1964/48

2.

Palynological examination of Duck Bay No. 1 Bore Cores.

Bores core samples from Arco-Woodside Duck Bay No. 1 bore were treated by the hydrofluoric acid-Schulzes solution method, and the residues examined under the microscope.

Results of examination.

Core No.	Depth (feet)	Microfossils	Age.	Type of sedimentation indicated.
3	2839-41	Microflora including Ceratosporites equalis disaccate gymnosperm pollens etc.	Lower Cretaceous	Non marine.
4	3190-94	None isolated.	?	?
5	3393-3403	?	?	?
6	3699-3704	Microflora including Nuskoisporites gondwanensis Cirratriradites splendens	Upper Palaeozoic	Non marine.
7	3880-3896	None isolated.	Permian	

A Lower Cretaceous microflora from Core 3 (2839-41 feet) contains forms described by Dettmann (1963), but in insufficient numbers to correlate reliably with Mecosoic microfloras obtained from other Gippsland cores.

No microfossils were isolated from Core 4 (3190-94 feet) which appears to be igneous rather than sedimentary in nature. A further sample from Core 5 (3393-3403 feet) is being prepared because although much fragmentary plant material is present no diagnostic microfossils have been noted. As this core is near the Palaeozoic Mesozoic boundary (see discussion on Core 6 below), precise knowledge of its geological age and nature is important.

Core 6 (3699-3704 feet) contains relatively poorly preserved microfossils including Nuskoisporites gondwanensis, and Cirratriradites splendens and other payments, all of which indicate Upper Palaeozoic sedimentation. Both forms have been described from the Permian Greta Coal Measures of N.S.W., and Nuskoisporites has also been described from the Permian of Western Australia and Queensland.

No indication of marine sedimentation has been found. This is the first record of Permian sediments under the Mesozoic in eastern Victoria.

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