

GUMLAND ORCHIDS.

Mr. F. W. Bartlett writes from his home, "Bankside," Silverdale, twenty miles north of Auckland, about orchids and other small interesting plants mostly growing in the rather scrubby country known as "gumland."

"The list of orchids I have located in the Silverdale area is quite considerable, - Dendrobium cunninghamii, Bulbophyllum pygmaeum, Earina micronata, Thelymitra longifolia, T. pauciflora, T. aemula (rare), T. caesia (fairly common), T. imberbis (scarce), Orthoceras strictum (common), Microtis unifolia (common), Prasophyllum colensoi (rare), P. pumilum (fairly common), Pterostylis banksii (uncommon), P. graminea (common), P. trullifolia (common), with its varieties alobula and gracilis (uncommon), P. nana (syn. puberula) and P. barbata (both uncommon); Acianthus sinclairii (common), Caladenia carnea (syn. minor) (common) and its unpublished var. bartlettii (uncommon); Chiloglottis cornuta, Corybas aconitiflorus, and C. oblongus all three fairly common, C. trilobus and C. macrantha uncommon, and Gastrodia sesamoides (rare).

It is possible to see within 8-10 chains of my home Pterostylis barbata and P. nana growing alongside one another with P. trullifolia and P. graminea nearby, while Thelymitra caesia and T. imberbis bloom beside the dainty Caladenia carnea var. bartlettii and Prasophyllum pumilum together with the more common orchids. Dotted through the scrub is the famous Phylloglossum with Lycopodium laterale, L. densum, Epacris pauciflora, Drosera binata and D. auriculata.

All this is on a piece of Crown Land rented by me. I live in dread that some day the Crown will resume ownership of the property and the scrub and its interesting plant life will go up in smoke or be overrun by crawler tractors in the name of progress."

(Could not the Wellington hills provide as long and interesting a list? Make a resolution to watch the orchids this spring! Ed.)

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WEEKEND TRIP TO WAIOPEHU. April 16 - 18th.

About 15 members of the Society travelled by truck from Wellington to Levin where Mrs. Duguid provided most welcome refreshment before we dossed down in and around her house. Next morning the truck took us to the Ohau River where breakfast was enjoyed in brilliant sunshine before we set off.

The first part of the route was through mixed bush which gave good opportunities to the collectors of fungi. Along the ridge leading to Waiopehu we passed through an extensive area of wind-thrown beeches; the shallow rooting systems of these trees, some of them of considerable size, were clearly shown. In addition to the tangle of Aristotelia, Rubus, etc., saplings of Nothofagus fusca were coming away well.

Some members reaching the hut early, climbed to the summit through the leatherwood and out on to the tussock; others delayed their visit until the following morning. After an early lunch at the hut we returned by the same route.

Even in the truck we had opportunities for botanical observation and watching for the seven headed nikau became almost a ritual!

The expedition was most successful, and we wish to record our thanks to the leader, Miss Mason, and incidentally to the weather which co-operated to the full.

J. M. Sansom.

GEASTRUM VELUTINUM.

This earth-star has fruited conspicuously in the month of July, in Wilton's Bush, on Johnston's Hill and in Ngaio Reserve. The fleshy rays of the outer shell open star-like, flesh-pink in colour, and develop reticulate cracks as they bend back and curl underneath. The inner part

sits at the centre of this star, like a small, brown, papery, puff-ball, with a tiny, conical, starshaped opening at the top. (I would be grateful to receive collections of any fungi from members who may find them.)

Greta B. Cone.

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SEAWEED RESEARCH.

On April 19th at the invitation of the Wellington Branch of the Royal Society of New Zealand, members heard a lecture by the Swedish algologist Dr. Tore Levring. Dr. Levring, who is Assistant Professor at the University of Gothenburg, is one of the most active and well known seaweed researchers in the world. His interest and ability in physiology were shown in his lecture on "Submarine Daylight and Photosynthesis in Marine Algae" but he is equally concerned with the systematic and geographical problems in this group. A year's collecting trip to Australia and New Zealand, with a grant from the Swedish Government, will enable him to amass much material to compare with the classical Australasian specimens in Sweden, and with other southern circum-polar specimens that he has already worked on. In New Zealand he and Mrs. Levring collected about Russell, Auckland, Wellington, Lyttelton and Dunedin, and he lectured to students in the four main centres.

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TROPICAL MANGROVE VEGETATION.

(Notes of Mr. McCann's Talk on March 15th.)

The word MANGROVE tends to embrace all plants growing in swampy muddy flats between high and low tides. Here plants have adapted themselves in various ways to an existence in saline slush, poor in oxygen. The mangroves form a biological unit of ecological and physiological interest.

The mangrove formation includes plants belonging to widely different families, although in New Zealand we tend to think only of the one species that dominates our mangrove swamps. Some of these families are:- Rhizophoraceae, the so-called true mangroves; Lythraceae; Combretaceae; Verbenaceae; Meliaceae; Myrsinaceae; Rubiaceae; Acanthaceae; Leguminaceae; Gramineae; Cyperaceae; Compositae; Salvadoraceae; Chenopodiaceae; Euphorbiaceae; Convolvulaceae; Asclepiadaceae; Ficoidae; Palmae; Apocynaceae. Some of these are rather members of the border-line flora between the mangrove and the terrestrial floras.

A brief description was given of a typical Indian mangrove swamp of the Bombay Presidency. Here on the seaward side is a protecting screen of trees or shrubs of Avicennia alba. Behind this is a mixture of woody plants of some nine genera, including Avicennia officinalis, Rhizophora, and a Derris related to that from which derris dust is obtained. On slightly higher ground are grasses and sedges and inshore still other plants, with further additions if there are patches where more sand is mixed with the mud.

The Rhizophoraceae are represented by five species in Bombay. While the fruit is still on the tree, an enormous radicle develops, sometimes attaining a length of two feet in R. mucronata, and half that length in Cerriops and Kandelia. Carallia has a red fleshy fruit, distributed by birds. The early development of the radicle is believed to be a means of anchoring the seedling in the mud, as it drops javelin-wise into the slush. In Rhizophora the entire fruit often falls, but if the seedling is without pericarp it floats vertically, owing to the enlargement of the distal portion of the radicle which weighs down the point and allows it to jab into the mud as the tide ebbs. Most of the Rhizophoraceae produce stilt roots. In R. mucronata the base looks like a giant spider with multitudinous legs. Pneumatophores (breathing roots) are not produced, but numerous large lenticels appear on exposed roots.