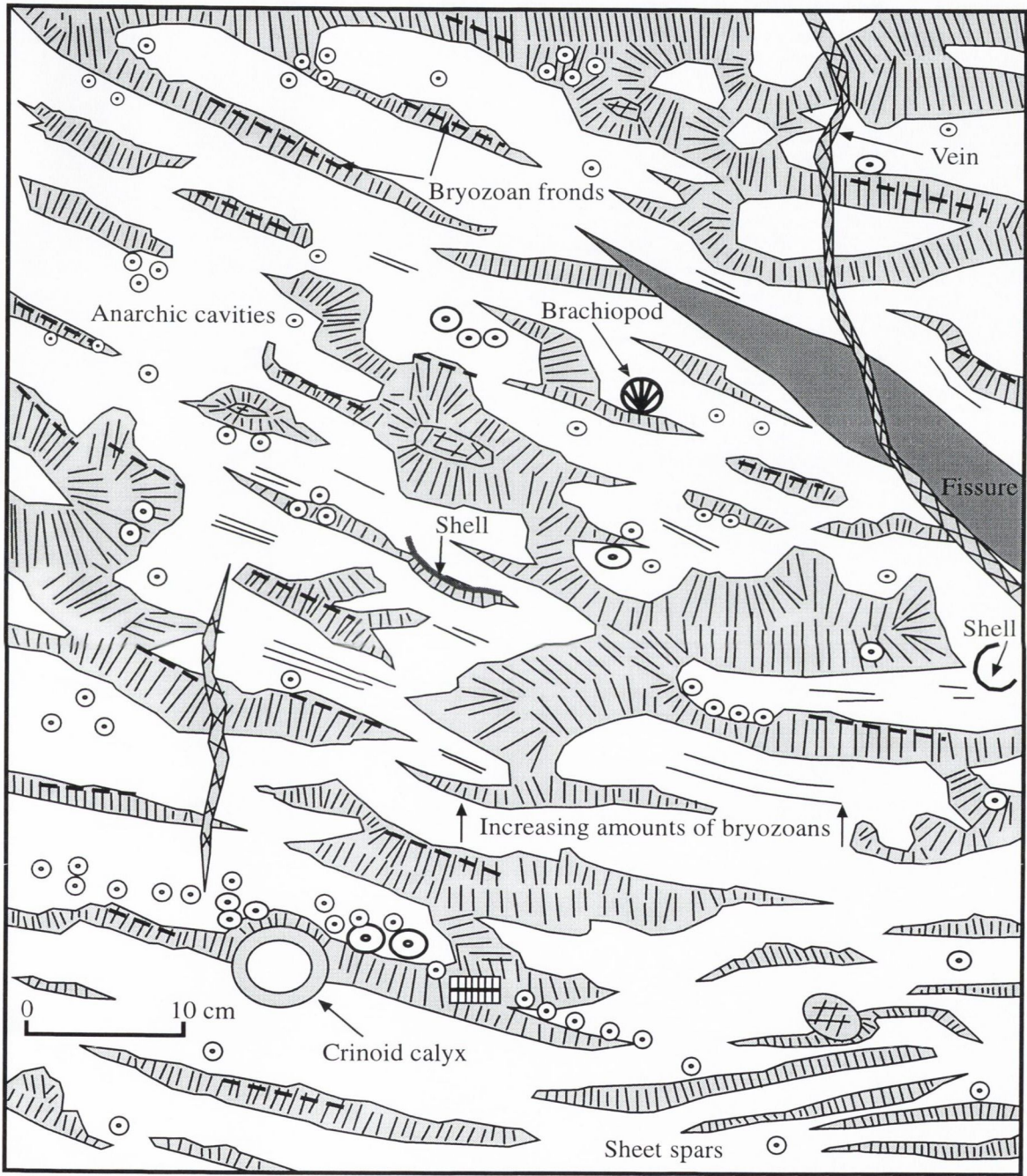
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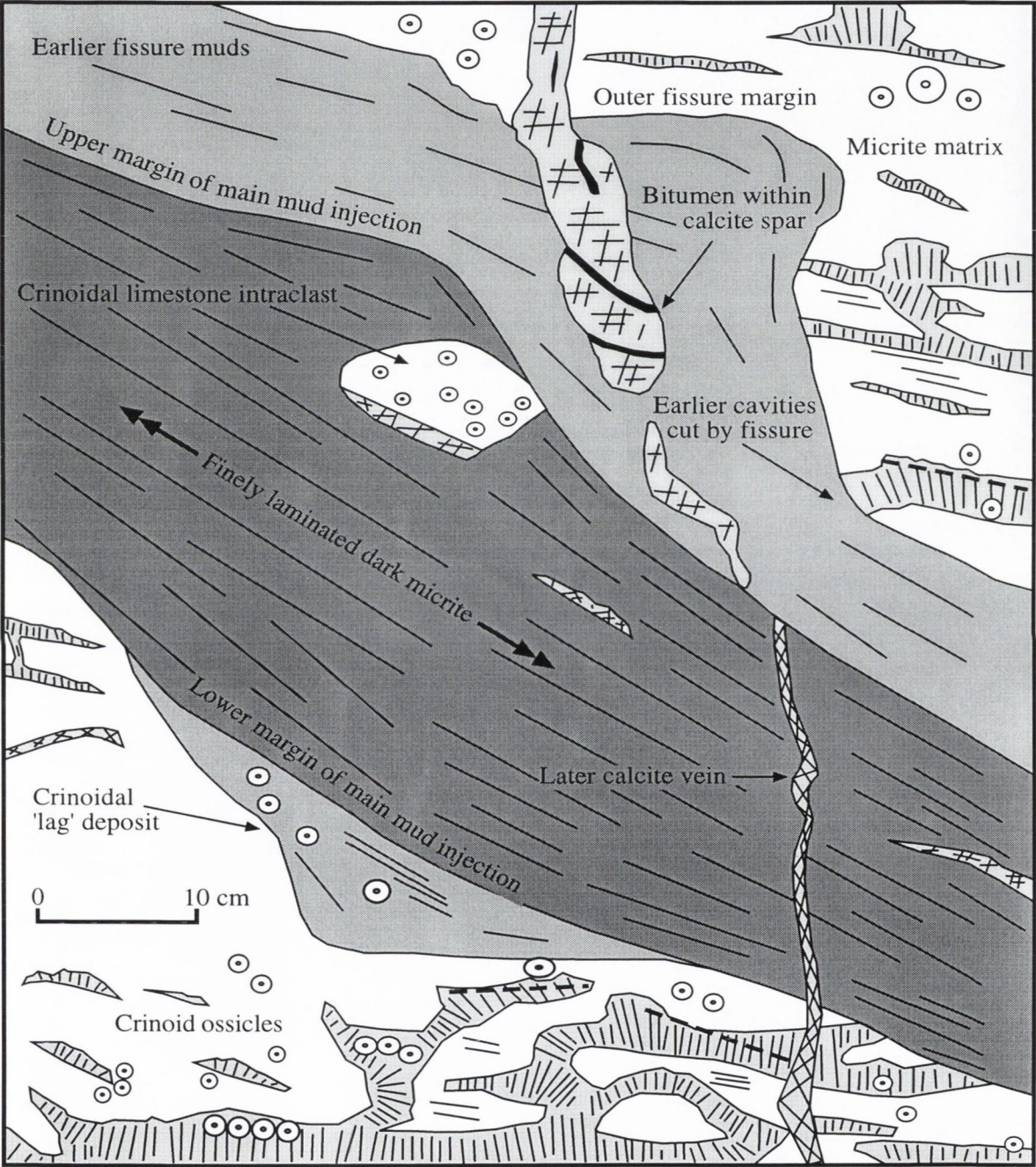
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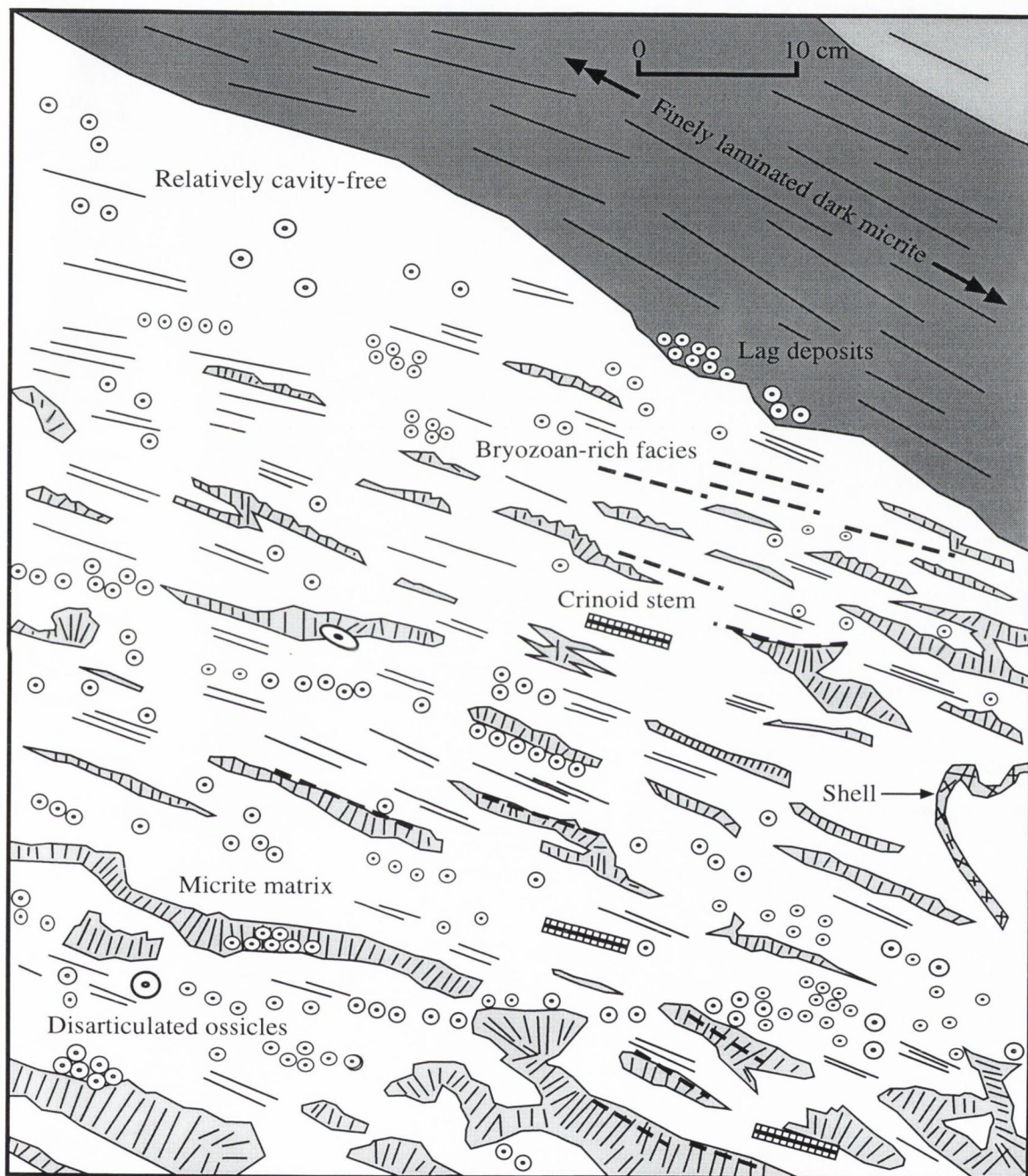
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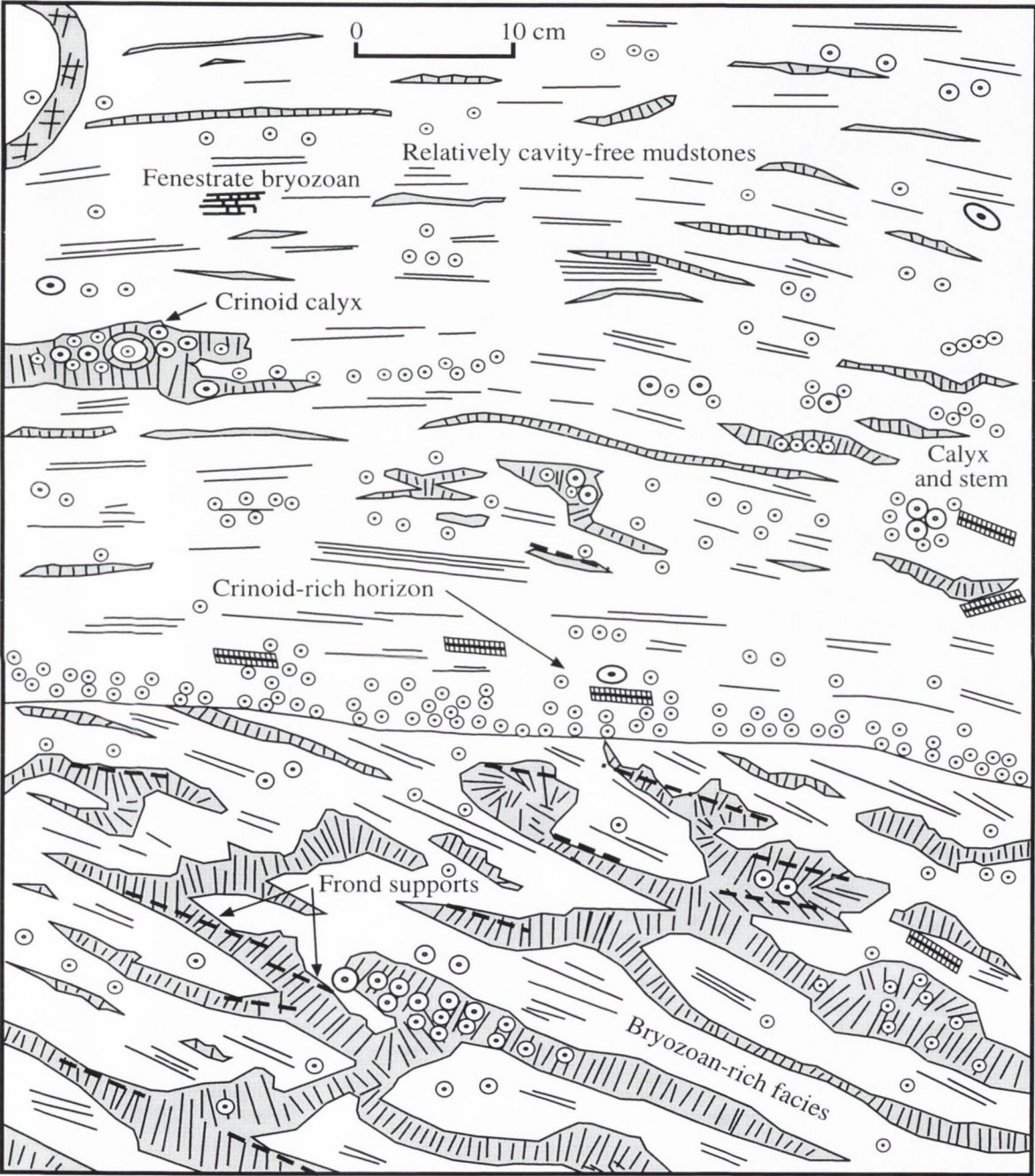
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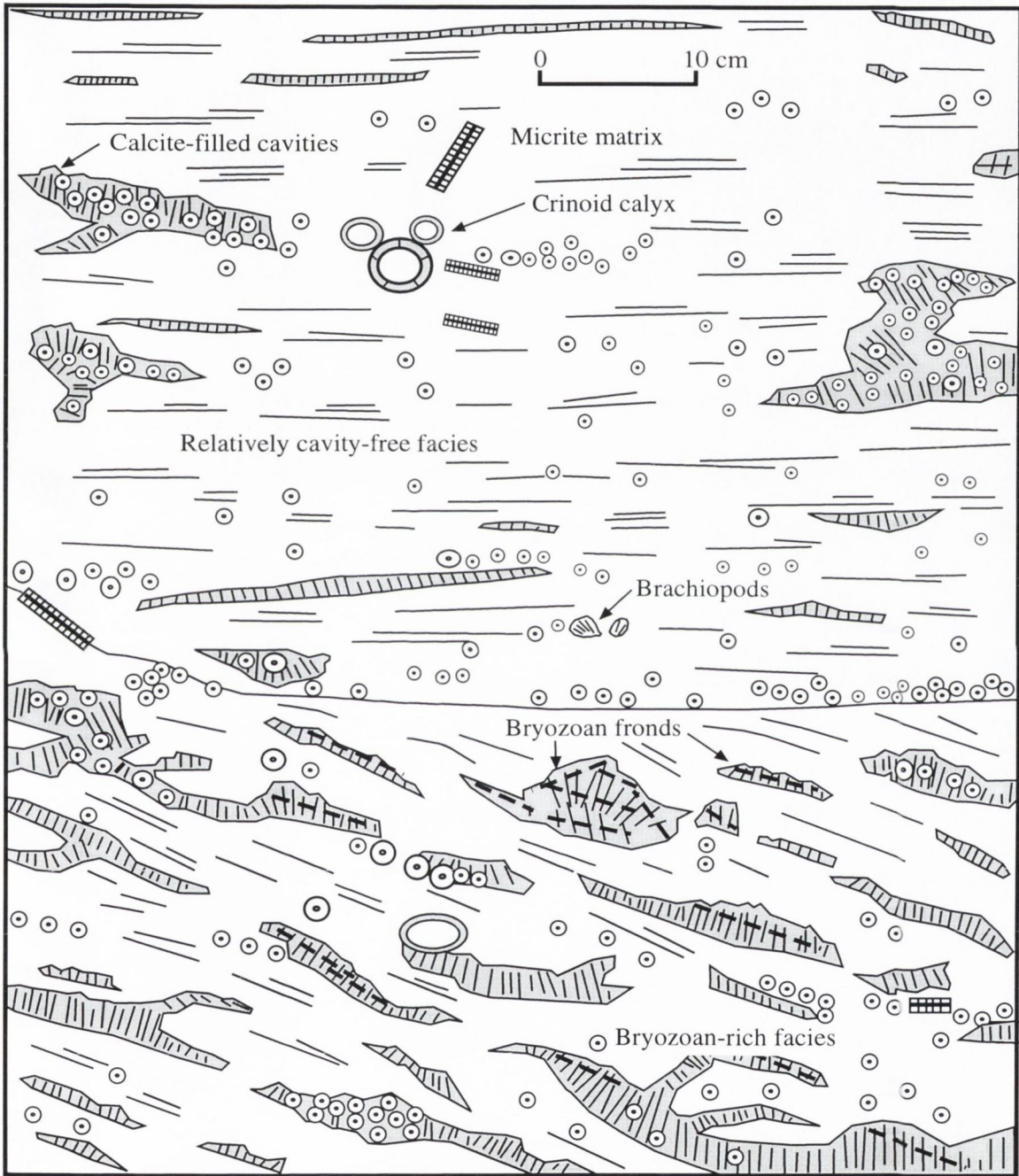
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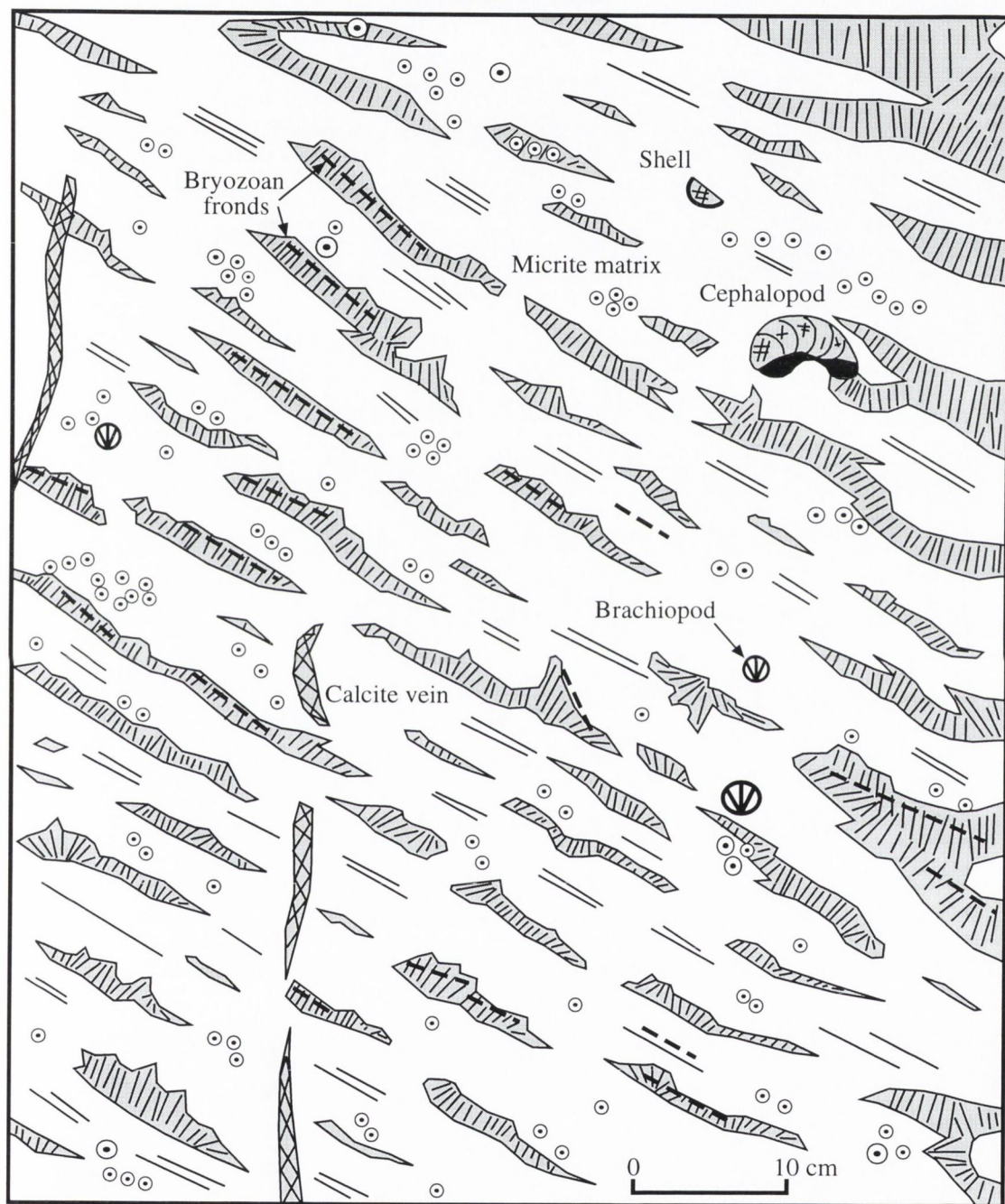
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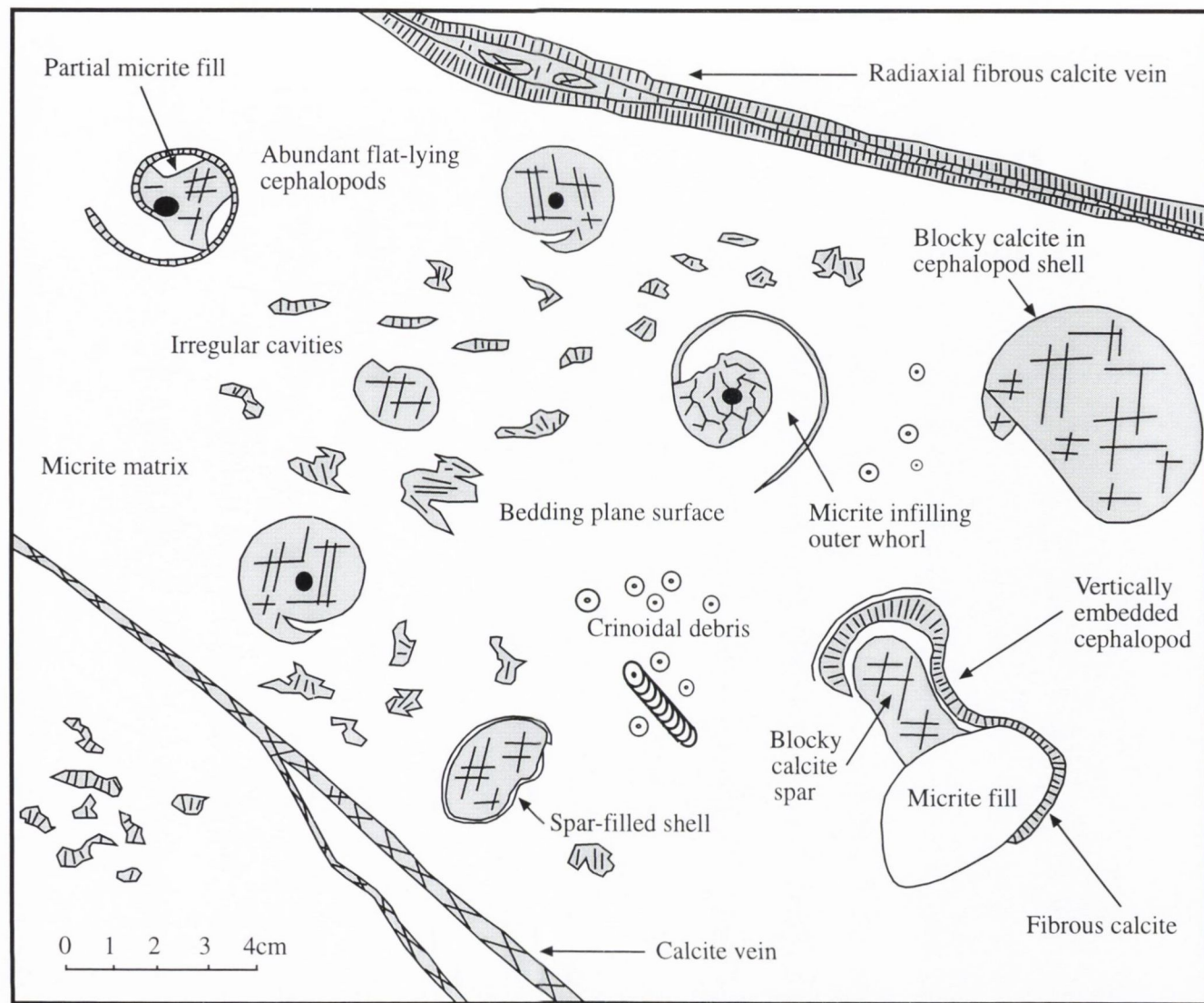


