

Rescuing Hawke's Bay's Wild Kakabeak

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INTRODUCTION

This paper addresses the conservation work being done in the Hawke's Bay region to rescue and protect one of the most threatened species in New Zealand, *Clianthus maximus*, ngutu-kaka or kakabeak.

The natural range of the species includes Gisborne, but I am not so familiar with the work Graeme Atkins is doing up there with the Department of Conservation in the Ruatoria area, so I'm keeping to my local patch.

Kakabeak are in a pretty dodgy state, with only 150 plants left in the wild in New Zealand, and they are found from Shine Falls, in Boundary Stream northwest of Tutira, north to East Cape.

The Department of Conservation has categorised it as nationally critical. When the plants were much more widespread (and I've had QEII National Trust covenantors at Putorino tell me that their parents reported rim rock on their farm used to be red with kakabeak) it probably didn't matter if 30% of the population was lost every 10 years.

But now, with so few known plants left, it really doesn't take much to lose a big

proportion of the population. The species has disappeared from 98% of its former habitat. Now the only places they can survive are cliff faces where goats can't get to.

Forest Lifeforce Restoration Trust

Pete Shaw, who works for the Forest Lifeforce Restoration Trust, is one of the most important people looking out for and looking after kakabeak in New Zealand.

While he describes himself as a crusty bushman, he is sadly underselling himself with that description. I interviewed him for this talk, and he supplied most of the photos. Pete's brother is Willie Shaw from Wildlands. Willie and Sarah Beadle had found a wild plant on the Waiiau Bluffs, south of Panekiri at Lake Waikaremoana, in 1983.

Pete now manages the largest privately-owned forest blocks in Hawke's Bay for Simon Hall and his Forest Lifeforce Restoration Trust. As part of this role, he went back in 2008 with Willie to find the plant. Twenty-five years after first finding the plant, Willie went straight back to the site,

and there it was, still remaining. Unfortunately, the plant has since died.

In addition to work on kiwi and whio, Simon has financed a great deal of kakabeak restoration work, including enabling Pete to hunt for new plants, and fencing enclosures with selections of plants grown from cuttings of those in the wild.

The patron of the Forest Liferforce Restoration Trust is Rachel Hunter, and one of the plants found in the wild is named after her. Pete Shaw found the plant in the Mohaka River gorge, collecting seed and cutting material.



Figure 1: Patron of the Forest Liferforce Trust, New Zealand Supermodel Rachel Hunter. Photo courtesy - Forest Liferforce Restoration Trust.

I have to say; I've never seen such a fertile plant in my life. All the seeds germinated, and most of the plants we have grown in the nursery in the past few years have come from Rachel's plant.

The Trust has built five enclosures in Maungataniwha Forest as a way of protecting populations of plants to enable production and collection of large amounts of seed. The first were learning ones, while the last two are in perfect spots.

"We have figured out what they need. You see kakabeak growing on these bluffs in the wilderness, hanging on with a few tenuous roots, but you plant them, and they

want fertile soil and dappled light. We have 400 plants in enclosures now."



Figure 2: Brent Gilmore collecting material from the Mohaka Valley. Photo courtesy - Forest Liferforce Restoration Trust.

The last enclosure was built specifically for all the known current Hawke's Bay plants, of which there are 30, some of which have since died in the wild. Pete says in 2008 when they began searching for plants in the wild was that he had no perception of where they would be living. Willie's plant was the first he had seen in the wild. He searched the Mohaka River by walking and he twice kayaked the river from Willowflat to Raupunga by himself.

There have been several aerial searches with a range of helicopters and a Piper Cub. An Airforce Iroquois was also used to search and winch people down to collect material, and two DOC staff collected material from on a long line under a Hughes 500 helicopter.

