

A visit to the Defence Force land and Shakespear Open Sanctuary, Whangaparaoa Peninsula

Alison Wesley and Maureen Young

Shakespear Regional Park has not previously been explored by the Auckland Botanical Society (ABS). A visit by ABS to both the Shakespear Open Sanctuary and the Defence Force land was made on Saturday 20th April 2013, and later visits were made by Maureen Young and Alison Wesley.

A species list of the vascular flora of Shakespear Regional Park was prepared by Rebecca Stanley and Holly Cox in 2009 in order to document the plant species present, (both native and exotic) and to assess future weed control. This was performed prior to the construction of a predator proof fence.

Four members of the Auckland Botanical Society- Maureen Young, Graeme Hambly, Stephen Benham and Barbara White visited and documented the plants of the former NZDF Naval Armament Depot (NAD) on 9 October 1998 (Benham et.al. 1998). Maureen Young and Becky Bell also visited the NZDF property on 25 May 2011 and made updates to the plant list (see attached appendix).

Construction of a pest proof fence between Army Bay and Okoromai Bay was completed in June 2011, and brodifacoum administered from July to November allowed the sanctuary area to become pest free by December that year. Unfortunately, mice have reinvaded and have proved impossible to eradicate. Occasional rat incursions have been controlled by the extensive network of traps, and only isolated possums, rabbits and stoats have been found and removed.

There has been a history of European occupation on the Shakespear property since the 1880s. However farming was difficult for some time and it wasn't until the early 1900s that Hobbs, who had leased the property, used it as an extensive grazing run for store cattle and a number of horses. Blanche Shakespear and her family returned to the Shakespear land in 1910 from Little Barrier Island where her husband, Robert, had been the first resident caretaker. Over the next 10 years the family worked tirelessly to develop their property. By 1921 the sheep flock had been built up to 711 and a small herd of dairy cows was being milked.

The outbreak of World War II in 1939 had a major impact on the property. The NZ Army realized the strategic importance of the Whangaparaoa Peninsula and developed a major military camp there. After WW II the Shakespars continued to farm the



Fig. 1. WMTA 1942 aerial photograph provided by and permission given by Environmental Services Defence Property Group, New Zealand Defence Force.



Fig. 2. An aerial photo of Shakespear Open Sanctuary 2011.

property, although the northern third was retained by the military as a defensive reserve (Fig. 1). One section of this had restricted access until very recently, as the tunnels previously constructed remained an armament depot until recently. As a result, this area (initially the NAD area and now the 9.2mm Battery Site) has had very little human activity, allowing natural regeneration to occur (Opus & Heslop 2013).

In July 1967 the Auckland Regional Authority (ARA) purchased 373 ha for the purpose of developing a regional park. Work began immediately under farm manager, Bruce Harvey, with the intention of developing a coastal farm park. Development centred on fencing, pasture development, tree planting, roading and construction of facilities at Te Haruhi Bay. Shakespear Regional Park was officially opened to the public on 17 December 1977.

Fig. 1 shows that in 1942 the mature vegetation at Shakespear Park occurred substantially on the NZDF land currently known as the 9.2mm Battery site and the area within the Sanctuary known as Kowhai Glen. Some mature trees are also visible within Waterfall Gully. Fig. 2 shows a major increase in vegetation cover of the park, mostly natural regeneration, but also the ongoing planting program.

Stanley and Cox (2009) recorded 223 plants of which almost 30% were exotic. One hundred and fifty-one species were recorded from the NZDF land, but no attempt was made to include exotic species.

The visit to the Shakespear Open Sanctuary on 20 April 2013th was to allow Botanical Society members to explore two patches of bush, and to record any new species not previously recorded.

Those attending were: Warren Brewer, Janice Butcher, Bruce Calvert, Brian Cumber, Neil Davies, Frances Duff, Sharen Graham, Marcel Horvath, Leslie Haines, Shelley Heiss- Dunlop, Peter Hutton, Margi Keys, Helen Lyons, Christine Major, Phillip Moll, Steve & Penny Palmer, Juliet Richmond, Joshua Salter, Megan Thompson, Alison Wesley (leader), Mike Wilcox, David Wilson, Phillip Wrigley, Helen Yang, Angelina Young and Maureen Young.