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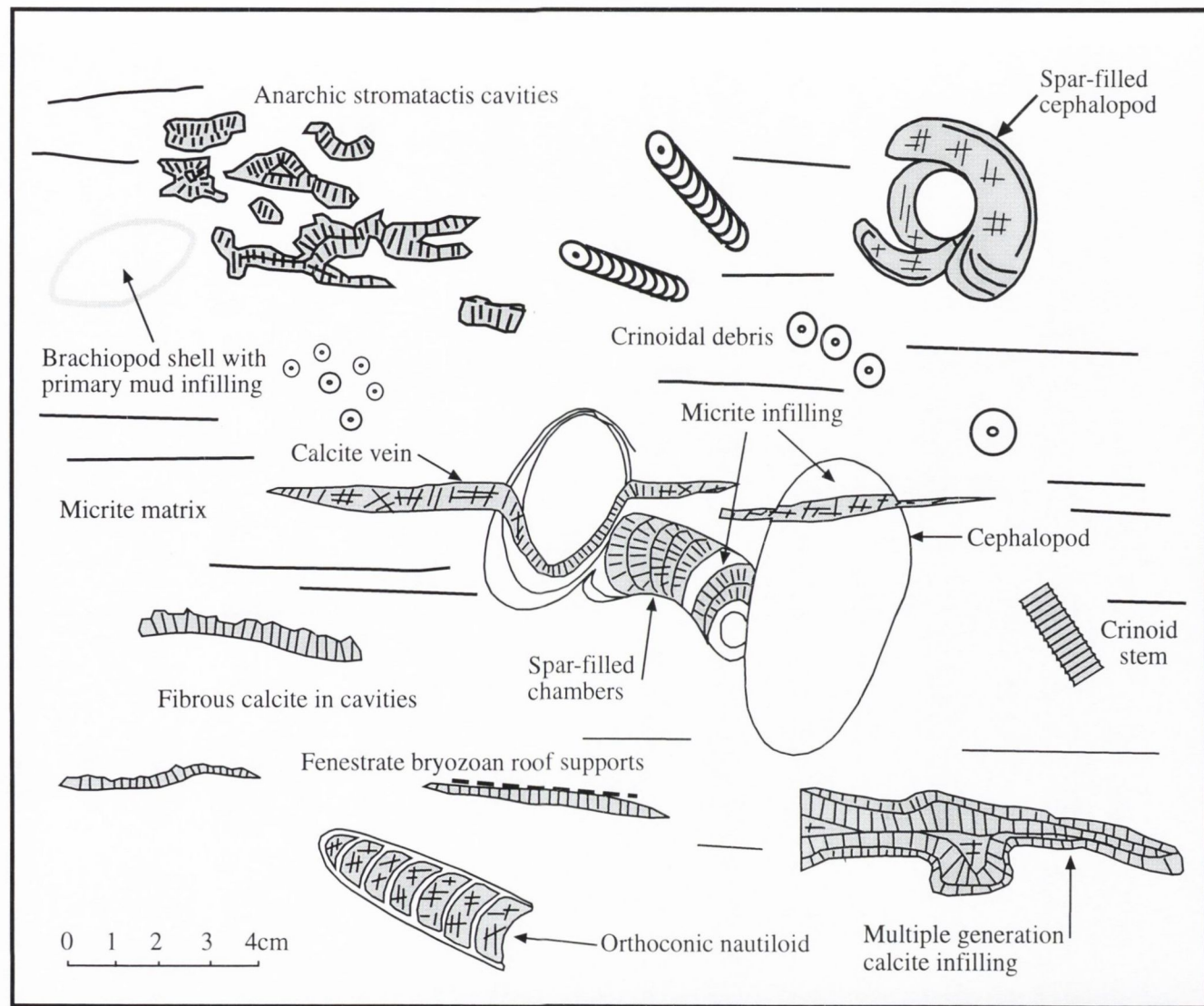


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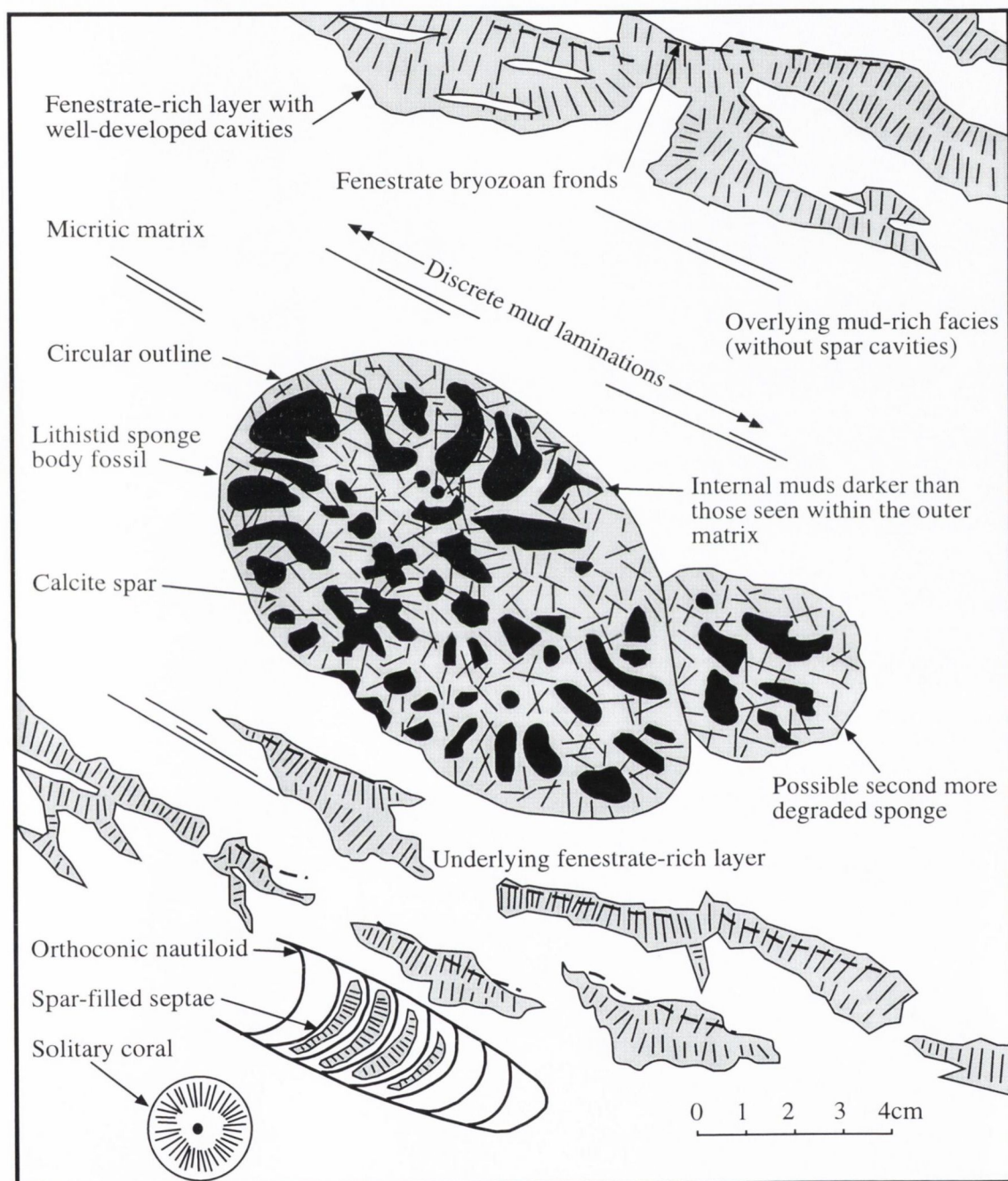


