



Geological Survey of Victoria



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PALYNOLOGY OF THE EASTERN
OTWAY BASIN

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INTRODUCTION

This compilation of the results of palynological investigations was begun by S. J. Tickell in 1989 as part of a geological study of the Port Campbell Embayment, later the eastern Otway Basin, by the Geological Survey of Victoria. It was extensively revised by C. Abele, with the help of G.J. Parker, in 1992 and 1993. Most of the data are from the Otway Basin east of longitude 142°30', including the Torquay Basin (Fig. 1). The locations of the boreholes listed in this compilation are shown in Fig. 2, except for Dunnawalla 9 (691500E 5805250N), Geelengla 10 (686400E 5792800N), South Caramut (629454E 5792650N), Woolsthorpe 1 (631141E 5778072N) and Wangoom 6 (628049E 5749021N).

The main emphasis has been on biostratigraphic zonation, but there are also comments on depositional environments and other matters. The spore-pollen zones are after Helby et al. (1987) for the Mesozoic and after Partridge (1976a) for the Tertiary (Fig. 3). Conclusions expressed in terms of other zonation schemes have been converted as accurately as possible to these two schemes. When several workers have investigated samples from the same bore intervals, generally the more recent conclusions are given here.

Some of the spore-pollen zone and rock unit identifications are doubtful as indicated by question marks added by earlier workers. Question marks in brackets were added during the compilation of these results where additional discrepancies were noted between spore-pollen zone and rock unit determinations.

For onshore oil exploration wells, kelly bushing is the datum for all depths listed whereas for government wells ground level is the datum. In the case of offshore wells, the depths are relative to the drill floor.

Rock units (Fig. 3) are denoted as follows:

- Tmi - Gellibrand Marl
- Ton - Narrawaturk Marl
- Ted - Demons Bluff Formation
- Tem1 - upper sand unit, Mepunga Formation
- Tem2 - Brucknell Member
- Tem3 - lower sand unit, Mepunga Formation
- Tem4 - Sturgess Point Member
- Tae - Eastern View Formation
- Tad - Dilwyn Formation
- Tad1 - Pember Mudstone
- Tap - Pebble Point Formation
- Tam - Moomowroong Sand and Wiridjil Gravel
- Kup - Paaratte Formation
- Kun - Nullawarre Greensand
- Kub - Belfast Mudstone
- Kuf - Flaxman Formation
- Kuw - Waarre Formation
- Kl - Eumeralla Formation
- Klh - Pretty Hill Formation
- Klc - Casterton Formation

