APPENDIX 1

ADDITIONS TO THE CHECKLIST OF VASCULAR PLANTS OF KAHAROA CONSERVATION AREA (Shaw 1991)

Chris Ecroyd

Lygodium articulatum

Macropiper excelsum

Corybas trilobus

WANTED

EMAIL ADDRESSES

THE COMMITTEE WOULD LIKE TO KEEP THE MEMBERSHIP LISTS UPDATED. WE WOULD LIKE TO KNOW WHO HAS NOW GOT AN EMAIL ADDRESS SO THAT THIS CAN BE ADDED TO THE DETAILS ON THE MEMBERSHIP LISTS.

IF THIS APPLIES TO YOU CAN YOU PLEASE SEND YOUR EMAIL ADDRESS TO THE SECRETARY AT THE ADDRESS LISTED IN THE FRONT OF THIS NEWSLETTER OR EMAIL THE ADDRESS TO THE EDITOR AT CHRIS.ECROYD@FORESTRESEARCH.CO.NZ

BLUE LAKE AND LAKE OKAREKA THREATENED PLANTS

Paul Cashmore

This field trip was on Saturday 12 June, just before the Annual General Meeting which. We hoped to see three threatened plants found in the Blue Lake/Lake Okareka area - the native cress *(Rorippa divaricata)* and two species of mistletoe (*Tupeia antarctica* and *Ileostylus micranthus*).

Rorippa divaricata is a short-lived herbaceous perennial. It is a New Zealand endemic, formerly widespread, but now restricted to northern offshore islands, the Rotorua Lakes and recently discovered in Golden Bay. Around Rotorua it is known from the Blue Lake, Mokoia Island (not seen since 1990), Lake Okataina and has recently been found at Lake Rotoiti. *Rorippa divaricata* generally occurs in open sites such as slips and other disturbed sites, however it has been known to occur under coastal forest (Beadel & Pardy 1998; Norton & de Lange 1999). It is currently ranked by Cameron *et. al.* (1995) as endangered. The Department of Conservation has recently published a recovery plan to guide conservation work on this species (Norton & de Lange 1999).

The trip began on the track around Blue Lake where several sites of *R. divaricata* occur. Following some initial searching several plants were relocated. All plants in this area have been planted by DoC staff from seed collected from the original Blue Lake population.

We checked most of the planted sites that could be found. The results are as follows. Plots 3,4,6,7,8,10,11 and 12 were relocated. *Rorippa divaricata* plants were found in the following plots

Plot 7 – Four plants present. These plants were growing in a light gap and were looking very healthy. This was an increase on the one plant found on 4 Feb 1999.

Plot 8 – Ten plants were found. This was an increase on the six plants found in February. Several plants were heavily browsed. It appeared that the high levels of browse were a result of slugs or snails.
Plot 12 – approx. five plants were located with two dead plants. All plants were heavily browsed.

We checked the original site where *R. divaricata* was known from. No plants were found. The species appears to have disappeared from this site within the last year.
We also tried to relocate another population which I had discovered the previous winter while canoeing on the lake. Unfortunately we were unable to exactly pinpoint the location from the track. (A subsequent visit to this site has confirmed that this population has also disappeared).

This visit confirmed that *R. divaricata* is surviving at the Blue Lake with a little bit of help from DoC. Many plants appeared to be thriving and seed was present on many individuals. Several new plants had established from those originally planted.

We then moved to the Blue Lake Holiday Park to see the mistletoes, *Tupeia antarctica* and *Ileostylus micranthus*. Both are threatened, mainly by possum browse but also from habitat loss and loss of pollinators (Dopson *in press). Tupeia* is ranked as rare while *Ileostylus* is local (Cameron *et al.* 1995). . These two species occur at a range of sites around the Rotorua Lakes and parasitise a range of host trees. *Ileostylus* is commonly found growing on mahoe or kohuhu in this area but can also be found on a large range of exotic species (de Lange 1996). Around the Rotorua lakes *Tupeia* most commonly occurs on fivefinger.

At this site the group was able to see several exotic trees with large healthy individuals of *Ileostylus* present. The trip coincided with fruiting of *Ileostylus* at Blue Lake and large quantities of ripe yellow fruit were present on several specimens.

Several fivefinger trees which host *Tupeia* were seen. These have been banded by DoC staff to try to prevent possum browsing of the mistletoe plants. This has been successful in many cases but unfortunately several dry summers, particularly the 97/98 summer appears to have taken its toll on many mistletoe plants around Blue Lake and elsewhere. Mistletoes take water and nutrients from their host trees and it appears that these dry summers have contributed to the death or decline of some mistletoe plants and in some cases host trees as well. However the group was still able to see many mistletoe plants including a very large healthy specimen of *Tupeia* which had unripe green fruit present.

The trip concluded with a visit to a site at Okareka which was discovered (or possibly rediscovered) several years ago. Although this is a small strip of vegetation bordering the lake DoC surveys have revealed over 200 mistletoe plants present within this area. Most specimens are *Tupeia* hosting on fivefinger but *Ileostylus* is present on kohuhu as well. The group examined several large specimens visible from the road. A tree lucerne (*Chamaecytisus palmensis*) plant which has many small *Tupeia* plants present was examined at close range. Several *Tupeia* specimens on neighbouring properties were pointed out.

With thoughts of preparation for the Annual General Meeting on people's minds the trip finished early in the afternoon.

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