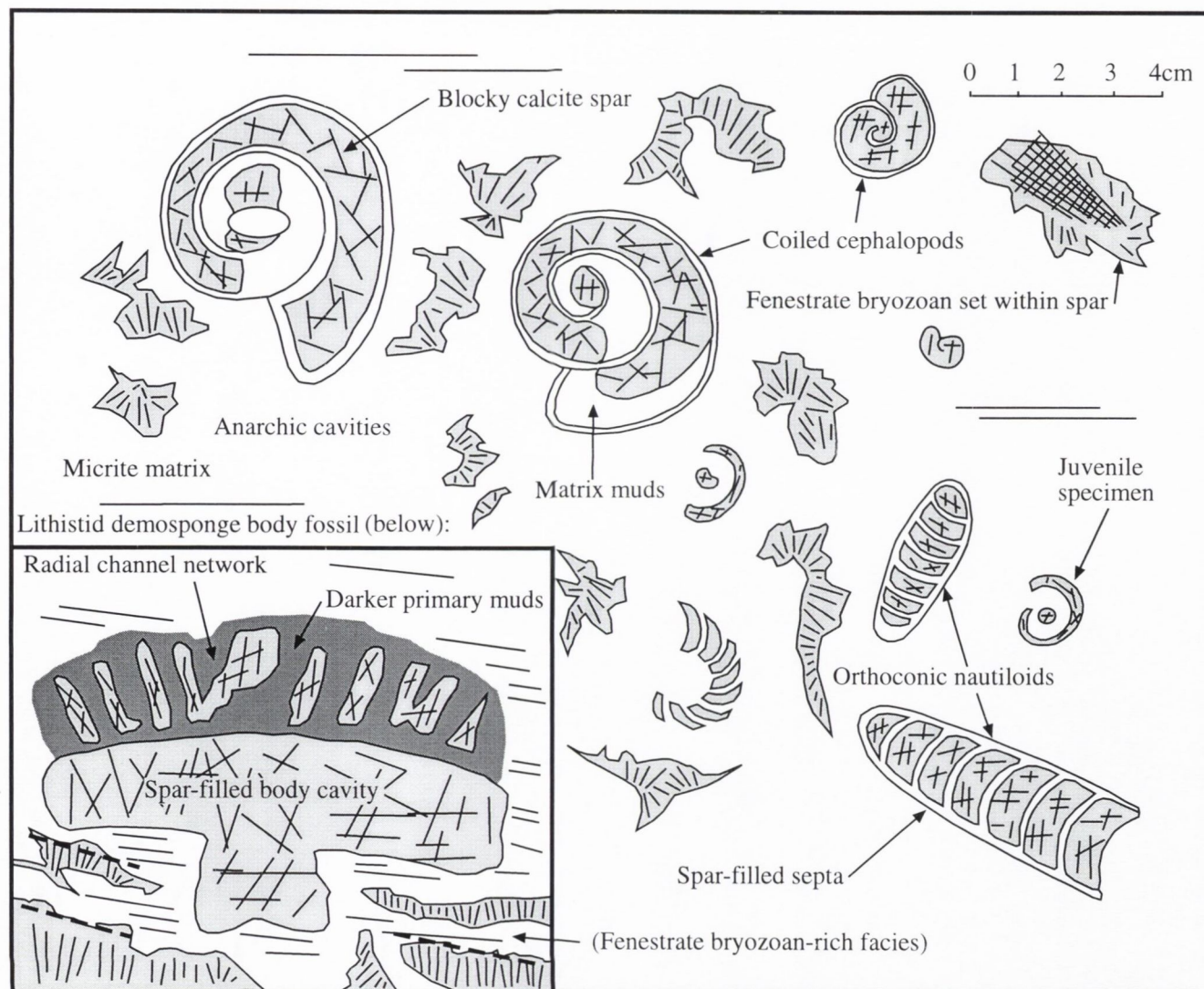


C1/FS1

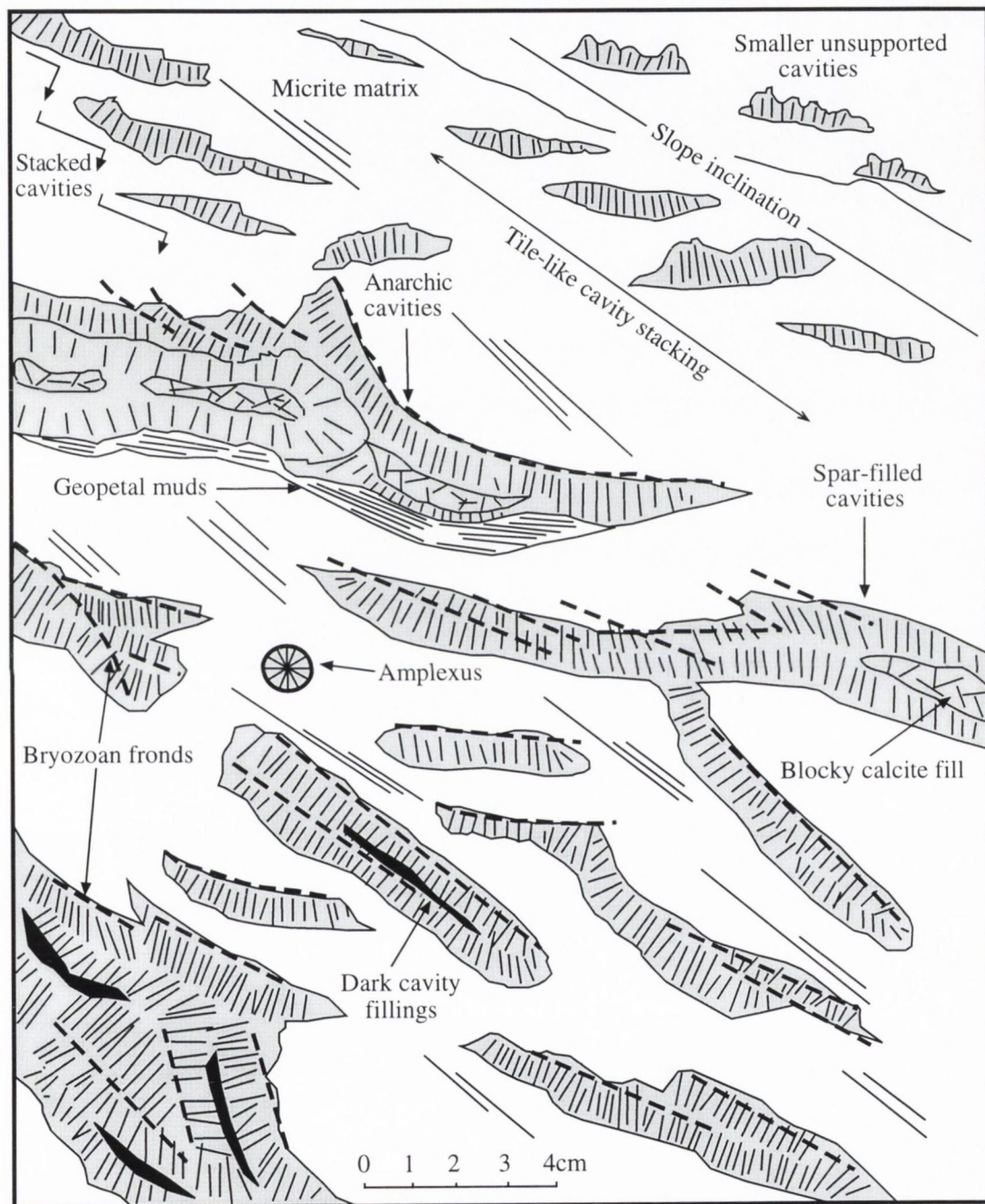


B1/FS1

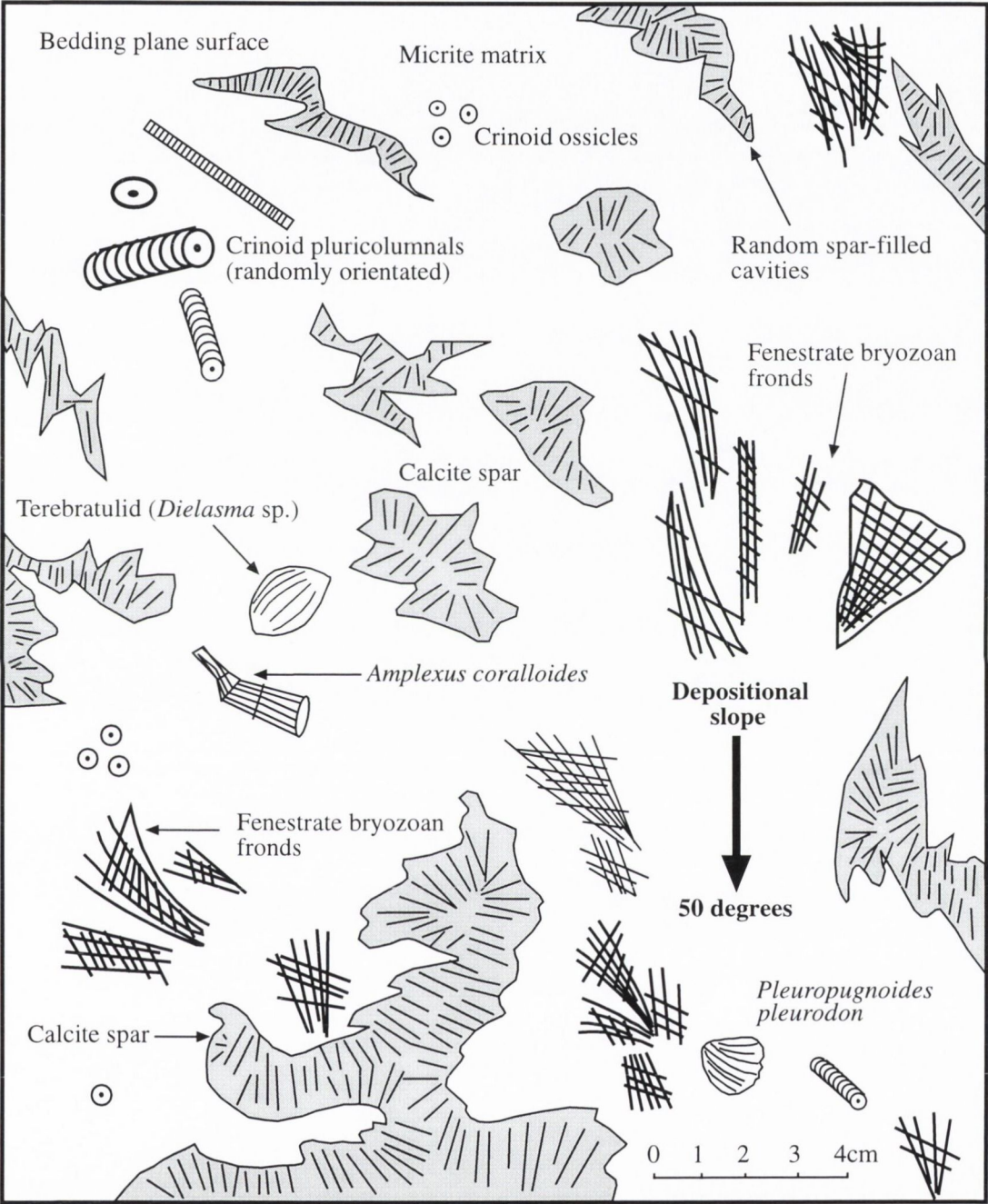




KN1/FS1



KN1/FS2



Photographic Plates

PLATE 4.1

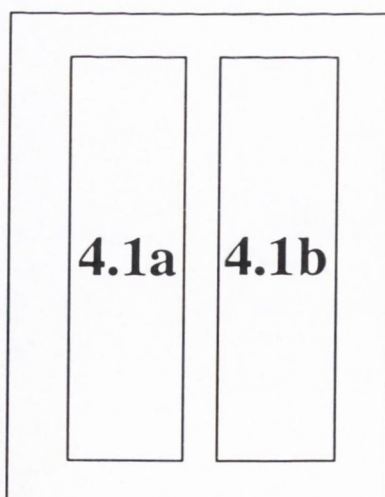
Mullawornia - northeast quarry face

Plate 4.1a: Northeast quarry face. Bedding appears to be generally absent or only poorly developed within the buildup.

Plate 4.1b: Northeast quarry face with the attitudes of various spar-filled cavities superimposed to show the overall geometry of the buildup. Mound core A is to the left of centre of the photograph. Steep primary depositional slopes characterise the prograding marginal facies developed either side of mound core A.

(Length of quarry face approximately 100 metres)

Plate Layout:





SHEET 2 - ATTITUDE OF STRONGHOLMS 15162T SMIS.

SHEET 3

SHEET 4 - ATTITUDE OF STRONGHOLMS 15162T SMIS.

PLATES 4.2 and 4.3

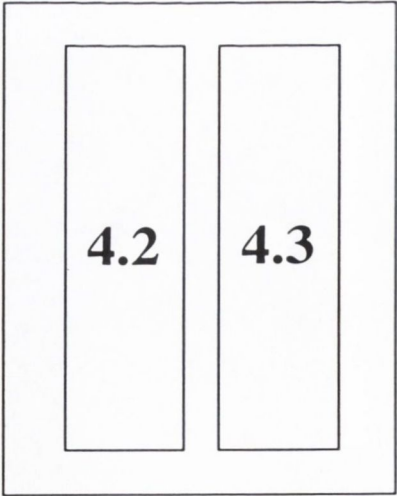
Mullawornia quarry faces

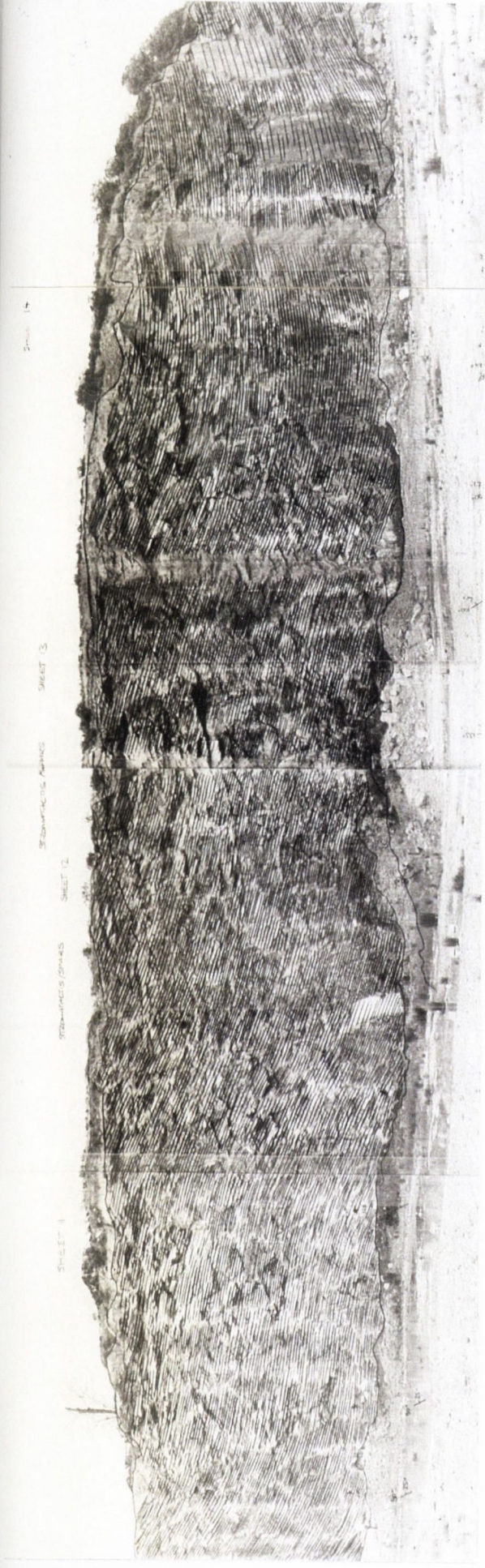
Plate 4.2: Southeast quarry face with the attitudes of spar-filled cavities superimposed.

Plate 4.3: Southwest quarry face with the attitudes of spar-filled cavities superimposed. Two discrete mound-cores (B and C) are visible within this quarry face.

(Length of quarry faces approximately 100 metres)

Plate Layout:





PLATES 4.4 - 4.6

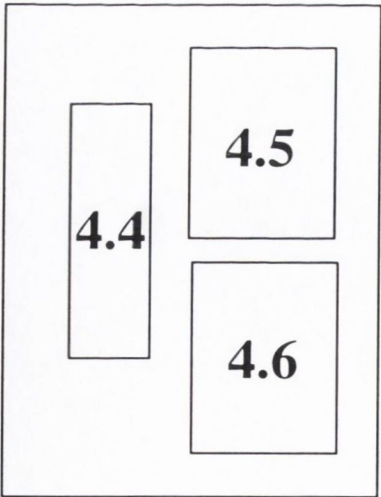
Mullawornia Quarry

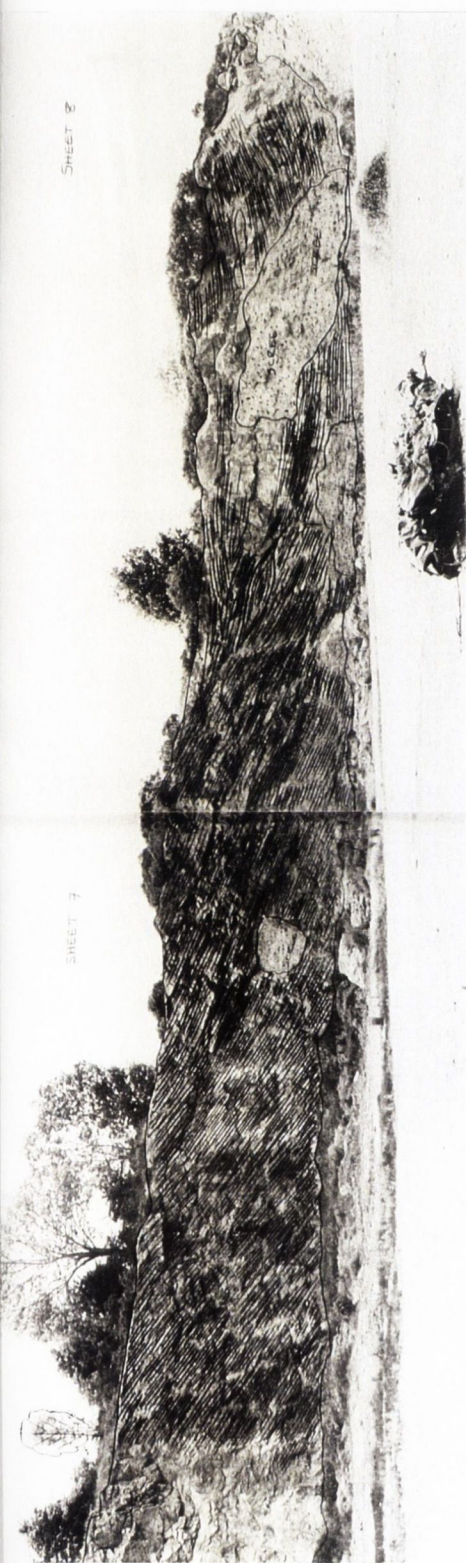
Plate 4.4: Western quarry face, showing the general attitudes of the various spar-filled cavities present within the limestones (length of exposure approximately 50 metres).

Plate 4.5 (Locality 40 - 42): Mound-core facies with poorly developed bedding. Typical lateral sheet spar cavities developed at the base of the quarry wall exposure (seen to the lower right) become increasing complex in shape moving upwards (i.e. void-complexing sequence). A discordant fissure, filled with darker finely laminated fissure muds, cuts the core facies limestones from right centre to the top centre of the photograph.

Plate 4.6 (Locality 75-77): Prograding marginal facies. Relatively steep primary depositional slopes are developed along the margins of the buildup. Bedding is slightly more discernible than at the mound-cores. Various spar-filled cavities record the attitude of the depositional surface and show it to have been inclined to almost 40° at this locality. Immediately to the right of the hammer, a typical void-complexing sequence is visible.

Plate Layout:





PLATES 4.7 - 4.11

Mullawornia Quarry

Plate 4.7 (Locality 392): Intra-reef shaley horizon. Small masses of primary carbonate muds separated by crinoid ossicle-rich shales (refer also to Field Sketch M15/FS1).

Plate 4.8 (Locality 42): Wackestone intraclast within darker finely laminated fissure muds.

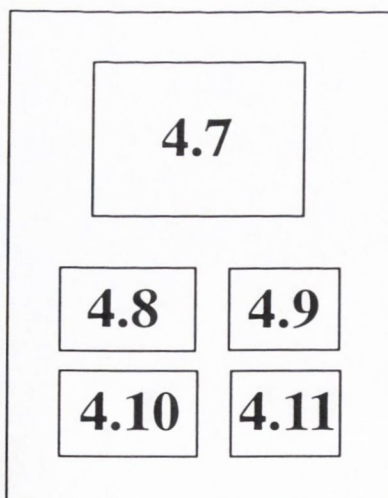
Plate 4.9 (Locality 75): Typical anarchic stromatactoid cavities (filled with lighter coloured calcite spar) developed within the prograding marginal facies. These cavities are associated with abundant fenestrate bryozoan debris.

Plate 4.10 (M16/S15 - Locality 75): Thin section photomicrograph showing the function of fenestrate bryozoan fronds as cavity roof supports. These were rigid enough to form primary shelter cavities beneath them and to support the overlying mud masses.

Plate 4.11 (M20/S26 - Locality 400): Unsupported *stromatactis* cavity developed within a wackestone matrix. The lower portion of the cavity has been floored by finely-laminated geopetal muds. The remaining upper portion of the cavity was subsequently filled by radiaxial fibrous calcite (RFC) cements. The upper and lower cavity margins are largely refittable.

