

COMMONWEALTH OF AUSTRALIA.

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

RECORDS.

Records No. 1957/70

by

Mary E. White

FOSSIL PLANTS FROM THE GEORGETOWN DISTRICT

WESTERN QUEENSLAND, FROM THE BLYTHESDALE FORMATION.

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Fossil plants were collected by J.B. Firman in 1956 from a locality near Forest Home Cattle Station. The following information regarding locality and Geology were supplied by Mr. Firman in his report accompanying the collection:-

"Locality:

The fossil locality is situated approximately 40 miles West of Georgetown in Western Queensland, and 5 miles N.W. of Forest Home Cattle Station. (Quadrant A, run 3/5120, Georgetown. Georgetown 4 mile sheet E/54/12 of the Australian National Grid.)

"Fossil Bearing Beds:

The fossil-bearing beds are **probably part of the** Blythesdale Formation of Upper Jurassic - Cretaceous age described by Bryan, W.H. and Jones, O.A. (1946).

The rocks outcrop as a low-lying hill. Three separate beds are identified as follows.-

- 1: Upper Bed of Pebble Conglomerate, occurs as debris. Thickness unknown.
- 2: Middle Bed of Ferruginous Sandstone. This bed contains poorly developed lenses of pebble conglomerate and a lens of light-grey sandstone which has an estimated thickness of 5 feet. The light-grey sandstone lens contains tubular structures. (Specimens No.F.21616). Plant fossils occur at the bottom of the middle bed in a fossil-bearing horizon about 6" thick. (Specimens No.F.21615, C.P.C. Nos.2879, 2881 - 2884). The maximum thickness of the bed is 20 feet.
- 3: Lower Bed of Light-Grey Silty Claystone: Contains pebbles and clay pellets. This bed contains plant fossils. The bottom of the bed is not exposed and thickness of the bed is unknown. (Specimens No.F. C.P.C. No. 2880)"

Palaeobotany

- I: Fossil plants from the Lower Bed of light-grey silty claystone
Specimen No. F.21614.

The fossils in these rocks are mainly in the form of red and yellow iron staining and the state of preservation is poor. The plant remains were macerated and the material is largely indeterminate. There is, however, one example of a portion of a leaf which is well preserved and there are several small cones in a good state of preservation.

The leaf fragment is referable to Linguifolium sp. Fig.1, Plate 1, C.P.C. 2880. As only the basal part of the leaf is present it is not possible to determine the species, but the fragment is similar to Linguifolium Lillianum Arber. The range of Linguifolium is Rhaetic-Jurassic.

Small cones, mostly incomplete or broken, occur in specimens 4140 and 4138. The average diameter of these is about 1/2 cm. Without further evidence it is not possible to determine the affinities of these cones. They appear to be of Conifer type but it is not impossible that they are Equisetalean. They are therefore of no value in determining the age of the rocks.

2: Specimens from the lens of sandstone in the middle bed show no plant remains and the nature of the tubular structures is uncertain. Specimen No.F.21616.

3: Fossil plants from the base of the middle bed of ferruginous sandstone.

(Specimens F.21615, C.P.C. 2879, 2881-2884.)

The following plants have been identified:-

- (a). Cladophlebis australis (Morris) Figure 2, Plate 1, C.P.C. 2881. Several forms of this species are present. It is a species which characteristically shows a great deal of variation. The range of the species is Rhaetic - Lower Cretaceous.
- (b). Cladophlebis albertsi (Dunk). which is regarded as an Upper Jurassic or Cretaceous form. C.P.C. 2882.
- (c). Linguifolium cf Lillianum Arber. The genus recorded from Rhaetic and Jurassic strata. Figure 4, Plate 2, C.P.C. 2883.
- (d) Linguifolium sp. A species of Linguifolium with a very much elongated leaf, with somewhat undulating margins. The apex of the leaf is not present, and there is no indication as to whether the leaf is a pinnule of a compound leaf. This species may be more strictly referable to Phyllopteris than to Linguifolium. The age of this plant can be roughly given as Rhaetic - Cretaceous.
- (e) Phyllopteris lanceolata Walkom. This species is one of the commonest and most characteristic plants of the Burram Series (Lower Cretaceous) in Queensland. Figure 5, Pl C.P.C. 2884.
- (f) Cycadites sp. ? Figure 3, Plate 1, C.P.C. 2879.

The assemblage of plants in the fossil-bearing horizon at the base of the ferruginous sandstone denotes an age of Jurassic or Lower Cretaceous.

