

WALLACEVILLE PEAT.

On Saturday, the 7th December, a party of 18 led by W.F. Harris visited the swamp at Wallaceville. The swamp lies in a valley which is 3 miles long and a mile wide and is flanked by hills, the altitude of the swamp itself being some 500 ft. above sea-level. The swamp is thought to have originated as a result of earth movement along the Rimutaka fault in consequence of which the land surface was tilted and warped and the stream which drained the valley was ponded back.

The locality was visited by Kirk some 50 years ago and it was here that he collected Gahnia robusta, a species which has not since been found. The valley is now much altered, however, as bush has been cleared from the hills and the swamp has been drained and planted in flax. Dried specimens in the Kirk herbarium are probably all that remains of Gahnia robusta. An interesting snail, a Paryphanta closely allied to a Nelson species, seems formerly to have inhabited the area, but under the altered conditions shrunken and empty shells are all that have been found to testify to its existence.

During the visit a section of a Swedish peat auger was used to demonstrate the method of obtaining peat samples at different depths below the surface. Borings with this auger have shown the depth of peat in the deepest part of the swamp area to be 28 feet. Wood samples and pollen grains from the lowest peat layer show that the valley floor was formerly covered with forest. Increasing wetness as the floor gradually subsided must have led to the death of the forest and as the centuries passed, manuka, fern (Gleichenia) and sedge communities have piled their debris on the buried tree trunks.

The main peat area, although not without interest for the plant ecologist, is too extensive to traverse on a short visit and offers but limited opportunities to the plant hunter. The party accordingly visited a smaller area of peat formation where a former stream had debouched on the swamp. Here curious mounds of peat rise up from what must have been hollow places where water had accumulated. Study of such mounds suggests that once peat formation has started the peat itself is sufficiently retentive of water to allow of a dome-like or convex upward growth.

This was demonstrated on an almost circular mound about 70 feet across and some 12 feet high. The surface quaked when walked upon, and when the surface mat was broken water quickly accumulated in the hollow. The presence of this water near the top of a dome-like mound testified to the water-holding capacity of the peat.

At the head of the valley there is an area with much surface water and a tall vegetation - Gahnia 12 ft. high, Phormium 9 ft. high, 6 ft. long stems of Juncus pallidus, tree like Hobe salicifolia and Coprosma tenuicalilis. In contrast to this, the peat mounds which the party visited bore a mat vegetation, only the flowering stems rising above the lawn-like surface.

Comparison with a plant list made just a year ago showed that some changes had taken place and plant-hunting soon began in earnest. With so many diligent and enthusiastic searchers not only were most of the former occupants brought to light, but some new discoveries were made and must be added to the 70 species noted on the former survey.

A yellowish moss, Broutelia pendula, imparts its characteristic colour to large patches of the vegetation mat, which is shot with a reddish tint, however, from the leaves of Drosera binata. A liver-wort, a species of Marchantia mingled with the moss, the two perhaps in mortal combat. The plants associated with these are mostly dwarfed below their normal stature. The following list includes many of the species noted on this visit.

FERNS. Blechnum procerum, B. penna-marina, Gleichenia circinata (-dicarpa), Paesia scaberula, Ophioglossum coriaccum.

SEDGES AND RUSHES. Juncus pauciflorus, J. planifolius, J. lampiocarpus, Luzula campestris, Elocharis acuta, E. gracilis, Schoenus axillaris, Cladium glomeratum, C. gunnii, Carex pseudo-cyperus, C. soeta (Forma).

ORCHIDS. Frasophyllum colonsoi, Microtis unifolia, Corysanthos macrantha, Chiloglottis cornuta.

HERBS. Drosera binata, Epilobium fontana, E. chlorocephalum, Halogaris micrantha, Contella uniflora, Nertera depressa, Pratia angulata, Loganophora pumila.

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AT YORK BAY.

February 1st was a perfect summer's day, and some dozen members gathered at York Bay at the invitation of Mrs. Alfred Atkinson. The morning was spent in the garden and plantation established by the late Mr. Alfred Atkinson. What was twenty years ago a waste gully full of gorse is now a pleasant place indeed, with terraced gardens and shrubs on the sunnier side and a fine bush of selected native trees on the steeper slope across the little stream.

In a single tour round the winding paths some 140 species were noted and undoubtedly many more would be found in an intensive search. Senecio Alfred Atkinson, a hybrid that was "born" in this garden, had almost finished flowering, but we saw the two parents growing side by side, S. hectori with big woolly leaves and white-rayed flowers and S. perdicoides with small crinkly leaves and yellow ray florets. Elatostemma on the shady flat beside the creek looked completely at home and ready to spread further. Rhabdothamnus also showed to perfection here, a lax open bush some five feet tall hung with hundreds of orange ball-shaped flowers. The bigger leaved and the yellow flowered forms both were thriving nearby. Similar conditions also suited Senecio turneri a showy herbaceous groundsel with cordate leaves 8 inches across. Beeches, kowhais and lancewoods (including Pseudopanax chathamicum), Coprosmas, Pittosporums, and a host of other trees formed the main shade and in more open places were noted Dracophyllum recurvatum, mairehau, Libocedrus doniana, Libertia ixioides, Astelia nervosa, and many more. A plant of Cyathodes acerosa near a sunny path had been neatly trimmed and showed what a pretty close-growing hedge plant this species would make.

Tea provided by our kind hostess accompanied lunch on the lawn overlooking the bay.

In the afternoon we passed across into the original beech forest that clothes the steep slopes at the head of York Bay, the property of Mrs. Esmond Atkinson. Among many things pleasant and interesting mention might be made of two. First an extensive bank of Marina autumnalis showing old fruit and buds. Nearby some observant person spotted what was new to most of us, a foot-high plant of Metrosideros robusta, perched far up on a beech limb and sending down pink-tipped roots towards the soil - the fore-runners presumably of the great woody structures that should later coalesce to form the trunk of the old rata tree. The fate of this youngster seemed uncertain as the lower part of the supporting bough bent away suddenly and the slender rata roots, growing still vertically downwards, hung free in the air with still twenty feet or so to grow before making contact with the ground. Its further progress would be worth watching.

The afternoon finished with expressions of gratitude to Mrs. Atkinson and Miss E. Moore who had made the arrangements to give us such a pleasant and profitable day.

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VISIT TO SOUTH KARORI.

A pleasant Saturday afternoon, September 7th, was spent by some fifteen members strolling along the South Karori road, noting the remnants of the original forest, the changes made by man, and the efforts of native plants to return. Time did not allow of visiting the steeper slopes, running down to the sea, where Senecio lagopus, Linum monogynum, Aciphylla squarrosa, Angelica geniculata, and other interesting species still find a refuge. Among the woods, the North American Montia porfoliata, a rare weed in New Zealand, was new to many of us. The peltate leaves give it a very different appearance from our own pleasant Montia australasica. Later a flowering specimen, the racemes of small white flowers appearing to arise directly from the stem-leaves, was shown at an evening meeting.

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