The plan for the day was to first visit the restricted area (previously NAD, now the 9.2 mm Battery Site) on the NZDF land, to be followed by lunch in the main Shakespear Sanctuary and then a walk through a patch of bush known as Kowhai Glen. The weather remained fine for the morning visit to NZDF land, but soon after the group entered Kowhai Glen, the heavens opened, necessitating a quick retreat to the assembled cars. As the rain appeared to have set in the group was invited to the home of Alison Wesley for a hot drink before dispersal home. As a result the plants of Kowhai Glen were only briefly observed.

New plants added to the list from NZDF land included *Lycopodiella cernua* and *L. scariosum*, *Psilotum nudum*, *Juncus australis*, *Uncinia uncinata*, *Coronastylis pumila* and *Pseudognaphalium luteoalbum*. *Pimelea orthia* was found in a different location from the previous record. This *Pimelea*, previously known as *P. prostrata* var. *erecta*, is becoming extremely scarce, as the gumland habitat that it grows in is fast disappearing. It is a species

that has no prostrate tendency, but emerges directly from the ground to a height of c. 40 cm (Fig. 3).

New records for the Shakespear Regional Park in 2013 included *Pteris tremula*, *Pellaea rotundifolia*, *Coprosma macrocarpa*, *Carex solandri*, *C. lambertiana*, *Gahnia xanthocarpa* and *Uncinia uncinata*.

Alison Wesley and Maureen Young made another visit to the NZDF land on 30th October 2013 in order to search for more evidence of orchids and also to search for more records of *Pimelea orthia* (first discovered during the visit of Maureen Young and Becky Bell in 2011). The plants had been found along the roadside of one road and this road was again searched from its origin to the coast. On this later occasion a total of 25 plants were seen, many of them flowering, and always located on the edge of road. Orchids found on this October visit were *Thelymitra pauciflora* and *T. aemula* as well as *Microtis uniflora*. We also confirmed the presence of *Pimelea longifolia*. As it was then flowering it was easier to distinguish from the *Hebe* that we had seen on our April visit.



Fig. 3. *Pimelea orthia* on NZDF land. Photo: Joshua Salter, 20 April 2013.

References

- Benham, S.; Young, M.; Hambly, G.; White, B. 1998: Visit to the R. N. Z. Naval armament depot Whangaparaoa October 1998. *Auckland Botanical Society Journal* 53: 76-77.
- Stanley, R.; Cox, H. 2009: Plants of Shakespear Regional Park. Report to ARC. (Unpublished)
- Opus International Consultants & Dr Viv Heslop 2013: Whangaparaoa Military Training Area: Then and Now. Commissioned by NZDF.

Appendix: Vascular plants of Shakespear Regional Park and Sanctuary including Defence Force land, recorded in 1998, 2009, 2011 and 2013.

Key

- * = exotic
 (G) = Garden
 (p) = planted
 x(S) = seen by A Wesley in September 2013
 SRP 2009 = Shakespear Regional Park, from Stanley & Cox (2009)

- SRP 2013 = additions to list for Shakespear Regional Park, by ABS in 2013
 NZDF 1998/2011 = list for NZ Defence Force land, recorded by Benham et al. (1998), and Maureen Young & Becky Bell on 25-05-2011
 NZDF 2013 = additions to NZDF list, by ABS in 2013.