Wild kakabeak face many problems:

- Deer
- Goats
- Hares and rabbits
- Snails and slugs
- Storms and droughts
- Weed sprays
- Lack of awareness
- Lack of funds

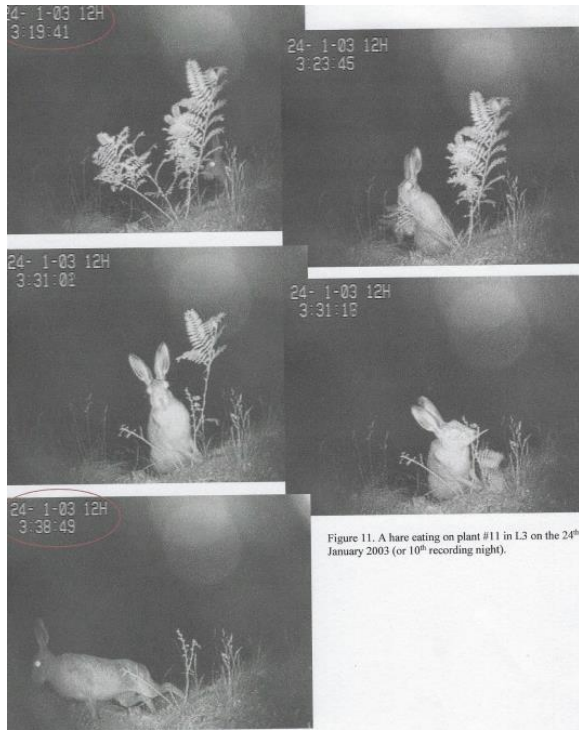


Figure 3: Hare eating young Kakabeak plants. Photo courtesy Department of Conservation

Goats are the major problem kakabeak have to cope with. Goats can smell kakabeak from miles away and are much more aggressive about getting to the plants growing on the cliff systems, than, say deer. The whole habitat of kakabeak through its Hawke's Bay and Gisborne range is infested with goats. It is very difficult to do any effective restoration and conservation work from Napier north to Gisborne and beyond because of the goat densities.

All the wild kakabeak plants have been DNA tested to see how they relate to each other. Gary Houlston at Landcare Research was contracted by DOC to do this work, and he found the DNA of plants from different areas appears quite distinct.

Interestingly, the DNA from *Clianthus puniceus* is plotted inside the DNA spread of the East Coast plants. His work would indicate that genetically there is no difference between the two kakabeak species, but a

taxonomist has identified *Clianthus puniceus* as a different species.

I asked Pete what he thought, and he gave me a lovely quote: "I wouldn't like to say myself. I've got in the crap before saying what I think. I have no opinion myself." A new tool in the race to save the species is shooting seed onto cliff systems – where goats cannot reach - in a technique called aerial propagation using helicopters.

The idea is to collect the seed, fill shotgun cartridges with regular pellets, a pulp medium like peat, and seed. The shells are shot from about 20 metres away, which is about the distance a helicopter could hover from likely sites in the wild.

They have also tried paintball guns, but shotguns have better direction, force, accuracy and penetration.

Recently some historical records made by Dr John Findlay, a Dannevirke GP and keen botanist, were discovered by his daughter Jeana Trent, as she went through his botanical diaries.

She found notes and photos from plants he recorded at Lake Waikaremoana in the early 1980s, and previously unknown. His photographs record a plant about five metres wide and three or four metres tall.



Figure 4: Kakabeak plant photographed by Dr John Findlay at Lake Waikaremoana early 1980's. Photo courtesy of Jeana Trent.

Nowadays we usually tell people that kakabeak grow two by two metres in size, but the one he found was much larger.

In conclusion, if we had vast amounts of money, the ideal solution to saving the species is that all plants would be in safe refuges free of deer and goats so that they could expand in the wild.

But that is unlikely, so the real-world solution is to try and fence some of these areas where it is practical, and to conserve as much genetic diversity as we can.

What I would like to see is a royalty on the sale of plants so people would know what they are buying and which plant it came from in the wild, and then the money could go back to conserving the plants in the wild.