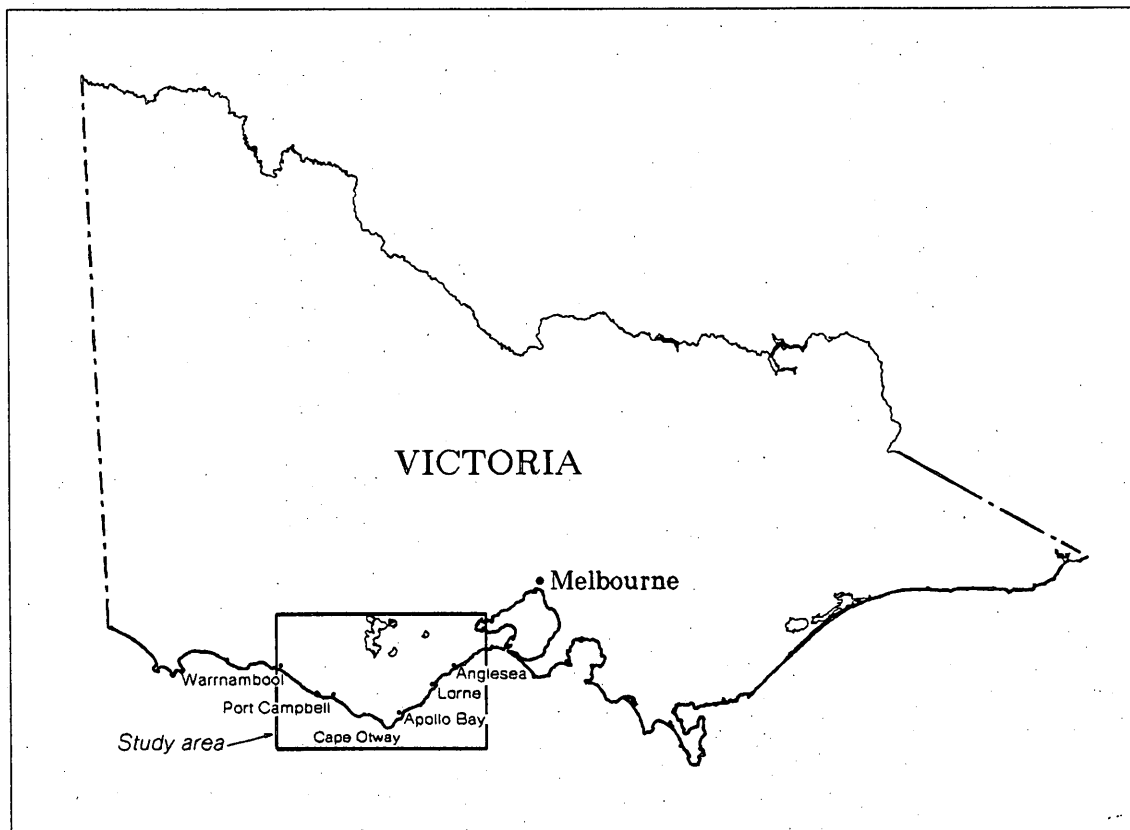


Figure 1 Location Map

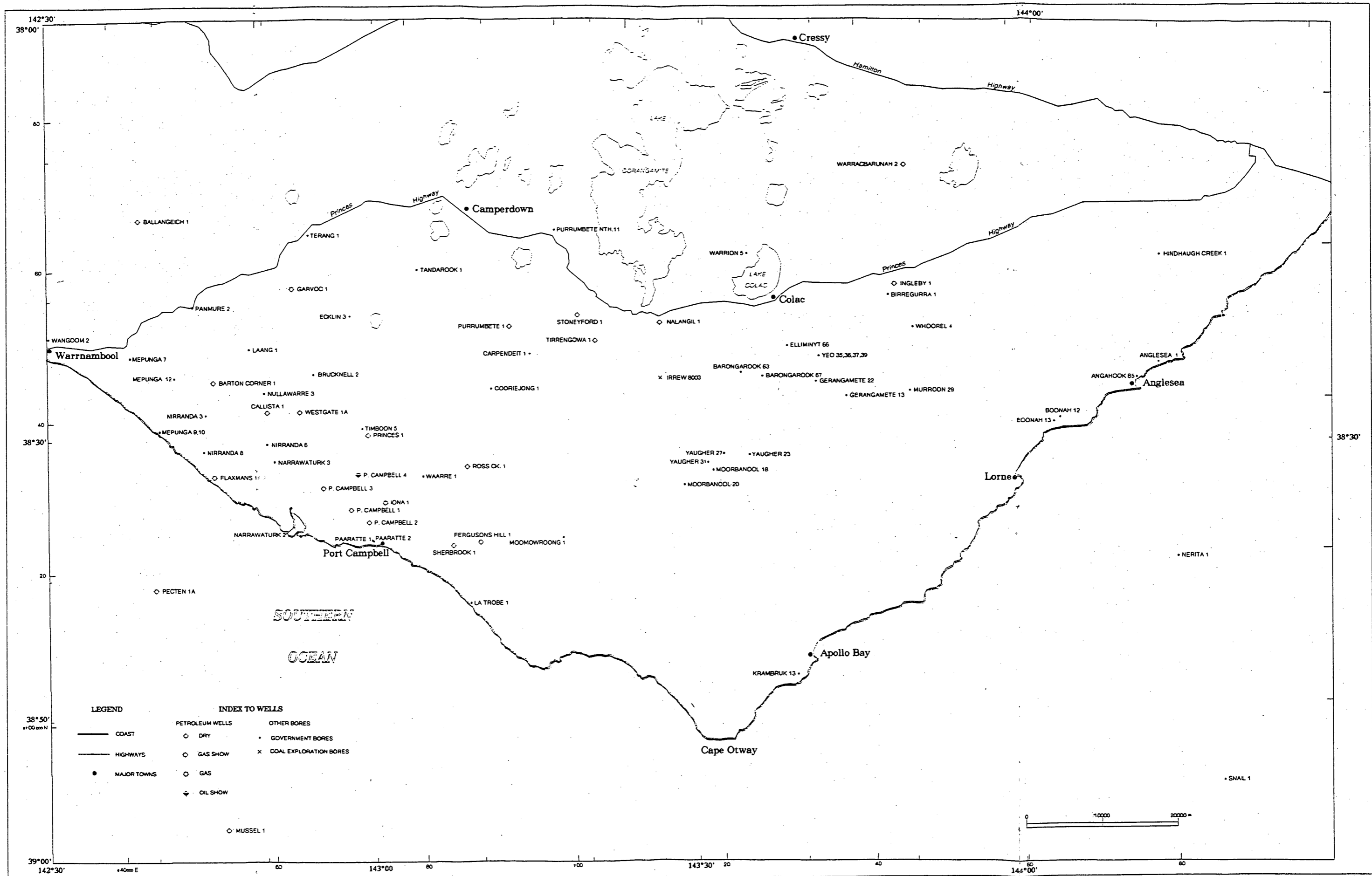


Figure 2 Well Location Map

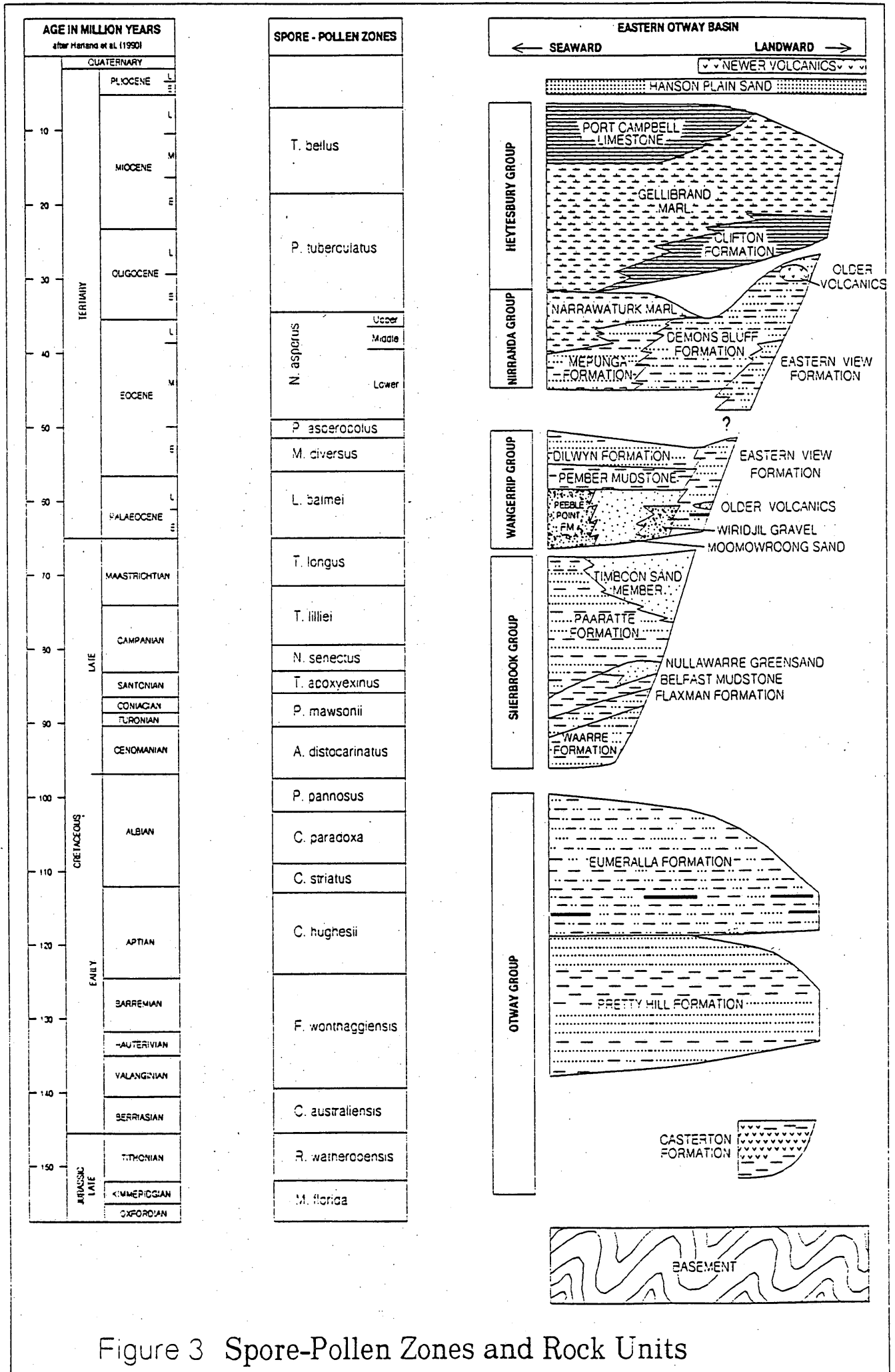


Figure 3 Spore-Pollen Zones and Rock Units

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
AIRE PARISH			OUTCROP	Upper <u>N. asperus</u>	Ton	Harris, 1971	Top of Browns Ck section, YC 080057
			OUTCROP	Middle <u>N. asperus</u>	Ted	Harris, 1971	<u>Turritella</u> clay bed, Browns Ck section, YC 080057
			OUTCROP	Lower <u>N. asperus</u>	Tad?	Harris, 1971	Top of gully section, Browns Ck, YC 081057
			OUTCROP	<u>M. diversus</u>	Tad	Morgan, 1990	YC 083053; marginal marine Johanna River Sand
			OUTCROP	Lower <u>N. asperus</u>	Ted	Morgan, 1990	YC 108044; Castle Cove, nearshore marine, Johanna River Sand
			OUTCROP	Lower to Middle <u>N. asperus</u> ?	Tad	Morgan, 1990	YC 106059; Great Ocean Road, Rotten Point Sand?
ANGAHOOK	85	20.3 20.4	CORE	Upper <u>N. asperus</u>	Tae	Archer, 1983	
ANGLESEA	1	149.4 155.4	CORE	no younger than Lower <u>N. asperus</u>	Tae	Morgan, 1987a; Partridge, 1993	
	1	240.5 246.6	CORE	no older than <u>P. asperopolus</u>	Tae	Macphail, 1989b; Partridge, 1993	
	1	332.2 338.3	CORE	upper <u>L. balmei</u>	Tae	Macphail, 1989b; Partridge, 1993	
	1	370.0 376.1	CORE	upper <u>L. balmei</u>	Tae	Macphail, 1989b; Partridge, 1993	

COMMENTS

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
ANGLESEA	1	459.0 465.1	CORE	lower <u>L. balmei</u>	Tae	Macphail, 1989b; Partridge, 1993	
	1	541.9 548.0	CORE	<u>T. lilliei</u>	Tae	Morgan, 1987a; Partridge, 1993	
	1	588.6 594.7	CORE	<u>C. striatus</u>	Kl	Morgan, 1987a; Partridge, 1993	
	1	678.2 684.3	CORE	<u>C. striatus</u>	Kl	Morgan, 1987a Partridge, 1993	
	1	779.4 782.4	CORE	<u>C. striatus</u>	Kl	Morgan, 1987a; Partridge, 1993	
	1	871.7 874.8	CORE	<u>C. striatus</u>	Kl	Morgan, 1987a; Partridge, 1993	
	1	962.6 965.6	CORE	<u>C. striatus</u>	Kl	Macphail, 1989b; Partridge, 1993	
	1	1222.6 1225.6	CORE	<u>C. striatus</u>	Kl	Macphail, 1989b; Partridge, 1993	
	1	1573.1 1576.1	CORE	<u>C. striatus</u>	Kl	Macphail, 1989b; Partridge, 1993	
	1	1901.0 1904.1	CORE	<u>C. hughesii</u>	Kl	Macphail, 1989b; Partridge, 1993	
	1	2299.4 2301.2	CORE	no older than <u>C. australiensis</u>	Kl	Macphail, 1989b; Partridge, 1993	
	1	2648.7 2653.9	CORE	no older than <u>C. australiensis</u>	Kl	Macphail, 1989b; Partridge, 1993	
	1	2790.1 2796.8	CORE	no older than <u>C. australiensis</u>	Kl	Macphail, 1989b; Partridge, 1993	

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
ANGLESEA	1	2938.6 2943.1	CORE	no older than <u>C. australiensis</u>	Kl	Macphail, 1989b; Partridge, 1993	
BALLANGRICH	1	3061.7 3067.8	CORE	no older than <u>C. australiensis</u>	Kl	Macphail, 1989b; Partridge, 1993	
	1	810.0	CUTTINGS	<u>C. striatus</u>	Kl	Islam, 1987	
	1	860.0	CUTTINGS	<u>C. hughesii</u>	Kl	Islam, 1987	
	1	865.0	CUTTINGS	<u>F. wonthaggiensis</u> (?)	Kl(?)	Islam, 1987	
	1	1200.0	CUTTINGS	<u>R. watheroensis</u>	Klc	Islam, 1987	
BARONGAROOK	63	24.0	CORE	<u>C. paradoxa</u>	Kl	Archer, 1993	
BARONGAROOK	67	92.0	CUTTINGS	<u>C. striatus</u>	Kl	Archer, 1993	
BARTON CORNER	1	1674.0	SWC	<u>A. distocarlinatus</u>	Kuw	Archer, 1985	
	1	1700.0	SWC	<u>P. pannosus</u> - lower <u>A. distocarlinatus</u>	Kl	Archer, 1985	
BIRREGURRA	1	239.6 239.9	OTHER	Middle <u>N. asperus</u>	Ton	Archer, 1993	
	1	306.6 311.5	CORE	<u>L. balmei</u>	Tae	Dettmann, 1969	
	1	331.9 335.9	CORE	upper <u>C. paradoxa</u>	Kl	Dettmann, 1969	
BOONAH	12	5.05 5.1	CORE	upper <u>L. balmei</u>	Tae	Archer, 1983	
BOONAH	13	14.9	CORE	upper <u>L. balmei</u>	Tae	Archer, 1983	

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
BRUCKNELL	2	491.8	CORE	Middle-Upper <u>N. asperus</u>	Ton	Archer, 1984	
	2	581.8	CORE	Middle <u>N. asperus</u>	Tem2	Archer, 1984	
	2	637.3	CORE	Lower <u>N. asperus</u>	Ted	Harris, 1989, 1991, 1992; marginal marine	
	2	682.1	CORE	<u>M. diversus</u>	Tad	Harris, 1989, 1991, 1992; marginal marine	
CALLISTA	1	930.0 940.0	CUTTINGS	<u>L. balmei</u>	Tap	Morgan, 1988a	nearshore marine
	1	940.0 970.0	CUTTINGS	<u>T. longus</u>	Kup	Morgan, 1988a	nearshore marine
	1	1665.0	SWC	lower <u>P. mawsonii</u>	Kuf	Morgan, 1988a	nearshore/offshore marine
	1	1689.0	SWC	lower <u>P. mawsonii</u>	Kuw	Morgan, 1988a	nearshore/offshore marine
	1	1715.0	SWC	lower <u>P. mawsonii</u>	Kuw	Morgan, 1988a	nearshore/offshore marine
	1	1734.0	SWC	<u>A. distocarinatus</u>	Kuw	Morgan, 1988a	nearshore marine
	1	1788.0	SWC		Kl	Morgan, 1988a	non-marine
CARPENDEIT	1	328.3 333.8	CORE		Ted	Dettmann, 1964e, 1969	Tertiary
	1	355.4 385.0	CORE	? <u>C. striatus</u>	Kl	Dettmann, 1964e, 1969	
	1	449.3 450.5	CORE	<u>C. striatus</u>	Kl	Dettmann, 1964e, 1969	
	1	493.8 518.8	CORE	<u>C. striatus</u>	Kl	Dettmann, 1964e, 1969	

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
COORIEJONG	1	290.2	CORE	Lower <u>N. asperus</u>	Tem4	Harris, 1989, 1991, 1992;	marginal marine
	1	328.9	CORE	<u>M. diversus</u>	Tad	Harris, 1989, 1991, 1992;	marginal marine
DUNNAWALLA	9	90.5 91.5	CORE	<u>M. diversus</u>	Tae	Archer, 1987	
ECKLIN	3	654.4	CORE	Lower <u>N. asperus</u>	Ted	Harris, 1989, 1991, 1992	marginal marine
	3	682.1	CORE	Lower <u>N. asperus</u>	Ted	Harris, 1989, 1991, 1992	marginal marine
ELLMINYT	66	27.4 30.5	CORE	Middle <u>N. asperus</u>	Ted	Archer, 1993	
	66	50.3 53.3	CORE	Lower ? <u>N. asperus</u>	Tae	Archer, 1993	
FERGUSONS HILL	1	473.7 479.8	CORE	<u>T. apoxyvexinus</u>	Kup	Dettmann, 1970	
	1	615.7 619.0	CORE	<u>P. mawsonii</u>	Kub	Dettmann, 1964d, 1970	
	1	739.7 742.8	CORE	<u>A. distocarinaratus</u>	Kuw	Dettmann, 1964d, 1970	
	1	742.8 746.5	CORE	<u>A. distocarinaratus</u>	Kuw	Dettmann, 1964d, 1969, 1970	
	1	946.4 948.2	CORE	? <u>P. pannosus</u>	K1	Dettmann, 1964d, 1969, 1970	
	1	1042.1 1045.5	CORE	<u>C. paradoxa</u>	K1	Dettmann, 1964d, 1969	Remanie fossils: Triassic
	1	1137.5 1143.6	CORE	<u>C. paradoxa</u>	K1	Dettmann, 1964d, 1969	