(Thin-section scale bars equal 5000 microns)

Plate Layout:



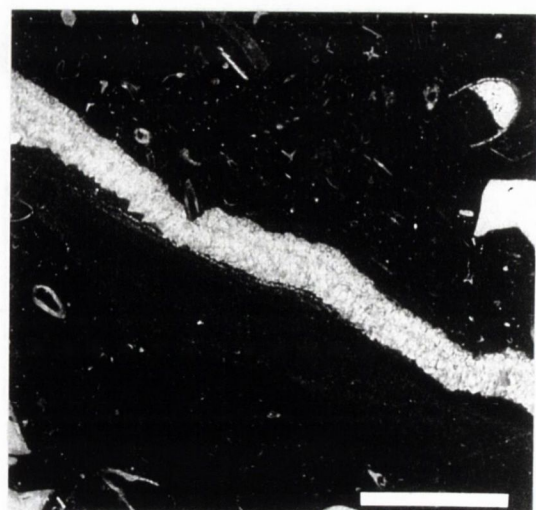
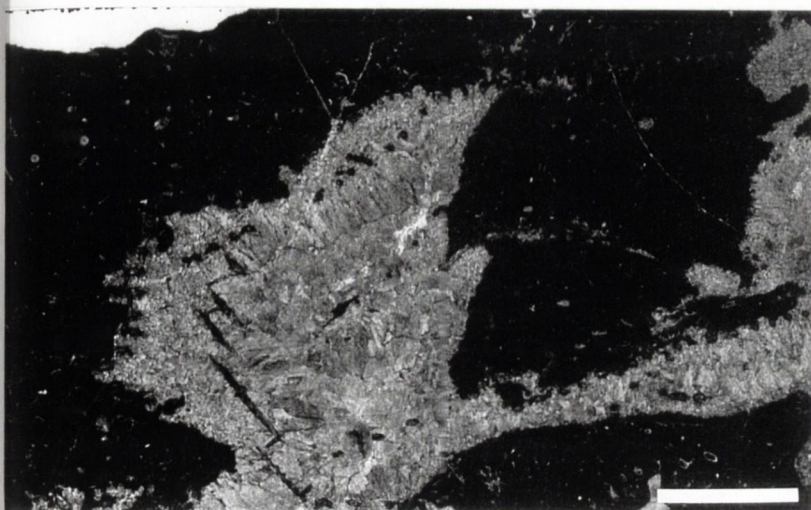
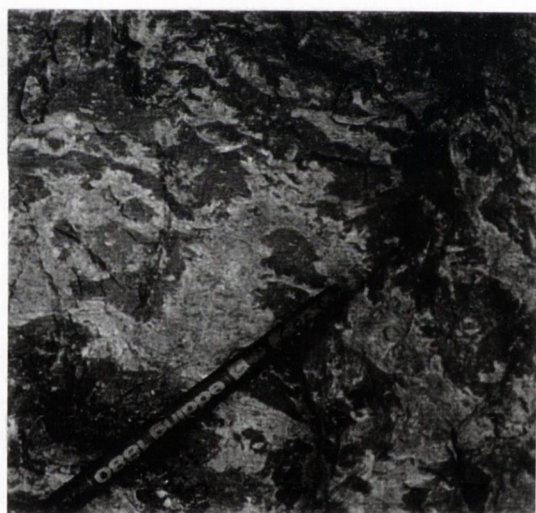


PLATE 5.1

Typical limestone textures

Figure 1 (M19/S17): Typical wackestone texture (main picture) also showing crudely laminated peloidal muds (top-left). Cavities and veins filled by later dolomite.

Figure 2 (M20/S4): Skeletal muds, rich in bryozoan and crinoidal bioclasts, cut by dark mud-filled minor fissure. Note laminated peloidal nature of sediments at bottom-right of picture.

Figure 3 (M20/S24): Characteristic 'mottled' nature of the mud matrix. A similar wackestone texture is present within each mud component.

Figure 4 (M20/S18): Mottled nature of the primary muds. Lighter areas are richer in microspar.

Figure 5 (M20/S12): Small-scale stylolite.

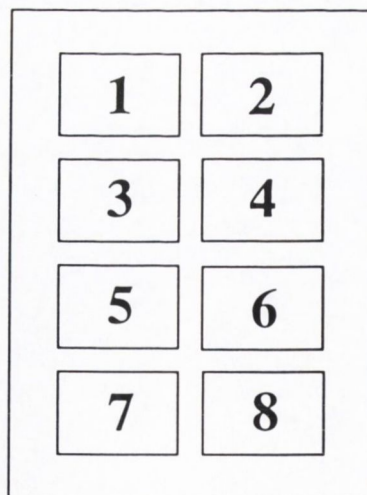
Figure 6 (M19/S7): Characteristic cavity fill by early early marine cements (RFC) with later infilling by dolomite rich in bitumen. Typical mudstone texture in the matrix.

Figure 7 (M19/S7): Early marine cement (radial fibrous calcite) in more detail.

Figure 8 (M17/S12): Equant calcite spar showing well developed crystal growth zones.

(All scale bars equal 400 microns, except 1, 2, 3 and 6, which equal 5000 microns)

Plate Layout:



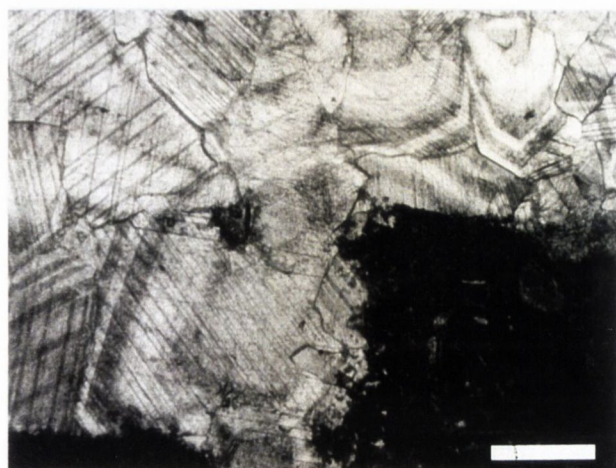
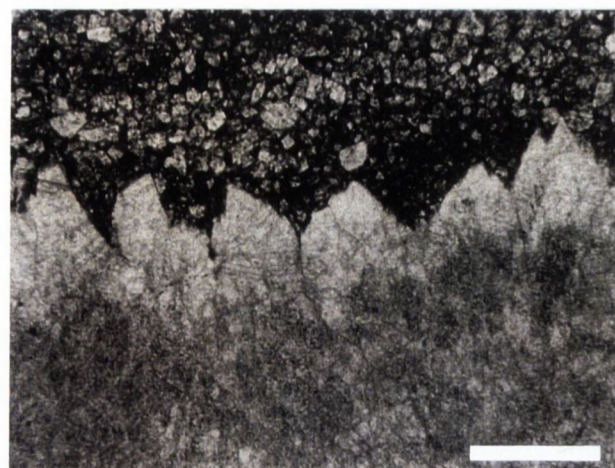
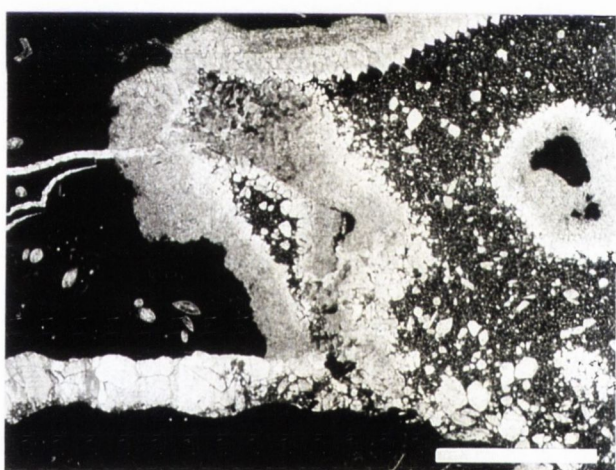
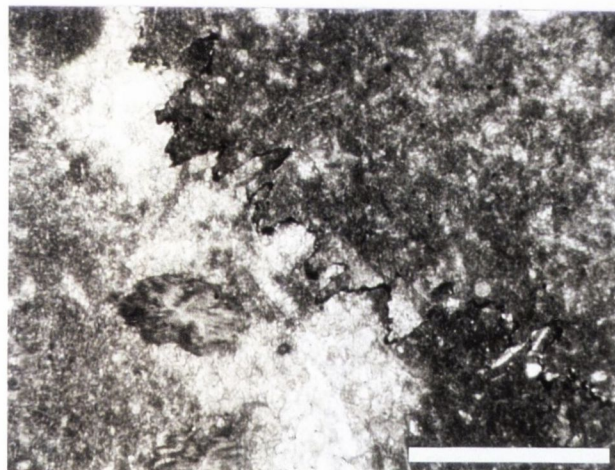
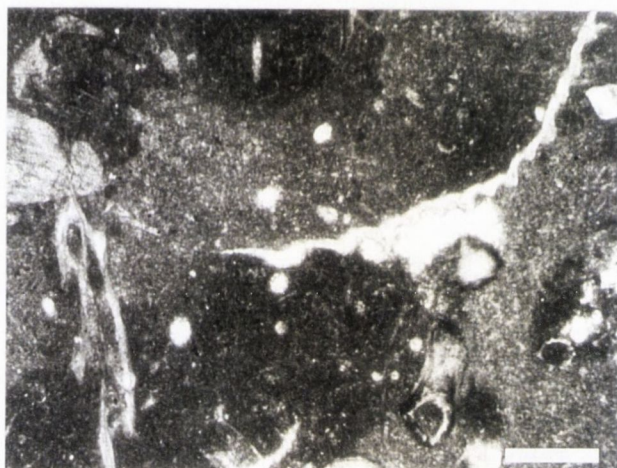
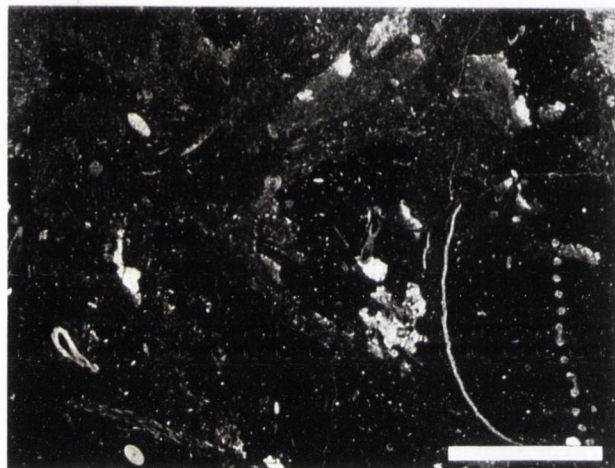
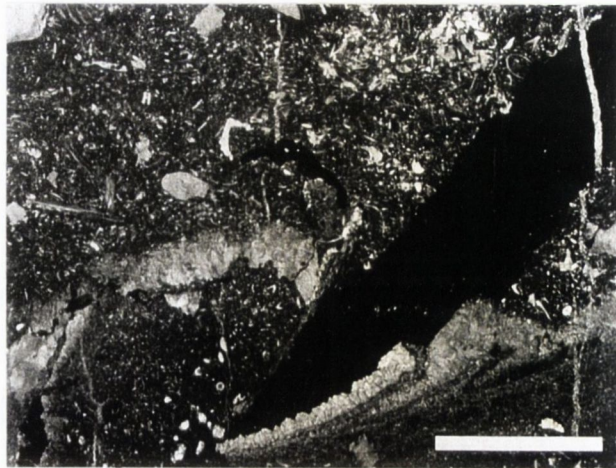
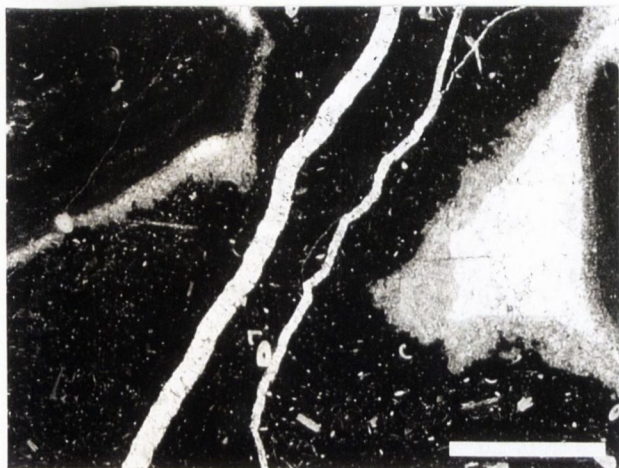


PLATE 5.2

Bryozoan material

Figure 1 (M19/S7): Broken fenestrate bryozoan material.

Figure 2 (M20/S23): Longitudinal section through broken fenestrate bryozoan.

Figure 3 (M17/S8): Cross-section through fenestrate bryozoan frond showing laminated outer skeleton.

Figure 4 (M16/S10): *Fistulipora incrustans* (Phillips) encrusting a large crinoid ossicle.

Figure 5 (M20/S23): Slightly oblique cross-section through *Rhombopora* (cryptostome bryozoan) showing autozooeical chambers budded in an annular fashion around the central axis.

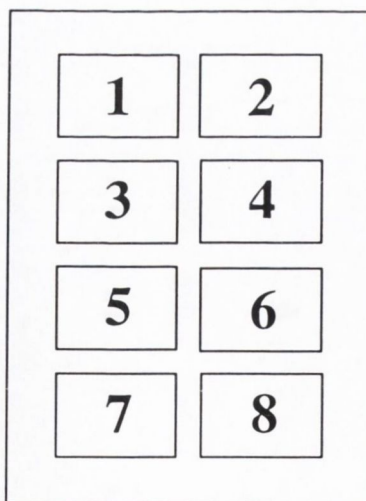
Figure 6 (M17/S14): Cross-section through *Rhombopora*, similar to the above.

Figure 7 (M19/S4): Cross-section through *Sulcoretopora* (cystoporate bryozoan) showing plicated median wall.

Figure 8 (M17/S12): *Stenopora* (trepastome bryozoan) with simple tube-like outer autozooeical chambers.

(All scale bars equal 400 microns)

Plate Layout:



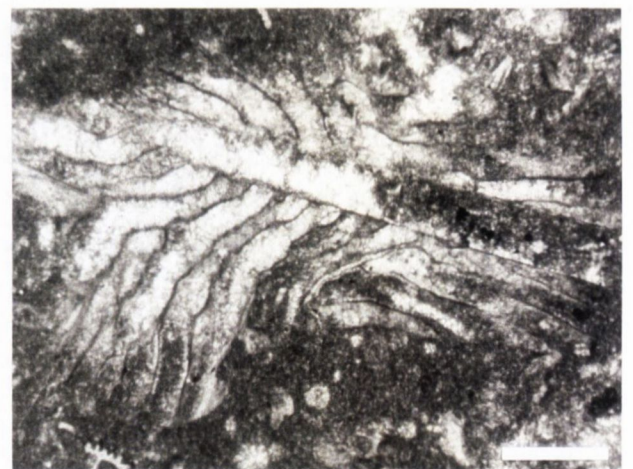
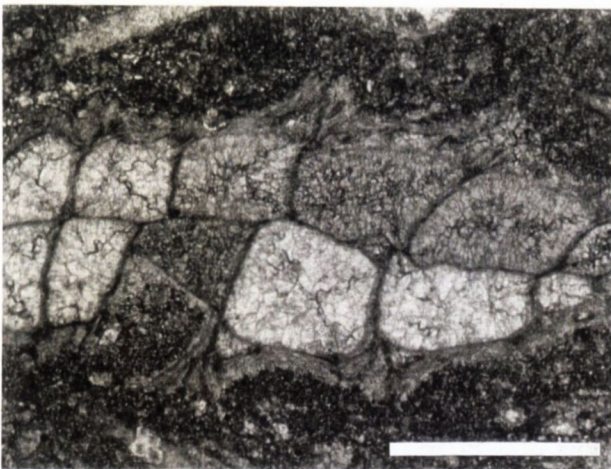
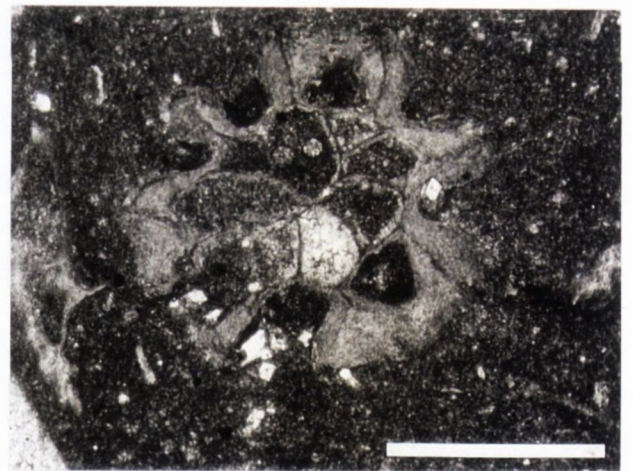
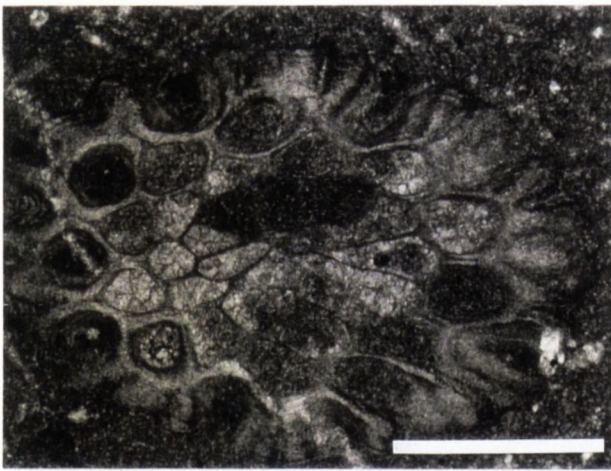
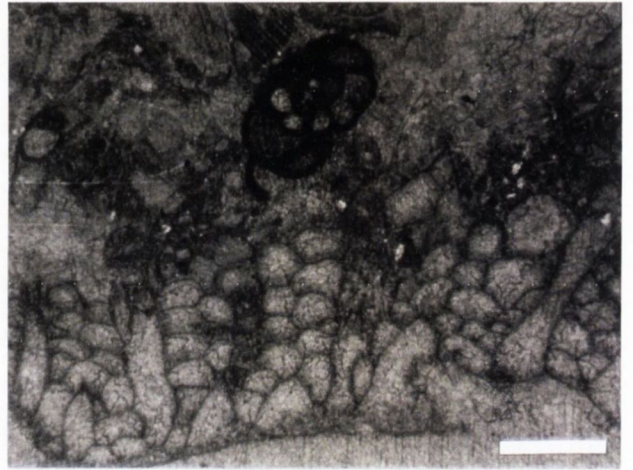
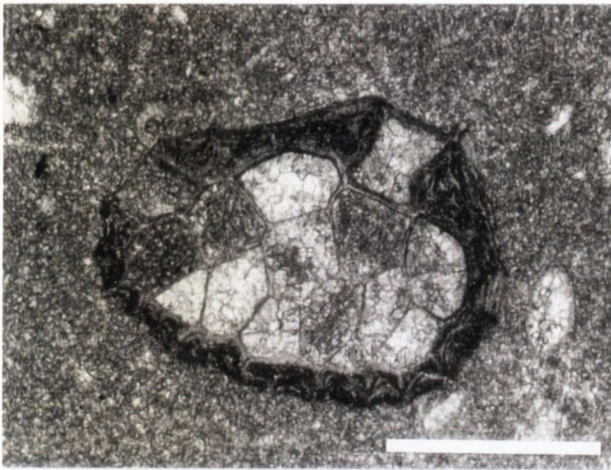
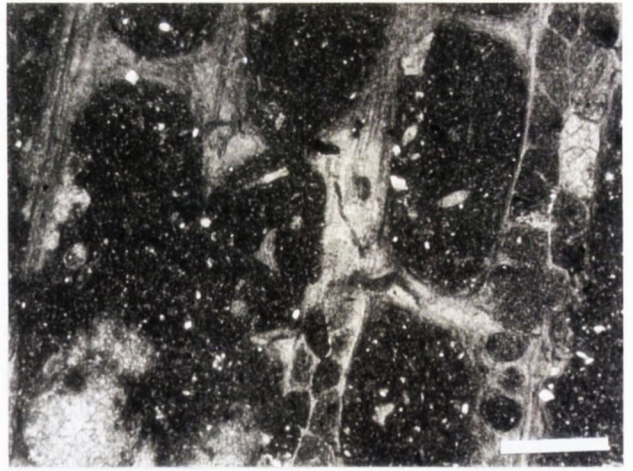
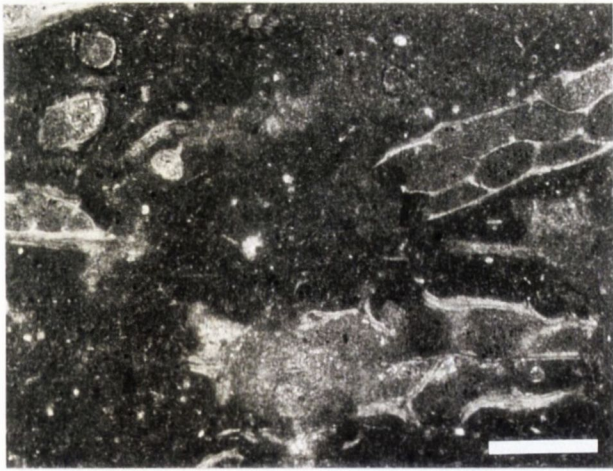


