

COMMONWEALTH OF AUSTRALIA.

DEPARTMENT OF NATIONAL DEVELOPMENT

BUREAU OF MINERAL RESOURCES, GEOLOGY & GEOPHYSICS

RECORDS 1960/38

By

M.E. WHITE



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PLANT FOSSILS FROM LOCALITIES ON BLACKCAP AND.  
WATER HOUSE 1 - MILE SHEET, NORTHERN TERRITORY

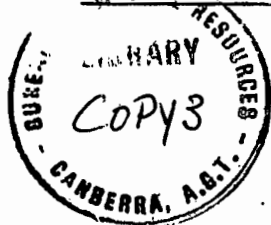


*S.K. Swarico.*

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PLANT FOSSILS FROM LOCALITIES ON BLACKCAP AND WATER-  
HOUSE 1-MILE SHEET, NORTHERN TERRITORY

Plant fossils were collected from four localities in the Northern Territory by P.R. Dunn and R. Bryan during the 1958 field season.

1. Specimens 96522 and 96523 were collected at the top of a flat-topped, isolated hill at the headwaters of the Bukalorkni Creek from Mullaman Formation silicified marl. (On the Blackcap 1-mile sheet).

Several layers of fronds of Cycadites sp. are associated with fronds of Pterophyllum fissum Feist. and poorly preserved fragments of Conifer foliage of Cunninghamites or Palissya type.

None of the fronds of Cycadites sp. shows attachment of the segments to the rachis. Venation of the segments is indistinct. In some there seem to be four parallel veins. This species of Cycadites resembles C. Blandfordianus Old. from the Rajmahal Series in India.

The fronds of Pterophyllum fissum are poorly preserved. They are similar to those illustrated in Record 1959/35 from the Georgina Basin in Queensland. (I determined the age of the specimens from the Georgina Basin as Liassic on the basis of floral similarity to the Rajmahal Flora as I was unaware of the recent reclassification of the Rajmahal Series as Lower Cretaceous (see Arkell 1956).

The presence of Cycadites associated with Pterophyllum fissum and Conifer foliage suggests a Lower Cretaceous age.

2. Specimens 96525 were collected 8 miles S.W. of Beswick Homestead, on a bluff facing the Chambers River, about 150' above river level, from Mullaman Beds. (Waterhouse 1-mile sheet).

Ptilophyllum pecten (Phillips) is associated with Taeniopteris spatulata (McCl). Both are common Jurassic and Cretaceous species.

3. Specimens 96428, 96429 and 96430 were collected 2 miles S.W. of Waterhouse Waterfall (which is 5 miles N. of Beswick Homestead) from Mullaman Beds. (Blackcap 1-mile sheet).

Specimen 96428 contains indeterminate stem casts.

In Specimen 96429 there are three types of stem:

- a. indeterminate casts as in 96428.
- b. Casts of hollow stems with some preservation of cortical tissues, showing nodding of Equisetalean type.
- c. Small branching stems or roots with alternate arrangement of branches.

Portion of a very small frond less than  $\frac{1}{2}$ " long and  $\frac{1}{8}$ " wide, with five pairs of rounded leaflets is probably a fragment of Microphyllopteris gleichenioides O. & M. which occurs in the Rajmahal Series and in the Styx River Series in Queensland.

In Specimen 96430 three fertile pinnules of Cladophlebis australis (Morris) occur with a fragment of Cycadites? and a cast of a segmented Equisetalean stem.

4. Specimen 96743 was collected from a locality on the Urapunga 4-mile sheet  $\frac{1}{2}$  mile W. of Black Cap, on an isolated hill about 170' above plain level, from Mullaman Beds.

A fragment of Conifer foliage of Elatocladus planus (Feist) type is present.

#### Floral List for the Mullaman Beds

Cycadites sp. cf. C. blandfordianus Old.  
Pterophyllum fissum Feist.  
Cunninghamites type foliage.  
Ptilophyllum pecten (Phillips).  
Taenippteris spatulata (McClelland).  
Equisetalean stems (Neocalamites?)  
Cladophlebis australis (Morris)  
Microphyllopteris gleichenioides O. & M.  
Elatocladus planus (Feist.)

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