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
FERGUSONS HILL	1	1247.2 1253.3	CORE	<u>C. paradoxa</u>	K1	Dettmann, 1964d, 1969	
	1	1314.9 1321.0	CORE	<u>C. paradoxa</u>	K1	Dettmann, 1964d, 1969	
	1	1547.5 1553.6	CORE	<u>C. paradoxa</u>	K1	Dettmann, 1964d, 1969	
	1	1692.9 1697.4	CORE	<u>C. paradoxa</u>	K1	Dettmann, 1964d, 1969	Remanie fossils: Triassic
	1	1808.7 1813.6	CORE	<u>C. paradoxa</u>	K1	Dettmann, 1964d, 1969	
	1	1951.6 1957.7	CORE	<u>C. paradoxa</u>	K1	Dettmann, 1964d, 1969	Remanie fossils: Triassic
	1	1998.0 2001.6	CORE	<u>C. paradoxa</u>	K1	Dettmann, 1964d, 1969	Remanie fossils: Permian
	1	2144.9 2147.9	CORE	<u>C. striatus</u>	K1	Dettmann, 1964d, 1969	
	1	2200.7 2203.7	CORE	<u>C. striatus</u>	K1	Dettmann, 1964d, 1969	
	1	2234.2 2238.8	CORE	<u>C. striatus</u>	K1	Dettmann, 1964d, 1969	
	1	2382.9 2387.2	CORE	upper <u>C. hughesii</u>	K1	Dettmann, 1964d, 1969	Remanie fossils: Permian
	1	2513.7 2517.6	CORE	upper <u>C. hughesii</u>	K1	Dettmann, 1964d, 1969	
	1	2669.4 2674.0	CORE	upper <u>C. hughesii</u>	K1	Dettmann, 1964d, 1969	

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
FERGUSONS HILL	1	2802.6 2807.5	CORE	upper <u>C. Hughesii</u>	K1	Dettmann, 1964d, 1969	
	1	2934.0 2935.5	CORE	upper <u>C. Hughesii</u>	K1	Dettmann, 1964d, 1969	
	1	3076.0 3077.3	CORE	<u>C. Hughesii</u>	K1	Dettmann, 1964d, 1969	
	1	3223.0 3227.2	CORE	<u>C. Hughesii</u>	K1	Dettmann, 1964d, 1969	
	1	3249.2 3251.6	CORE	<u>C. Hughesii</u>	K1	Dettmann, 1964d, 1969	
	1	3377.2 3381.5	CORE	<u>C. Hughesii</u>	K1	Dettmann, 1964d, 1969	
	1	3480.5 3484.5	CORE	<u>C. Hughesii</u>	K1	Dettmann, 1964d, 1969	
	1	3486.3	SWC	<u>C. Hughesii</u>	K1	Dettmann, 1964d, 1969	
FLAXMANS	1	1085.3 1089.0	CORE	<u>L. balmei</u> (?)	Kup(?)	Dettmann, 1964b, 1970	
	1	1257.5 1260.0	CORE	<u>N. senectus</u>	Kup	Morgan, 1986	
	1	1365.1 1370.3	OTHER	<u>N. senectus</u>	Kup	Morgan, 1986	
	1	1428.5 1431.0	CORE	<u>N. senectus</u>	Kup	Morgan, 1986	
	1	1431.0 1436.8	CORE	<u>N. senectus</u>	Kup	Morgan, 1986	

COMMENTS

REFERENCE

ROCK UNIT

SPORE-POLLEN ZONE

SAMPLE TYPE

SAMPLE DEPTH FROM/TO (m)

BORE NO.

PARISH/BOREHOLE

PARISH/BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
FLAXMANS	1	1516.0	CORE	<u>N. senectus</u>	Kup	Morgan, 1986	
		1518.7					
	1	1518.7	CORE	upper	Kup	Morgan, 1986	
		1521.8		<u>T. apoxyvexinus</u>			
	1	1624.5	CORE	upper	Kup	Morgan, 1986	
		1626.3		<u>T. apoxyvexinus</u>			
	1	1633.0	CORE	upper	Kup	Morgan, 1986	
		1638.5		<u>T. apoxyvexinus</u>			
	1	1638.5	CORE	upper	Kup	Morgan, 1986	
		1644.6		<u>T. apoxyvexinus</u>			
	1	1663.6	CORE	upper	Kup	Morgan, 1986	
		1665.1		<u>T. apoxyvexinus</u>			
	1	1685.8	CORE	upper	Kub	Morgan, 1986	
		1688.3		<u>T. apoxyvexinus</u>			
	1	1689.5	CORE	upper	Kub	Morgan, 1986	
		1690.4		<u>T. apoxyvexinus</u>			
	1	1813.6	CORE	upper	Kub	Morgan, 1986	
		1819.7		<u>T. apoxyvexinus</u>			
	1	1944.9	CORE	lower	Kub	Morgan 1986	
				<u>T. apoxyvexinus</u>			
	1	1946.1	CORE	<u>P. mawsonii</u>	Kub	Morgan, 1986	
		1948.0					
	1	2013.5	CORE	<u>P. mawsonii</u>	Kuf	Morgan, 1986	
		2016.6					
	1	2019.6	CORE	<u>P. mawsonii</u>	Kuf	Morgan, 1986	
		2022.7					

COMMENTS

REFERENCE

ROCK

SPORE-POLLEN

SAMPLE

DEPTH

BORE

PARISH/

BOREHOLE	BORE NO.	FROM/TO (m)	DEPTH	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
FLAXMANS	1	2082.4 2096.1		CORE	<u>P. mawsonii</u>	Kuf	Morgan, 1986	
	1	2103.7 2107.1		CORE	<u>A. distocarinatus</u>	Kuw	Morgan, 1986	
	1	2128.1 2133.6		CORE	<u>A. distocarinatus</u>	Kuw	Morgan, 1986	
	1	2198.2 2200.7		CORE	<u>A. distocarinatus</u>	Kuw	Morgan, 1986	
	1	2277.8 2283.9		CORE	upper <u>C. paradoxa</u>	Kl	Morgan, 1986	
	1	2331.1 2336.6		CORE	upper <u>C. paradoxa</u>	Kl	Morgan, 1986	
	1	2396.9 2398.8		CORE	upper <u>C. paradoxa</u>	Kl	Morgan, 1986	
	1	2428.0 2431.7		CORE	upper <u>C. paradoxa</u>	Kl	Morgan, 1986	
	1	2480.8 2484.1		CORE	upper <u>C. paradoxa</u>	Kl	Morgan, 1986	
	1	2484.1 2487.5		CORE	upper <u>C. paradoxa</u>	Kl	Morgan, 1986	
	1	2581.7 2586.5		CORE	upper <u>C. paradoxa</u>	Kl	Morgan, 1986	
	1	2707.8 2711.5		CORE	upper <u>C. paradoxa</u>	Kl	Morgan, 1986	
	1	2780.7 2784.3		CORE	upper <u>C. paradoxa</u>	Kl	Morgan, 1986	

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
FLAXMANS	1	2895.3 2901.7	CORE	upper <u>C. paradoxa</u>	K1	Morgan, 1986	
	1	2978.5 2982.5	CORE	upper <u>C. paradoxa</u>	K1	Morgan, 1986	
	1	3085.2 3088.8	CORE	upper <u>C. paradoxa</u>	K1	Morgan, 1986	
	1	3198.0 3201.0	CORE	lower <u>C. paradoxa</u>	K1	Morgan, 1986	
	1	3292.1 3297.0	CORE	<u>C. striatus</u>	K1	Morgan, 1986	
	1	3379.3 3380.8	CORE	<u>C. striatus</u>	K1	Morgan, 1986	
	1	3421.4 3424.4	CORE	<u>C. striatus</u>	K1	Morgan, 1986	
	1	3510.4 3513.7	CORE	<u>C. striatus</u>	K1	Morgan, 1986	
GARYOC	1	1016.2	SWC	lower <u>C. paradoxa</u>	K1	Morgan, 1986	
	1	1081.7	SWC	upper <u>C. hughesii</u>	K1	Morgan, 1986	
	1	1110.1	SWC	lower <u>C. hughesii</u>	K1	Morgan, 1986	
	1	1147.0	SWC	lower <u>C. hughesii</u>	K1	Morgan, 1986	
	1	1200.9	SWC	lower <u>C. hughesii</u>	K1	Morgan, 1986	
	1	1242.4	SWC	lower <u>C. hughesii</u>	K1	Morgan, 1986	
	1	1275.3	SWC	lower <u>C. hughesii</u>	K1	Morgan, 1986	

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
GARYOC	1	1302.1	SWC	lower <u>C. hughesii</u>	K1	Morgan, 1986	
	1	1339.3	SWC	lower <u>C. hughesii</u>	K1	Morgan, 1986	
	1	1368.2	SWC	lower <u>C. hughesii</u>	K1h	Morgan, 1986	
	1	1486.8	SWC	<u>F. wonthaggiensis</u>	K1h	Morgan, 1986	
	1	1505.7	SWC	<u>F. wonthaggiensis</u>	K1h	Morgan, 1986	
	1	1513.0	SWC	<u>F. wonthaggiensis</u>	K1h	Morgan, 1986	
GEELENGLA	10	71.0 71.5	CORE	<u>P. tuberculatus</u>	Tmi	Archer, 1987	
GERANGAMETE	13	322.5 325.8	CORE	<u>N. asperus</u>	Ted	Harris, 1991	
	13	360.3 362.1	CORE	<u>N. asperus</u>	Ted	Harris, 1991	
	13	384.0 390.1	CORE	? <u>M. diversus</u>	Tae	Harris, 1991	? core misplaced
	13	451.7 454.2	CORE	<u>N. asperus</u>	Tae	Harris, 1991	
	13	486.8 488.9	CORE	? <u>M. diversus</u>	Tae	Harris, 1991	
GERANGAMETE	22	99.0 100.0	CUTTINGS	lower <u>L. balmei</u>	Tae	Archer, 1993	
	22	117.0 118.0	CUTTINGS	lower <u>L. balmei</u>	Tae	Archer, 1993	

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
HINDHAUGH CREEK	1	277.4 280.4	CUTTINGS	<u>C. striatus</u>	Kl	Macphail, 1989a	
	1	383.1	CORE	<u>C. striatus</u>	Kl	Macphail, 1989a	
	1	1117.2	CORE	<u>C. hughesii</u>	Kl	Macphail, 1989a	
	1	2237.2 2240.3	CUTTINGS	<u>C. hughesii</u>	Kl	Macphail, 1989a	
INGLEBY	1	2370.1	CORE	<u>C. hughesii</u>	Kl	Macphail, 1989a	
	1	75.0	SWC	<u>P. tuberculatus</u>	Tmi	Macphail, 1991b	restricted marine
	1	150.0	SWC	<u>P. tuberculatus</u>	Tmi	Macphail, 1991b	restricted marine
	1	164.0	SWC	Middle <u>N. asperus</u>	Ted	Macphail, 1991b	marginal marine
	1	244.0	SWC	Lower <u>N. asperus</u>	Ted	Macphail, 1991b	fluvio-lacustrine
	1	248.0	SWC	<u>C. paradoxa</u>	Kl	Macphail, 1991b	lacustrine
	1	313.0	SWC	<u>C. striatus</u>	Kl	Macphail, 1991b	lacustrine
IONA	1	331.0	SWC	Upper <u>N. asperus</u>	Tem4 (?)	Morgan, 1988b	nearshore marine; Middle and Lower <u>N. asperus</u> not seen; hiatus or condensed section likely.
	1	402.5	SWC	<u>P. asperopolus</u>	Tad	Morgan, 1988b	marginal marine
	1	543.0	SWC	upper <u>M. diversus</u>	Tad	Morgan, 1988b	nearshore marine, middle and lower <u>M. diversus</u> not seen, hiatus or condensed section probable.
	1	586.0	SWC	upper <u>L. balmei</u>	Tad1	Morgan, 1988b	marginal marine

