

An island with too few lovers

Geoff Davidson



Fig. 1. Looking back towards Beachlands' eroding cliffs with pohutukawa trees that have slumped from the cliff edge to the beach. All photos by Bev Davidson, 11 Aug 2018.



Fig. 2. Approaching the island at low tide with deciduous *Erythrina × sykesii* silhouetted against the skyline, and pohutukawa around the cliff edge.



Fig. 3. Le Dejeuner sur L'Herbe? Or lunch on the *Lonicera*. With deciduous *Erythrina × sykesii* silhouetted behind.

In 1958 Colin McCahon recognised the destruction in our landscapes and painted his "Northland Panels". Sixty years on he surely would have included a panel featuring weeds in our landscapes.

On August's second Saturday the 11th 2018 a group of 30 Bot Soccers met at Beachlands intent on visiting Motukaraka Island at low tide. Our normal third Saturday would have meant wading thigh deep to the island. Upon arrival the tide appeared to still be lapping some rocks so we first headed east to the wharf and paused to admire the fault line in the strata which Christine Major informed us was proof that Auckland did have earthquakes. She also pointed out the layer of strata deposited after a Taupo eruption.

Returning the length of the beach we were all dismayed at the level of erosion of the cliff face and the number of pohutukawa (*Metrosideros excelsa*) that had fallen from their tenuous perches high above (Fig. 1). Is climate change the sole cause, or could McCahon blame modern urban development?

With the tide now well in retreat we pursued it across the mudflats and shell banks to the romantic-looking isle of Motukaraka. A cliff-bound island of 5 hectares, fringed with pohutukawa, it at first appears to be idyllic, pristine and pure (Fig. 2). Ascending the staircase to the plateau above rapidly destroys the illusion. The weeds soon appeared and their domination of much of the plateau remains unchallenged. The history of the island is well described by Russell et al. (2006).

Among the eradication and restoration attempts, South Auckland Forest & Bird volunteers, twenty years ago, began planting the grassy plateau in an effort to defeat the spread of the established weeds. Many of those plantings have achieved their purpose and are well established, but large parts of the plateau are still covered in pampas (*Cortaderia jubata* and *C. selloana*) or honeysuckle (*Lonicera japonica*) vines (Fig. 3). Several large flame trees (*Erythrina × sykesii*) dominate the north eastern cliff edge, with widespread gorse (*Ulex europaeus*) and privet (*Ligustrum lucidum* and *L. sinense*). *Rhamnus alaternus*, and *Solanum mauritianum* are both serious weeds present, with potential to dominate if left uncontrolled. No doubt there is the usual suite of animal pests that have re-established since being eradicated in the 20th century. Possums, rats and rabbits were serious threats to the revegetation efforts, and with years of neglect have had every chance to reinvade the island.

decided, before weeds can be tackled and more native species planted. Auckland Botanical Society should be prepared and willing to offer assistance if called upon in the future, and perhaps now is a good time to contact Ngai Tai ki Tamaki and make this offer.

Acknowledgements

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Russell, J.C.; Cameron, E.K.; MacKay, J.W.B.; Dudley, J.L.; Clout, M.N. 2006: Ecological Survey of Motukaraka (Flat Island), Beachlands, Auckland. *Auckland Botanical Society Journal* 61: 57–61.

Prepared by Ewen Cameron, based on four Bot. Soc. Journal articles (see References), with names updated.
ABS = added by ABS on 11 Aug 2018; * = naturalised species; pl. = planted; +pl. = wild and also planted.