Plate I



Fig. I: Linguifolium sp. from the lower bed of
light grey silty claystone X 3.
C.P.C. 2880.



Fig. 2: Cladophlebis australis Morr.
C.P.C. 2881.



Fig. 3: Cycadites sp.
C.P.C. 2879.

PLATE 2.

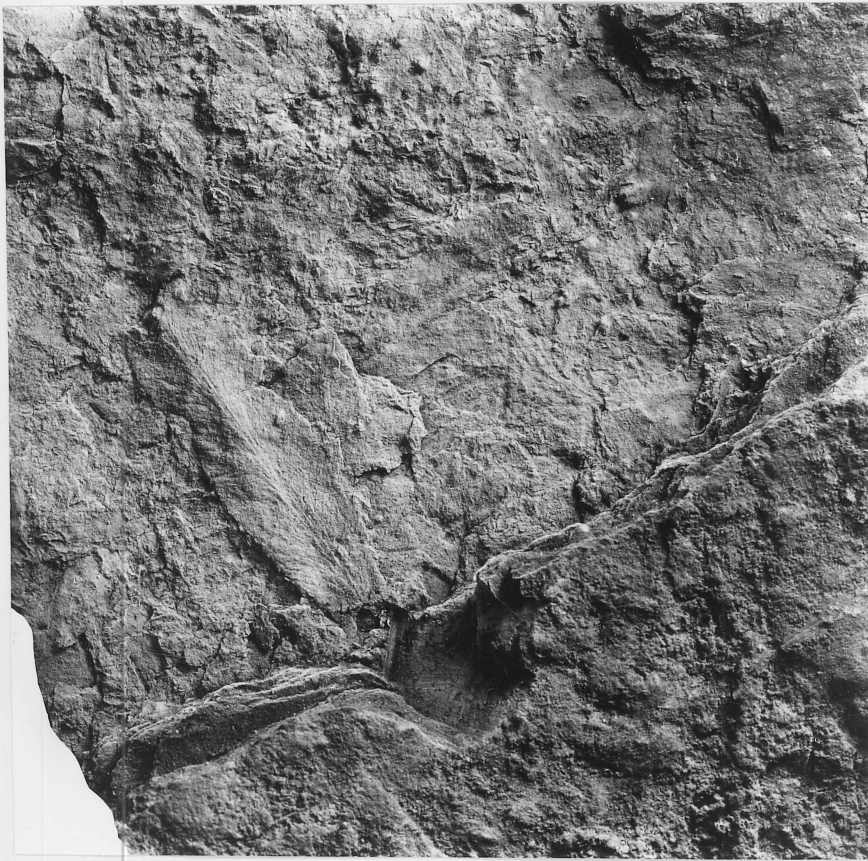


Fig.4: Linguifolium lilleanum Arber ?
C.P.C. 2883.

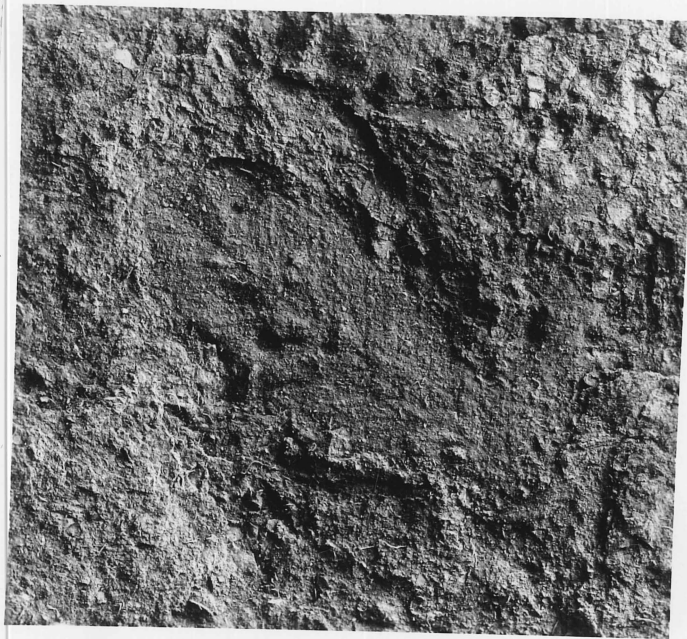


Fig.5: Phyllopteris lanceolata Walk. x 2.
C.P.C. 2884.