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
NERITA	1	1822.7 1825.8	CUTTINGS	<u>C. striatus</u>	K1	Macphail, 1989c	
	1	1849.5	SWC	<u>C. striatus</u>	K1	Macphail, 1989c	
	1	1898.9 1902.0	CUTTINGS	<u>C. striatus</u>	K1	Macphail, 1989c	
NEWLINGROOK PARISH	1	1967.8	SWC	<u>C. australiensis</u> or younger	K1	Macphail, 1989c	
			OUTCROP	<u>L. balmei</u>	Tad1	Harris, 1991	road cutting, Gellibrand River Road; YC 129310
NIRRANDA	3	793.2	CORE	Lower <u>N. asperus</u>	Tem3	Harris, 1989, 1991, 1992	non-marine
	3	848.8	CORE	<u>M. diversus</u>	Tad	Harris, 1989, 1991, 1992	non-marine
	3	1024.4	CORE	<u>M. diversus</u>	Tad1	Harris, 1989, 1991, 1992	non-marine
	3	1076.9	CORE	<u>M. diversus</u> (?)	Kup(?)	Harris, 1989, 1991, 1992	non-marine
NIRRANDA	6	562.7	OTHER	<u>N. asperus</u>	Tem2	Archer, 1984	
	6	611.4	OTHER	Lower <u>N. asperus</u>	Tem3	Archer, 1984	
NIRRANDA	6	663.9	CORE	<u>M. diversus</u>	Tad	Harris, 1989, 1991, 1992	marginal marine
	6	937.7	CORE	<u>T. longus</u>	Tap	Harris, 1989, 1991, 1992	marginal marine
	6	942.0	CORE	<u>T. longus</u>	Kup	Harris, 1989, 1991, 1992	marginal marine
NIRRANDA	8	1137.0 1140.3	CORE	lower <u>L. balmei</u>	Tap	Morgan, 1992a	marginally marine
NULLAWARRE	3	738.5	CORE	<u>M. diversus</u> (?)	Tem3(?)	Harris, 1989, 1991, 1992	marginal marine
	3	798.6	CORE	<u>M. diversus</u>	Tad	Harris, 1989, 1991, 1992	marginal marine

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
NERITA	1	658.4 661.4	CUTTINGS	Middle <u>N. asperus</u>	Tae	Macphail, 1989c	
	1	765.0 768.1	CUTTINGS	lower <u>M. diversus</u>	Tae	Macphail, 1989c	
	1	817.5	SWC	lower <u>M. diversus</u>	Tae	Macphail, 1989c	<u>A. hyperacantha</u> dinoflagellate zone
	1	867.5	SWC	upper <u>L. balmei</u>	Tae	Macphail, 1989c	
	1	899.2 902.2	CUTTINGS	upper <u>L. balmei</u>	Tae	Macphail, 1989c	
	1	944.9 947.9	CUTTINGS	upper <u>L. balmei</u>	Tae	Macphail, 1989c	
	1	991.5	SWC	upper <u>L. balmei</u>	Tae	Macphail, 1989c	
	1	1076.2	SWC	lower <u>L. balmei</u>	Tae	Macphail, 1989c	
	1	1129.0	SWC	lower <u>L. balmei</u>	Tae	Macphail, 1989c	
	1	1178.7	SWC	lower <u>L. balmei</u>	Tae	Macphail, 1989c	
	1	1239.0	SWC	upper <u>T. longus</u>	Tae	Macphail, 1989c	
	1	1332.6	SWC	lower <u>T. longus</u>	Tae	Macphail, 1989c	
	1	1420.4	SWC	<u>T. lilliei</u>	Tae	Macphail, 1989c	
	1	1506.9	SWC	<u>C. striatus</u>	Kl	Macphail, 1989c	
	1	1611.5	SWC	<u>C. striatus</u>	Kl	Macphail, 1989c	
	1	1728.2 1731.3	CUTTINGS	<u>C. striatus</u>	Kl	Macphail, 1989c	

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
	1	288.5	SWC	Lower <u>N. asperus</u> ?	Ted	Macphail, 1991a	fluvio-lacustrine?
	1	291.0	SWC	<u>C. striatus</u>	Kl	Macphail, 1991a	lacustrine
	1	345.0	SWC	<u>C. striatus</u>	Kl	Macphail, 1991a	lacustrine
NARRAWATURK	2	705.9	CORE	Lower <u>N. asperus</u>	Tem3	Harris, 1989, 1991, 1992	marginal marine
	2	744.3	CORE	<u>M. diversus</u>	Tad	Harris, 1989, 1991, 1992	non-marine
	2	783.0	CORE	<u>M. diversus</u>	Tad	Harris, 1989, 1991, 1992	non-marine
	2	864.7	CORE	<u>M. diversus</u>	Tad	Harris, 1989, 1991, 1992	non-marine
	2	921.7	CORE	<u>M. diversus</u>	Tad	Harris, 1989, 1991, 1992	non-marine
	2	1041.8	CORE	<u>L. balmei</u>	Tap	Harris, 1989, 1991, 1992	non-marine
	2	1152.8	CORE	<u>T. longus</u>	Kup	Harris, 1989, 1991, 1992	marginal marine
	2	1368.2 1371.6	CORE	<u>N. senectus</u> - <u>T. lilliei</u>	Kup	Dettmann, 1970	
	2	1437.1 1441.7	CORE	<u>N. senectus</u> - <u>T. lilliei</u>	Kup	Dettmann, 1970	
	2	1515.8 1517.9	CORE	<u>N. senectus</u> - <u>T. lilliei</u>	Kup	Dettmann, 1970	
	2	1568.8 1569.7	CORE	<u>N. senectus</u> - <u>T. lilliei</u>	Kun	Dettmann, 1970	
	2	1623.7 1626.4	CORE	<u>N. senectus</u> - <u>T. lilliei</u>	Kun	Dettmann, 1970	
NARRAWATURK	3	637.6 643.7	CORE	upper <u>M. diversus</u>	Tad	Morgan, 1992a	nearshore marine

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
MUSSEL	1	1418.5	SWC	<u>T. lilliei-T. longus</u>	Kup	Morgan, 1986	
	1	1443.2	SWC	<u>T. lilliei-T. longus</u>	Kup	Morgan, 1986	
	1	1479.5	SWC	<u>T. lilliei-T. longus</u>	Kup	Morgan, 1986	
	1	1549.6	SWC	<u>N. senectus</u>	Kun	Morgan, 1986	
	1	1706.9	SWC	<u>N. senectus</u>	Kub	Morgan, 1986	
	1	1756.9	SWC	<u>N. senectus</u>	Kub	Morgan, 1986	
	1	1801.1	SWC	<u>N. senectus</u>	Kub	Morgan, 1986	
	1	1847.4	SWC	<u>N. senectus</u>	Kuf	Morgan, 1986	
	1	2030.0	SWC	upper <u>T. apoxyxinus?</u>	Kuf	Morgan, 1986	
	1	2100.4	CORE	<u>P. mawsonii</u>	Kuw	Morgan, 1986	
	1	2236.3 2237.8	CORE	<u>A. distocarinaratus</u>	Kuw	Morgan, 1986	
	1	2239.7	SWC	<u>A. distocarinaratus</u>	Kuw	Morgan, 1986	
	1	2243.3	SWC	<u>A. distocarinaratus</u>	Kuw	Morgan, 1986	
	1	2254.3	SWC	<u>A. distocarinaratus</u>	Kuw	Morgan, 1986	
NALANGIL	1	107.5	SWC	<u>T. bellus</u>	Tmi	Macphail, 1991a	restricted marine
	1	163.0	SWC	<u>P. tuberculatus</u>	Tmi	Macphail, 1991a	restricted marine
	1	202.0	SWC	Middle <u>N. asperus</u>	Ted	Macphail, 1991a	marginal marine
	1	236.0	SWC	Middle <u>N. asperus</u>	Ted	Macphail, 1991a	marginal marine
	1	261.0	SWC	Lower <u>N. asperus</u> ?	Ted	Macphail, 1991a	fluvio-lacustrine?

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
MEPUNGA	9	837.3	CORE	Lower <u>N. asperus</u>	Tem3	Harris, 1989, 1991, 1992	marginal marine
	9	894.0	CORE	<u>M. diversus</u>	Tad	Harris, 1989, 1991, 1992	non-marine
MEPUNGA	10	1233.1	CORE	<u>L. balmei</u>	Tap	Harris, 1989, 1991, 1992	non-marine
	10	1238.3	CORE	<u>T. longus</u>	Kup ?	Harris, 1989, 1991, 1992	marginal marine
MEPUNGA	12	1691.9 1695.3	CORE	<u>P. mawsonii</u>	Kub	Archer, 1993	
MOOMWROONG	1	87.0	CORE	<u>L. balmei</u>	Tam	Harris, 1991	
	1	162.0	CORE	<u>L. balmei</u>	Tam	Harris, 1991	
	1	201.0 203.0	CORE	upper <u>T. longus</u>	Kup	Morgan, 1989	marginal marine; <u>M. druggii</u> dinoflagellate zone
MOOMWROONG PARISH			OUTCROP	upper <u>L. balmei</u>	Tad1	Morgan, 1989	Gellibrand River Road, 009232; nearshore marine; <u>A. homomorphum</u> dinoflagellate zone
MOORBANOOL	18	116.6	CORE	<u>C. paradoxa</u>	K1	Archer, 1993	
MOORBANOOL	20	135.0	CORE	lower <u>C. paradoxa</u>	K1	Archer, 1993	
MURROON	29	139.0 140.0	CORE	Middle <u>N. asperus</u>	Tae	Archer, 1993	
MUSSEL	1	1265.5	SWC	upper <u>M. diversus</u>	Tad1	Morgan, 1986	
	1	1282.6	SWC	upper <u>M. diversus</u>	Tad1	Morgan 1986	
	1	1315.2	SWC	<u>T. lilliei-T. longus</u>	Kup	Morgan, 1986	
	1	1360.0	SWC	<u>T. lilliei-T. longus</u>	Kup	Morgan, 1986	
	1	1384.7	SWC	<u>T. lilliei-T. longus</u>	Kup	Morgan, 1986	