PLATE 5.3

Echinoderm material

Figure 1 (M16/S2): Detailed cross-section of a crinoid ossicle showing the original porous microstructure (stereom).

Figure 2 (M19/S6): Oblique and cross-sectional view through two crinoid ossicles, which each comprise single calcite crystals.

Figure 3 (M20/S27): Crinoid-rich facies, with typical wackestone texture, which comprises a wide range of echinoderm material set within a muddy matrix.

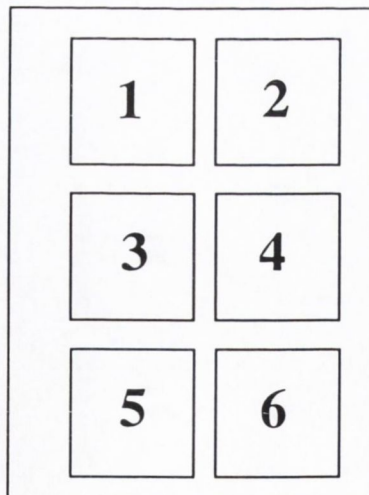
Figure 4 (M16/S12): Crinoid ossicles with prismatic syntaxial overgrowths. Overgrowths are discontinuous around individual ossicles and are not present on ossicles within the surrounding outer muddy matrix.

Figure 5 (M17/S17): Crinoid-rich facies (mud-poor) with well developed syntaxial overgrowths on those crinoid ossicles which are not surrounded by the mud matrix. The stereom of many individual ossicles has commonly been occluded by syntaxial cement.

Figure 6 (M19/S16): Crinoid ossicles, with radiaxial fibrous calcite (RFC) cements, set within a crudely laminated heterogeneous wackestone matrix.

(All scale bars equal 400 microns, except 3, 4, 5 and 6, which equal 2000 microns)

Plate Layout:



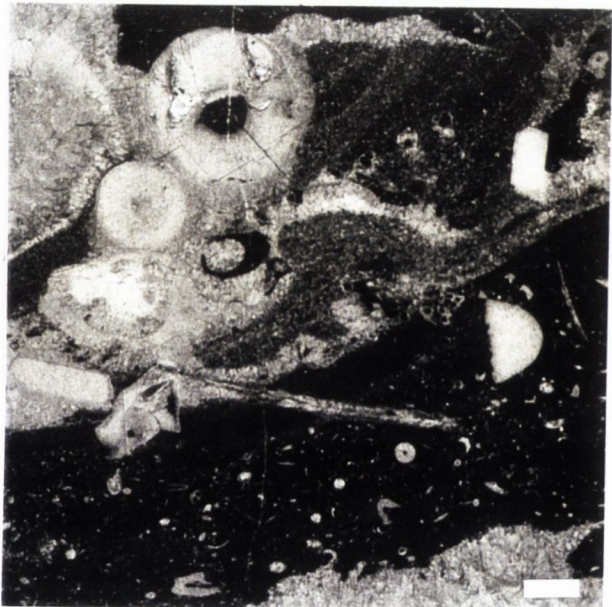
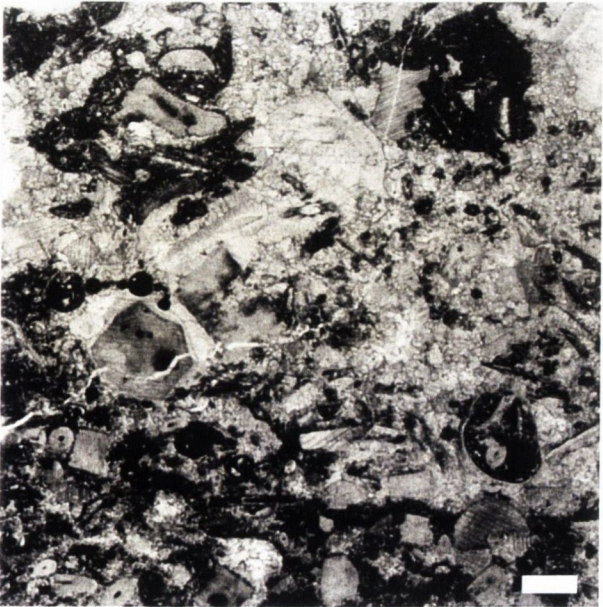
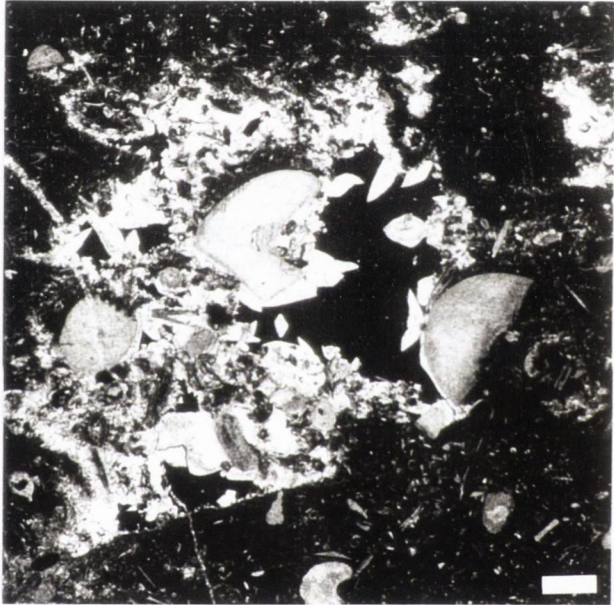
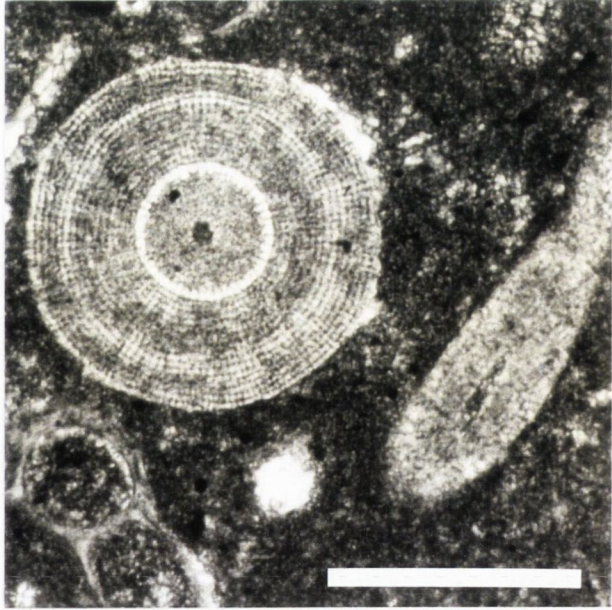
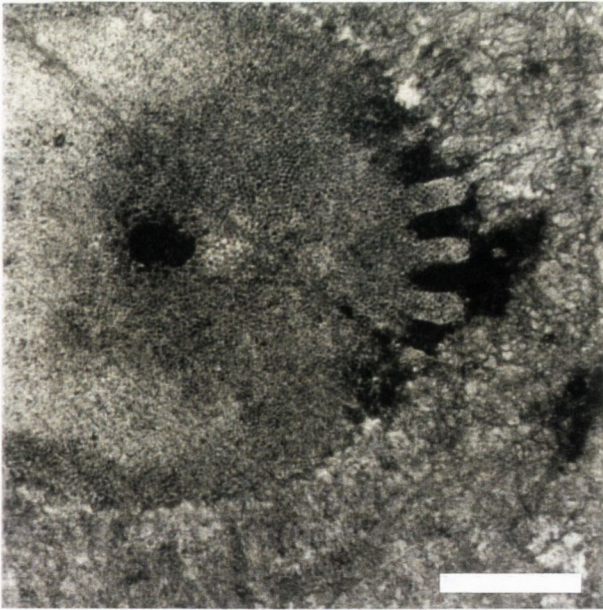


PLATE 5.4

Shell material

Figure 1 (M20/S22): Hollow brachiopod spine, consisting of a circular arrangement of concentric fibrous calcite crystals.

Figure 2 (M19/S14): Geopetal fill of brachiopod with muds similar to those observed within the matrix. The surface level of these cavity muds records the palaeohorizontal. The remaining upper cavity void has been subsequently infilled by sparry calcite.

Figure 3 (M16/S15): Detailed view of the subparallel arrangement of fibrous calcite crystals observed within a ribbed brachiopod shell.

Figure 4 (M16/S8): Gastropod shell, with mud-filled lower chamber.

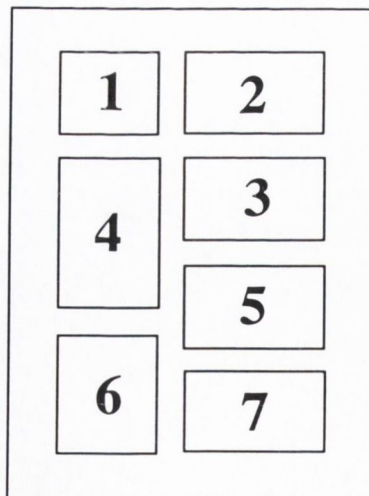
Figure 5 (M19/S5): Spar-filled gastropod mould.

Figure 6 (M20/S14): Gastropod shell fragment. The original aragonite shell mineralogy has been lost during diagenesis and replaced by coarse drusy calcite.

Figure 7 (M20/S26): Lower geopetal sediment and upper void-filling sparry calcite within a brachiopod shell.

(All scale bars equal 400 microns)

Plate Layout:



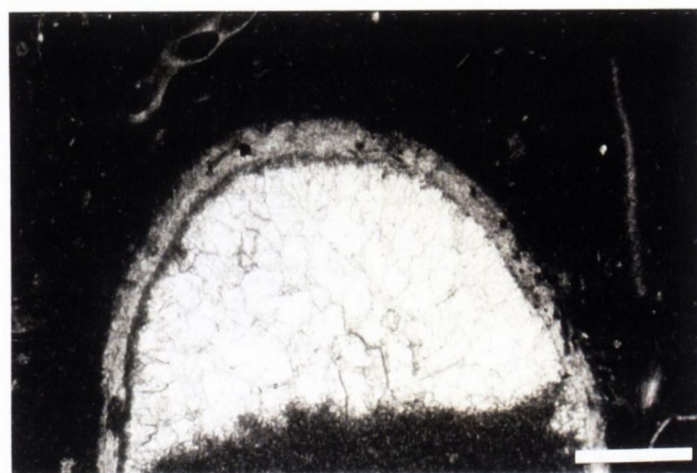
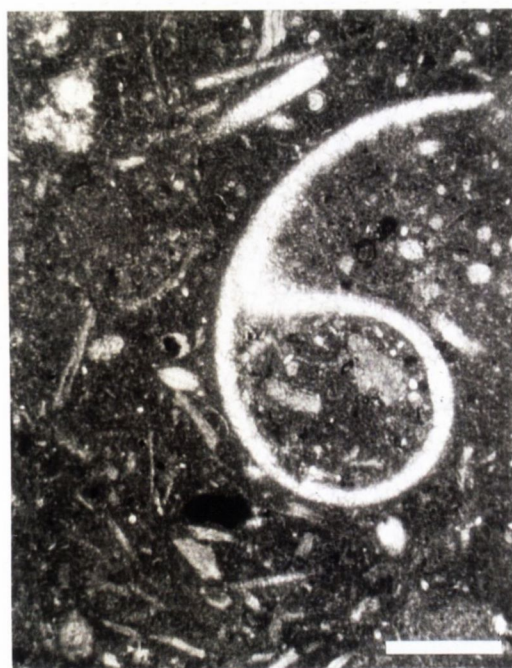
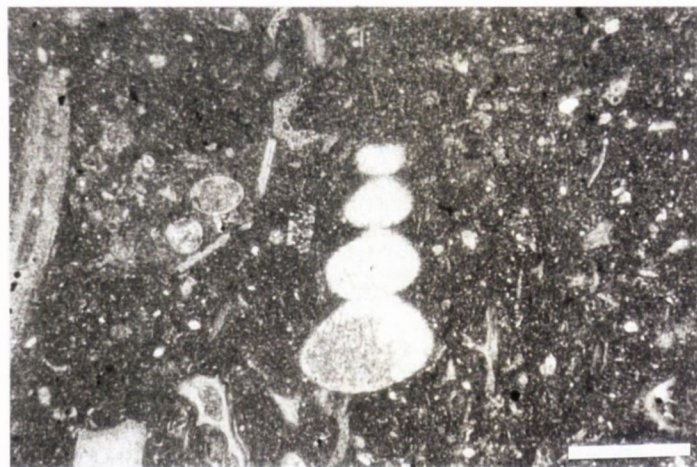
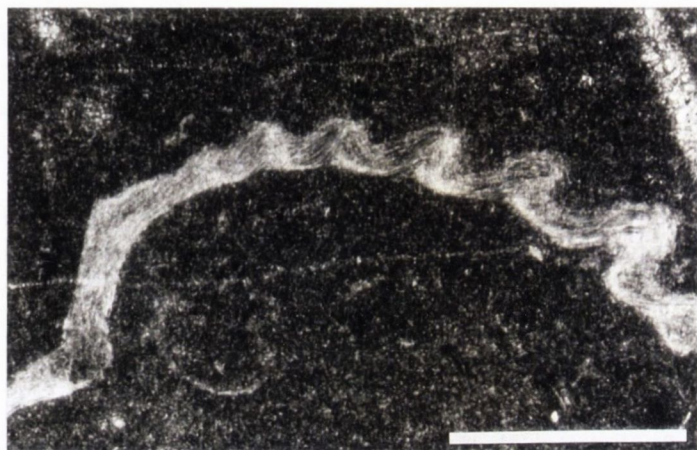
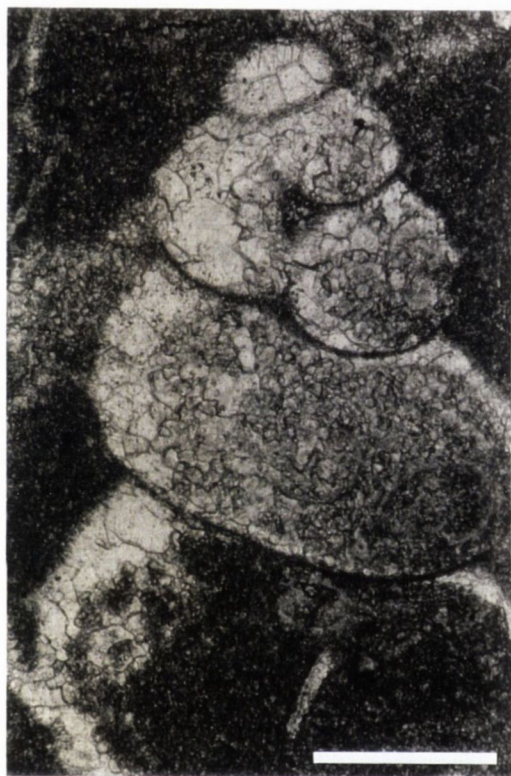
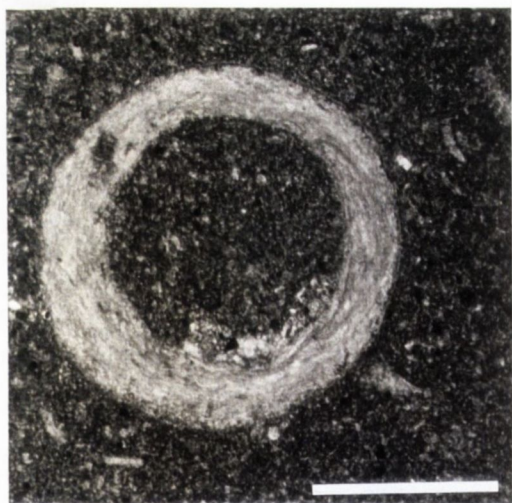


PLATE 5.5

Arthropod material and sponge spicules

Figure 1 (M19/S7): Articulated and disarticulated ostracod shells, typically associated with mudstone textures.

Figure 2 (M20/S4): Distinctive trilobite cuticle, consisting of calcite crystals arranged in microcrystalline needles orientated normal to the outer surface (observed in cross-polarised light).

