Royal Society of New South Wales
Southern Highlands Branch
October 21st 2010 Lecture

Geology & Geophysics of Antarctica: The Early Australian Story

Dr David Branagan

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An audience of 45 greeted Dr David Branagan at the Drama Hall, Frensham School, Mittagong on the evening of 21st October, 2010.

David Branagan has had an extraordinary career as a consultant geologist in coal and metal mining, and particularly in engineering projects. He has been President of the International Commission for the History of the Geological Sciences, President of the Royal Society of New South Wales and is an Honorary Life Member of the Geological Society of Australia. He was awarded an honorary D.Sc. by the University of Sydney in 2008.

Branagan has written numerous textbooks and technical papers, but in recent years has concentrated on the history of geology. One of his biographical works is *TW Edgeworth David: A Life* published by the National Library of Australia. This book was one of four works short-listed for the first Prime Minister's History Award in 2007, and was largely the subject of Branagan's lecture to the Southern Highlands Branch October meeting. Others who played a role in stimulating interest in Antarctica, and who were discussed in the presentation included Franklin, Neumayer, von Mueller, Bull, Borchgrevink, Bernacchi, Gregory and David.

There were two major themes in this lecture. The first described the search for the elusive South Magnetic Pole while the second dealt with the growth of knowledge of the geology of Antarctica. A minor but linked theme was the relationship existing between Australia, Scandinavia and Japan during the period from about 1840 to 1914.

Considerable Australian interest in Antarctica exploration and science dates from the 1880s, with the formation of an Exploration Committee set up in Melbourne. One extraordinary outcome of the study of the rocks of Antarctic was that it allowed the conclusion that the land was indeed continental, and therefore at an earlier stage had been part of Gondwana. This was a pivotal realisation that influenced numerous fields of study in the years that followed.

The key figure in this presentation was Sir Tannatt William Edgeworth David (1858-1934), geologist, born in Wales. In 1891 he became Professor of Geology at Sydney University, and within ten years of taking the position had achieved world wide acclaim. In 1907 Ernest Shackleton invited David to journey south with his expedition and return in the *Nimrod* at the end of the summer. The university granted leave and in December 1907, David, with two former students, Sir Douglas Mawson and Leo Cotton joined Shackleton in New Zealand.

Even before his Antarctic landfall, David had decided to stay with the expedition. It meant taking unauthorized leave but he could not resist the unique opportunity to research the geology of such a remote and inhospitable part of the planet. He celebrated his fiftieth

birthday within sight of the active volcano Mount Erebus (3795 m) and in March he stood on its summit, leader of the first successful climbing party.

Shackleton was so impressed that next spring he put him in charge of an attempt to reach the South Magnetic Pole. The journey of four months during which David, with Mawson and a young Scots doctor Forbes Mackay, dragged laden sledges from sea-level up more than 2200 m to their goal on the ice plateau and back, covering in all some 1250 km, has passed into the annals of polar exploration as an epic of courage and endurance.

In the general rejoicing at David's return to Sydney late in March 1909, it was hardly surprising that his unscheduled absence from Sydney University was easily forgiven.

The audience was clearly intrigued with this presentation of Antarctic exploration and asked as many questions as time allowed.

The vote of thanks was given by Anne Wood.

Anne Wood