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## MOUNT CAMERON WEST

W. Bryden

EARLY this year a party consisting of anthropologists, archaeologists, geologists, botanists, zoologists and artists visited the Mt. Cameron West area. The purpose of the visit was to carry out a more thorough examination of the petroglyphs in the area, to survey the site and locate the markings, to take photographs of all visible carvings and to make casts of as many as possible.

It was in the late 1920's that the carvings were located in the area, though it is possible that G. A. Robinson and others knew of them many years earlier. A shepherd on the Woolnorth Estate in the north-western corner of the State noticed the markings and mentioned them to a friend but from all accounts the manager of the property was not aware of their existence. Meston and Dallas were told, after enquiry, that no such markings existed and just as they were ready to leave the area the shepherd in question returned from a mustering exercise and was able to give directions of the location. Meston and his party photographed the area and later Meston accompanied by Pearson, then Director of the Tasmanian Museum, and Tindale an entomologist-cum-anthropologist on the staff of the South Australian Museum, visited the area. In 1932 and 1933 Meston wrote of these aboriginal carvings as did Crowther in 1949.

Luckman and others visited the area about 1950, made extensive excavations, photographed some of the rock faces and one of the party made a plane table survey of the area. It was obvious to all members of that party that deterioration was becoming rapid and to make sure some record remained at least one slab was removed and was later lodged in the Queen Victoria Museum in Launceston.

The question of preservation of the petroglyphs was taken up by the Tasmanian Museum in 1955 and a good deal of time and effort was devoted to the problem. The area is exposed to the full blast of the west winds which are often very strong. In fine weather and at low tide, wind blown sand adds to the problem and an additional hazard is the water in the sand which seeps up the sandstone slabs making them soft and delicate and easily damaged. Various suggestions have been made for preservation, such as the provision of a wind shelter on the west side and covering the surfaces with some bonding material, but after careful thought and examination these and other suggestions were ruled out because of the difficulties inherent in each suggestion.

Mr. L. E. Luckman has given freely on his specialist advice in dealing with the particular soft sandstone in this area. After many discussions with the Tasmanian Committee of the Institute of Aboriginal Studies it was decided that the Tasmanian Museum in association with Mr. Luckman should take a party to the site and remove a significant slab of sandstone with prominent markings on it and have it installed in the Tasmanian Aboriginal Room in the State Museum. This was done about eight years ago, not without adverse criticism by some individuals, but for all that it was proposed to get others at a later date. The Institute of Aboriginal Studies then asked if, before removal of any further slabs, the Museum would co-operate and take a group to the area to carry out a more detailed survey than had been done by Luckman and others.

This was done in February of this year. A good deal of excavation was carried out which exposed more markings, a further survey was made and very detailed copies were made of the exposed petroglyphs on polythene sheeting. This was followed up by excellent casting work done by the Senior Preparator at the Museum, Mr. D. P. Alexander, who used some materials new to this kind of work. This was followed up by making casts in fibre glass and these have proved to be excellent and probably better

than any made by methods used previously. One of these is now exhibited in the main entrance foyer of the Tasmanian Museum while another is in the Institute of Aboriginal Studies in Canberra.

The work done earlier this year indicates that the petroglyphs may be spread over a much wider area than previously thought to be the case. At some later date it is hoped the two bodies will carry out a further field study in this area. Some interesting finds of charcoal were located at varying levels and when this has been radio-carbon dated we might get some additional information relating to the stages in which the carvings were made. Further work may well give more detailed and valuable information.

It is a pleasure to be able to record thanks for much co-operation and interest from the V. D. L. Company on whose land the petroglyphs are situated.

### FLAKED STONES OF THE TASMANIAN ABORIGINES

F. L. Sutherland

LAPIDARY was important to Tasmanian aborigines in their extensive use of flaked stone implements. Even today, nearly a century after racial extinction, their stone tools remain common monuments scattered around their old camp sites. During their occupation of Tasmania they fashioned hundreds of thousands of stone implements. Their choice, use and exploitation of different stone types is the subject of this article which summarizes extensive studies of some 15,000 flaked stones from numerous sites throughout Tasmania, combined with field observations by the writer and other researchers. The study material is held in the collections of the Queen Victoria Museum, Launceston, Tasmanian Museum, Hobart, and Australian Museum, Sydney. A more detailed report of the work is in preparation for journal publication.