Figure 3 (M20/S23): Mouldic replacement of a large hyalosteliid megasclere.

Figure 4 (M20/S19): Trilobite cuticle.

Figure 5 (M17/S8): Originally siliceous sponge spicules underwent early dissolution to leave a mould within the muds. This void was later filled by sparry calcite.

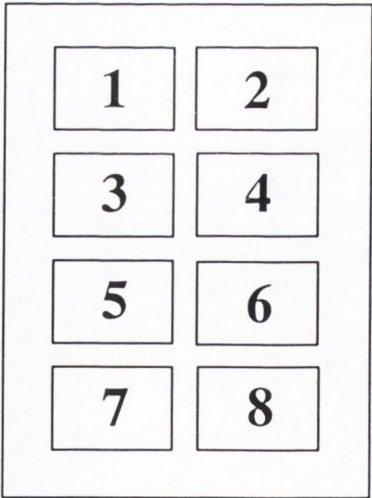
Figure 6 (M17/S8): Spicule mould, as above (observed in cross polarised light)

Figure 7 (M17/S20): Hyalosteliid sponge spicules.

Figure 8 (M20/S22): Variously orientated sponge spicules.

(All scale bars equal 400 microns)

Plate Layout:



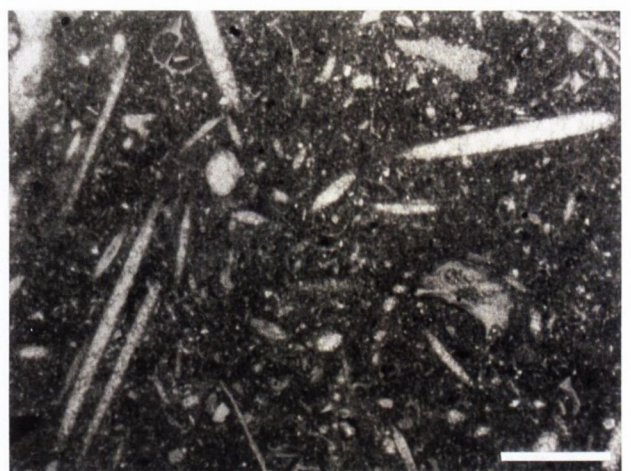
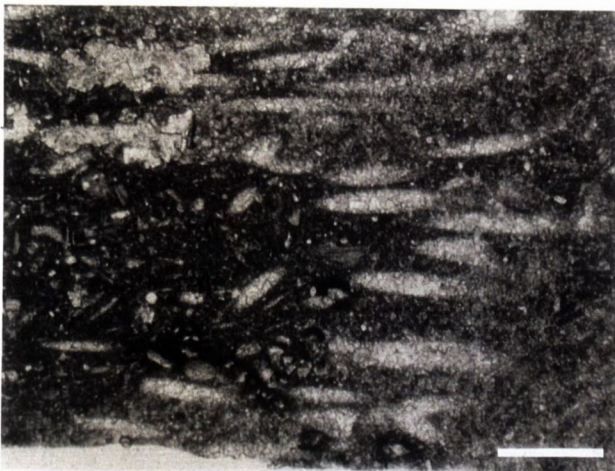
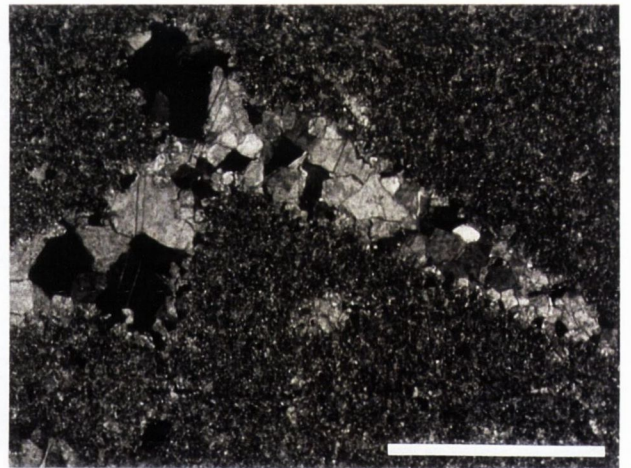
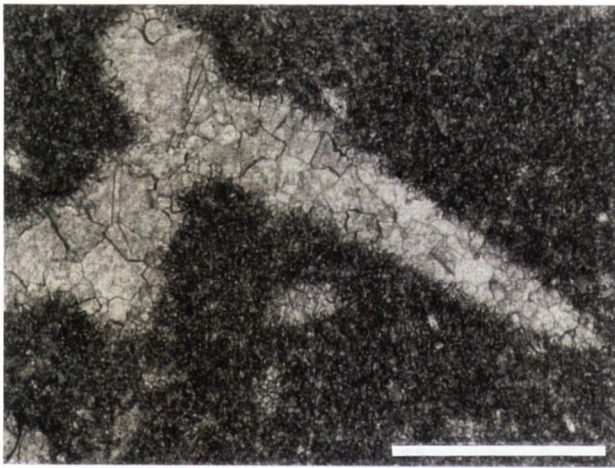
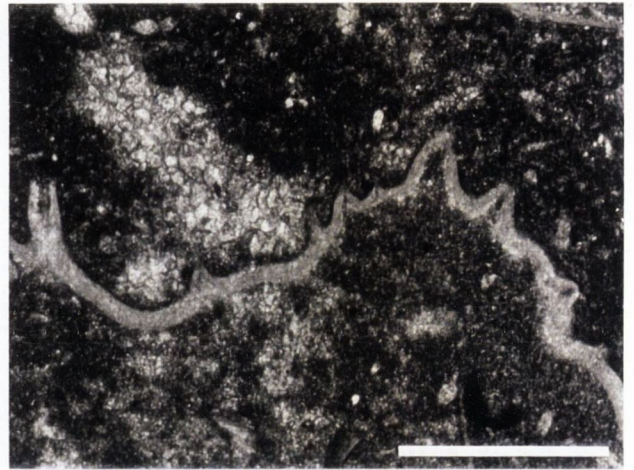
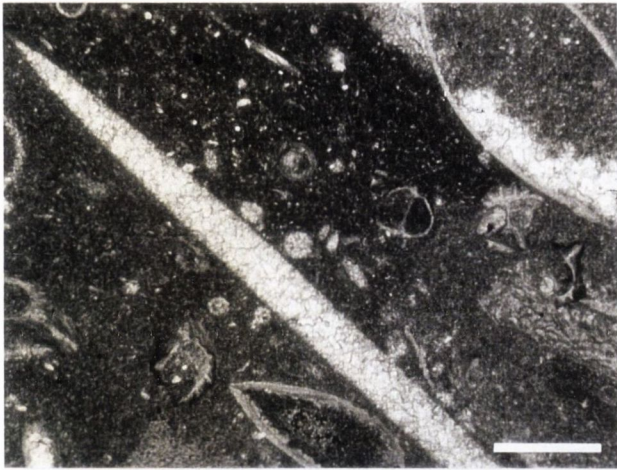
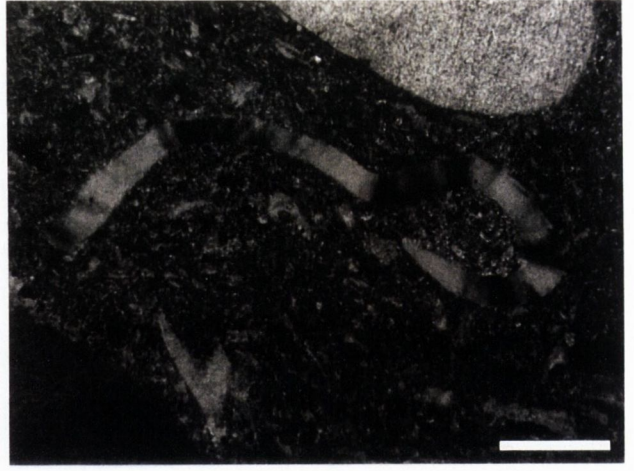
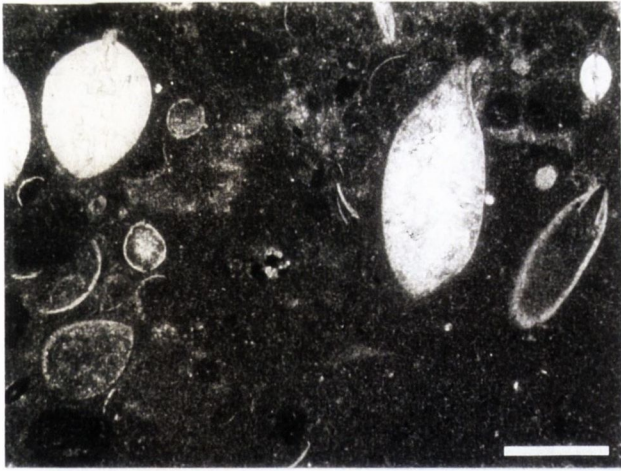


PLATE 5.6

Foraminifera I

Figure 1 (M16/S10): *Earlandia* sp.

Figure 2 (M16/S10): *Earlandia* sp.

Figure 3 (M16/S13): *Palaeospiroplectammina* sp.

Figure 4 (M17/S7): *Tetrataxis* sp.

Figure 5 (M20/S1): c.f. *Tetrataxis*

Figure 6 (M16/S10): *Pseudotaxis* sp.

Figure 7 (M16/S10): *Endothyra* sp.

Figure 8 (M19/S20): *Endothyra* sp.

Figure 9 (M19/S14): *Endothyra* sp.

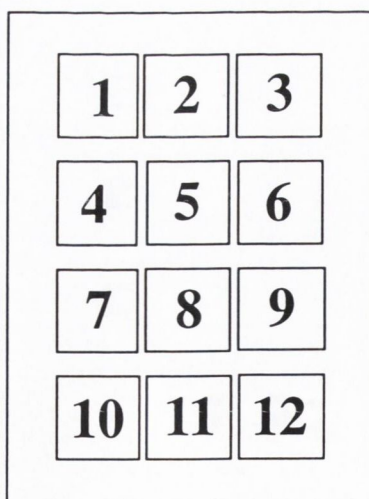
Figure 10 (M20/S6): *Endothyra* sp.

Figure 11 (M20/S1): *Endothyra* sp.

Figure 12 (M20/S4): *Endothyra* sp.

(All scale bars equal 400 microns)

Plate Layout:



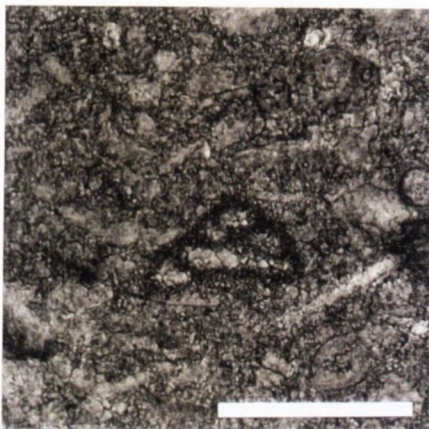
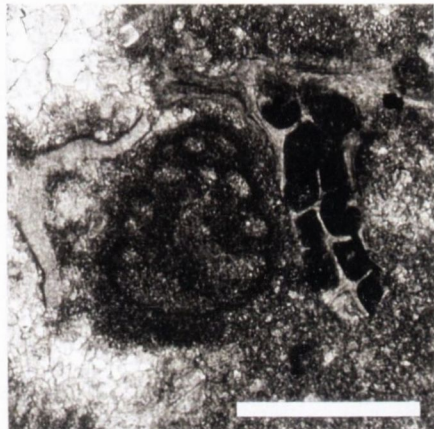


PLATE 5.7

Foraminifera II

Figure 1 (M19/S19): *Valvulinella* sp.

Figure 2 (M19/S20): *Endothyra* sp.

Figure 3 (M19/S20): *Endothyra* sp.

Figure 4 (M19/S20): *Endothyra* sp.

Figure 5 (M19/S20): *Endothyra* sp.

Figure 6 (M19/S20): *Endothyra* sp.

Figure 7 (M17/S19): *Endothyra* sp.

Figure 8 (M16/S10): *Endothyra* sp.

Figure 9 (M19/S14): *Endothyra* sp.

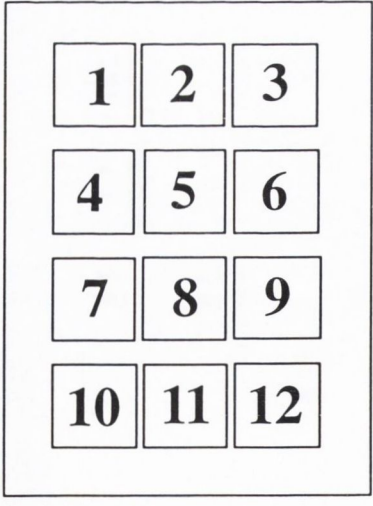
Figure 10 (M19/S20): *Endothyra* sp.

Figure 11 (M19/S20): *Endothyra* sp.

Figure 12 (M16/S10): *Endothyra* sp.

(All scale bars equal 400 microns)

Plate Layout:



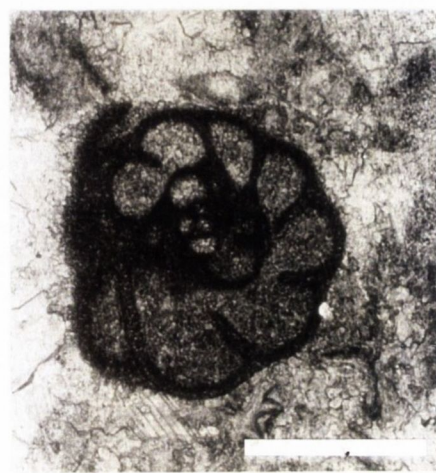
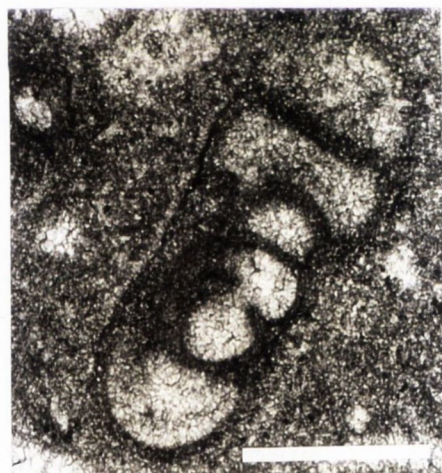


PLATE 5.8

Globochaetes and moravamminids

Figure 1 (M19/S19): Globochaetes set within a microspar matrix. Thallus? composed of relatively tightly packed, barrel-shaped cells with calcareous walls.

Figure 2 (M20/S4): Globochaetes. Slightly curved thallus? with tightly packed barrels which have a more polygonal shape (observed in cross-polarised light).

Figure 3 (M16/S12): Globochaetes set within a muddy matrix.

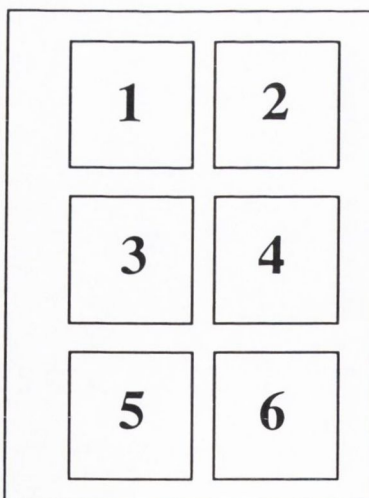
Figure 4 (M17/S1): Globochaetes. Less dense arrangement of cells which are more circular in outline. Each cell displays a micrite-filled cylindrical pore at its centre.

Figure 5 (M20/S2): Moravamminid set within optically dense mud matrix. Gently curved thallus? with incomplete septa and an open, mud-filled, axial cavity.

Figure 6 (M20/S2): Moravamminid in detail. Walls comprise large calcite plates which commonly have a speckled appearance due to the presence of small inclusions. Internal muds correspond to those seen within the matrix.

(All scale bars equal 400 microns)

Plate Layout:



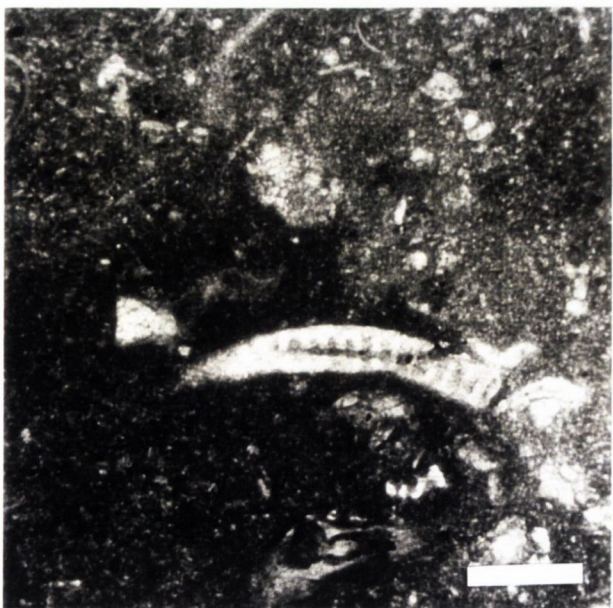
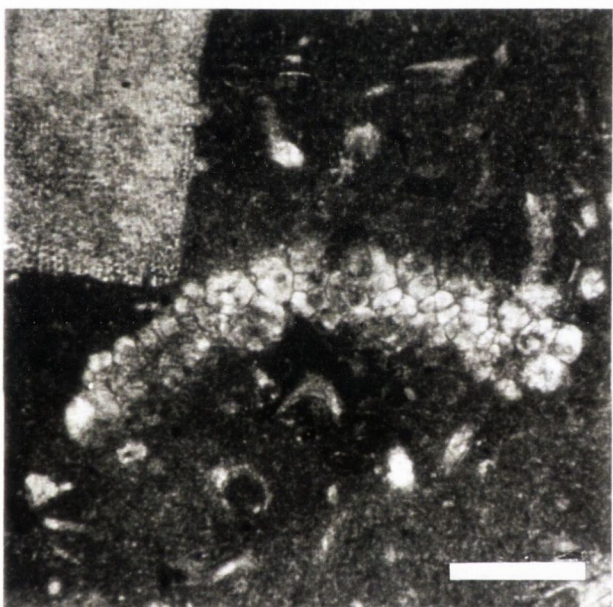
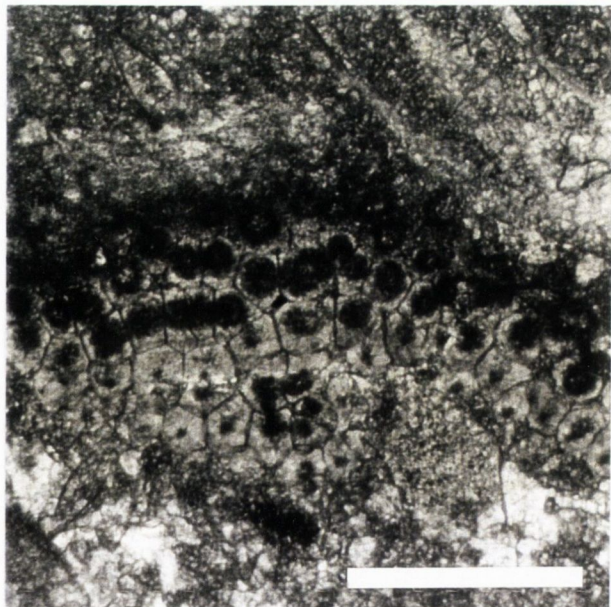
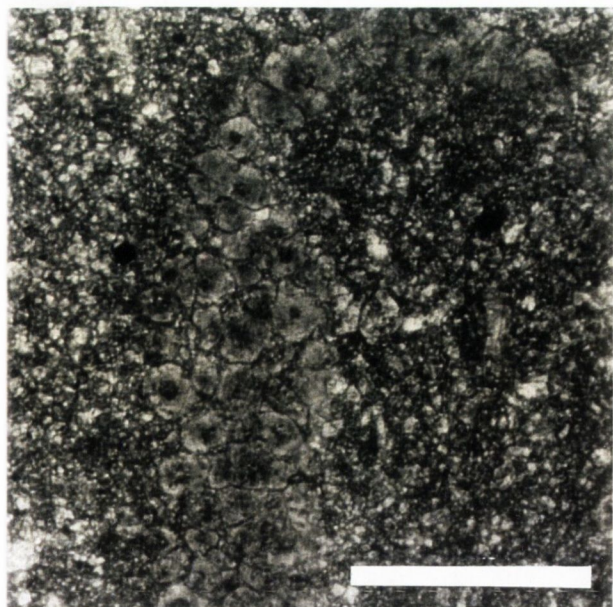


PLATE 5.9

Worm tubes, aoujgaliids and *Rectangulina*

Figure 1 (M19/S14): *Trypanopora*-like serpulid worm tube.

