Ophioglossum petiolatum at Hokio Beach

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Ophioglossum petiolatum is a species which was once quite common in the North Island around lake margins, flushes and in swampy ground. However, in recent years it has been recorded with certainty only from Hokio Beach by Tony Druce in 1967 (D. R. Given, *Rare and endangered plants of New Zealand*). An attempt by us to relocate this population in October 1980 failed dismally, but exactly two years later, the Wellington Botanical Society were more successful. A single population of about 30-40 plants was found in peaty soil beside standing water. The area was cattle-grazed, and only in clumps of longer grass and rushes were plants with the distinctive features of the species to be seen (Fig. 1). Characters which distinguish it from the commoner *O. coriaceum* are the larger leaf blade (up to 5 x 2cm cf. 2 x 0.5cm), the longer stipe between leaf and ground level, and the greater number of sporangia (c.20 cf. c.6 pairs).

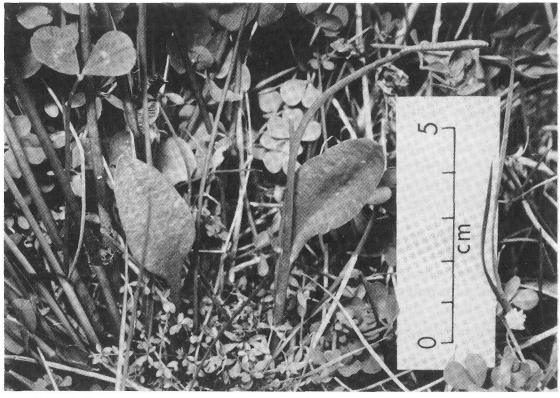

Fig. 1. *Ophioglossum petiolatum* at Hokio Beach. Photo: B. V. Sneddon, December 1982.

Outside New Zealand, *O. petiolatum* has a wide range in the tropics, but its exact distribution is difficult to determine because of confusion with *O. reticulatum*. The plant was referred to *O. pedunculosum* by Allan (*Flora of New Zealand*, Vol. I), but this name is definitely incorrect. In New Zealand, the species is at the southern limit of its distribution and is now very rare. Unfortunately, plants at Hokio are threatened by grazing and planting of pines. Another population has recently been discovered by Anthony Wright in an isolated area of Great Barrier Island, and the species should certainly be looked for in remaining wetland areas of the North Island.

Annual Growth of Bulbous Buttercup (*Ranunculus bulbosus*)

F. C. Duguid, Levin

One sometimes reads of the naturalised plant, bulbous buttercup, that a bulb is not always present, or that the plant sometimes disappears after flowering. It seemed that a study of the growth pattern could provide answers.

From the following, it will be seen that (a) the "bulb" (corm) is not present in early stages of the seedling plants, and is not very recognisable while it is totally enclosed within the sheathing bases of many petioles; and that (b), the developed corm has a dormant stage which may be brief or long, the plant's survival depending on available moisture before the corm becomes too desiccated.

In April 1978, rosettes of prostrate leaves were seen in poor pasture on a low gravel terrace at Ohau. The leaves were rather similar to those of creeping buttercup, having three, deeply-lobed and serrated leaflets, but the leaves were more numerous and there were no trailing stems. Some plants dug up showed that the leaf rosettes were springing as offsets from a shallowly buried corm. Several rosettes were gathered to grow for study.

As seedlings, the plants are just a cluster of leaves above a number of stout roots. The leaves increase in number during winter and during the flowering stage, the outer ones dying off in succession. By mid-September, a stout corm has been built up within the sheathing petiole bases. At this stage it is about 15 mm in diameter with an outer layer 4 mm thick from which spring the leaves and roots. By now the developing floral scapes are crowding at the centre of the cluster and the first flower appears, long-stemmed. At the base of the stem are what appear to be leaves with narrow strap-shaped lobes. As the scape thrusts upwards