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REPORT ON PLANT FOSSILS IN STRATIGRAPHICAL BORE

B.M.R. 2, LAUREL DOWNS, W.A.

by

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Plant fossils occur in the Laurel Downs Bore,
B.M.R. 2 at two horizons:

1. The core samples at 2212-2212 $\frac{1}{2}$ feet show superficially indeterminate fossil stems with a flattened diameter of between 2 and 5 mm. Some of the fossils are in the form of impressions with a coaly film on the surface, and others are partially petrified and appear to contain pyrites.

There are numerous ribbon-like linear impressions which have the appearance of linear leaves but are indeterminate. Figure 1 shows a face of a core sample at this horizon in which two partially petrified stems are present. A narrow petrified stem of this sort was sectioned.

Figure 1.

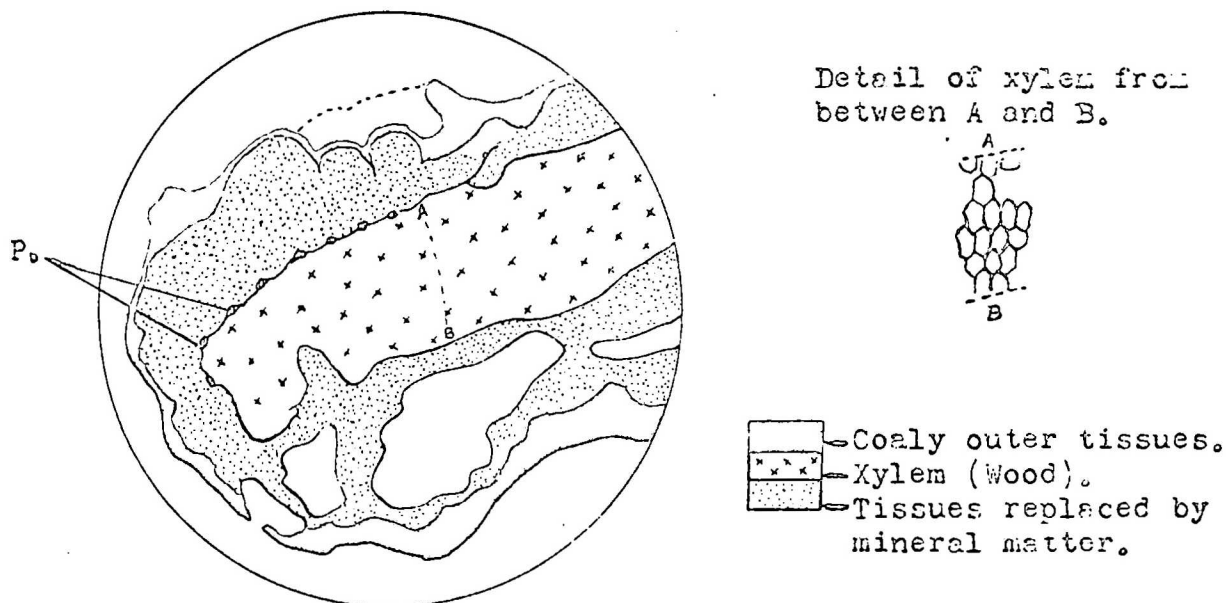


Microscopic examination of the sections revealed some preservation of internal tissues. A map of a section is seen in Figure 2. The stem has a central vascular cylinder without medulla and there is a ring of small bundles on its outer margin (Fig. 2).

The core of xylem recalls that found in Lepidodendroid stems and the small bundles in a ring external to the vascular cylinder are probably leaf trace bundles.

Figure 2:

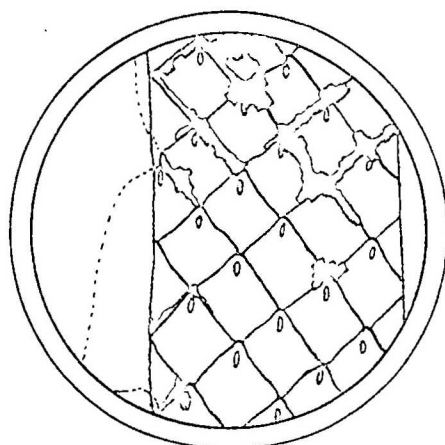
Map of Section of Stem.



No structure is preserved external to the vascular cylinder and the tissues are replaced by mineral matter. Only a very tentative determination of the stem as probably belonging to a Lycopodiaceous plant can be made. The petrified stems at this level appear to be similar to those small indeterminate stems occurring at the second plant horizon.

2. The core samples at 2498 feet contain two very clear impressions of Leptophloeum australe M'Coy (Fig. 3). A coaly film covered one surface of the impressions. The rhombic scars on the stems have leaf trace scars in their upper angles.

Figure 3.



Leptophloeum australe M'Coy.

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3