Figure 2 (M20/S6): Aoujgaliid set in microspar matrix. Characteristic cylindrical shape with concentric arrangement of square or rectangular cells.

Figure 3 (M20/S5): Aoujgaliid.

Figure 4 (M20/S12): Aoujgaliid. Lemon-shaped skeleton with more rectangular outer cells. Lighter-coloured cell walls are calcareous, internal cavities are mud-filled.

Figure 5 (M20/S5): Aoujgaliid set within a muddy matrix. Internal muds correspond to those observed within the matrix.

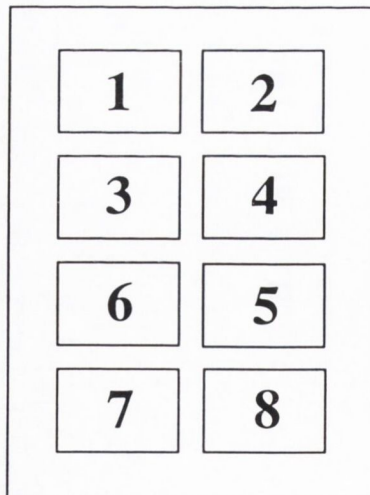
Figure 6 (M17/S16): *Rectangulina*. Internal structure characterised by lighter-coloured lamellae/tubes arranged in a parallel fashion.

Figure 7 (M16/S18): *Rectangulina*. Sub-rectangular body characterised by an optically dense micritic matrix.

Figure 8 (M19/S18): *Rectangulina*. Sub-parallel internal tubes contain similar sediments to those observed within the surrounding matrix.

(All scale bars equal 400 microns, except 7, which equal 200 microns)

Plate Layout:



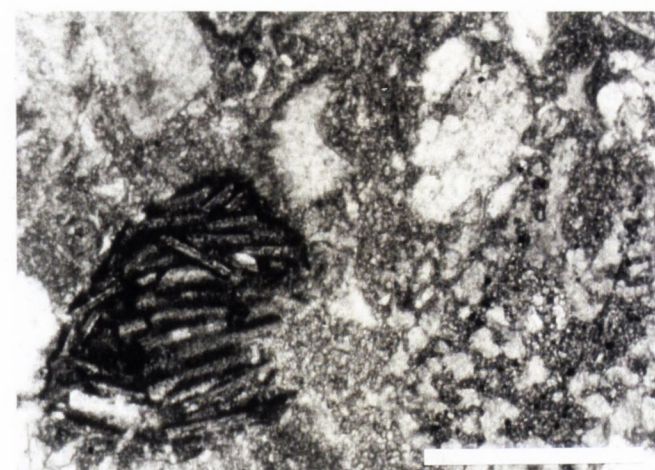
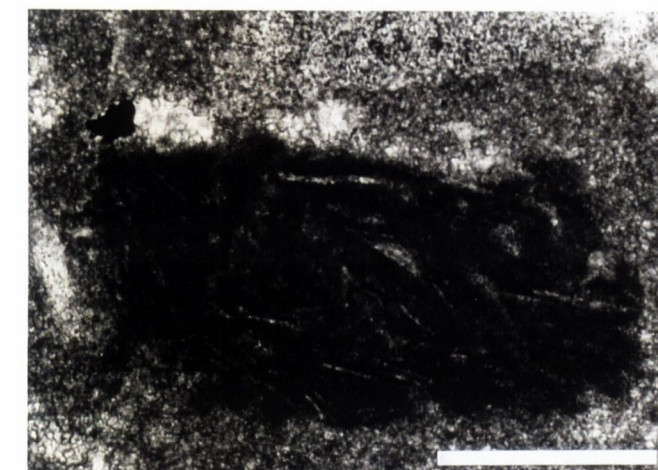
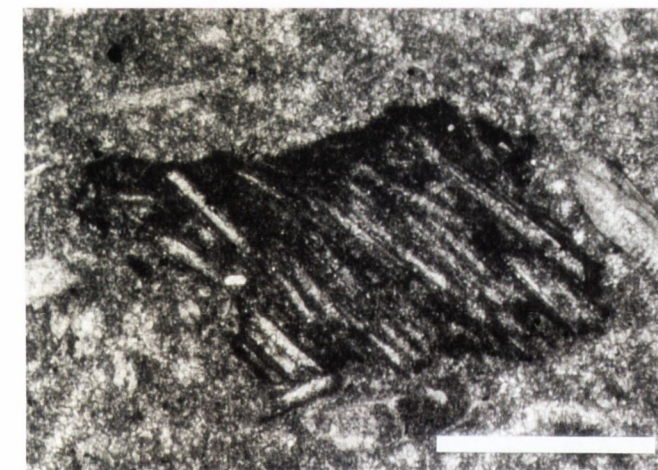
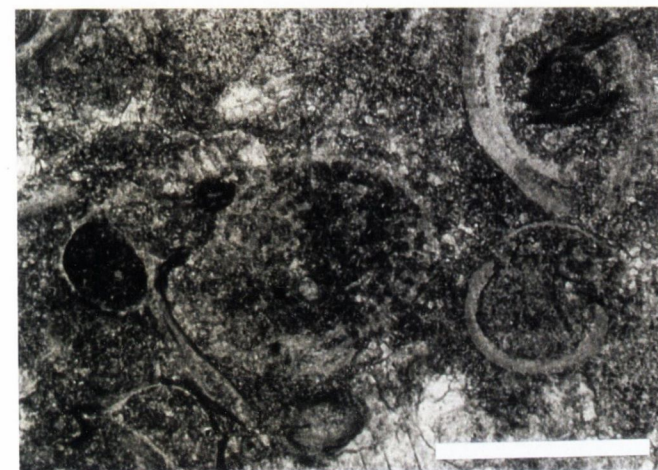
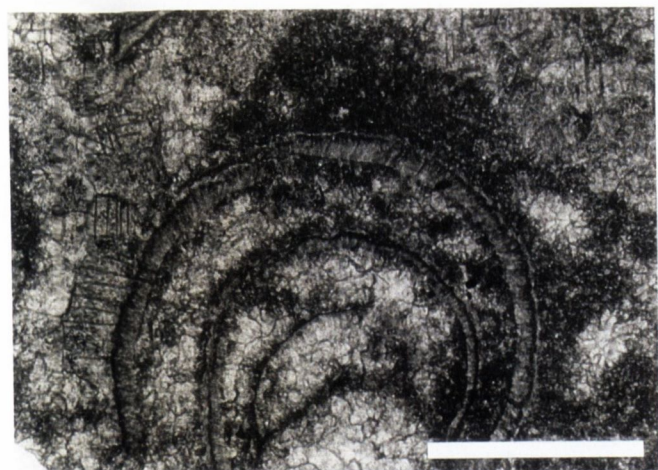


PLATE 5.10

Salebrids, *Sphaerinvia* and *Asphaltina*

Figure 1 (M20/S16): Salebrid set within a sparry matrix. Longitudinal section showing sub-parallel arrangement of optically dense, microcrystalline, calcareous tubelets.

Figure 2 (M20/S5): Salebrid set within a muddy matrix. Longitudinal section with spar-filled tubelets..

Figure 3 (M19/S15): *Sphaerinvia*. Regularly spaced septa radiate outwards from the dark inner layer into the outer wall. Spar-filled central cavity.

Figure 4 (M19/S14): *Sphaerinvia* with characteristically thick, fibrous, lamellar outer wall.

Figure 5 (M17/S3): *Sphaerinvia* in detail. The inner layer is often incomplete, providing a functional aperture to the central chamber. This has become infilled with muds similar to those observed within the surrounding matrix.

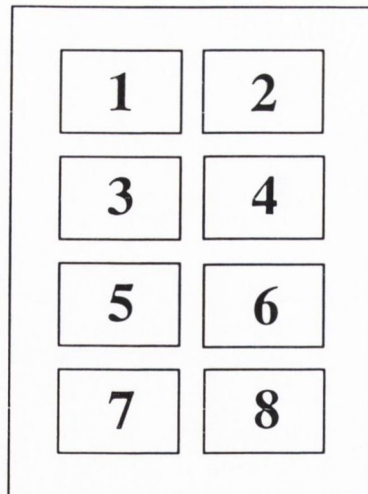
Figure 6 (M16/S2): *Asphaltina*. Irregularly-shaped mud-filled tubes encrusting one another.

Figure 7 (M19/S5): *Asphaltina* with relatively thick calcareous tube walls developed.

Figure 8 (M20/S20): *Asphaltina*.

(All scale bars equal 400 microns, except 4 and 5, which equal 200 microns)

Plate Layout:



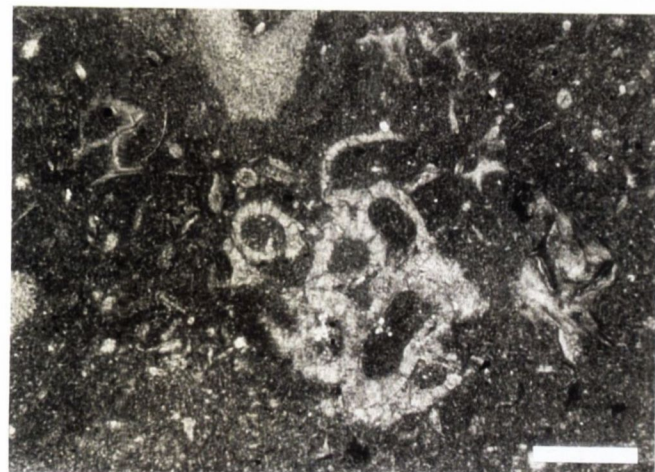
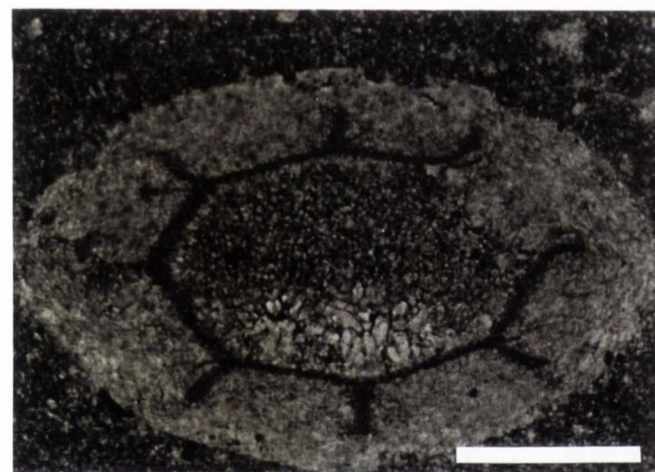


PLATE 5.11

Calcispheres and microproblematica

Figure 1 (M20/S23): *Mendipsia leesi*. Mud-filled calcisphere consisting of an optically dense calcitic test which exhibits a characteristic radial wall structure.

Figure 2 (M19/S20): Spar-filled *Mendipsia leesi* containing large triangular dolomite crystal.

Figure 3 (M19/S18): Spar-filled *Mendipsia leesi*.

Figure 4 (M19/S12): Problematicum 1. Hollow, calcareous, articulated bone-shaped segments with a thin, darker outer wall.

Figure 5 (M17/S17): Problematicum 1. Hollow, disarticulated, bone-shaped segments with characteristic bulbous tips.

Figure 6 (M20/S5): Problematicum 2. Encrusting array of monolayered laminar walls composed of microcrystalline calcite.

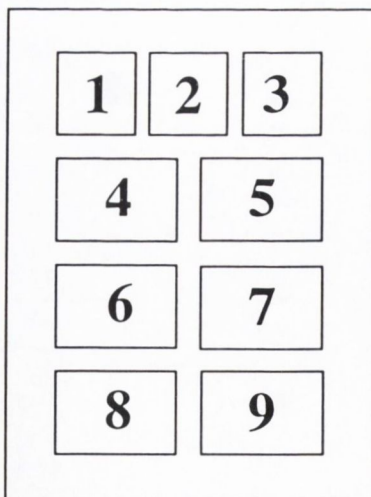
Figure 7 (M20/S21): Problematicum 2. Outer tubelets are smaller than the inner ones.

Figure 8 (M19/S14): Unidentified microproblematicum composed of diamond-shaped calcite crystals which exhibit a sweeping undulose extinction (observed in cross-polarised light).

Figure 9 (M20/S22): Unidentified microproblematicum. Bilayered calcareous outer wall.

(All scale bars equal 400 microns, except 1, 2 and 3, which equal 200 microns)

Plate Layout:



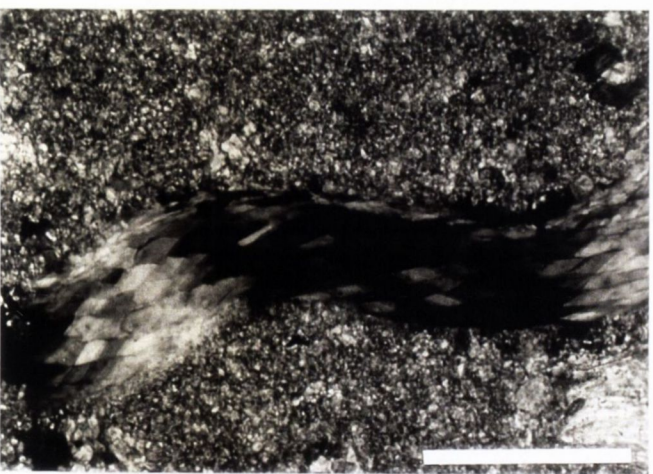
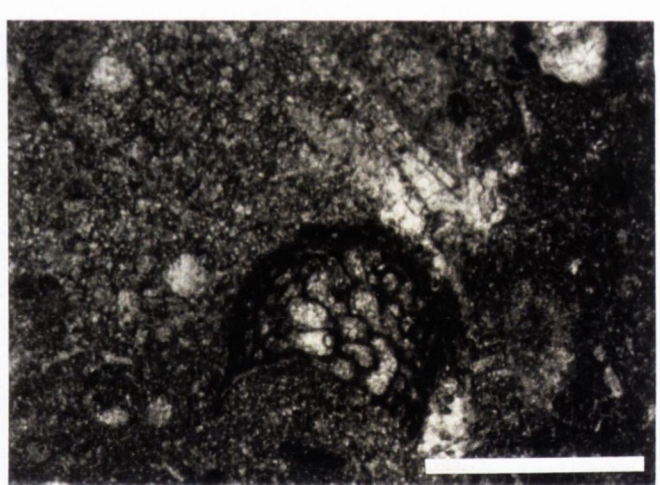
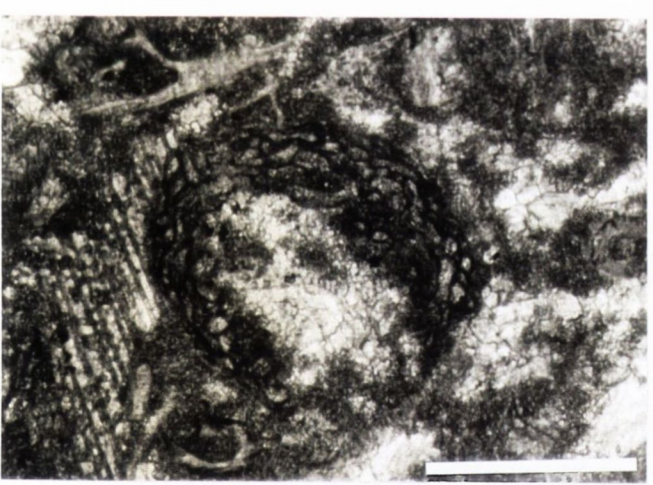
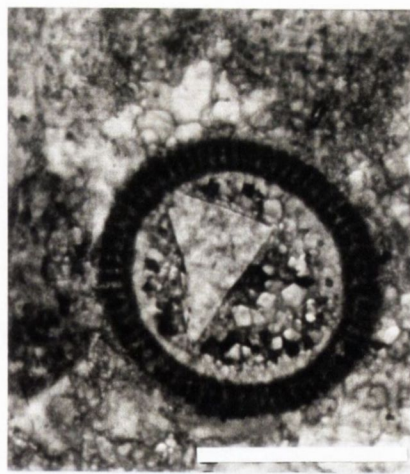


PLATE 5.12

Intraclasts and peloids

Figure 1 (M19/S7): Optically denser intraclast, containing abundant broken fenestrate bryozoan debris, set within a lighter coloured less bioclastic matrix.

Figure 2 (M20/S7): Sub-angular wackestone intraclast containing abundant broken bryozoan material. Lower left portion of intraclast consists of a large broken crinoid ossicle. Intraclast contained within a relatively unfossiliferous mudstone matrix.

Figure 3 (M16/S6): Well-defined cavity (geopetal) peloids set within a largely microsparitic matrix.