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
LA TROBE PARISH			OUTCROP	upper <u>M. diversus</u>	Tad	Harris, 1965	Locality No. S215, XC 884123
			OUTCROP	upper <u>M. diversus</u>	Tad	Harris, 1965	Locality No. S216, XC 884123
			OUTCROP	upper <u>M. diversus</u>	Tad	Harris, 1965	Locality No. S217, S218, XC 881128
			OUTCROP	lower <u>M. diversus</u>	Tad	McPhail, 1990	Cat Reef Point, lower carbonaceous unit, XC 928074
			OUTCROP	?	?	McPhail, 1990	Cat Reef Point, upper carbonaceous unit, XC 928074; Late Quaternary
MEPUNGA	7	657.0	CORE	Lower <u>N. asperus</u>	Tem3	Harris, 1989, 1991,	1992 marginal marine
	7	726.6	CORE	<u>M. diversus</u>	Tad	Harris, 1989, 1991,	1992 ? marginal marine
	7	790.0	CORE	<u>T. longus</u>	Tap	Harris, 1989, 1991,	1992 marginal marine
	7	919.6 922.0	CORE	<u>N. senectus</u> - <u>T. lilliei</u>	Kup	Dettmann, 1964e,	1970
	7	983.6 987.2	CORE	<u>T. apoxyxinus</u>	Kup	Dettmann, 1964e,	1970
	7	1040.3 1044.9	CORE	<u>T. apoxyxinus</u>	Kun	Dettmann, 1964e,	1970; Remanie fossils - <u>C. paradoxa</u> zone derivatives dinoflagellates
	7	1104.3 1110.4	CORE	<u>P. pannosus</u>	Kl	Dettmann, 1964e,	1970
	7	1175.9 1181.1	CORE	<u>C. paradoxa</u>	Kl	Dettmann, 1964e,	1969

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
LA TROBE	1	459.9 481.6	CORE	<u>T. lilliei</u>	Kup	Partridge, 1976b	
	1	495.9 497.1	CORE	<u>N. senectus</u> - <u>T. lilliei</u>	Kup	Dettmann, 1970	
	1	496.8 530.1	CORE	<u>N. senectus</u>	Kup	Partridge, 1976b	
	1	528.8 530.0	CORE	<u>T. apoxyvexinus</u>	Kup	Dettmann, 1970	
LA TROBE PARISH			OUTCROP	lower <u>M. diversus</u>	Tad	McPhail, 1990	Cat Reef Point, lower carbonaceous unit, XC 928074
			OUTCROP	?	?	McPhail, 1990	Cat Reef Point, upper carbonaceous unit, XC 928074; Late Quaternary
			OUTCROP	<u>L. balmei</u>	Tap	Harris, 1965	Locality No. S208, XC 903099
			OUTCROP	<u>L. balmei</u>	Tap	Harris, 1965	Locality No. S209, XC 903099
			OUTCROP	<u>L. balmei</u>	Tap	Harris, 1965	Locality No. S210, XC 900104
			OUTCROP	<u>L. balmei</u>	Tap	Harris, 1965	Locality No. S211, XC 900104
			OUTCROP	lower <u>M. diversus</u>	Tad1	Harris, 1965	Locality No. S212, Rivernook Member, XC 888118
			OUTCROP	lower <u>M. diversus</u>	Tad	Harris, 1965	Locality No. S213, XC 886122
			OUTCROP	upper <u>M. diversus</u>	Tad	Harris, 1965	Locality No. S214, Turritella Bed, XC 886122

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
LAANG	1	1076.6 1080.8	CORE	<u>N. senectus</u> - <u>T. lilliei</u>	Kun	Dettmann, 1969	
	1	1179.3 1180.8	CORE	<u>P. pannosus</u>	Kl	Dettmann, 1969	
	1	1228.6 1247.9	CORE	<u>C. paradoxo</u>	Kl	Dettmann, 1969	Remanie fossils - Permian
LA TROBE	1	61.0 62.5	CORE	Middle <u>N. asperus</u> (?)	Tem4(?)	Partridge, 1976b	
	1	67.4	CORE	Lower <u>N. asperus</u>	Tem4	Harris, 1989, 1991, 1992	marginal marine
	1	78.9	CORE	<u>M. diversus</u> (?)	Tad	Harris, 1989, 1991, 1992	marine
	1	86.0 98.8	CORE	<u>P. asperopolus</u> (?)	Tad	Partridge, 1976b	
	1	108.8	CORE	<u>M. diversus</u>	Tad	Harris, 1989, 1991, 1992	marginal marine
	1	123.1 225.6	CORE	upper <u>M. diversus</u>	Tad	Partridge, 1976b	
	1	242.0 313.3	CORE	lower <u>M. diversus</u>	Tad, Tad1	Partridge, 1976b	
	1	324.3 358.1	CORE	upper <u>L. balmei</u>	Tad1, Tap	Partridge, 1976b	
	1	380.4 420.6	CORE	lower <u>L. balmei</u>	Tap	Partridge, 1976b	
	1	420.8	CORE	<u>L. balmei</u>	Tap	Harris, 1989, 1991, 1992	? marginal marine
	1	426.7 434.3	CORE	? <u>T. longus</u>		Dettmann 1970	

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
IONA	1	1287.0	SWC	lower <u>P. mawsonii</u>	Kuf	Morgan, 1988b	very nearshore to offshore; <u>P. infusorioiodes</u> dinoflagellate zone
	1	1297.0	SWC	lower <u>P. mawsonii</u>	Kuf	Morgan, 1988b	very nearshore to offshore; <u>P. infusorioiodes</u> dinoflagellate zone
	1	1347.5	SWC	lower <u>P. mawsonii</u>	Kuw	Morgan, 1988b	very nearshore to offshore; reworked Permian, Triassic and Jurassic spores; <u>P. infusorioiodes</u> dinoflagellate zone
	1	1383.0	SWC	<u>P. pannosus</u>	K1	Morgan, 1988b	non-marine to slightly brackish
	1	1407.0	SWC	<u>P. pannosus</u>	K1	Morgan, 1988b	non-marine to slightly brackish
	1	1423.0	SWC	<u>P. pannosus</u>	K1	Morgan, 1988b	non-marine to slightly brackish
	1	1481.0	SWC	<u>P. pannosus</u>	K1	Morgan, 1988b	non-marine to slightly brackish
IRREWILLIPE	8003	43.0	CORE	Middle <u>N. asperus</u>	Ted	Archer, 1993	
KRAMBRUK	13	987.0	OTHER	upper <u>C. Hughesii</u>	K1	Dettmann, 1981	
	13	1093.0	OTHER	upper <u>C. Hughesii</u>	K1	Dettmann, 1981	
	13	1281.0	CORE	upper <u>C. Hughesii</u>	K1	Dettmann, 1981	
	13	1373.0	OTHER	upper <u>C. Hughesii</u>	K1	Dettmann, 1981	
LAANG	1	749.8	CORE	Lower <u>N. asperus</u>	Tem3	Harris, 1989, 1991, 1992	marginal marine
	1	802.5	CORE	<u>M. diversus</u>	Tad	Harris, 1989, 1991, 1992	marginal marine
	1	850.8	CORE	<u>M. diversus</u>	Tad	Harris, 1989, 1991, 1992	marginal marine

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
IONA	1	602.0	SWC	lower <u>L. balmei</u>	Tap	Morgan, 1988b	nearshore marine
	1	621.0	SWC	lower <u>L. balmei</u>	Tap	Morgan, 1988b	nearshore marine
	1	652.5	SWC	upper <u>T. longus</u>	Tap	Morgan, 1988b	marginal marine; <u>M. druggii</u> dinoflagellate zone
	1	659.5	SWC	upper <u>T. longus</u>	Kup	Morgan, 1988b	marginal marine; <u>M. druggii</u> dinoflagellate zone
	1	664.5	SWC	upper <u>T. longus</u>	Kup	Morgan, 1988b	marginal marine; <u>M. druggii</u> dinoflagellate zone
	1	704.0	SWC	lower <u>T. longus</u>	Kup	Morgan, 1988b	brackish
	1	772.0	SWC	<u>T. lilliei</u>	Kup	Morgan, 1988b	brackish
	1	858.0	SWC	<u>N. senectus</u>	Kup	Morgan, 1988b	nearshore marine
	1	942.0	SWC	<u>N. senectus</u>	Kup	Morgan, 1988b	nearshore marine
	1	1018.0	SWC	<u>N. senectus</u>	Kup	Morgan, 1988b	nearshore marine; <u>N. aceras</u> dinoflagellate zone
	1	1054.0	SWC	<u>N. senectus</u>	Kup	Morgan, 1988b	nearshore marine; <u>N. aceras</u> dinoflagellate zone
	1	1075.5	SWC	<u>T. apoxyxinus</u>	Kup	Morgan, 1988b	offshore marine; <u>N. aceras</u> dinoflagellate zone
	1	1240.0	SWC	<u>T. apoxyxinus</u>	Kub	Morgan, 1988b	offshore marine; <u>I. cretaceum</u> dinoflagellate zone
	1	1254.0	SWC	<u>T. apoxyxinus</u>	Kub	Morgan, 1988b	offshore marine; <u>I. cretaceum</u> dinoflagellate zone
	1	1276.5	SWC	upper <u>P. mawsonii</u>	Kuf	Morgan, 1988b	nearshore marine; <u>C. striatoconus</u> dinoflagellate zone

COMMENTS

REFERENCE

ROCK UNIT

SPORE-POLLEN ZONE

SAMPLE TYPE

BORE SAMPLE DEPTH FROM/TO (m)

BORE NO.

PARISH/BOREHOLE

PARISH/BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
PECTEN	1/1A	1579.5	SWC	<u>T. apoxyexinus</u>	Kun	Morgan, 1986	
	1/1A	1615.4	SWC	<u>T. apoxyexinus</u>	Kun	Morgan, 1986	
	1/1A	1645.3	SWC	<u>T. apoxyexinus</u>	Kub	Morgan, 1986	
	1/1A	1722.1	SWC	<u>T. apoxyexinus</u>	Kuf	Morgan, 1986	
	1/1A	1748.0	SWC	<u>P. mawsonii</u>	Kuf	Morgan, 1986	
	1/1A	1776.1	SWC	<u>A. distocarinitatus</u>	Kuw	Morgan, 1986	
	1/1A	1804.4	SWC	<u>P. pannosus</u>	Kl	Morgan, 1986	
	1/1A	1821.8	SWC	upper <u>C. paradoxa</u>	Kl	Morgan, 1986	
	1/1A	1832.8	SWC	upper <u>C. paradoxa</u>	Kl	Morgan, 1986	
	1/1A	1876.0	SWC	upper <u>C. paradoxa</u>	Kl	Morgan, 1986	
	1/1A	2195.8	SWC	upper <u>C. paradoxa</u>	Kl	Morgan, 1986	
	1/1A	2217.7	SWC	upper <u>C. paradoxa</u>	Kl	Morgan, 1986	
	1/1A	2255.2	SWC	upper <u>C. paradoxa</u>	Kl	Morgan, 1986	
	1/1A	2283.0	SWC	upper <u>C. paradoxa</u>	Kl	Morgan, 1986	
	1/1A	2301.9	SWC	upper <u>C. paradoxa</u>	Kl	Morgan, 1986	
	1/1A	2351.5	SWC	upper <u>C. paradoxa</u>	Kl	Morgan, 1986	
	1/1A	2414.0	SWC	upper <u>C. paradoxa</u>	Kl	Morgan, 1986	
	1/1A	2475.0	SWC	<u>C. striatus</u> - <u>C. paradoxa</u>	Kl	Dettmann, 1967, 1969	
	1/1A	2501.2	SWC	<u>C. striatus</u> - <u>C. paradoxa</u>	Kl	Dettmann, 1967, 1969	

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
PAARATTE	1	454.9	CORE	Lower <u>N. asperus</u>	Tem3	Harris, 1989, 1991, 1992	marginal marine
	1	486.5	CORE	<u>M. diversus</u>	Tad	Harris, 1989, 1991, 1992	marginal marine
PAARATTE	2	467.0	CORE	Lower <u>N. asperus</u>	Tem3	Archer, 1984	
PANMURE	2	717.2	CORE	<u>M. diversus</u> ?	Tem3	Harris, 1989, 1991, 1992	? marginal marine
	2	753.8	CORE	<u>T. longus</u> ?	Tad	Harris, 1989, 1991, 1992	
	2	790.3 792.8	CORE	? <u>T. apoxyexinus</u>	Tad	Dettmann, 1970	
PECTEN	1/1A	576.7	SWC	Lower <u>N. asperus</u>	Ton	Morgan, 1986	
	1/1A	802.2	SWC	upper <u>M. diversus</u>	Tad	Morgan, 1986	
	1/1A	999.7	SWC	upper <u>M. diversus</u>	Tad1	Morgan, 1986	
	1/1A	1017.4	SWC	lower <u>M. diversus</u>	Tad1	Morgan, 1986	
	1/1A	1024.7	SWC	lower <u>M. diversus</u>	?	Morgan, 1986	
	1/1A	1102.8	SWC	<u>L. balmei</u>	Tap	Morgan, 1986	
	1/1A	1126.2	SWC	<u>L. balmei</u>	Tap	Morgan, 1986	
	1/1A	1138.4	SWC	<u>T. lilliei-T. longus</u>	Tap	Morgan, 1986	
	1/1A	1369.5	SWC	<u>T. lilliei-T. longus</u>	Kup	Morgan, 1986	
	1/1A	1428.0	SWC	<u>N. senectus</u>	Kup	Morgan, 1986	
	1/1A	1458.5	SWC	<u>N. senectus</u>	Kup	Morgan, 1986	
	1/1A	1533.1	SWC	<u>N. senectus</u>	Kun	Morgan, 1986	
	1/1A	1547.8	SWC	<u>N. senectus</u>	Kun	Morgan, 1986	

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
PECTEN	1/1A	2539.9	SWC	<u>C. striatus</u> - <u>C. paradoxa</u>	Kl	Dettmann, 1967, 1969	
	1/1A	2604.8	SWC	<u>C. striatus</u>	Kl	Morgan, 1986	
	1/1A	2630.4	SWC	<u>C. striatus</u>	Kl	Morgan, 1986	
	1/1A	2642.6	SWC	<u>C. striatus</u>	Kl	Morgan, 1986	
	1/1A	2664.9	SWC	<u>C. striatus</u>	Kl	Morgan, 1986	
	1/1A	2704.5	SWC	<u>C. striatus</u>	Kl	Morgan, 1986	
	1/1A	2731.6	SWC	<u>C. striatus</u>	Kl	Morgan, 1986	
	1/1A	2783.4	SWC	<u>C. striatus</u>	Kl	Morgan, 1986	
	1/1A	2807.2	SWC		Kl	Morgan, 1986;	Cretaceous
	1/1A	2836.2	SWC		Kl	Morgan, 1986;	Cretaceous
PORT CAMPBELL	1	774.2	CORE	<u>L. balmei</u> - <u>M. diversus</u>	Tadl	Dettmann, 1970	
	1	888.8	CORE	<u>T. longus</u>	Kup	Harris, 1989, 1991, 1992	marginal marine
	1	1015.9	CORE	<u>N. senectus</u> - <u>T. lilliei</u>	Kup	Dettmann, 1970	
	1	1097.3	CORE	<u>N. senectus</u> - <u>T. lilliei</u>	Kup	Dettmann, 1970	
	1	1218.3	CORE	<u>N. senectus</u> - <u>T. lilliei</u>	Kup	Dettmann, 1970	
	1	1304.5	CORE	<u>N. senectus</u> - <u>T. lilliei</u>	Kup	Dettmann, 1970	
	1	1305.5	CORE	<u>N. senectus</u> - <u>T. lilliei</u>	Kup	Dettmann, 1970	

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
PORT CAMPBELL	1	1305.8 1308.5	CORE	<u>N. senectus</u> - <u>T. lilliei</u>	Kup	Dettmann, 1970	
	1	1377.1 1382.6	CORE	<u>T. apoxyexinus</u>	Kun	Dettmann, 1970	
	1	1449.0 1452.1	CORE	<u>T. apoxyexinus</u>	Kun	Dettmann, 1970	
	1	1481.9 1484.1	CORE	<u>T. apoxyexinus</u>	Kun	Dettmann, 1970	
	1	1529.5 1531.9	CORE	<u>T. apoxyexinus</u>	Kub	Dettmann, 1970	
	1	1531.9 1533.4	CORE	<u>T. apoxyexinus</u>	Kub	Dettmann, 1970	
	1	1592.0 1595.0	CORE	<u>T. apoxyexinus</u>	Kuf	Dettmann, 1970	
	1	1737.4 1742.8	CORE	<u>A. distocarinaratus</u>	Kuw	Dettmann, 1970	
	1	1808.1 1808.7	CORE	<u>A. distocarinaratus</u>	Kuw	Dettmann, 1970	
	2	1627.6 1628.5	CORE	<u>T. apoxyexinus</u>	Kup ?	Dettmann, 1970	
PORT CAMPBELL	2	1632.2 1634.0	CORE	<u>T. apoxyexinus</u>	Kup ?	Dettmann, 1970	
	2	1801.4 1804.1	CORE	<u>T. apoxyexinus</u>	Kub	Dettmann, 1970	
	2	2161.9 2165.0	CORE	<u>P. mawsonii</u>	Kub	Dettmann, 1970	

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
PORT CAMPBELL	2	2256.4 2258.3	CORE	<u>P. mawsonii</u>	Kub	Dettmann, 1964a, 1970	
	2	2340.9 2345.1	CORE	<u>P. mawsonii</u>	Kuf	Dettmann, 1964a, 1970	
	2	2403.3 2407.0	CORE	<u>P. mawsonii</u>	Kuf	Dettmann, 1964a, 1970	
	2	2409.1 2411.9	CORE	<u>P. mawsonii</u>	Kuf	Dettmann, 1964a, 1970	
	2	2411.9 2417.1	CORE	<u>P. mawsonii</u>	Kuf	Dettmann, 1964a, 1970	
	2	2467.7 2471.9	CORE	<u>A. distocarinatus</u>	Kuf	Dettmann, 1964a, 1970	
	2	2491.4 2495.7	CORE	<u>A. distocarinatus</u>	Kuw	Dettmann, 1964a, 1970	
	2	2531.7 2533.2	CORE	<u>A. distocarinatus</u>	Kuw	Dettmann, 1964a, 1970	
	2	2533.8 2535.6	CORE	<u>A. distocarinatus</u>	Kuw	Dettmann, 1964a, 1970	
	2	2541.7 2543.9	CORE	<u>A. distocarinatus</u>	Kuw	Dettmann, 1964a, 1970	
	2	2563.1 2565.8	CORE	<u>A. distocarinatus</u>	Kuw	Dettmann, 1964a, 1970	
	2	2607.9 2612.1	CORE	<u>P. pannosus</u>	Kl	Dettmann, 1964a, 1970	
2	2622.8 2628.6	CORE	<u>P. pannosus</u>	Kl	Dettmann, 1964a, 1970		

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
PORT CAMPBELL	3	1341.1 1344.2	CORE	<u>T. apoxyexinus</u>	Kun	Dettmann, 1964a, 1970	
	3	1425.2 1431.0	CORE	<u>A. distocarinhatus</u>	Kuw	Dettmann, 1964a, 1970	
	3	1457.2 1463.3	CORE	<u>A. distocarinhatus</u>	Kuw	Dettmann, 1964a, 1970	
	3	1684.3 1685.5	CORE	<u>C. paradoxa</u>	Kl	Dettmann, 1964a, 1970	
PORT CAMPBELL	4	881.5 888.0	CORE	<u>N. senectus</u> - <u>T. lilliei</u>	Kup	Dettmann, 1970	
	4	977.1 983.2	CORE	<u>N. senectus</u> - <u>T. lilliei</u>	Kup	Dettmann, 1970	
	4	983.2 989.0	CORE	<u>N. senectus</u> - <u>T. lilliei</u>	Kup	Dettmann, 1970	
	4	1072.2 1072.5	CORE	<u>N. senectus</u> - <u>T. lilliei</u>	Kup	Dettmann, 1970	
	4	1072.5 1077.7	CORE	<u>N. senectus</u> - <u>T. lilliei</u>	Kup	Dettmann, 1970	
	4	1164.6 1169.8	CORE	<u>N. senectus</u> - <u>T. lilliei</u>	Kup	Dettmann, 1970	
	4	1253.3 1259.4	CORE	<u>T. apoxyexinus</u>	Kun	Dettmann, 1970	
	4	1301.1 1307.2	CORE	<u>T. apoxyexinus</u>	Kun	Dettmann, 1970	
	4	1402.0 1404.4	CORE	<u>T. apoxyexinus</u>	Kub	Morgan, 1986	

COMMENTS

REFERENCE

ROCK UNIT

SPORE-POLLEN ZONE

SAMPLE TYPE

SAMPLE DEPTH FROM/TO (m)

BORE NO.

PARISH/ BOREHOLE

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
PORT CAMPBELL	4	1491.6 1497.7	CORE	<u>P. mawsonii</u>	Kuf	Morgan, 1986	
	4	1516.9 1519.3	CORE	<u>P. mawsonii</u>	Kuw	Morgan, 1986	
	4	1519.3 1525.4	CORE	<u>P. mawsonii</u>	Kuw	Morgan, 1986	
	4	1570.2 1574.8	CORE	<u>A. distocarينات</u>	Kuw	Dettmann, 1970	
	4	1755.3 1755.3	CORE	<u>P. pannosus</u>	Kl	Morgan, 1986	
	4	1850.1 1854.4	CORE	upper <u>C. paradoxa</u>	Kl	Dettmann, 1969	
	4	1937.0 1940.7	CORE	upper <u>C. paradoxa</u>	Kl	Dettmann, 1969	
	4	2030.0 2037.0	CORE	upper <u>C. paradoxa</u>	Kl	Dettmann, 1969	
	4	2189.4 2191.8	CORE	upper <u>C. paradoxa</u>	Kl	Dettmann, 1969	
	4	2343.9 2350.0	CORE	upper <u>C. paradoxa</u>	Kl	Dettmann, 1969	
	4	2404.6 2410.1	CORE	lower <u>C. paradoxa</u>	Kl	Dettmann, 1969	
	4	2410.1 2411.0	CORE	lower <u>C. paradoxa</u>	Kl	Dettmann, 1969	
	4	2523.4 2529.5	CORE	<u>C. striatus</u>	Kl	Dettmann, 1969	

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
PORT CAMPBELL	4	2590.8 2596.9	CORE	<u>C. striatus</u>	Kl	Dettmann, 1969	
PRINCES	1	603.0	SWC	<u>L. balmei</u>	Tap	Dettmann, 1986a	paralic
	1	643.0	SWC	<u>T. longus</u>	Tap	Dettmann, 1986a	marginal marine
	1	1002.0	SWC	<u>P. mawsonii</u>	Kub	Dettmann, 1986a	marginal marine
	1	1023.0	SWC	<u>P. mawsonii</u>	Kuf/Kuw	Dettmann, 1986a	marginal marine
	1	1046.0	SWC	<u>A. distocarinatus</u>	Kuf/Kuw	Dettmann, 1986a	marginal marine
PURRUMBETE	1	488.3	SWC	lower <u>C. paradoxa</u>	Kl	Dettmann, 1968 b,c; 1969	
	1	640.0	SWC	? <u>C. striatus</u>	Kl	Dettmann, 1968 b,c; 1969	
	1	701.0	SWC	? <u>C. striatus</u>	Kl	Dettmann, 1968 b,c; 1969	
	1	792.4	SWC	<u>C. striatus</u>	Kl	Dettmann, 1968 b,c; 1969	
	1	853.4	SWC	<u>C. striatus</u>	Kl	Dettmann, 1968 b,c; 1969	
	1	886.3	SWC	<u>C. striatus</u>	Kl	Dettmann, 1968 b,c; 1969	
	1	912.8	SWC	<u>C. striatus</u>	Kl	Dettmann, 1968 b,c; 1969	
	1	1005.8	SWC	<u>C. striatus</u>	Kl	Dettmann, 1968 b,c; 1969	
	1	1069.8	SWC	<u>C. striatus</u>	Kl	Dettmann, 1968 b,c; 1969	
	1	1130.7	SWC	<u>C. striatus</u>	Kl	Dettmann, 1968 b,c; 1969	
	1	1167.3	SWC	upper <u>C. hughesii</u>	Kl	Dettmann, 1968 b,c; 1969	
	1	1221.6	SWC	upper <u>C. hughesii</u>	Kl	Dettmann, 1968 b,c; 1969	
	1	1286.2	SWC	upper <u>C. hughesii</u>	Kl	Dettmann, 1968 b,c; 1969	

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
PURRUMBETE	1	1368.5	SWC	upper <u>C. hughesii</u>	K1	Dettmann, 1968 b,c; 1969	
	1	1439.2	SWC	upper <u>C. hughesii</u>	K1	Dettmann, 1968 b,c; 1969	
	1	1545.3	SWC	upper <u>C. hughesii</u>	K1	Dettmann, 1968 b,c; 1969	
	1	1615.4	SWC	<u>C. hughesii</u>	K1	Dettmann, 1968 b,c; 1969	
	1	1735.8	SWC	<u>C. hughesii</u>	K1	Dettmann, 1968 b,c, 1969	
	1	1805.9	SWC	? <u>C. hughesii</u>	K1	Dettmann, 1968 b,c; 1969	
PURRUMBETE NORTH	11	491.3 493.1	CORE	<u>C. paradoxa</u> ?	K1h	Harris, 1991	
ROSS CREEK	1	381.0	SWC	<u>L. balmei</u>	Tad1	Wilschut, 1974	lagoonal, nearshore
	1	505.4	SWC	<u>L. balmei</u>	Tap	Wilschut, 1974	lagoonal, nearshore
	1	670.0	SWC	<u>T. apoxyxinus</u>	Kup	Wilschut, 1974	nearshore
	1	763.8	SWC	<u>T. apoxyxinus</u>	Kup	Wilschut, 1974	nearshore
	1	813.8	SWC	<u>P. pannosus</u>	K1	Wilschut, 1974	continental
	1	978.4	SWC	<u>P. pannosus</u>	K1	Wilschut, 1974	continental
	1	1008.9	SWC	? <u>C. paradoxa</u>	K1	Wilschut, 1974	continental
	1	1093.0	SWC	? <u>C. paradoxa</u>	K1	Wilschut, 1974	continental
	1	1100.6	SWC	<u>C. paradoxa</u>	K1	Wilschut, 1974	continental
	1	2180.8	SWC	<u>C. paradoxa</u>	K1	Wilschut, 1974	continental
	1	2182.7	SWC	<u>C. hughesii</u> - <u>C. striatus</u>	K1	Wilschut, 1974	continental

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
ROSS CREEK	1	2248.8	SWC	<u>C. hughesii</u> - <u>C. striatus</u>	Kl	Wilschut, 1974	continental
	1	2281.7	SWC	<u>C. hughesii</u>	Kl	Wilschut, 1974	continental
	1	3546.7	SWC	<u>C. hughesii</u>	Kl	Wilschut, 1974	continental
SHERBROOK	1	1025.7 1029.6	CORE	<u>T. apoxyexinus</u>	Kun	Dettmann, 1964d, 1970	
	1	1096.1 1097.6	CORE	<u>T. apoxyexinus</u>	Kun	Dettmann, 1964d, 1970	
	1	1165.9 1166.2	CORE	<u>A. distocarيناتus</u>	Kuw	Dettmann, 1964d, 1969, 1970	
	1	1234.1 1234.7	CORE	<u>C. paradoxa</u>	Kl	Dettmann, 1964d, 1969, 1970	
	1	1238.7 1240.2	CORE	<u>C. paradoxa</u>	Kl	Dettmann, 1964d, 1969	
	1	1315.5 1316.1	CORE	<u>C. paradoxa</u>	Kl	Dettmann, 1964d, 1969	
	1	1317.0 1318.9	CORE	<u>C. paradoxa</u>	Kl	Dettmann, 1964d, 1969	
	1	1401.5 1402.4	CORE	<u>C. paradoxa</u>	Kl	Dettmann, 1964d, 1969	
	1	1482.9 1486.5	CORE	<u>C. paradoxa</u>	Kl	Dettmann, 1964d, 1969	
	1	1492.3 1494.7	CORE	<u>C. paradoxa</u>	Kl	Dettmann, 1964d, 1969	
	1	1497.5 1502.4	OTHER	<u>C. paradoxa</u>	Kl	Dettmann, 1964d, 1969	Remanie fossils : Triassic

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
SHERBROOK	1	1589.8 1595.9	CORE	<u>C. paradoxa</u>	K1	Dettmann, 1964d, 1969	Remanie fossils : Permian
	1	1650.2 1653.2	CORE	<u>C. paradoxa</u>	K1	Dettmann, 1964d, 1969	Remanie fossils: Triassic
SNAIL	1	509.7	SWC	<u>P. tuberculatus</u>		Macphail, 1989d	
	1	746.8 749.8	CUTTINGS	Middle <u>N. asperus</u>	Ted	Macphail, 1989d	
	1	776.0	SWC	Middle <u>N. asperus</u>	Ted	Macphail, 1989d	
	1	800.4	SWC	Middle <u>N. asperus</u>	Tae	Macphail, 1989d	
	1	815.3	SWC	Middle <u>N. asperus</u>	Tae	Macphail, 1989d	
	1	818.0	SWC	Middle <u>N. asperus</u>	Tae	Macphail, 1989d	
	1	848.3	SWC	Middle <u>N. asperus</u>	Tae	Macphail, 1989d	
	1	859.5 862.6	CUTTINGS	upper <u>L. balmei</u>	Tae	Macphail, 1989d	
	1	873.3	SWC	upper <u>L. balmei</u>	Tae	Macphail, 1989d	
	1	886.1	SWC	<u>C. paradoxa</u>	K1	Macphail, 1989d	
	1	962.3	CORE	<u>C. paradoxa</u>	K1	Macphail, 1989d	
	1	1051.3	SWC	<u>C. paradoxa</u>	K1	Macphail, 1989d	
	1	1170.4	SWC	<u>C. striatus ?</u>	K1	Macphail, 1989d	
	1	1228.6	SWC	<u>C. striatus ?</u>	K1	Macphail, 1989d	

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
SOUTH CARAMUT	1	100.0	SWC	<u>P. tuberculatus</u>	Tmi	Morgan, 1991b	nearshore marine
	1	140.0	SWC	<u>P. tuberculatus</u>	Tmi	Morgan, 1991b	nearshore marine
	1	162.0	SWC	Upper <u>N. asperus</u> ?	Ted	Morgan, 1991b	nearshore marine
	1	191.0	SWC	Upper <u>N. asperus</u> ?	Ted	Morgan, 1991b	nearshore marine
	1	196.0	SWC	<u>C. hughesii</u>	Kl	Morgan, 1991b	lacustrine
	1	379.5	SWC	<u>F. wonthaggiensis</u>	Klh	Morgan, 1991b	non-marine
	1	381.0	SWC	<u>F. wonthaggiensis</u>	Klh	Morgan, 1991b	non-marine
	1	393.0	SWC	<u>C. australiensis</u> - <u>F. wonthaggiensis</u>	Klh	Morgan, 1991b	non-marine
STONEYFORD	1	450.0	CUTTINGS	<u>C. hughesii</u> - <u>C. striatus</u>	Kl	Dettmann, 1984	
	1	600.0	CUTTINGS	<u>C. hughesii</u> - <u>C. striatus</u>	Kl	Dettmann, 1984	
	1	700.0	CUTTINGS	<u>C. hughesii</u>	Kl	Dettmann, 1984	
	1	900.0	CUTTINGS	<u>C. hughesii</u>	Kl	Dettmann, 1984	
	1	950.0	CUTTINGS	<u>C. hughesii</u>	Kl	Dettmann, 1984	
	1	1009.0	CUTTINGS	<u>C. hughesii</u>	Kl	Dettmann, 1984	
	1	1050.0	CUTTINGS	<u>C. hughesii</u>	Kl	Dettmann, 1984	
	1	1100.0	CUTTINGS	<u>C. hughesii</u>	Klh	Dettmann, 1984	
	1	1155.5	SWC	<u>F. wonthaggiensis</u> - <u>C. hughesii</u>	Klh	Dettmann, 1984	

PARISH/ BORE SAMPLE DEPTH SAMPLE SPORE-POLLEN ROCK REFERENCE COMMENTS

BOREHOLE NO. FROM/TO (m) TYPE ZONE UNIT

TANDAROOK 1 614.2 CORE C. striatus K1 Dettmann, 1964e, 1969
618.1

TERANG 1 492.8 CORE Tem3 Dettmann, 1964e, 1969 Tertiary
498.9

1 530.6 CORE C. hughesii - K1 Dettmann, 1964e, 1969
532.5 C. striatus

1 560.8 CORE C. hughesii K1 Dettmann, 1964e, 1969
563.8

1 589.5 CORE C. hughesii K1 Dettmann, 1964e, 1969
591.9

1 648.3 CORE C. hughesii K1 Dettmann, 1964e, 1969
650.5

TIMBOON 5 286.5 CORE Middle N. asperus Ton Archer, 1984

5 352.4 CORE Middle N. asperus Tem2 Archer, 1984
355.4

5 419.9 CORE Lower N. asperus Tem4 Harris, 1989, 1991, 1992 marginal marine

5 423.2 CORE Lower N. asperus Tem4 Harris, 1989, 1991, 1992 non-marine

5 449.0 CORE M. diversus Tad Harris, 1989, 1991, 1992 non-marine

5 665.1 CORE L. balmei Tap Dettmann, 1970
668.7

5 697.1 CORE T. longus Tap Harris, 1989, 1991, 1992 marginal marine

5 723.6 CORE N. senectus - Kup Dettmann, 1970
729.7 T. lilliei

5 760.8 CORE N. senectus - Kup Dettmann, 1970
766.9 T. lilliei

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
TIMBOON	5	788.8 794.9	CORE	<u>N. senectus</u> - <u>T. lilliei</u>	Kup	Dettmann, 1970	
	5	863.2 869.3	CORE	<u>N. senectus</u> - <u>T. lilliei</u>	Kup	Dettmann, 1970	
	5	898.9 903.1	CORE	<u>N. senectus</u> - <u>T. lilliei</u>	Kup	Dettmann, 1970	
	5	936.3 937.9	CORE	<u>T. apoxvexinus</u>	Kup	Dettmann, 1970	
	5	964.1 967.1	CORE	<u>T. apoxvexinus</u>	Kup	Dettmann, 1970	
	5	1001.6 1004.9	CORE	<u>T. apoxvexinus</u>	Kup	Dettmann, 1970	
	5	1038.5 1039.4	CORE	<u>A. distocarinaratus</u> (?)	Kup(?)	Dettmann, 1964c, 1969	
	5	1066.8 1068.0	CORE	<u>P. pannosus</u>	Kl	Dettmann, 1964c, 1969, 1970	
	5	1085.7 1087.8	CORE	<u>C. paradoxa</u>	Kl	Dettmann, 1964c, 1969	
	5	1121.7 1124.6	CORE	<u>C. paradoxa</u>	Kl	Dettmann, 1964c, 1969	

