CYLOMEIA UNDULATA (BURGES) GEN.ET COMB.NOV., A LYCOPOD OF THE EARLY TRIASSIC STRATA OF NEW SOUTH WALES

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SUMMARY

"Taeniopteris undulata Burges" leaves are identified as lycopod leaves which were borne in flat, plate-like crowns on *Pleuromeia*-like plants which are given the new generic name *Cylomeia*. *"Pleuromeia longicaulis* (Burges) Retallack" is referred to the same genus. It is suggested that *Cylomeia undulata* (Burges) might have borne cones recently described as *Skilliostrobus* Ash 1979, in the same manner as *Cylomeia longicaulis* (Retallack) bore *Cylostrobus* cones.

AN EARLY TRIASSIC LYCOPOD

Burges (1935) described as *Taeniopteris undulata* long, narrow leaves with a pronounced midrib (two median grooves) and undulating margins in his account of the Narrabeen Flora of New South Wales. Leaf fragments of this type are fairly common in the Narrabeen Group sediments which outcrop in many localities in Sydney's Northern Beach suburbs from Narrabeen to Palm Beach. Similar long, narrow leaves with less obvious midribs and without undulating margins, occur in great profusion locally in some areas, and have been assigned to *Pleuromeia longicaulis* by Retallack (1975) in his reconstruction of that plant.

In 1977, a specimen was obtained by The Australian Museum, prompting this investigation which has resulted in its identification as a whorled lycopod leaf crown comprising leaves of *"Taeniopteris undulata"* type. The specimen AMF 58791 was obtained from Early Triassic roof shales above the Upper Permian Bulli Seam in the Bellambi Colliery (K panel), Wollongong. It is beautifully preserved as an impression with a film of carbon on the surface, and shows a whorl of ribbon-like leaves which are attached to the stem apex in several layers, forming a plate-like crown 18 cm in diameter, slightly concave in the centre. Unfortunately no cell structure is preserved. The leaves are broken off, or interrupted by the edges of the specimen at a length of 8 or 9 cm. They average 5 mm in width (Figure 1).

The leaves have parallel margins and are without visible midribs for most of their preserved length, but towards their extremities the margins start to undulate and the midribs become more pronounced (Figure 2). If the leaves had been preserved as broken up fragments, as is usually the case in plant fossils, the undulating distal parts would have been consistent with *Taeniopteris undulata* and the proximal parts indistinguishable from *Pleuromeia longicaulis*.

A new genus *Cylomeia* is erected as this specimen cannot be accommodated in any existing genus of lycopods for reasons detailed below. The name is derived from *Lyco* — reversed as in *Cylostrobus* — and *meia* a diminutive as in *Pleuromeia* to indicate the dwarf-tree nature of the lycopod, and also to indicate its relationship with those plants.

A second specimen showing a less complete crown of more mature leaves was found in the Wollongong University collection by Dr. A. Wright, and presented to The Australian Museum. It came from the same horizon and general locality in the Bellambi Colliery, Wollongong. This specimen, AMF 60882, shows approximately ten broader

Records of The Australian Museum, 1981, **Vol. 33 No. 16,** 723-734, Figures 1-10.