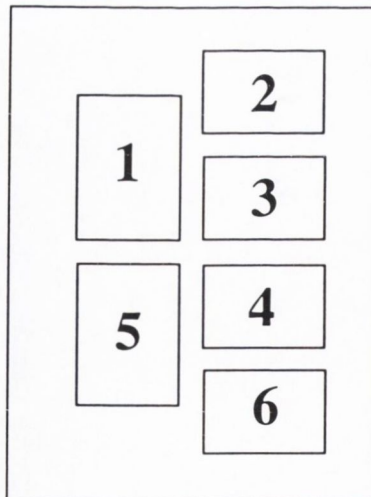
Figure 4 (M17/S14): Well-defined cavity (geopetal) peloids, some of which have a characteristic sub-quadrangle shape.

Figure 5 (M16/S4): Less well-defined matrix peloids.

Figure 6 (M16/S1): Well-defined cavity (geopetal) peloids with signs of micritization. Set within successively micritized, cavity-filling, sparry cements.

(All scale bars equal 400 microns, except 5, which equals 2000 microns)

Plate Layout:



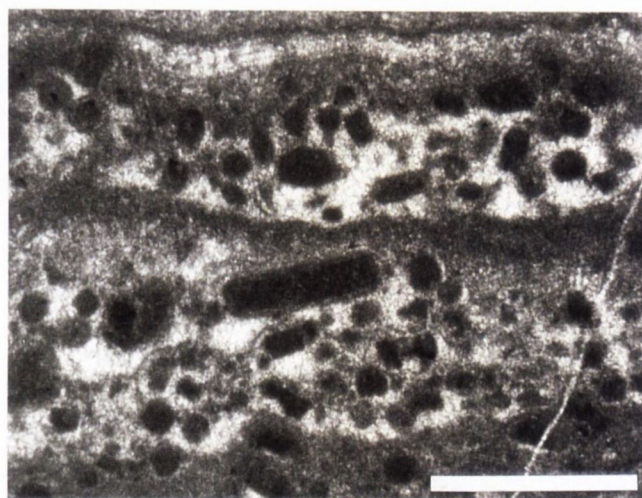
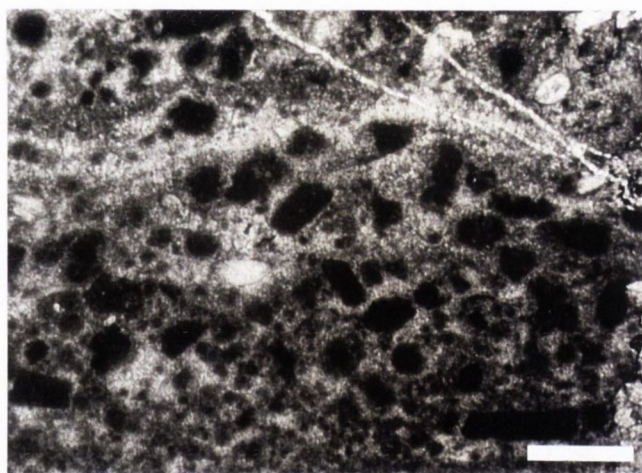
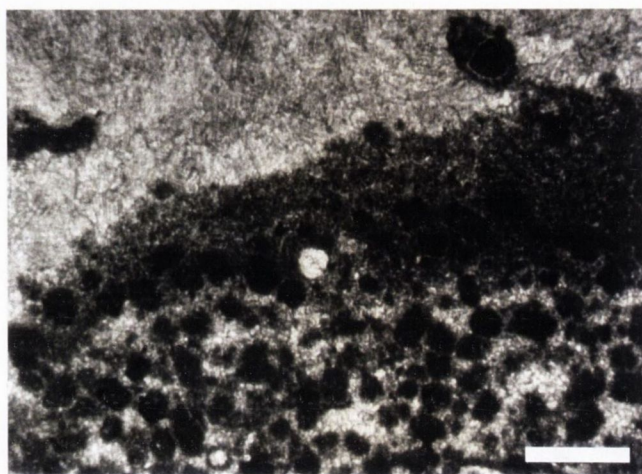
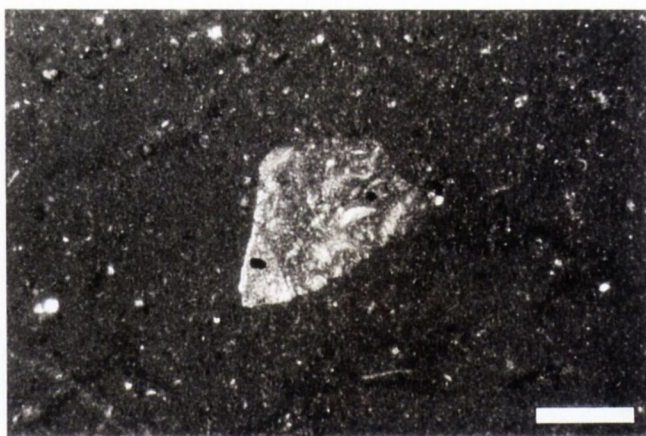
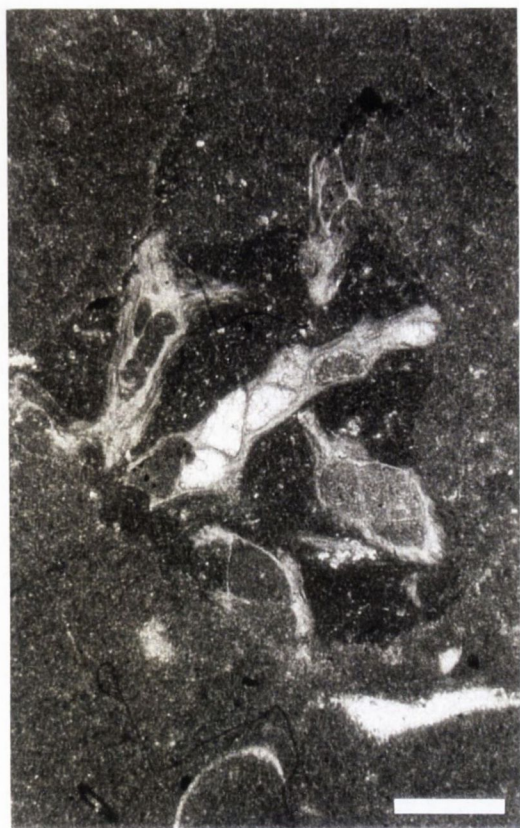


PLATE 5.13

Micritization

Figure 1 (M16/S1): Micritized cements in detail.

Figure 2 (M16/S1): Characteristic fabric showing the successive micritization of cavity-filling cements. Micritization occurs most commonly within cavities.

Figure 3 (M16/S5): Micritization of grains, mainly fenestrate bryozoan fronds, present within a primary cavity space. Successive, infilling, cavity cements have also been micritized to varying degrees, reflected by the varying thicknesses of optically dense micritic fringes.

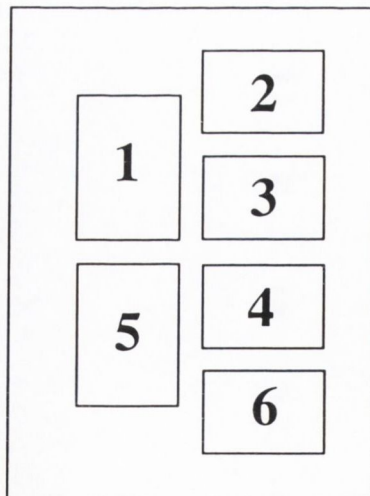
Figure 4 (M16/S3): Micritized grains (fenestrate bryozoan fronds) within successively micritized cavity-filling cements.

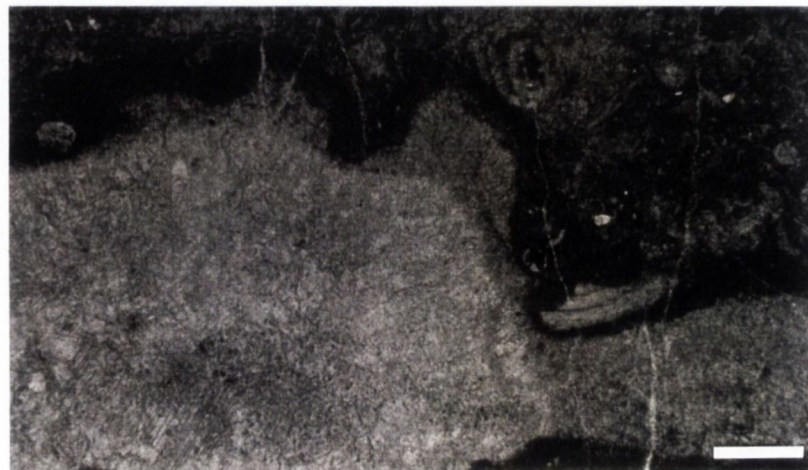
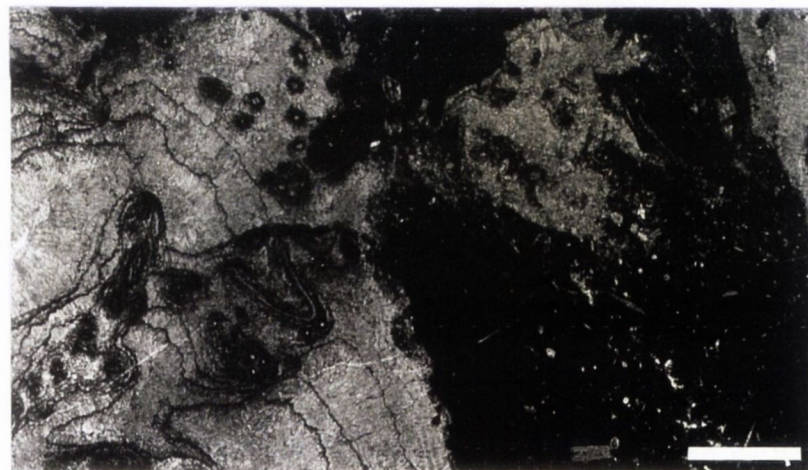
Figure 5 (M16/S16): Micritized cavity cements within a brachiopod shell-supported cavity.

Figure 6 (M16/S4): Micritized cavity walls.

(All scale bars equal 400 microns, except 2, 3 and 4, which equal 3000 microns)

Plate Layout:





PLATES 6.1-6.6

Macrofauna (Mullawornia)

Plate 6.1 (Locality 405): A wide range of crinoidal material is present, more commonly as disarticulated ossicles, but also including longer stem sections (pluricolumnals). These generally show a random orientation with respect to slope geometry, implying little downslope movement.

Plate 6.2 (Locality 42): Crinoid calyx (larger circle, upper right) and component parts aligned along a 'bedding' surface in an otherwise massive mudstone. The style of preservation suggests little transport by currents, and either rapid post-mortem burial in muds or possibly trapping and binding of the skeletal material within a gelatinous surficial biofilm prior to later burial.

Plate 6.3 (Canal Locality): Typical brachiopod geopetal (upper right). The lower portion of the shell has been filled by geopetal muds, whilst the remaining upper shell cavity has been filled by later void-filling calcite spar. The pen marks the inclination of 'bedding', whilst the level of the mud within the shell records the 'palaeohorizontal'. The difference between the two gives the angle of the original depositional slope.

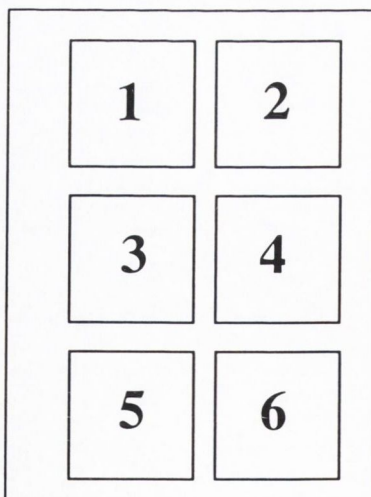
Plate 6.4 (Locality 90): Large vertically embedded cephalopod preserved on a steep primary depositional slope (45°) within the prograding marginal facies.

Plate 6.5 (Locality 300): Typical orthoconic nautiloid with spar-filled internal septa.

Plate 6.6 (Canal Locality): Typical horn-shaped solitary coral (*Zaphrentites* sp.).

(Pen length = 14 cm, cap = 4 cm)

Plate Layout:





PLATES 8.1 & 8.2

Macrofauna (Carrahane Strand & Fenit Island)

Plate 8.1 (upper photograph): Regularly spaced bryozoan-rich layers are a characteristic feature of the prograding marginal facies exposed at Carrahane Strand, Barrow, Co. Kerry. These layers are highlighted by the presence of anarchic, spar-filled, primary shelter cavities, which were formed beneath the long, unbroken, autochthonous, fenestrate bryozoan fronds. The proportions of the primary carbonate muds are greatly reduced within these layers, which appear to be laterally continuous over tens of metres.

Plate 8.2 (lower photograph): Randomly orientated crinoid stem sections (pluricolumnals) exposed on wave polished slabs along the western foreshore of Fenit Island (INGR Q 713 181). Individual stem sections are commonly associated with very localised clusters of more disarticulated ossicles and plates, which are considered to represent individual crinoid organisms which were disarticulated *in situ* and suffered minimal post-mortem movement prior to burial.

(Dimensions of notebook = 16 cm by 10 cm)



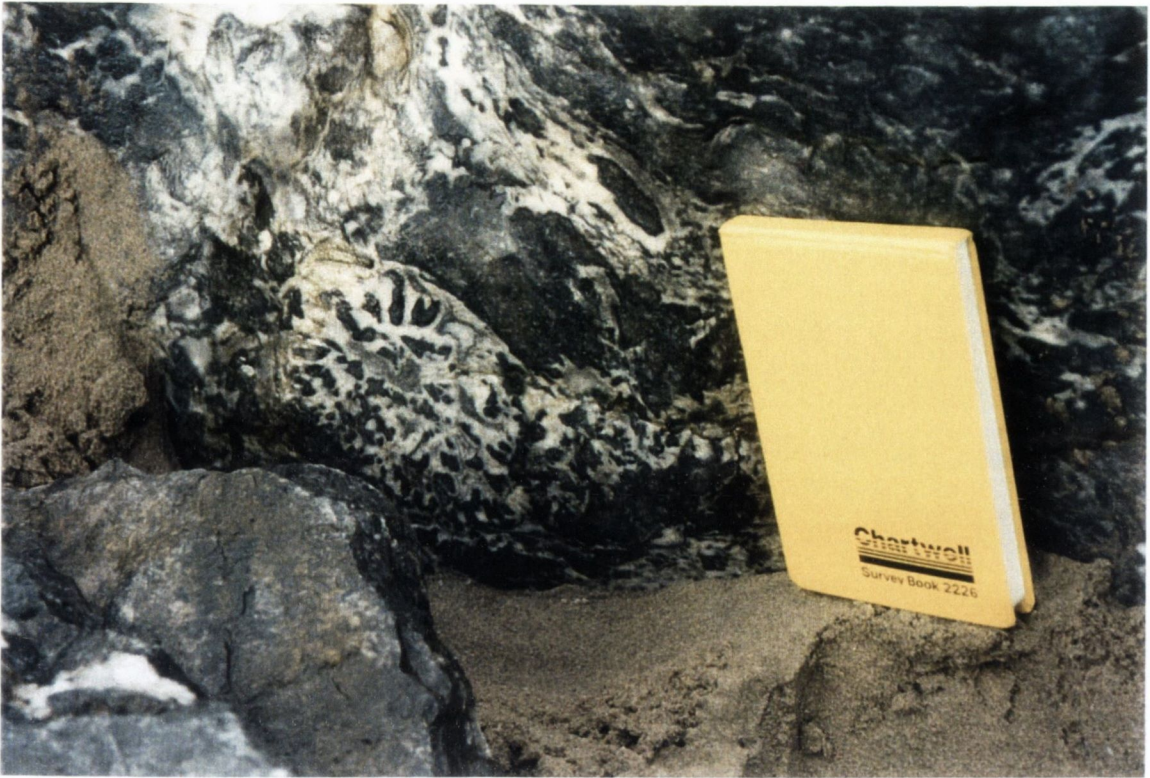
PLATES 8.3 & 8.4

Macrofauna (Carrahane Strand)

Plate 8.3 (upper photograph): Rare body fossil of a lithistid demosponge, exposed at high water mark at Carrahane Strand (INGR Q 733 188). The sponge body fossil is circular in outline, approximately 14 cm in diameter, and is preserved as a spar-filled radial channel network which encloses irregular patches of micrite. These internal micrites appear to be darker than the surrounding matrix muds which enclosed the body fossil itself. They may have been generated *in situ* within the enclosed microenvironment of the sponge body, by the bacterially-mediated calcification of the sponge body tissues.

Plate 8.4 (lower photograph): Lithistid demosponge body fossil set within a bryozoan-rich horizon exposed at high water mark at Carrahane Strand (INGR Q 729 186). The upper part of the sponge shows the characteristic spar-filled radial network, but this is less clear in the lower part, which has become partially infilled with carbonate mud.

(Dimensions of notebook = 16 cm by 10 cm)



PLATES 8.5 & 8.6

Macrofauna (Fenit Island) & laminar sheet spars (East Camp)

Plate 8.5 (upper photograph): Colonial tabulate coral (*Syringopora* sp.) observed within bank facies limestones exposed along the western foreshore of Fenit Island (INGR Q 729 186). The colony is over a metre in diameter and was preserved in life position.

Plate 8.6 (lower photograph): Laminar sheet spars developed within relatively muddy bank facies limestones exposed at high water mark at the East Camp locality (INGR Q 710 105). Individual cavities are laterally continuous over several metres and are regularly-spaced, about 8 cm apart. They appear to have developed as vertical pull-apart structures in muds which lacked any appreciable skeletal reinforcement. The size and shape of many cavities suggests that they were enlarged by pore fluids prior to becoming infilled by radial fibrous calcite cements.

(Dimensions of notebook = 16 cm by 10 cm)



PLATES 8.7 & 8.8

Macrofauna (West Camp)

Plate 8.7 (upper photograph): Characteristic development of anarchic cavities at the West Camp Locality (INGR Q 693 105). The cavities which appear darker, in the lower part of the exposure, are filled with early radiaxial fibrous calcite marine cements. The brighter cavities, in the upper part of the photograph, are filled with later coarse blocky calcite burial cements, and appear to contain partially degraded sponge body material.

Plate 8.8 (lower photograph): Vertically embedded cephalopod (*Vestinautilus* sp.) observed on a wave-polished bedding surface exposed at the West Camp locality. *Vestinautilus* was characterised by a relatively broad venter, which may have helped this particular species to remain upright, as recorded at Mullawornia.

(Dimensions of notebook = 16 cm by 10 cm)

