

MOTUOTAU (RABBIT) ISLAND SCENIC RESERVE –AN UPDATE

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Motuotau Island lies about 500 m offshore from Ocean Beach, Mount Maunganui. It is a small 2.5 ha low dome-shaped island that rises c. 45 m above sea level at its highest point, surrounded on all sides by steep cliffs which rise from the shoreline. It is a scenic reserve administered by the Department of Conservation. A full description of the vegetation and flora is provided in an earlier issue of RBS Newsletter (Clarkson and Spring–Rice 1992).

On Thursday 27 April 2007 DOC staff Alan Jones, John Heaphy, Paul Cashmore and Sarah Crump; along with Sara Brill from Environment BOP, completed a half day weed and flora survey of Motuotau Island. This is part of DOC's annual weed surveillance and control programme on the island which has been ongoing for several decades now.

While visiting the site a flock of 60+ pigeons took flight from the island. With pigeons and starlings roosting on the island and feeding on the nearby mainland there is a guaranteed new supply of weeds coming onto the island regularly and it is an ongoing task for DOC to visit the island at least annually and remove weed species as they appear. It is therefore important to continue regular weed surveillance trips at least once a year, so that when weeds germinate they are controlled prior to setting seed and spreading further on the island.

Two weed species that are widespread around the island are black nightshade (*Solanum nigrum*) and giant pokeweed/inkweed (*Phytolacca americana*). As these are widely dispersed around the island they are not treated along with blackberry which is in amongst bracken at the old clearing at the top of the island. This may need to be controlled in the future to prevent birds spreading the plant further around the island.

Boxthorn is restricted to the coastal cliffs on the island. Surprisingly no evergreen buckthorn (*Rhamnus alaternus*) or boneseed (*Chrysanthemoides monilifera*) was observed on the island, although the cliffs where it is most likely to be present can only be inspected through binoculars, mainly from the boat, therefore any smaller plants may remain undetected. Due to a large control operation undertaken on private properties around Papamoa by Environment BOP the risk of buckthorn establishing here has decreased somewhat, although there are still small trees on Moturiki/Leisure Island 500m away!

The nationally threatened coastal tree parapara (*Pisonia brunoniana*) was planted on the island by DOC in the 1990s using plants grown from seed sourced from nearby Karewa Island (A. Jones *pers. comm.*). These trees were inspected during the site visit and have grown very well. While one of the larger planted specimens appeared to have been lost under a large pohutukawa windfall the other trees were healthy with seed present. Four adults and 14 large seedlings were counted in the vicinity of the original plantings.

The entire flatter parts of the island were traversed by the team in the morning. An incredible ninety individual plants (approx.) from 11 different weed species were hand pulled or treated during the visit (See Table 1). Fourteen vascular plant species (10 adventives and 4 indigenous species) were added to the vascular plant species list for the island (Clarkson & Spring-Rice 1992)).

CONCLUSIONS

For a small island of 2.5 ha this is a reasonably high density of weeds establishing given this is only one year since last the control programme. This is also a good site to show the role that birds, particularly starlings and pigeons play in the spread of a large diversity of weed species in and around the landscape. Given that urban Mt Maunganui and Papamoa are essentially on the island's doorstep this 'rain' of weed seeds dispersed largely by birds is unlikely to reduce substantially in the near future and may increase both in numbers and range of species.

Table 1: Weed species on the island treated or pulled out

Weed species	Location description	Treatment received 27/4/07
Flowering cherry(?) <i>Prunus</i> sp.	Occasional seedlings/saplings found around the island.	36 plants hand pulled
Sydney golden wattle <i>Acacia longifolia</i>	Occasional seedling/saplings found around the island.	13 plants hand pulled
Phoenix palm <i>Phoenix canariensis</i>	A few seedlings found around top of island	5 plants hand pulled
Japanese wax tree <i>Rhus succedanea</i>	Seedlings and saplings scattered around top of island	10 plants hand pulled
American inkweed <i>Phytolacca americana</i>	Plants scattered all over the island	Not treated as very widespread
Black nightshade <i>Solanum nigrum</i>	Plants scattered all over the island	Not treated as very widespread
Tomato <i>Solanum lycopersicum</i>	One plant found down on rocks near sign for the island	1 plant hand pulled
Tamarillo <i>Solanum betaceum</i>	Two plants found in amongst thick vegetation, near top of island	Sawn off & stumps treated with 'Vigilant' gel
Woolly nightshade <i>Solanum mauritianum</i>	One young (non-fruiting) plant found at western end of island	1 plant hand pulled
Kahili ginger <i>Hedychium gardnerianum</i>	3 small clumps found around island	Leaf material moved, roots cut up & sprayed.
Bushy asparagus <i>Asparagus aethiopicus</i>	Seedlings found scattered around island, especially near old clearing	15 plants hand pulled, bagged & taken off island for disposal
Coastal tea tree <i>Leptospermum laevigatum</i>	One small seedling found near tamarillo, near top of island	One seedling hand pulled
Fathen <i>Chenopodium album</i>	Two plants found at top of bank on either side of the island.	2 plants hand pulled
Boxthorn <i>Lycium ferocissimum</i>	Thick patches on coastal cliffs	Not treated to date on steep cliffs as widespread and difficult to access. Accessible seedlings hand pulled.
Veldt grass <i>Ehrharta erecta</i>	At least three infestations around island.	No control undertaken as hadn't confirmed ID.
Blackberry <i>Rubus fruticosus</i> agg.	In amongst bracken at old clearing (one seedling plant pulled out at top of bank).	Not treated this time. Some potential to spread.

Left unchecked this range of weed species would over time overwhelm the pohutukawa-dominated forest and could in the long term lead to an almost complete loss of much of the high conservation value native ecosystem which occurs on the island, which includes its associated fauna.

REFERENCE

Clarkson, B.D., Spring-Rice B. (1992). Vegetation and flora of Motuotau Island, Bay of Plenty. *RBS Newsletter* 26:8–14.

ADDITIONS TO VASCULAR PLANT SPECIES LIST FOR MOTUOTAU ISLAND

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[NZMS 260 U14 921 918]

(Note: These are additions to the published list of Bruce D. Clarkson & Barry Spring-Rice (1992) in RBS Newsletter 26:8–14).

Scientific name	Common name
<i>Acacia longifolia</i> *	Sydney golden wattle (NZFRI 26506)
<i>Asparagus aethiopicus</i> *	bushy asparagus (NZFRI 26508)
<i>Chenopodium album</i> *	fathen
<i>Conyza sumatrensis</i> *	broad-leaved fleabane
<i>Dodonaea viscosa</i>	akeake
<i>Ehrharta erecta</i> *	veldt grass (NZFRI 26505)
<i>Entelea arborescens</i>	whau
<i>Leptospermum laevigatum</i> *	coastal tea tree
<i>Pisonia brunoniana</i> #	parapara
<i>Phoenix canariensis</i> *	phoenix palm (AK 299293 & duplicate to NZFRI)
<i>Prunus sp.</i> *	cherry
<i>Rhus succedanea</i> *	rhus, Japanese wax tree (NZFRI 26507)
<i>Solanum aviculare</i>	poroporo
<i>Solanum lycopersicum</i> *	tomato

* = naturalised species

= originally planted but now self sustaining

(xxx) = voucher reference for herbarium specimens