

See also



GEOLOGICAL SURVEY

Upper Cainozoic Stratigraphic Units
of the Gawler Block and Eucla Basin
in South Australia.

J.B. FIRMAN

Department of Mines
South Australia —

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DEPARTMENT OF MINES
SOUTH AUSTRALIA

UPPER CAINOZOIC STRATIGRAPHIC UNITS
OF THE GAWLER BLOCK AND EUCLIA BASIN
IN SOUTH AUSTRALIA.

by

J.B. FIRMAN
RESEARCH GEOLOGIST

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UPPER CAINOZOIC STRATIGRAPHIC UNITS
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IN SOUTH AUSTRALIA.

INTRODUCTION

New lithostratigraphic units are defined following regional surveys of the Gawler Block and Eucla Basin areas in South Australia. The new names have been cleared with the Central Register of Stratigraphic Nomenclature, Canberra, and the definitions has been approved by the Stratigraphic Nomenclature Sub-Committee of the Geological Society of Australia (S.A. Division).

LE HUNTE FORMATION

Derivation of Name: Port Le Hunte near Lake Macdonnell south of Penong.

Distribution: Lake Macdonnell and elsewhere in lagoons and coastal swamps on the coastal margin of southern Australia, where similar materials occur in the same position in sequence and continuity can be demonstrated by association with St. Kilda Formation or equivalents.

Type Section: Lake Macdonnell Bore A.A.IOW, and other bores described in Dickinson and King (1949 and 1950).

Lithology: "Pale grey marl and gypsum" and "off-white to pale grey crystalline gypsum" (Lindsay, 1967 p.5). Shelly in part and containing a fauna including Katelsysia and Zeacumantus commonly found in shallow marine-estuarine-littoral St. Kilda Formation.

Thickness: Up to 10 metres.

Relationships: Overlies Glanville Formation containing Anadara and older units elsewhere. Le Hunte Formation in Lake Macdonnell, is a lagoonal equivalent of non-marine Yamba Formation found in southern Australia in inland lakes and swamps (Firman, 1966b, 1972 and 1973., Lindsay, 1967, Lindsay and Harris, 1973). Dark grey silt, yellowish brown gypsum sand and off-white gypsum silt at the top of the unit are not differentiated.

Age: Upper Pleistocene - Recent.

MOORNABA SAND

Derivation of Name: After Moornaba Rockhole which is within the main area of occurrence of the unit on the FOWLER 1: 250 000 map area.

Distribution: Western Eyre Peninsula marginal to the Gawler Ranges and extending northwest beyond Lake Tallacootra.

Type Section: Dune crest near junction of Koonibba - Inila Rock Waters track with Vermin Proof Fence, and at intersection of north-south road and Vermin Proof Fence 11 km north-east of Charoba Tank.

Lithology: Aeolian off-white and pale yellowish brown quartz sand overlying darker yellow and orange coloured quartz sand with soft carbonate pipes in some places.

Thickness: A thin veneer on Wiabuna Formation on the margins of the large dune fields. Up to 10 metres within the dune fields proper.

Relationships: Overlies Wiabuna Formation inland. The Upper pale yellowish brown quartz sand occupies a similar position in sequence to Semaphore Sand on the coastal margin as described in Firman, 1966a and 1969.

Age: Recent.

WIABUNA FORMATION

Derivation of Name: Wiabuna Railway Station 50 km east of Penong on the Port Lincoln, Minnipa, Thevenard, Penong Line, (Now abandoned).

Distribution: Western Eyre Peninsula including the Quondong Plains.

Type Section: On the Eyre Highway 19 km east of Penong, and at other road cuttings through dune crests between Penong and Koonibba where the unit overlies Upper Member Bridgewater Formation. Good exposures in interdunal areas occur 5 km west of Woolshed Flat.

Lithology: Pale brown quartz or shell sand with carbonate silt. Upper part contains carbonates of the Loveday Soil in most places. Sand-size material is usually derived from adjacent source material. Mainly aeolian, but the dune form is derived in part from earlier forms as old as Lower Member Bridgewater Formation.

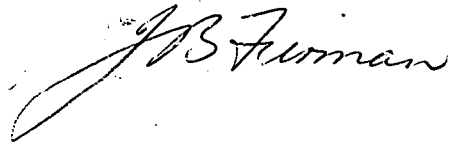
Thickness: Up to 2 metres. The unit is thin on dune crests and thick in the interdune swales.

Relationships: Overlain by Recent aeolian sands, including Semaphore Sand on the coastal margin and Moornaba Sand inland. Thin sandy overlays not differentiated. Overlies Bridgewater Formation. - as defined in Firman, 1967 and 1969 - and re-worked ?aeolian - colluvial material possibly occupying the same position in sequence as the Pooraka Formation, (see Firman, 1966a for description).

Stratigraphically equivalent to Woorinen Formation of the Murray Basin (Firman, 1972 and 1973).

Age: Upper Pleistocene.

16th September, 1974



J.B. FIRMAN

RESEARCH GEOLOGIST

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