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<i>Haloragis erecta</i>				<i>Pseudopanax crassifolius</i>	pl.	
<i>Hebe stricta</i>	+pl.	ABS	Planted. Noted previously as natural	<i>Pseudopanax crassifolius</i> × <i>P. lessonii</i>	+pl.	
<i>Hedycarya arborea</i>	pl.			<i>Pseudopanax lessonii</i>		
<i>Helminthotheca echiodides</i> *				<i>Ranunculus parviflorus</i> *		
<i>Hoheria populnea</i>	+pl.	ABS	Spreading. Previously noted only as planted	<i>Ranunculus reflexus</i>		
<i>Hypochaeris radicata</i> *				<i>Ranunculus repens</i> *		
<i>Jacobaea vulgaris</i> *				<i>Raphanus raphanistrum</i> *		
<i>Knightia excelsa</i>	pl.	ABS		<i>Rhamnus alaternus</i> *		
<i>Kunzea robusta</i>	pl.			<i>Rumex crispus</i> *		
<i>Leptospermum scoparium</i>	+pl.			<i>Rumex pulcher</i> *		
<i>Leucopogon fasciculatus</i>				<i>Sagina procumbens</i> *		
<i>Ligustrum lucidum</i> *				<i>Senecio bipinnatisectus</i>		
<i>Ligustrum sinense</i> *				<i>Senecio hispidulus</i>		
<i>Linum bienne</i> *				<i>Senecio lautus</i>		
<i>Linum trigynum</i> *				<i>Senecio ?skirrhodon</i> *		ABS Rare, one plant, cliff, coastal forest
<i>Lobelia anceps</i>				<i>Sherardia arvensis</i> *		
<i>Lonicera japonica</i> *				<i>Solanum mauritianum</i> *		
<i>Lotus angustissimus</i> *				<i>Solanum nigrum</i> *		
<i>Lotus pedunculata</i> *				<i>Solanum nodiflorum</i>		
<i>Lotus suaveolens</i> *				<i>Sonchus asper</i> *		
<i>Lysimachia arvensis</i> var. <i>arvensis</i> *				<i>Sonchus oleraceus</i> *		
<i>Medicago arabica</i> *				<i>Sophora microphylla</i> s.l.		
<i>Medicago ?nigra</i> *				<i>Taraxacum officinale</i> *		ABS Rare, centre of island, one on coast
<i>Melicope ternata</i>	pl.			<i>Trifolium dubium</i> *		
<i>Melicytus ramiflorus</i>				<i>Trifolium glomeratum</i> *		
<i>Mentha pulegium</i> *				<i>Trifolium repens</i> *		
<i>Metrosideros excelsa</i>	+pl.			<i>Ulex europaeus</i> *		
<i>Muehlenbeckia complexa</i>				<i>Verbena bonariensis</i> *		
<i>Myosotis discolor</i> *				<i>Veronica arvensis</i> *		
<i>Myrsine australis</i>				<i>Veronica plebeia</i>		
<i>Olearia solandri</i>	pl.			<i>Vicia disperma</i> *		
<i>Ozothamnus leptophyllus</i>				<i>Vicia sativa</i> *		
<i>Parentucellia viscosa</i> *				<i>Vicia tetrasperma</i> *		
<i>Physalis peruviana</i> *				<i>Vitex lucens</i>	pl.	
<i>Phytolacca octandra</i> *				Monocotyledons (22 + 31)		
<i>Piper excelsum</i>				<i>Agapanthus orientalis</i> *		
<i>Pittosporum crassifolium</i>	+pl.	ABS	Noted previously as natural. Only cultivated plants seen by ABS	<i>Agrostis capillaris</i> *		
				<i>Aira caryophylla</i> *		
<i>Plagianthus divaricatus</i>	+pl.	ABS	Previously noted only as planted. Seen wild on beach.	<i>Anthosachne kingiana</i> subsp. <i>multiflora</i>		
				<i>Anthoxanthum odoratum</i> *		
<i>Plantago coronopus</i> *				<i>Apodasmia similis</i>		
<i>Plantago lanceolata</i> *				<i>Asparagus asparagoides</i> *		
<i>Prunella vulgaris</i> *				<i>Asparagus scandens</i> *		ABS Rare, few seedlings noted
<i>Prunus domestica</i> *				<i>Astelia banksia</i>		
<i>Prunus ?persica</i> *				<i>Avena sativa</i> *		ABS
<i>Pseudognaphalium luteoalbum</i>				<i>Briza minor</i> *		

