

# McConnell's Wetland and Saltmarsh, Pollok Wharf Road, Awhitu Peninsula, 12 April 2014

Tricia Aspin

**Participants (20):** *Tricia Aspin (leader), Paul Baleeiro (Brazilian PhD student studying Utricularia), Michelle Boule, Bruce Calvert, Ewen Cameron, Charlotte Crump, Frances Duff, Christine Major, Raewyn McConnell (landowner), Bruce McGorry (farm worker), Philip Moll, Dhahara Ranatunga, Joshua Salter, Jenni Shanks, Vijay Soma, Valerie Tomlinson, Alison Wesley, David Wilson, Angelina Young, Maureen Young.*

The McConnell family have farmed this area at Pollok since 1941. It is now owned by Bruce and Raewyn McConnell and is actively worked by the third generation. A daughter, Patricia Udy manages the property. Patricia's husband, Stewart, another daughter, Judith, and nephew, Bruce McGorry, are also involved with the day-to-day working of this successful dairy farm. To gain access to the beachfront we crossed into the neighbouring property of Brian and Paddy Johnston.

Our Bot Soc visit began with some participants having to give way to several wild fallow deer crossing the road just before our meeting place outside the farmyard. We were joined by Raewyn McConnell and Bruce McGorry and an easy walk along the cattle race took us to the back of the dairy farm where we overlooked the expanse of the Rangiriri Creek (Figs. 1, 2). An area of manuka (*Leptospermum scoparium*) swampland blends into saltmarsh on the southern and eastern sides of the property and is bounded on the north by a steep cliff with native bush. The cliff marks a fault line, one of several known on the Awhitu Peninsula. Our plan was to explore the areas of wetland and then go into the neighbouring property to access a greater area of saltmarsh and part of the Rangiriri Spit beachfront. Although the diverse habitats have been modified for farming, partial fencing and occasional light grazing have not detracted from some interesting botany.

Starting at the western end of the wetland we first ventured under old manuka to view several of the usual wetland species such as *Machaerina rubiginosa*, *M. tenax* and *M. teretifolia* as well as our first observation of the small mat-forming *Nertera scapanioides* (Fig. 3). This species has a similar leaf shape to the better known *N. dichondrifolia* but is a lighter green colour with few hairs on the leaf margins and young stems. Some spherical orange-red fruit were present. Here also we noted the difference between both of the tangle fern species. *Gleichenia microphylla* is a taller plant with flattened triangular ultimate pinna segments while *G. dicarpa* forms more compact thickets and has pouched

ultimate segments (see Appendix for the full species list).

Under the manuka and patches of grey willow (*Salix cinerea*) much of the wetland has a covering of ferns, sedges and rushes interspersed with an abundance of *Coprosma tenuicaulis*. The small herb, *Centella uniflora*, is commonly present. We skirted around on the rough pasture and went in under the manuka where the cattle or wild deer made access possible. Here we saw a species of *Carex*, at this time identified by Ewen as *C. lessoniana*. Of interest was an old kauri log partly visible above ground. The tree probably would have fallen several hundred years ago. It has been noted that logs in many of the drained swamps have all fallen in a similar direction giving rise to the assumption that this was the result of a long-ago catastrophic event. Many peninsular swamps have been created by the falling of these large trees and the subsequent build-up of material and water trapped behind (Fig. 4). The drain was filled with the bright green of *Isolepis prolifera* and the dainty inflorescences of swamp millet (*Isachne globosa*) were much admired. Moving along the drain edge we next noted duckweed (*Lemna* cf. *disperma*) where the water had pooled.

A slightly different habitat was explored next, a relatively clear area under a patch of grey willows. Two more sedges, *Carex ochrosaccus* and *C. dissida* were noted, some more *N. scapanioides* and on the trunks of wheki (*Dicksonia squarrosa*) we found *Tmesipteris lanceolata* and *T. elongata* (Fig. 5). Leatherleaf fern (*Pyrrosia eleagnifolia*) and hound's tongue fern (*Microsorium pustulatum*) had established on leaning boughs of the willows.

Leaving the flat we followed fenced (electric!) access to take us to an old track bounded by the manuka wetland and leading along the base of the escarpment. Eventually it would take us to the boundary and out to the beach. The cliff (marking the edge of the faultline) presented a different habitat (Fig. 6). First there was a mix of dry shrubland species such as akepiro (*Olearia furfuracea*), soft mingimingi (*Leucopogon fasciculatus*), *Dianella latissima* and *Gahnia lacera* and then a mix of second growth broadleaf species with mahoe (*Melicactus ramiflorus*), mapou (*Myrsine australis*), kawakawa (*Piper excelsum*), karamu (*Coprosma robusta*) and *Geniostoma ligustrum* predominating. A sample of *Pteris* posed the question – is it *P. macilenta* or is it *P. saxatilis*? A specimen was later identified by John Braggins as *P. saxatilis* citing the narrow fronds and stalked pinnules as opposed to that of *P. macilenta* seen

nearby with larger, broader fronds. Although we had no *Utricularia* to show Paul today, