

BASIC DATA
Palynological analysis of core sample
at 456.6 metres in Loy Yang-2,
onshore Gippsland Basin.

by

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Introduction

This palynological study of a single core sample from the Loy Yang-2 well was undertaken for Lakes Oil N.L. at the request of Ingrid Campbell. The sample was submitted directly to Core Laboratories Australia Pty Ltd in Perth for processing on 10th April 2005 and the prepared palynological slides were returned on 26th April.

The 15 grams of rock processed gave a high organic residue yield, containing a high concentration of mostly well-preserved palynomorphs. The moderate diversity assemblage of 34 spore-pollen species and two algae species recorded is listed in Table 1. Author citations for the species are recorded in the table, but can also be sourced from the papers by Dettmann (1963, 1986) and Helby *et al.* (1987).

References

- DETTMANN, M.E., 1963. Upper Mesozoic microfloras from southeastern Australia. *Proceedings Royal Society Victoria*, vol.77, pt.1, p.1-148, pls 1-27.
- DETTMANN, M.E., 1986. Early Cretaceous palynofora of subsurface strata correlative with the Koonwarra Fossil Bed, Victoria. *Association of Australasian Palaeontologists Memoir* 3, p.79-110.
- HELBY, R., MORGAN, R. & PARTRIDGE, A.D., 1987. A palynological zonation of the Australian Mesozoic. *In Studies in Australian Mesozoic Palynology*, P.A. Jell, editor, *Memoir Association Australasian Palaeontologists* 4, p.1-94.

Table 1: Species list for core sample at 456.6 metres in Loy Yang-2.**SPORES**

<i>Aequitriradites spinulosus</i> (Cookson & Dettmann) Cookson & Dettmann 1961	X
<i>Arcellites reticulatus</i> (Cookson & Dettmann) Potter 1963	X
<i>Baculatisporites</i> spp.	7.9%
<i>Ceratosporites equalis</i> Cookson & Dettmann 1958	1.5%
<i>Cicatricosisporites</i> spp.	1.0%
<i>Cooksonites variabilis</i> Pocock 1962	X
<i>Cyathidites</i> spp. (large)	14.9%
<i>Cyathidites</i> spp. (small)	23.3%
<i>Cyclosporites hughesii</i> (Cookson & Dettmann) Cookson & Dettmann 1959	X
<i>Dictyotosporites speciosus</i> Cookson & Dettmann 1958	X
<i>Foraminisporis dailyi</i> (Cookson & Dettmann) Dettmann 1963	1.0%
<i>Foraminisporis wonthaggiensis</i> (Cookson & Dettmann) Dettmann 1963	0.5%
<i>Klukisporites scaberis</i> (Cookson & Dettmann)	0.5%
<i>Laevigatosporites ovatus</i> Wilson & Webster 1946	X
<i>Leptolepidites major</i> Couper 1958	X
<i>Leptolepidites verrucatus</i> Couper 1953	1.0%
<i>Minerisporites marginatus</i> (Dijkstra) Potonié 1956	X
<i>Neoraistrickia truncata</i> (Cookson) Potonié 1956	0.5%
<i>Osmundacidites wellmanii</i> Couper 1953	14.4%
<i>Perotriletes majus</i> (Cookson & Dettmann) Evans 1970	X
<i>Pilosisorites notensis</i> Cookson & Dettmann 1958	0.5%
<i>Pilosisorites parvispinosus</i> Dettmann 1963	X
<i>Retitriletes</i> spp.	9.9%
<i>Retitriletes austroclavatidites</i> (Cookson) Döring et al. 1963	X
<i>Retitriletes eminus</i> (Dettmann) Srivastava 1977	X
<i>Retitriletes facetus</i> (Dettmann) Srivastava 1975	X
<i>Ruffordiaspora australiensis</i> (Cookson) Dettmann & Clifford 1992	X
<i>Ruffordiaspora ludbrookiae</i> (Dettmann) Dettmann & Clifford 1992	X
Trilete spores undiff.	2.0%
Total Spores:	78.7%

GYMNOSPERMS

<i>Alisporites grandis</i> (Cookson) Dettmann 1963	X
<i>Corollina torosa</i> (Reissinger) Klaus 1960	0.5%
<i>Microcachryidites antarcticus</i> Cookson 1947	1.0%
<i>Podocarpidites</i> spp.	17.8%
<i>Trichotomosulcites subgranulatus</i> Couper 1953	2.0%
Total Gymnosperms:	21.3%
Total Spore-Pollen:	202

Microplankton

<i>Schizosporis reticulatus</i> Cookson & Dettmann 1959	X
<i>Sigmopollis carbonis</i> (Newman) Srivastava 1985	1%
Total Microplankton:	1%
Combined SP + MP count:	204

Other Palynomorphs (as % of spore-pollen + others)

Indeterminate palynomorphs	6.4%
Other Palynomorphs Count:	14
TOTAL COUNT:	218

X = Present in assemblage outside of count.