Botanists enjoying a wet day at Waione frost flats. Photo: Paul Cashmore

A SEASON OF INTERESTING THREATENED PLANT DISCOVERIES IN WHIRINAKI FOREST PARK

Paul Cashmore

So far this year there has been a range of interesting new discoveries of nationally threatened plant species/populations in and around Whirinaki Forest Park. These have occurred thanks to the Botanical Society weekend visit in March (see article in this newsletter) and from some dedicated threatened plant survey work by the Department of Conservation (DOC).

The first discovery was made in January by DOC when a single *Alepis flavida* (Chronically Threatened – Gradual Decline (de Lange *et. al.* (2004)) mistletoe plant was discovered growing on red beech (*Nothofagus fusca*) high on a ridge behind Minginui village in the Tuwatawata Ecological Area. This is part of a much larger area where DOC is

intensively managing animal pests, in particular possums and mustelids. This find was made during annual monitoring and survey work for the other two mistletoe species, *Peraxilla tetrapetala* and *Peraxilla colensoi,* which have been known from within the managed area and elsewhere in the park since the late 1990s. The *Alepis* was discovered very close to a known *Peraxilla tetrapetala* plant which had been monitored for several years so possibly it is a result of ongoing sustained possum control allowing previous browsed plants to reappear. *Alepis flavida* is a new species record for Whirinaki Forest Park but not particularly surprising given it is known in the adjoining Te Urewera National Park and in Waipunga Forest to the south.

In March the Rotorua/Waikato Botanical Society/Forest and Bird visit to Whirinaki occurred with several new threatened plant species discovered as described in the article in this issue of the newsletter. These were *Hypericum* aff. *japonicum* (Chronically threatened-Gradual Decline) from Waione frost flats, *Isolepis fluitans* (Chronically threatened-Gradual Decline) and *Potomogeton pectinatus* (Chronically threatened-Gradual Decline) from Arahaki Lagoon (de Lange *et. al.* 2004)). Some follow-up survey work at Waione by DOC following the field trip showed a lot more of the *Hypericum* aff. *japonicum* was present in the vicinity, a pleasing result given this species appears to be declining and has disappeared from many of it's previously known sites (P. de Lange pers. comm.).

Following this some intensive survey by DOC for *Dactylanthus taylorii* (Chronically threatened-Serious Decline) was undertaken in and around Taahau frost flats in March during the flowering season. While this species is known in the general vicinity it wasn't known from Taahau. This proved to be a very fruitful search with a good population subsequently discovered. During this survey we also found a healthy young *Ileostylus micranthus* mistletoe plant growing near the ecotone edge on lemonwood (*Pittosporum eugenioides*). This mistletoe species has not been recorded in the park before.

A few weeks later DOC staff ventured into a gully on the edge of Waione frost flat that runs into the Wheao River, looking for more dactylanthus. There was no dactylanthus

there much to our surprise but instead we stumbled across what I instantly recognised as *Pittosporum turneri* (Acutely Threatened – Nationally Endangered) and what later (with a quick confirmation from the textbook) turned out to be *Melicytus flexuous* (Chronically Threatened-Gradual Decline) (de Lange *et. al* 2004).

A follow-up visit to properly assess the size of the populations revealed 800-1000 *Melicytus flexuosus* plants with 58 *Pittosporum turneri* present. This was definitely an exciting find as neither of these species has been recorded in the BoP region before. This population of *Melicytus flexuosus* appears to be a north-eastern outlier from the other nearest central North Island populations in Pureora and Erua. Follow up enquiries suggest this is amongst the larger known populations in New Zealand for this species. This population appeared reasonably healthy although 90% of plants counted were adults so deer appear to be affecting juvenile recruitment. The *Pittosporum turneri* population, although relatively small, appeared healthy with nearly all trees showing both adult and juvenile foliage – a sign that there is minimal possum browsing as a result of ongoing possum control by DOC in the area.

This is the only *Pittosporum turneri* population found in the vicinity of the Kaingaroa Plateau and is a long way north of the nearest known population in the Pukahanui Valley on the edge of southern Whirinaki. While only a few percent of the original vegetation remains on the Kaingaroa Plateau, it shows that other populations of threatened tree and shrub species such as *Pittosporum turneri* and *Melicytus flexuosus* may have once been present prior to clearing and burning in the area. It also provides a small ray of hope that further small isolated populations of these species may still exist in suitable vegetation in gullies with the neighbouring Taahau frost flat being a possible place to start looking. What this discovery also shows is that even in areas that have been relatively well botanised (Waione would be in this category) there's still some surprising discoveries to be made out there.

If that wasn't enough threatened species for one site *Carex raoulii* (Data Deficient) (de Lange *et. al.* 2004) was also noted at several places in the same gully by Peter de Lange on our follow up survey.

Nine new threatened plant populations, the majority being species which have not been recorded in Whirinaki before is not bad work for a season!!

[Note: The orchid *Drymoanthus flavus,* listed as Chronically Threatened, in Serious decline, was also recently reported by Neil Fitzgerald (Fitzgerald 2005) as occurring at Whirinaki. There is an excellent illustration of it accompanying this article.]

REFERENCES

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