

A PRIMITIVE FERN ODDITY

PETER T. MAHAN

Unpromising as it seems as a habitat for delicate native plants, parts of the Canterbury Plains harbour a small unfernlike fern which belongs to the family *Ophioglossaceae*, a primitive family with links that go back to the Jurassic Period.

This small fern, *Ophioglossum coriaceum*, or adder's tongue, from the shape of the fruiting spike, is found throughout New Zealand, the Kermadecs, Chatham Islands and Australia, Tasmania, Easter Island and Bolivia.

Arnold Wall wrote "It is sometimes to be found still on the hills, especially between Sumner and the Godley Head lighthouse in the spring, but only in certain seasons". He also wrote that it sometimes disappeared entirely for years.

At one time according to Thomas H. Potts (about 1880) it used to spring up in abundance about the north town belt, a grassy land before it became covered with gardens and villa residences. He was probably referring to Papanui and St Albans. Potts also reported it growing on tussocky ground close to the sea in Ohinitahi, Governors Bay.

Today one needs to travel further afield in order to locate it. In the middle of October 1986 John Thompson, Ian Tweedy and I found numerous *Ophioglossum coriaceum* plants growing in patches in sandy soil amongst grass along the roadside by the Amberley Beach golf course. A few had fertile fronds. In 1988 on 28 September, John Thompson, his wife and I went to the same locality but failed to find any plants along the roadside. We did however find a few specimens growing inside the fenceline of the golf course. From their appearance they appeared to have been sprayed with weedicide, but we concluded that they were suffering from drought, as that spring had been very dry.

Before they will germinate *Ophioglossum* spores must be covered in some way because light inhibits germination. In nature the spores must be washed into a crack or covered by sand or humus either by rain or wind, or in some other way. Given these conditions the spores germinate to form a slender prothallus which may remain in the soil for as long as twenty years. In *Ophioglossum* infection of young plants by mycorrhiza is essential at all stages of development, for their continued growth. For this reason the surest way of growing it on is to take up a clod of turf in which it is found growing and put it in a pot of damp, peaty soil, keeping the pot in a place shaded from the afternoon sun.

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