	SRP 2009	SRP 2013	NZDF 1998/2011	NZDF 2013	
FERNS & LYCOPODS (33)					
<i>Adiantum cunninghamii</i>	x		x		
<i>Adiantum hispidulum</i>	x		x		
<i>Adiantum viridescens</i>	x				
<i>Asplenium bulbiferum</i>	x				
<i>Asplenium flaccidum</i>	x		x		
<i>Asplenium oblongifolium</i>	x		x		
<i>Asplenium polyodon</i>	x		x		
<i>Blechnum filiforme</i>	x		x		
<i>Blechnum membranaceum</i>	x				
<i>Blechnum novae-zelandiae</i>	x		x		
<i>Cardiomanes reniforme</i>	x				
<i>Cyathea dealbata</i>	x		x		
<i>Cyathea medullaris</i>	x		x		
<i>Deparia petersenii</i>	x				
<i>Dicksonia squarrosa</i>	x		x		
<i>Doodia australis</i>	x		x		
<i>Hypolepis dicksonioides</i>	x				
<i>Lastreopsis glabella</i>	x				
<i>Lastreopsis hispida</i>	x				
<i>Lastreopsis velutina</i>	x				
<i>Lindsaea linearis</i>	x		x		
<i>Lindsaea trichomanoides</i>			x		
<i>Lycopodiella cernua</i>	x		x		
<i>Lycopodium scariosum</i>				x	
<i>Lycopodium volubile</i>				x	
<i>Lygodium articulatum</i>	x		x		
<i>Microsorium pustulatum</i>	x		x		
<i>Microsorium scandens</i>	x		x		
<i>Nephrolepis cordifolia</i> * (G)	x				
<i>Paesia scaberula</i>	x		x		
<i>Pellaea rotundifolia</i>		x			
<i>Pneumatopteris pennigera</i>	x		x		
<i>Ptilotum nudum</i>				x	
<i>Pteridium esculentum</i>					x
<i>Pteris macilenta</i>					x
<i>Pteris tremula</i>					x
<i>Pyrrosia eleagnifolia</i>					x
<i>Tmesipteris tannensis</i>					x
TREES & SHRUBS incl. CONIFERS (86)					
<i>Acacia melanoxylon</i> * (blackwood) (G)					x
<i>Agathis australis</i>					x
<i>Alectryon excelsus</i> (p)					x
<i>Alseuosmia macrophylla</i> or ? <i>quercifolia</i>					x
<i>Araucaria heterophylla</i> * (Norfolk Island pine) (p?)					x
<i>Avicennia marina</i>					x
<i>Beilschmiedia tarairi</i>					x
<i>Beilschmiedia tawa/tawaroa</i>					x
<i>Brachyglottis repanda</i>					x
<i>Carmichaelia australis</i>					x
<i>Carpodetus serratus</i>					x
<i>Chrysanthemoides monilifera</i> * (boneseed)					x
<i>Cinnamomum camphora</i> * (camphor laurel) (p)					x
<i>Coprosma arborea</i>					x
<i>Coprosma areolata</i>					x
<i>Coprosma grandifolia</i>					x
<i>Coprosma lucida</i>					x
<i>Coprosma macrocarpa</i>					x
<i>Coprosma repens</i>					x
<i>Coprosma rigida</i>					x
<i>Coprosma rhamnoides</i>					x
<i>Coprosma robusta</i>					x
<i>Coprosma spathulata</i>					x
<i>Corokia buddleoides</i>					x
<i>Corokia cotoneaster</i> (p?)					x
<i>Coriaria arborea</i>					x
<i>Corynocarpus laevigatus</i>					x
<i>Cotoneaster franchetii</i> * (cotoneaster)					x
<i>Cupressus macrocarpa</i> * (macrocarpa)					x
<i>Dacrydium cupressinum</i> (p?)					x