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
TIRRENGOWA	1	337.1	SWC	Middle <u>N. asperus</u>	Tem3(?)	Morgan, 1987b	slightly brackish
	1	598.9	SWC	upper <u>C. Hughesii</u>	Kl	Morgan, 1987b	non-marine
	1	716.3	SWC	upper <u>C. Hughesii</u>	Kl	Morgan, 1987b	non-marine
	1	896.1	SWC	upper <u>C. Hughesii</u>	Kl	Morgan, 1987b	non-marine
	1	1097.3	SWC	upper <u>C. Hughesii</u>	Kl	Morgan, 1987b	non-marine
	1	1184.2	SWC	lower <u>C. Hughesii</u>	Klh	Morgan, 1987b	non-marine
	1	1223.5	SWC	<u>F. wonthaggiensis</u>	Klh	Morgan, 1987b	non-marine
WAARRE	1	468.8	CORE	<u>L. balmei</u>	Tap	Harris, 1991	
	1	550.8	CORE	<u>T. longus</u>	Tap	Harris, 1991	
	1	593.4	CORE	<u>T. longus</u>	Kup	Harris, 1991	
	1	680.9	CORE	<u>T. longus</u>	Kup	Harris, 1991	
	1	801.0	CORE	? <u>N. senectus</u>	Kup	Harris, 1991	
	1	976.3	CORE	<u>N. senectus</u>	Kub	Harris, 1991	
WANGERRIP PARISH			OUTCROP	<u>L. balmei</u>	Tap	Harris, 1991	XC 903096; Bell Point

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
WANGOOM	2	605.0	CORE	Lower <u>N. asperus</u>	Tem4	Harris, 1989, 1991, 1992	marginal marine
	2	808.3	CORE	<u>T. longus</u>	Kup	Harris, 1989, 1991, 1992	marginal marine
	2	863.8 865.3	CORE	<u>T. lilliei</u>	Kup	Dettmann, 1970	
	2	919.3 925.1	CORE	upper <u>T. apoxvexinus</u>	Kun	Dettmann, 1970	
	2	955.9 961.0	CORE	? <u>A. distocarيناتus</u>	Kl	Dettmann, 1970	
	2	983.0 989.1	CORE	? <u>P. pannosus</u>	Kl	Dettmann, 1970	
	2	1020.2 1020.8	CORE	<u>P. pannosus</u>	Kl	Dettmann, 1970	
	2	1047.6 1049.4	CORE	<u>P. pannosus</u>	Kl	Dettmann, 1969	
	2	1209.4 1210.7	CORE	<u>C. paradoxa</u>	Kl	Dettmann, 1969	
	2	1287.1 1287.7	CORE	? <u>C. paradoxa</u>	Kl	Dettmann, 1969	

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
WANGOOM	6	559.6	CORE	Lower <u>N. asperus</u>	Tem3	Harris, 1989, 1991, 1992	
	6	598.0	CORE	<u>M. diversus</u>	Tad	Harris, 1989, 1991, 1992	
	6	832.9	CORE	<u>L. balmei</u>	Tap	Harris, 1989, 1991, 1992	
	6	906.5 912.6	CORE	<u>N. senectus</u> - <u>T. lilliei</u>	Kup	Dettmann, 1970	
	6	934.2 936.3	CORE	<u>T. apoxyvexinus</u>	Kup	Dettmann, 1970	
	6	951.3 952.8	CORE	<u>T. apoxyvexinus</u>	Kup	Dettmann, 1970	
	6	952.8 954.3	CORE	<u>T. apoxyvexinus</u>	Kub	Dettmann, 1970	
	6	972.6 973.5	CORE	<u>T. apoxyvexinus</u>	Kub	Dettmann, 1970	
	6	991.2 992.4	CORE	<u>T. apoxyvexinus</u>	Kub	Dettmann, 1970	
	6	1010.1 1012.2	CORE	? <u>C. paradoxa</u>	Kl	Dettmann, 1970	
	6	1039.7 1040.9	CORE	? <u>C. paradoxa</u>	Kl	Dettmann, 1969	

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
WARRACBARUNAH	2	438.0	CUTTINGS	lower <u>P. tuberculatus</u>	Ted	Morgan, 1991a	nearshore marine
	2	489.4	CORE	Middle <u>N. asperus</u>	Ted	Morgan, 1991a	marginally marine
	2	552.0	CUTTINGS	upper <u>L. balmei</u>	Tae	Morgan, 1991a	apparently non - marine
	2	739.0 743.0	CORE	<u>C. hughesii</u>	Kl	Morgan, 1991a	
	2	743.4 864.0	CORE, CUTTINGS	<u>C. hughesii</u>	Kl	Morgan, 1991a	non-marine
	2	903.0 960.9	CUTTINGS, CORE	upper <u>F. wonthaggiensis</u>	Klh	Morgan, 1991a	non-marine
	2	999.0 1389.8	CUTTINGS, CORE	lower <u>F. wonthaggiensis</u>	Klh	Morgan, 1991a	non-marine; <u>M. evansii</u> algal bloom at 999 m suggesting lacustrine maximum
	2	1445.7	CORE	lower <u>F. wonthaggiensis</u>	Klh	Morgan, 1991a	
WARRION	5	417.0 422.5	CORE	Middle - Upper <u>N. asperus</u>	Ted	Archer, 1993	
	5	454.7 458.5	CORE	Middle <u>N. asperus</u>	Ted	Archer, 1993	
WENSLEYDALE PARISH			OUTCROP	<u>M. diversus</u>	Tae	Morgan, 1992c	Wensleydale coal mine, SE corner; XC 599521; uppermost part of upper coal seam
			OUTCROP	<u>M. diversus</u>	Tae	Morgan, 1992c	mudstone directly above previous sample

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
WESTGATE	1A	1832.5	SWC	<u>P. mawsonii</u>	Kuw	Dettmann, 1986b	marginal marine
	1A	1848.5	SWC	<u>A. distocarينات</u>	Kuw	Dettmann, 1986b	marginal marine
	1A	1867.0	SWC	<u>P. pannosus</u>	Kl	Dettmann, 1986b	terrestrial
	1A	1909.0	SWC	<u>P. pannosus</u>	Kl	Dettmann, 1986b	terrestrial
WHOREL	4	346.9 347.5	CORE	<u>L. balmei</u>	Tae	Harris, 1991	
WOOLSTHORPE	1	335.0	CUTTINGS	<u>C. striatus</u>	Kl	Morgan, 1988 c	
	1	610.0	CUTTINGS	upper <u>C. hughesii</u>	Kl	Morgan, 1988 c	
	1	762.0 1189.0	CUTTINGS	lower <u>C. hughesii</u>	Kl	Morgan, 1988 c	
	1	1310.6	SWC	<u>C. hughesii</u>	Kl	Dettmann, 1968 a,c	
	1	1376.1	SWC	<u>C. hughesii</u>	Kl	Dettmann, 1968 a,c	
	1	1525.4	SWC	<u>F. wonthaggiensis</u> - <u>C. hughesii</u>	Klh	Dettmann, 1968 a,c	
	1	1578.2	SWC	<u>F. wonthaggiensis</u> - <u>C. hughesii</u>	Klh	Dettmann, 1968 a,c	
	1	1607.7	SWC	<u>F. wonthaggiensis</u> - <u>C. hughesii</u>	Klh	Dettmann, 1968 a,c	
	1	1674.8	SWC	<u>F. wonthaggiensis</u> - <u>C. hughesii</u>	Klh	Dettmann, 1968 a,c	
	1	1798.2	SWC	<u>F. wonthaggiensis</u> - <u>C. hughesii</u>	Klh	Dettmann, 1968 a,c	
	1	1856.1	SWC	<u>F. wonthaggiensis</u> - <u>C. hughesii</u> (?)	Klc(?)	Dettmann, 1968 a,c	

PARISH/ BORE SAMPLE DEPTH SAMPLE SPORE-POLLEN ROCK SPORE-REFERENCE COMMENTS

BOREHOLE NO. FROM/TO (m) TYPE ZONE UNIT

WOOLSTHORPE 1 1898.8 SWC F. wonthaggiensis(?) Klc(?) Morgan 1992b

1 1944.5 SWC R. watheroensis - Klc Morgan 1992b
C. australiensis

YAN YAN GURT PARISH OUTCROP Middle N. asperus Ted Morgan, 1992a YC 532505,
nearshore marine

YAUGHER 23 120 CORE C. paradoxa Kl Archer, 1993

23 121 CORE C. paradoxa Kl Archer, 1993
122

23 166 CORE C. striatus Kl Archer, 1993
167

23 205 CORE C. striatus Kl Archer, 1993
205.5

YAUGHER 27 118 CORE T. longus Tae Archer, 1993
123

27 193.6 CORE T. longus Kup Archer, 1993
196.5

YAUGHER 31 149.0 OTHER P. pannosus Kl Archer, 1993
151.6

YEO 35 13.0 CUTTINGS upper L. balmei - Tae Archer, 1993
13.5 upper M. diversus

YEO 36 9.5 CUTTINGS upper L. balmei - Tae Archer, 1993
10.0 upper M. diversus

36 23.0 CUTTINGS upper L. balmei - Tae Archer, 1993
23.5 upper M. diversus

PARISH/ BOREHOLE	BORE NO.	SAMPLE DEPTH FROM/TO (m)	SAMPLE TYPE	SPORE-POLEN ZONE	ROCK UNIT	REFERENCE	COMMENTS
YEO	37	14.0 14.5	CUTTINGS	upper <u>L. balmei</u> - upper <u>M. diversus</u>	Tae	Archer, 1993	
	37	28.0 28.5	CUTTINGS	upper <u>L. balmei</u> - upper <u>M. diversus</u>	Tae	Archer, 1993	
YEO	39	2.0 2.5	CUTTINGS			Archer, 1993	Recent
	39	12.0 12.5	CUTTINGS	upper <u>L. balmei</u> - upper <u>M. diversus</u>	Tae	Archer, 1993	
	39	20.5 21.0	CUTTINGS	upper <u>L. balmei</u> - upper <u>M. diversus</u>	Tae	Archer, 1993	

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