

AUCKLAND BOTANICAL SOCIETY

HON. EDITOR: Marguerite W. Crookes, 31 Maungawhau Road, Epsom, Auckland, S.E.3.

HON. SECRETARY: Mrs. P. Hynes, 54 Calgary Street, Mt. Eden, Auckland.

* * * *

As the holiday season is once more upon us the Editor takes this opportunity of extending her best wishes to all members, and also of expressing the hope that anything of interest observed on country rambles will be duly recorded for the News Letter !

The Editor regrets that it has not been possible yet to publish further Bulletins, though some are under way, but we hope by the next edition to have something further for our readers.

LECTURES AND EXCURSION.

On Wednesday September 6th Mr. Caldwell gave us a most useful lecture on "Timber Trees". A summary of his talk will appear in the next number.

On Sunday September 17th the Society held an excursion to Rangitoto. This island is somewhat difficult of access and a large gathering availed themselves of the opportunity to visit a spot of such charm and botanical interest. Lists of the more important plants were kindly provided for us through the good offices of the Museum Botanist, Miss Molesworth, and members found them most helpful. In the short period before lunch a number of members sallied forth intend on finding one of the Island's chief treasures Psilotum triquetrum. This remarkable plant is of very ancient lineage, and might almost be regarded as a living fossil. Psilotum comes from the Greek psilos meaning naked, and the plant is well named as it possesses only minute scale-like leaves and no true roots. Some botanists think that the whole mighty fern world may possibly be descended from some such group as the Psilophytales a very ancient family which flourished in Palaeozoic times, and of which Psilotum may be regarded as the most direct descendant. Psilotum produces spores, which give rise to prothalli bearing the reproductive organs, but as these develop below ground they are not easy to discover. P. triquetrum is common in all tropical and

subtropical countries as far north as Japan and Florida. It is found in various hot spring areas, at Ranganui Harbour, Motuhora Island and Lake Taupo. The kidney ferns and various species of Hymenophyllum were noted growing luxuriantly on the lava rocks. Among the trees, of particular interest was the hybrid pohutukawa, first recorded by the late Mr. Carse, and named by him Meterosideros sub-tomentosa (Trans. Vol. 57 p. 92). At one place on the path to the filters, members were able to see the hybrid and its two parents M. tomentosa and M. robusta all growing side by side. (Cockayne states this is only one of various hybrid forms. "The Vegetation of New Zealand" p. 67)

The highlight of the day was the finding by Miss Thomas and Mr. Cooper of Pterostylis barbata, while specimens were also noted by Mr. Millener near Islington Bay. This orchid has never previously been recorded from Rangitoto. It differs from the other N.Z. species in that its lip is pendulous and hairy and hangs right out of the flower. The weather was broken in the afternoon but cleared for the homeward journey. The Leader was Miss M. Crookes.

* * * *

A lecture on ferns was given by Miss M. Crookes on Wednesday October 4th at 8 p.m. We print the following summary:

The fern has a very strange life history. Spores are formed in minute (usually) stalked capsules called sporangia. These are as a rule collected into groups called sori. In some ferns (ex. the genus Polypodium) these form small brown circles on the backs of the fronds. When the spores are ripe they are ejected and blown about by the wind till they find a spot suitable for germination. On germinating they do not give rise to a new fern, but, instead, to a small green scale, usually about half an inch across, known as a prothallus. This bears, when mature, the organs of reproduction. When fertilization has taken place, the egg cell divides and eventually grows into a new fern plant. Water is essential for fertilisation, thus the fern remains an amphibian.

The ferns of the world number over 9000 species. N.Z. has 158, probably more. Ferns are most varied in form, and both vegetative and soral characters are important in classification. The most primitive ferns are the Ophioglossaceae (including the Adder's tongues and the Parsley Fern). Another primitive family includes the King Fern (Marrattia fraxineae). Among more advanced,