<i>Bromus catharticus</i> (<i>B. willdenowii</i>) *				<i>Rhopalostylis sapida</i>	pl.	
<i>Bromus diandrus</i> *				<i>Rytidosperma racemosum</i> *		
<i>Bromus hordeaceus</i> *				<i>Rytidosperma unarede</i>		
<i>Carex breviculmis</i>				<i>Sporobolus africanus</i> *		
<i>Carex divulsa</i> *				<i>Stenotaphrum secundatum</i> *		
<i>Carex flagellifera</i>				<i>Vulpia bromoides</i> *		
<i>Carex inversa</i>				<i>Vulpia myuros</i> *		
<i>Carex uncinata</i>						
<i>Cenchrus clandestinus</i> *						
<i>Cordyline australis</i>	+pl.	ABS	One dead standing (?cultivated), one in native bush near shore (?wild)	Mosses (24 + 1) (from Beever 1992, and Jessica Beever pers. comm.)		
				<i>Bryum argenteum</i>		
				<i>Bryum clavatum</i> (<i>B. erythrocarpoides</i>)		
				<i>Bryum dichotomum</i>		
<i>Cortaderia jubata</i> *				<i>Campylopus clavatus</i>		
<i>Cortaderia selloana</i> *				<i>Campylopus introflexus</i>		
<i>Cynodon dactylon</i> *				? <i>Didymodon tophaceus</i>		
<i>Cyperus ustulatus</i>				<i>Didymodon torquatus</i> (<i>Barbula torquata</i>)		
<i>Dactylis glomerata</i> *				<i>Eurhynchium praelongum</i> *		
<i>Dichelachne crinita</i>		ABS	Locally common in two places, soggy ground, in centre of island	(<i>Stokesiella praelonga</i>)		
<i>Eleocharis acuta</i>				<i>Fissidens asplenioides</i>		
		ABS	One population, several plants. Fruiting. Bottom of steps	<i>Fissidens curvatus</i> (<i>F. pungens</i>)		
<i>Ehrharta erecta</i> *				<i>Fissidens leptocladus</i>		
				<i>Fissidens taxifolius</i> *		ABS Sparse
<i>Ficinia nodosa</i>				<i>Fissidens tenellus</i>		
<i>Gahnia lacera</i>				<i>Gymnostomum calcareum</i>		
<i>Hedychium gardnerianum</i> *				<i>Hypnum cupressiforme</i>		
<i>Holcus lanatus</i> *				<i>Philonotis tenuis</i>		
<i>Iris foetidissima</i> *				<i>Ptychomnion aciculare</i>		
<i>Juncus articulatus</i> *				<i>Racopilum cuspidigerum</i> var. <i>convolutaceum</i>		
<i>Juncus australis</i>				<i>Rhaphidorrhynchium amoenum</i> (<i>Sematophyllum amoenum</i>)		
<i>Juncus bufonius</i> *				<i>Rhynchostegium laxatum</i>		
<i>Juncus edgariae</i>				? <i>Rhynchostegium tenuifolium</i>		
<i>Juncus sarophorus</i>		ABS	Rare, a few plants growing together. In weeds, in centre of island	<i>Thuidium furfurosum</i>		
<i>Juncus usitatus</i>				<i>Tortula muralis</i>		
				? <i>Trichostomum brachydontium</i>		
<i>Lachnagrostis billarderei</i>				<i>Weissia controversa</i>		
<i>Lepidosperma australe</i>				? <i>Weissia patula</i> (? <i>Hymenostomum patulum</i>)		
<i>Leucojum aestivum</i> *		ABS				
<i>Lolium arundinaceum</i> *						
<i>Lolium perenne</i> *						
<i>Machaerina juncea</i>						
<i>Microlaena stipoides</i>						
<i>Narcissus</i> sp. *						
<i>Oplismenus hirtellus</i> subsp. <i>imbecillis</i>						
<i>Paspalum dilatatum</i> *						
<i>Polypogon monspeliensis</i> *						
<i>Polypogon fugax</i> *						
				Liverworts (1 + 1) (from 1989 collections)		
				<i>Chiloscyphus semiteres</i>		
				<i>Lunularia cruciata</i> *		