

Appendix 2.2 – Palynological examination of a clay sample

PALYNOLOGICAL EXAMINATION OF A SAMPLE FROM THE SHIRE OF NARRACAN, BH-3, SOUTH-EASTERN VICTORIA

Core sample supplied by J Brumley of the Geological Survey

DEPTH: 1.85 – 3.60 m

LITHOLOGY: Carbonaceous clay

RESULTS: Sample yielded moderate microflora in a reasonable state of preservation.

Species present are:

- Alisporites grandis*
- A. similis*
- Cyathidites australis*
- Densiosporites velatus*
- Dictyophyllidites crenatus*
- Dictyosporites complex*
- * *Dictyosporites speciosus*
- Foraminisporis dailyi*
- Gleicheniidites* cf *G. circinidites*
- Klukisporites scaberis*
- Leptolipidites major*
- L. verrucatus*
- Lycopodiumsporites austroclavatidites*
- L. nodosus*
- Lycopodiumsporites austroclavatidites*
- L. nodosus*
- Microcachyridites antarcticus*
- Osmundacidites wellmanii*
- Podocarpidites* cf *P. ellipticus*
- Podosporites microsaccatus*

All of the above species, with the exception of that marked with an asterisk, are long-ranging in the upper Mesozoic of southeastern Australia, with some species extending into the Tertiary. *Foraminisporis dailyi* ranges from the *Dictyosporites speciosus* Zone (middle Neocomian – upper Aptian), while the other species commence their range earlier.

The only species with a limited vertical range is *Dictyosporites speciosus* (*), which ranges from the upper *Crybelosporites stylosus* Zone to the early *Coptospora paradoxa* Zone (lower Neocomian – upper Aptian).

AGE: It seems likely that the sample represents the *D. speciosus* Zone i.e. middle Neocomian to upper Aptian age (Lower Cretaceous).

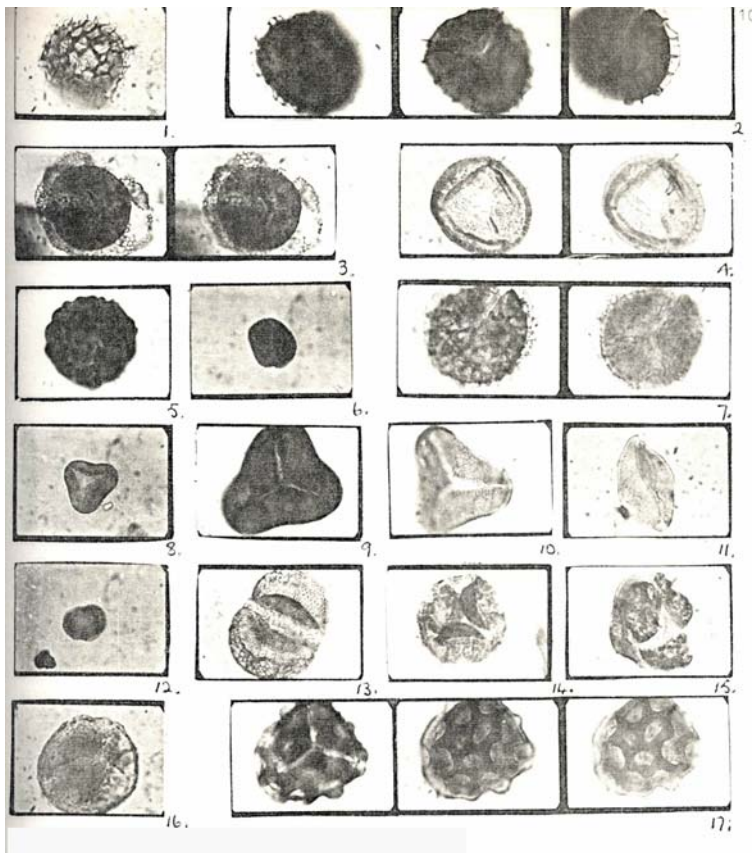
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References:

Dettman M E 1963. Upper Mesozoic microfloras from southeastern Australia. Proc. Roy. Soc. Vict. 77, 1-148.

& Playford G 1969. Palynology of the Australian Cretaceous, a Review. In Stratigraphy and Palaeontology, Essays in Honour of Dorothy Hill, 174-120.

Attachment: Photographs of some of the species present in the sample.



All photos (X500) unless otherwise specified.

Lycopodiumsporites austroclavatidites

L. nodosus

Dictyosporites complex

Densiosporites velatus

Leptolepidites major

Faraminisporis dailyi (X200)

Dictyosporites speciosus

Cyathidites australis (X200)

Dictyophyllidites crenatus

Foveotriletes paryiretus

Ginkgocycadophytus nitidus

Alisporites similis (X200)

Alisporites grandis (X200)

Podosporites microsaccatus

Microcachyridites antarcticus

Osmundacidites wellmanii

Klikisporites scaberis