#### Stone Types Used

The Tasmanian aborigines greatly favoured siliceous stones for their flaked tools, as in many stone industries elsewhere, on account of the general hardness of such materials and tendency to curved fracture which assists flaking. They used a wide variety of rocks, namely cherty hornfelsic rocks, quartzites, cherts, impure cherts, spongolites, quartz, chalcedony, opal, silicified breccias and conglomerates, and occasionally other types including dolerite and basalt.

The cherty hornfelsic rocks are products of contact metamorphism of mudstones by Devonian-Carboniferous granites intruding older basement strata; by Jurassic dolerite sheets invading Permo-Triassic strata; and by Cainozoic basalt lavas overflowing the Tasmanian terrain. The quartzites derive from similar contact zones in sandstones, but also commonly come from the older metamorphic basement rocks. Cherts and impure cherts occur amongst the Precambrian and Cambrian basement rocks and quartz is an ubiquitous veinstone in the basement rocks and granite bodies. The spongolites are silicified sponge spicule rock, locally derived from the Tertiary marine beds of north-west Tasmania. Chalcedony and opal, including jasper, agate and silicified wood, are common contact associates of the Palaeozoic granites, Jurassic dolerite and Cainozoic basalts. Silicified breccias and conglomerates range from chert types typical of Cambrian basement rocks to contact metamorphosed rocks at granite dolerite and basalt bodies. Derived and freed pebbles and boulders of any of these rocks may be found in younger strata, including present stream and beach deposits.

#### Distribution of Stone Types in the Implements

Implement materials in the eastern half of Tasmania are characterised by high percentages of cherty hornfelsic rocks, generally forming 60-100% of the collections. Lesser, but noteworthy, concentrations appear in a few west coast localities as around Devonport, Mole Creek and Trial Harbour.

The northern west coast collections are dominated by impure cherts and spongolites, with considerable variations in their respective proportions. Cherts are the prominent material in the western north coast collections. Quartzites are the main element on the Rocky Cape, Mole Creek and southern west coast areas, but also appear in limited amounts in some collections from the north, north-western and north-eastern coasts, in the northern midlands and in southern Tasmania.

Mineral quartz, chalcedony and opal generally form small to moderate percentages of collections on northern, north-eastern and south-western coasts, in the northern midlands and in southern Tasmania; quartz becomes dominant in some of the north-east and east coast collections.

Silicified breccias and conglomerates appear to limited extents in the north coast collections around Devonport (Cambrian types) and are often present in southern Tasmanian collections, particularly around the south-eastern Derwent shore. Basaltic and doleritic rocks are rarely present, except in Rocky Cape and one or two other collections.

### Analysis of Stone Type Distribution

The wide variety of stone materials used by the aborigines reflects the varied geology of Tasmania. In many areas the implement collections show high correlations with the local geology, but in some cases a part of it is of extraneous materials. There are indications of aboriginal transport of favoured materials as far as from one side of the State to the other. Detailed excavations by some workers at sites lacking local sources of good material show predominance of implements of cruder materials in the lower levels, but increasing amounts of good exotic material in the upper levels. This suggests increasingly better knowledge and use of good materials brought in with time.

The aborigines obtained their stone materials by quarrying outcrops, or from picking up loose pebbles or boulders in alluvial and beach deposits. Over sixty sites from which raw stone was gathered are now known in Tasmania, ranging from extensively quarried outcrops, as at Syndal, Melton Mowbray, Oyster Cove etc., to minor working of small outcrops or pebble or boulder deposits. A description of an aboriginal party quarrying stone near Plenty is given in Ling Roth's text on the Tasmanian Aborigines, which included the humorous sight of an elderly aborigine enthusiastically breaking stone, jumping as he did so and flinging his legs apart to avoid the flying stone chips.

### SPRINGTAILS ( COLLEMBOLA )

#### A. Green

RECENTLY two interesting species of Collembola have been collected by Mrs. A. Goede and given to the Tasmanian Museum. These primitive insects belonging to the genus Ceratrimeria were found under logs in wet forest.

Both species are "springtails without springs". Most collembolids can escape by leaping through the air, propelled by a springing device located on the lower surface of the abdomen. In these two species of Ceratrimeria the springing mechanism is reduced and does not function, so that the insects can proceed forwards only at a sedate walk.

Even more unusual is the appearance of these collembolids. Elongated, paired processes project outwards along each side of the body, so that the insects appear to be bristling with sharp spines, although these processes are actually quite soft. In the larger species, C. dendyi (Lubbock) which reaches a body length of 9 mm., the largest processes are not quite as long as the body is wide. However, in C. bicornis (Womersly), a species up to 5 mm. long, the processes are considerably longer than the width of the body. To add to the peculiar appearance the "spines" are coloured a light yellow at the tips, in contrast to the dark blue-gray of the rest of the body.

C. dendyi has been recorded by Womersly (Primitive Insects of South Australia, 1939) from Collinsvale. Mrs. Goede's examples of this species were found between Lottah and Blue Tier in the north-east, thus extending the known Tasmanian distribution. C. bicornis was first discovered in Tasmania (Womersly, 1940, Trans. Roy. Soc. S. Aust., 64 (1)) at Ida Bay in the far south. In this case the recently found specimens came from Ida Bay again and from Hastings.

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by many to have adversely affected the Magpie. However no concrete evidence for this was forthcoming and, as the Magpie is almost entirely insectivorous, it is difficult to see how the birds could pick-up this particular poison as it is applied on carrots, apples and, to a lesser extent, oats.

## THE WHITE-BACKED MAGPIE IN TASMANIA

D. G. Thomas

AS fears had been expressed that the White-backed Magpie was decreasing in numbers in Tasmania a survey into its status was carried out. This took the form of a questionnaire that was distributed to persons answering an appeal in the press and to people considered to have good local knowledge. Assistance was also received from farmers' associations. Ninety-seven completed questionnaires were returned and I would like to express my thanks to all contributors and to the Animals and Birds Protection Board who generously made a grant available to cover the cost of the enquiry.

We have some historical information as to the distribution of Magpies. Littler (*A Handbook of the Birds of Tasmania*, 1910) states "Although the species is one of the best known birds in many districts in Tasmania, yet there are parts where it is almost if not quite an absolute stranger. It is only within the last few years that it has extended its range to any extent on the West Coast, and I am given to understand that even now in the more densely timbered and moist localities it is unknown." Sharland (*Tasmanian Birds*, 1958) states "The Magpie is chiefly a bird of the sheep country and light timber, but will occur in clearings in a forest. Its distribution is marked by the extent and range of semi-open grazing country, it being common in most parts of the Midlands where the land is largely cleared, and occurring in lesser numbers in the Derwent Valley to as far as between Hamilton and Ouse; it is also found about Sorell, Richmond, Tea Tree, Colebrook, Forcett and Rokeby. There are some on the east coast, very few on Tasman Peninsula and in the Huon. In the north there are a good many about Launceston and Perth, but it does not range along the north-west coast much beyond Carrick. It is fairly common on King Island." It is apparent from these two accounts that the Magpie disappeared from the north-west coast after 1910 but before 1958.

The present questionnaire was designed to establish the present distribution of the Magpie; whether it was decreasing or increasing; and whether any such changes were thought to be of recent origin or part of a long term trend. Contributors were also asked what, in their opinion, were the causes of any changes.

The results reveal that the present distribution closely follows the distribution of sheep as given by Peter Scott in the "*Atlas of Tasmania*". The Magpie is absent from the North-West, the North-East and the Huon. The largest populations are in the Midlands and on the East Coast. It is common on King Island where it was introduced from Victoria some 50 years ago. It is also present on Flinders Island but I have been unable to find out whether it occurs there naturally or whether it has been introduced by man. With the exception of the Huon the Magpie is distributed very much as reported by Sharland in 1958.

There is no evidence that the overall numbers of Magpies are decreasing. Some contributors reported local decreases but these were off-set by others who reported increases. The Magpie has always been very local in its occurrence, with small groups of birds occupying well-defined but restricted territories. While some territories have been occupied continuously for over 100 years, others may be abandoned after a few years. Many of the reported gains and losses may well be due to groups shifting their territories. When plotted on a map, decreases in numbers are concentrated in several areas, particularly those already mentioned where there are now no Magpies. Some contributors were able to give an approximate date for the disappearance of Magpies and it is apparent that this was well over ten years ago. In my opinion it can be correlated with changes in land usage; and in particular with a change from grazing on unimproved native pasture to dairy farming on improved pasture and horticulture. Associated with these changes is the felling of mature trees in which the birds nest.

There was no clear indication for the existence of long term trends and only about 20 contributors reported recent changes. Of these slightly over half were increases. One contributor who reported the disappearance of Magpies from the vicinity of her home later wrote that the birds had reappeared.

The commonest reason for change in status, whether an increase or decrease, was considered to be changes in the habitat. After this was change in the food supply. In fact it is not possible to separate the two. The use of 1080 was considered

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