<i>Leontodon saxatilis</i> * (hawkbit)	x				<i>Cyperus ustulatus</i>	x		x	
<i>Leucanthemum vulgare</i> * (oxeye daisy)	x				<i>Dianella nigra</i>	x		x	
<i>Lobelia anceps</i>	x				<i>Ficinia nodosa</i>	x			
<i>Ludwigia peploides</i> *	x				<i>Ficinia spiralis</i>	x			
<i>Medicago arabica</i> * (spotted medick)	x				<i>Freycinetia banksii</i>	x		x	
<i>Modiola caroliniana</i> *	x				<i>Gahnia lacera</i>	x		x	
<i>Nasturtium officinale</i> * (watercress)	x				<i>Gahnia pauciflora</i>	x		x	
<i>Oxalis exilis</i>	x				<i>Gahnia setifolia</i>	x		x	
<i>Persicaria decipiens</i>	x		x		<i>Gahnia xanthocarpa</i>		x	x	
<i>Phytolacca octandra</i> * (inkweed)	x				? <i>Gladiolus undulata</i> * (dune bulb, plant just emerging, no flowers)	x			
<i>Pimelea longifolia</i>			x		<i>Hedychium gardnerianum</i> * (wild ginger)	x			
<i>Pimelea orthia</i>			x		<i>Iris foetidissima</i> * (stinking iris)	x		x	
<i>Pseudognaphalium luteoalbum</i>				x	<i>Isachne globosa</i>	x		x	
<i>Plantago lanceolata</i> *	x				<i>Juncus australis</i>			x	
<i>Ranunculus reflexus</i>	x		x		<i>Juncus effusus</i> * (soft rush)	x			
<i>Rumex obtusifolius</i> * (broad-leaved dock)	x				<i>Juncus kraussii</i>	x			
<i>Samolus repens</i>	x				<i>Lachnagrostis littoralis</i>	x			
<i>Sarcocornia quinqueflora</i>	x				<i>Lagurus ovatus</i> * (hares tail)	x			
<i>Selliera radicans</i>	x				<i>Lepidosperma australe</i>	x		x	
<i>Senecio bipinasectus</i> *	x				<i>Machaerina articulata</i>	x		x	
<i>Senecio hispidulus</i> * (fireweed)	x				<i>Machaerina juncea</i>			x	
<i>Senecio minimus</i>			x		<i>Machaerina rubiginosa</i>	x		x	
<i>Solanum nodiflorum</i>	x				<i>Machaerina tenax</i>			x	
<i>Suaeda novae-zelandiae</i>	x				<i>Machaerina teretifolia</i>				
MONOCOTS (53)									
<i>Acianthus sinclairii</i>			x		<i>Microlaena avenacea</i>	x		x	
<i>Agapanthus orientalis</i> * (G)	x				<i>Microlaena stipoides</i>	x		x	
<i>Ammophila arenaria</i> * (marram grass)	x				<i>Microtis unifolia</i>				x
<i>Apodasmia similis</i>	x				<i>Morelotia affinis</i>			x	
<i>Asparagus asparagoides</i> * smilax	x				<i>Oplismenus hirtellus</i>	x		x	
<i>Astelia banksii</i>	x		x		<i>Orthoceras novae-zelandiae</i>			x	
<i>Astelia solandri</i>	x				<i>Paspalum dilatatum</i> *	x			
<i>Austroderia fulvida</i> (p)	x		x		<i>Phoenix canariensis</i> * (phoenix palm)	x			
<i>Austroderia splendens</i> (one only, seen on coastal cliff)	x				<i>Phormium tenax</i>	x		x	
<i>Bolboschoenus fluviatilis</i>	x				<i>Poa anceps</i>			x	
<i>Carex ? dissita</i>	x		x		<i>Pterostylis banksii</i>			x	
<i>Carex lambertiana</i>		x	x		<i>Pterostylis graminea</i>		x(S)	x	
<i>Carex lessoniana</i>			x		<i>Pterostylis trullifolia</i>		x(S)	x	
<i>Carex pumila</i>	x				<i>Rhopalostylis sapida</i>	x		x	
<i>Carex secta</i>	x				<i>Ripogonum scandens</i>	x		x	
<i>Carex solandri</i>		x	x		<i>Rytidosperma</i> sp.			x	
<i>Carex virgata</i>	x		x		<i>Schoenus apogon</i>			x	
<i>Cenchrus clandestinus</i> (kikuyu)	x				<i>Schoenus tendo</i>	x		x	
<i>Collospermum hastatum</i>	x		x		<i>Spinifex sericeus</i>	x			
<i>Cordyline australis</i>	x		x		<i>Stenotaphrum secundatum</i> * (buffalo grass)	x		x	
<i>Cordyline fruticosa</i> * (ti pore) source unknown	x				<i>Thelymitra aemula</i>				x
<i>Cordyline pumilio</i>	x		x		<i>Thelymitra carnea</i>			x	
<i>Cortaderia</i> sp.* (pampas)	x		x		<i>Thelymitra longifolia</i>		x	x	
<i>Corunastylis pumila</i>				x	<i>Thelymitra pauciflora</i>		x		x
<i>Cynodon dactylon</i> * (couch grass)	x		x		<i>Typha orientalis</i>	x		x	
					<i>Uncinia banksii</i>	x			x
					<i>Uncinia uncinata</i>		x		
					<i>Zostera muelleri</i>	x			