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THE FLORA OF JURVILLE ISLAND.

On August 16th Dr Oliver gave the Society a most interesting talk, illustrated by lantern slides, on the flora of D'Urville Island - an island that has been little visited by botanists.

Lesson visited this region in 1827 with D'Urville's expedition, but he gives localities only as "French Pass" without indicating whether it was from the mainland or the island that his specimens came. In Cheeseman's Flora only five species, collected by five different people, are named as coming from D'Urville Island. Dr Oliver collected at the Southern end of the island; on the east side he visited Kapowai, the Waunui River Reserve, and climbed the high ridge of the island at two different places, including Attempt Hill, 2500 ft, the highest point on the island; on the west side he stayed at Greville Harbour and visited various points, again including the summit of Attempt Hill. Almost three hundred species were collected during two trips totalling fourteen days.

The island, which lies in the Wellington weather district, not that of Nelson, is swept by strong westerly winds. The strength of these winds is shown by a tree trunk on Bald Spur, the north ridge of Attempt Hill, which is 6 in. in diameter and 6 to 8 ft long, yet only 1 ft high - completely flattened by the wind.

The Mineral Belt reaches D'Urville Island. Here it forks; one branch goes up the east side over Attempt Hill and one on up the west coast. There is the same sudden change of vegetation from ordinary soil to that of the mineral belt as is seen in Nelson.

The bush has suffered at the hands of man. Most of the forest has been cleared from the east side although more remains on the west. There are a good many wild cattle, pigs, and some deer which cross to and from the mainland.

In the west, in the neighbourhood of Greville harbour the bush in the gullies is generally dominated by kahakohe, with beech higher up; on top where it is wetter there is less beech and more smaller trees such as Nothofagus; the forest is in general Nothofagus truncata; We saw slides of the sand dunes at Long Beach with Spinifex hirsutus, Coprosma acerosa, and pingao, and the swamp at Puketutu Bay with raupo and flax. Blechnum banksii was found inside the north spit at Greville harbour, the only place where it was seen. Here also was Hebe elliptica an interesting new locality for this species.

On the east side of Attempt Hill occurs the only really wet piece of bush where every log is covered with ferns, liverworts and mosses. Amongst the N. truncata is some N. menziesii and Olearia arborescens.

Twelve-foot high manuka is most prominent on the serpentine belt, with here and there an occasional beech little more than the same height. Smaller plants of the dry scrub are Leucopogon fasciculatus, Cassinia vauilliersii, Pimelea gnidia, Coprosma lucida, Pittosporum divaricatum, Dacrydium bidwillii and Hymenanthera alpina. Celmisia greminifolia and C. gracilentra grow where there is seeping water. Dacrydium laxifolium occurs on dry serpentine rocks, a contrast to its damp habitat at Arthur's Pass. Senecio lagopus grows up in the mineral belt where there is much fog, not appearing below 1000ft. Pimelea lyalli, Gleichenia circinata, Lindsaya linearis, Clematis australis, Craspedia uniflora (only one form) are other species on the mineral belt. Here also is Pogonathera microphylla.

Other interesting plants mentioned were Ascarina lucida, with shining green aromatic leaves, near sea level at Kapowai and Suttonia australis growing in its type locality. Gentians grow down to sea level. Oreobolus pectinatus grows in the bog on Bald Spur.

On the island are five species of Hebe: - H. angustifolia (in its type locality); H. salicifolia v. atkinsonii; the Hebe which occurs on Bald Spur in a series of broad and narrow leaved forms, is said by Mr Geo. Simpson to be identical with H. lapidosus, hitherto recorded only from Marlborough; H. rigidula; H. elliptica.

There are two hybrid Coprosmas: - C. foetidissima x banksii, and C. robusta x propinqua. These are the only two crosses noted although many other species occur.

It is interesting to note that many species have different forms in different habitats. The manuka on the mineral belt has very small leaves while on the lowlands it has very broad leaves. The southern rata, a form with small leaves, was found only on the mineral belt. The gontian, probably a form of *Geopelia*, in the bog of Bald Spur has very large flowers while those further down the hill have small ones. In the burnt beech there is much *Pimelea longifolia* while further up the mountain is the small leaved *P. glandia*; in between one finds intermediates which may be hybrids. There is need of transplant experiments to help to elucidate the questions which these forms raise.

Dr Oliver gave answers to several questions. He stated that only six rewarewa trees were noticed and these were in the saddle south of Attempt Hill. The beech is mostly *N. truncata* with *N. fusca* here and there; *Nauclea* occurs in the mineral belt and in wet forest. There are half a dozen orchids among which is *Pterostylis barbata*; *Epinephelium* and *Dendrobium* are on the serpentine belt and *Phyllophyllosum pygmaeum* occurs in sheets on the rocks; there are several colour forms of *Thelymitra longifolia*.

In moving a vote of thanks Dr Cone said how fortunate we were to have had the opportunity to hear an account of such an important piece of work, with its problems of epharmacy and hybridism.

EXCURSION TO PETONE WATER WORKS RESERVE, April 11th, 1943.

An innovation for the Society was an excursion to which secondary school pupils and their teachers were especially invited. Four schools were represented and the total attendance, including members was 43. The following account, contributed by a group of girls, shows that useful notes were taken, and that the experiment might well be repeated.

"On the cleared hillsides *Pennantia sorvibosa* was abundant, while *Paraonia heterophylla* with long pods hanging down, was climbing over everything. Weeds noted were the native *Acaena sanguisorbae*, *piripiri*, and an exotic *Geranium*, the cranesbill.

The predominant tree in the bush was *Beilschmiedia tawa*.

Podocarpus ferrugineus (miru) was found with a scarlet rata vine growing up it, and *Griselinia lucida* and an *Astelia* epiphytic in the forks.

We found a number of juvenile forms, and altogether the bush seemed very young. Among the juveniles we distinguished between *Elaeocarpus dentatus* (hinau) and *Knightia excelsa* (rewarewa) and we found all stages in the development of the growth of *Pennantia sorvibosa*. *Putarutaweta* (*Carpodetus serratus*) was also found in the juvenile and mature forms.

Other plants we found were:- *Rhipogonum scandens* (supple-jack), *Olea lanceolata* (white Maire), member of the olive family, *Suttonia salicina* (to'o), *Fuchsia excoaricata* (native fuchsia), *Brachyglottis repanda* (raugiora), *Geniosoma ligustrifolia* (privet-leaved *Geniosoma*), *Uncinia* sp., a sedge with hooked fruits, *Coprosma grandifolia*, male and female flowers, dioecious, *Muehlenbeckia australis* in flower, buckwheat family, *Pseudowintera*, *Wintera*, or *Drimys williamsii* (horopito), *Schiffelia digitata* (pate) in flower, *Notopanax arboreum* (whauwhaupaku), *Hedyotis arborea* (Porokaiwhiria), common name pigeonwood, *Laurelia Novae-Zelandiae* (Tuketea) which has stems flattened at the nodes, and large brown shelf fungi, two epiphytic orchids, *Bulbophyllum pygmaeum* and *Sarcocollum adersus*, *Coprosma foetidissima* (stink-wood), nikau in flower, the liverwort *Marchantia*, and many *Blechnum*, *Asplenium* and *Polypodium*.

Leycesteria formosa was common in parts. This is an introduced plant which has a distinct juvenile form with lobed leaves, while the mature ones are entire. The stem is smooth, round and hollow. Mr Duncan showed how to make fine whistles from it. Large red fruits hang down surrounded by tiers of red bracts, from which the local name Pagoda plant arises."