DEPARTMENT OF MINES
SOUTH AUSTRALIA

TWO PULMONATE GASTROPODS FROM BRIDGEWATER FORMATION, ALTHORPE ISLAND

by

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Consultant

Rept.Bk.No. 73/206
G.S. No. 5211
D.M. No. 1007/72
Pal.Rept.No.10/73

31st August, 1973.

Geological Survey of South Australia

PALAEONTOLOGICAL/PALYNOLOGICAL EXAMINATION OF MATERIAL

County: Sample ~~Pal. Rept.~~ No: F0/73

Hundred: Collector's Sample No: RBM 32/73

Section: GSSA Pal. Coll. Reg. No: M3290

Geological Sheet Reference: KINGSCOTE 1:250 000 Docket No: 1007/72

Althorpe 1: 63 360

Other locality information: Althorpe Is. Aerial Survey 196/ photo 0675(9) sp

Collected from surface

Submitted by: R.B. Major Date: 9 Feb. 1973

Information required: Identify snail, found in fallen block of Bridgewater Formation on northern coast of Althorpe Is. and indicate value for dating time of deposition.

PALAEONTOLOGIST'S REPORT

The mollusc is a pulmonate gastropod, the land snail *Angasella polypleura* Tate, in a fairly well-cemented calcarenite (aeolianite) matrix in which there are occasional fragments of marine molluscs and foraminifera.

Angasella polypleura was described as occurring on the "Bunda Plateau, Great Australian Bight, in great abundance as dead shells but found living buried in loose soil at the bases of shrubs". Its geographical range extends to the Roe Plains west of Madura in Western Australia. Its presence

with fragments of marine organisms is consistent with the coastal dune origin of the Bridgewater Formation.

The species isliving, and does not provide any more refined evidence of the age of the Bridgewater Formation than the Quaternary age given by Kenley (*Geol. Surv. S. Aust. & Vict. Spec. Bull.*, The Otway Basin of Southeastern Australia, 1971, p. 135).

The taxonomy and a revised description of the species are:

Family CAMAENIDAE

Genus ANGASELLA Angas, 1864

(= PLEUROXIA Ancey, 1887, *nom. nov.* for *Angasiella* Angas *non Angasiella* Crosse).

By Article 57(d) of the International Code of Zoological Nomenclature, 1961, *Angasella* and *Angasiella* are not homonyms.

Angasella polypleura Tate

Helix cyrtopleura Tate, 1879, *Trans. R. Soc. S. Aust.*, 2: 127; Hedley, 1895, *Proc. malac. Soc. Lond.*, 1: 260 *non Helix cyrtopleura* Pfeiffer, 1862.

Angasella polypleura Tate, 1899, *Trans. R. Soc. S. Aust.*, 23(2); 246, pl. 6, figs. 2a-2c.

Pleuroxia polypleura; Iredale, 1937, S. Aust. Nat. 18(2): 48; Iredale, 1939, J. R. Soc. W. Aust., 25: 55, pl. 3 fig. 27 (synonymy).

Description modified from Tate, 1899 and Iredale, 1939: Shell subdepressed, flattened, but height of spire varying, umbilicate, with about 60 sigmoid threadlike axial ribs, the

intercostal spaces coarsely granular, the granules having a tendency to coalesce to form rugae; outer lip reflected, parietal callus thick, columellar lip arched and broadly reflected over the umbilicus. The apex is large, flattish, of one and a half whorls with lip submerged, microscopically very finely pitted (not smooth, as stated by Tate and by Iredale). Diameter 18, height 10.5 mm.

Type locality: Bunda Plateau, Great Australian Bight, (For redefinition of the Bunda Plateau see Lowry, Geol. Surv. W. Aust. Bull 122: 16) as dead shells on the surface and in soil at the bases of shrubs.

6th August, 1973
NHL:IA

N.H. Ludbrook
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Geological Survey of South Australia

PALAEONTOLOGICAL/PALYNOLOGICAL EXAMINATION OF MATERIAL

County: Sample ~~Pal. Rept.~~ No: F9/73

Hundred: Collector's Sample No: RBM 31/73
GSSA Pal. Coll. Reg. No: M3291

Geological Sheet Reference: KINGSCOTE 1:250 000 Docket No: 1007/72
Althorpe 1: 63 360

Other locality information: Althorpe Isd Aerial Survey 196/ photo 0675(2) sp.

Collected from surface

Submitted by R.B. Major Date: 9 Feb. 1973

Information required: Identification, time significance, facies significance. Shell from within 10 cm of the base of the Bridgewater Formation from cliffs at the northern end of Althorpe Is.

PALAEONTOLOGIST'S REPORT

The material is well-cemented calcarenite (aeolianite) in which shells of *Succinea australis* Ferussac are imbedded. *Succinea australis*, like *Angasella polypleura*, is a pulmonate gastropod, but it lives associated with coastal limestones and in moist situations near the coast from which it could have been blown into coastal dunes. The family Succineidae typically lives amphibiously in marshes.

The type material described by Ferussac was collected by Peron from Kangaroo Island and islands of the Nuyts Archipelago. Like *Angasella polypleura*, it is a living species the time range of which is not known; in the present state of our knowledge rocks containing it can be a-sumed to be of Quaternary age.

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6th August, 1973

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