

Hypsela rivalis: a member of the lobelia family, local in the North Island, more widespread in the South Island; thinly scattered in lake-shore turfs at L. Wairarapa.



Crassula sp. (*Tillaea sinclairii*): one of the most abundant species of the lake-shore turfs; has the smallest leaves of any flowering plant present.

Callitriche petriei: this native starwort is thinly scattered in the lake-shore turfs; a rather local New Zealand species. Stomata show clearly in upper surfaces of the leaves.

Photographs with exception of aerial photo all by Colin C. Ogle



Big Lagoon, J. K. Donald Reserve, east shore of L. Wairarapa (February 1982). The Donald Reserve is the largest surviving area of swamp and ponds which is contiguous with the main lake. Some ponds, including Big Lagoon, have been artificially deepened in an attempt to retain water in summer and autumn. This creates habitat for tall exotic and native plants rather than small, wetland turf ones, as well as for waterfowl, bitterns, herons, frogs and perch.



Callitriche petriei: one each of the very reduced male and female flowers are shown: the male consists of one stamen only (see the yellow anther), and the female shows two lobes of the ovary and two styles.

and a white-flowered native violet (*Viola lyallii*) are examples, but the most notable rarity is a species of *Crassula* (= *Tillaea acutifolia*).

The state of botanical knowledge

Much of the botany of the Lake Wairarapa wetlands remains unknown. No detailed vegetation map has yet been made for the area, the precise nature of the plant zonation is undescribed, and, undoubtedly, there are species present which have so far escaped notice because of their rarity of their likeness to other plants. The taxonomic status of some plants remains unclear; for instance that of *Isoetes*, *Pilularia*, *Lilaeopsis*, and perhaps an unnamed species of *Glossostigma*.

Finally, there is the question of the roles the plants have in the ecology of the wetlands. Clearly, some bird species use certain areas of the lake shore, while others seem to prefer different parts. Some connections between the vegetation and the wildlife use of the wetlands should emerge from the current year's study at Lake Wairarapa by the Wildlife Service.

Botanically, Lake Wairarapa's eastern shores are still a fascinating natural system. Not only do they deserve protection but with suitable management the total biological and scenic values of the complex might be enhanced. This could lead to an increased public awareness and use of the wetlands for their intrinsic rather than exploitable values.

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