

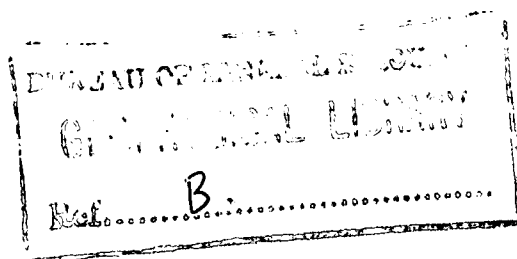
1963/35 B

COMMONWEALTH OF AUSTRALIA.

DEPARTMENT OF NATIONAL DEVELOPMENT.
BUREAU OF MINERAL RESOURCES
GEOLOGY AND GEOPHYSICS.

RECORDS.

1963/35



REPORT ON 1962 PLANT FOSSIL COLLECTION FROM THE
GREAT ARTESIAN BASIN

by

Mary E. White.



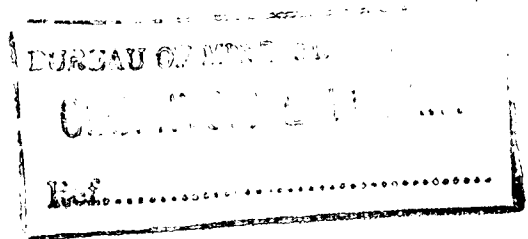
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Summary: Plant fossils were collected at four localities in the Great Artesian Basin in 1962. Cladophlebis australis (Morr.) occurs in the Longsight Sandstone - of Lower Cretaceous age. A Permian Glossopteris flora was collected in Galah Gorge in beds which are regarded as probably equivalent to the Oxley Creek sequence. The presence of Glossopteris conspicua Feist. suggests Upper Permian age for these plants.

Details of localities and plants identified are as follows:-

1. Locality G.A.B. 987: Flinders River, Hughenden; photo 11 W-C/ 5123, pt. 330.
(Probable age and stratigraphy stated as "top of Longsight Sandstone, Lower Cretaceous")

Specimens F 22302.

Cladophlebis australis (Morr.).

This is a most characteristic plant of the Jurassic of Australia. It ranges from Upper Triassic through Jurassic and into Lower Cretaceous (Styx River Series, Walkom, 1919; Gilbert River Formation, White, Records 1957/70; Locality TT 60 Northern Territory, Records 1962/114; etc.) Its presence is therefore in keeping with a Lower Cretaceous age for the Longsight Sandstone. (A collection of plant fossils from Longsight Sandstone was reported on in Records 1959/35, "Fossil Plants from the Georgina Basin, Queensland". The age of the assemblage - Pterophyllum fissum, Taeniopteris, Ptilophyllum and conifer foliage was then regarded as Jurassic from a comparison with the Rajmahal Flora in India. It has since been shown that the Rajmahal flora is Lower Cretaceous in age, and collections of plant fossils from the Northern Territory in which the age has been verified by marine invertebrate fossils have proved that the Pterophyllum assemblage is Lower Cretaceous in Australia as well.)

2. Locality G.A.B. 1028: Flinders River, Hughenden; photo 6/5027, pt. 65.
(Probable age and stratigraphy stated as "? Permian or ? Triassic beds just above unconformity on metamorphic basement; probably equivalent to part of sequence at Oxley Creek")

Specimens F 22303.

Indeterminate.

3. Locality G.A.B. 1033: Galah Gorge, Hughenden; photo 8/5157, pt. 88.
(Probable age and stratigraphy stated as "?
Longsight Sandstone, Jurassic, but could be from an
underlying Triassic sequence").

Specimens F 22304.

Very large numbers of minute plant fragments are present. There is one fragment of rachis with three pinnules of Cladophlebis australis Morr. and one complete small pinnule of the species. A fragment of a larger leaf 1.5 cm long and 1 cm wide with lateral veins at an acute angle to the midrib, each bifurcating near the midrib, may be a median part of a small leaf of Linguifolium or Phyllopteris type, or part of a large pinnule of Thinnfeldia type. It is too incomplete for close identification. A small fragment of the median part of another leaf is of Taeniopteris type.

An age determination of Jurassic or Lower Cretaceous can be made on the plant evidence available in these specimens.

4. Locality G.A.B. 1034 (samples A, B, E, H)
North end of Galah Gorge; Hughenden photo 5/5075, pt. 94.
(Probable age and stratigraphy stated as "section
in Permian beds, probably equivalent to Oxley Creek
sequence").

Specimens F 22305, F 22306, F 22307 and F 22308.

- a. G.A.B. 1034 A: Indeterminate. Rootlets ? F 22305.

- b. G.A.B. 1034 B: Specimens F 22306.

Very poor, coaly specimens containing:

Vertebraria indica Royle

Glossopteris indica Sch.

Glossopteris ? angustifolia Bgt.

Age Permian.

- c. G.A.B. 1034 E: Specimens F 22307.

Glossopteris indica Sch.

** Glossopteris ampla Dana. ** Glossopteris browniana Bgt.

Age Permian.

- d. G.A.B. 1034 H: Specimens F 22308

Glossopteris indica Sch.

Glossopteris conspicua Feist.

Glossopteris angustifolia Bgt.

Age Permian. The presence of G. conspicua indicates Upper Permian age.

Reference: WALKOM, A.B., 1919: Mesozoic Floras of Queensland III & IV.
The floras of the Burrum and Styx River Series. Qld. Geol.
Surv. Publ. 263.