

STRATIGRAPHY AND PALYNOLOGY OF  
THE PERMIAN AT WATERLOG BAY,  
YORKE PENINSULA, SOUTH AUSTRALIA

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Submitted to the Department of Geology and  
Mineralogy as partial fulfilment of the  
requirements of the course in Honours Geology,  
1972

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## ABSTRACT

The Permian microflora from Waterloo Bay is systematically described and quantified. One microfloral assemblage-zone is present and is dominated by monosaccate and monocolpate pollen. The low frequency of taeniata disaccate pollen indicates that the microflora is of pre-late 'Sakmarian' age.

The assemblage is equated with Evans' (1969) Stage 2 microflora. Resulting from this the sediments from Waterloo Bay are correlated with the Upper Nangetty Formation of the Perth Basin, also of 'Sakmarian' age.

A reworked Devonian microflora is recorded and its excellent preservation suggests a local origin. It is postulated that the microflora was recycled in a sub aqueous environment during or at the end of deglaciation. This and the presence of arenaceous foraminifera, spinose acritarchs, and Botryococcus suggest a low salinity 'marine' environment of deposition.

Palynological correlation of this suite of sediments with other South Australian Permian deposits shows a general marine influence during 'Sakmarian' time. Subsidence and lifting (McGowan, 1972) is postulated to explain this ingression which is recorded in all continents of Gondwanaland, with the exception of Antarctica.