24. AMENDED AND RENAMED GROUPS OF THE UPPER PERMIAN ROCKS OF THE WESTERN TIERS AREA, TASMANIA

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INTRODUCTION

Recent regional mapping of the Quamby Quadrangle has allowed re-examination and assessment of the major stratigraphic units as defined by McKellar (1957) and used by Wells (1957) and others for the Permian System in the vicinity of the Western Tiers.

With minor re-arrangement McKellar's groupings have practical acceptability but two group names used by him, namely 'Woodbridge' and 'Ferntree', are considered invalid and have been changed to 'Poatina' and 'Bogan Gap' respectively.

NOMENCLATURAL REVISION

Much confusion has centred around the term 'Woodbridge' since it was first used by Lewis (1937) for a tillite series outcropping at Woodbridge in S Tasmania.

The term 'Woodbridge' was also used by Voisey (1938), Prider (1948), Hills and Carey (1949) and many others for a fossiliferous pebbly siltstone and sandstone formation which is well developed in the Hobart area and is widespread over much of the southern portion of the State. This formation, known for many years as the Woodbridge Glacial Formation (Hills and Carey, 1949), was renamed the Malbina Siltstone and Sandstone by Banks and Read (1962). They considered that the Malbina Siltstone and Sandstone is neither the same formation nor a correlate of the tillite series described by Lewis (1937) at Woodbridge.

As the 'Woodbridge Group' of McKellar (1957) is neither a correlate of the 'Woodbridge Series' (Lewis, 1937) at Woodbridge, nor of the Malbina Siltstone and Sandstone of the Hobart area (Clarke, 1969) the name 'Woodbridge Group' (McKellar, 1957) is invalid and is here changed to Poatina Group. Consequently the only beds which retain the name 'Woodbridge' are those of the tillitic 'Woodbridge Series' of Lewis (1937).

The use of the term Ferntree (McKellar, 1957) for the rock unit in the Quamby area is also invalid as there is no evidence to suggest that this unit is in any way a correlate of the validly named Ferntree Group of the Hobart area. The group called the Ferntree Group in the Quamby area is here named the Bogan Gap Group.

AMENDED GROUPING

In addition to renaming the Groups, the authors have also amended McKellar's (1957) stratigraphy with what was considered to be the minimum of re-arrangement.

The need for this amendment became apparent when it was noted that the basal formation of his Ferntree Group, the Garcia Sandstone, was more similar to the underlying beds than to those above.

The Dabool Sandstone of the Woodbridge Group (McKellar, 1957) and the Garcia Sandstone are both poorly sorted, pebbly sandstones containing the same shelly fauna. The similarity of these formations is also maintained in outcrop and weathering patterns, both units giving rise to topographic benches. Reliable separation of these two formations can be achieved only where the approximately 9 m thick bed of bryozoan-rich, fissile Weston Mudstone is exposed between them. On the basis of these similarities the Garcia Sandstone is now grouped with the formations of McKellar's (1957) Woodbridge Group, this amended group being called the Poatina Group.

The amended groups to replace the former Woodbridge and Ferntree Groups of McKellar (1957) are defined as follows:—

The *Poatina Group* is that group of rocks consisting of the Meander Mudstone (at the base), Dabool Sandstone, Weston Mudstone and including the Garcia Sandstone (at the top), which has a total thickness of 86.8 m and lies conformably between the Liffey Group below and the Bogan Gap Group above.

In the type area, beside the road leading to the Poatina Power Station entrance tunnel, the lithology consists of a sequence of poorly fossiliferous mudstone and sandstone (Meander Mudstone) overlain by fossiliferous sandstones (Dabool Sandstone, Garcia Sandstone) containing a shelly fauna which includes *Wyndhamia jukesi* (Etheridge), *Martiniopsis profunda* (Campbell), *Martiniopsis denmeadi* (Campbell), *Martiniopsis ovata* (Campbell), *Paraconularia derwentensis* (Johnston) and *Grantonia hobartensis* Brown. These two sandstone formations are separated by Weston Mudstone containing an abundance of fenestrate and stenoporid bryozoa.

The *Bogan Gap Group* is that group of rocks consisting of the Springmount Mudstone (at the base), Palmer Sandstone, Drys Mudstone, Blackwood Conglomerate and Eden Mudstone (at the top), which has a total thickness of 178.4 m and lies conformably between the Poatina Group below and the Jackey Formation above.

The predominant rock type is sparsely fossiliferous, medium to dark grey, quartz and mica mudstone (Springmount, Drys, Eden Mudstones) containing a thin, unfossiliferous, conglomeratic sandstone (Palmer Sandstone) and a thin, unfossiliferous, quartz conglomerate (Blackwood Conglomerate).

The type area is in the vicinity of a track which climbs from Bogan Gap in a direction SSW to the Lake Highway.

The amended grouping and renaming is summarised in the following table:—

Group	*Formation*	*Thickness*
	Jackey Formation	
BOGAN GAP	Eden Mudstone	6.1 m
	Blackwood Conglomerate	0.91 m
	Drys Mudstone	99.7 m
	Palmer Sandstone	3.05 m
	Springmount Mudstone	68.6 m

Group	*Formation*	*Thickness*
POATINA	Garcia Sandstone	9.1 m
	Weston Mudstone	9.1 m
	Dabool Sandstone	7.01 m
	Meander Mudstone	61.6 m

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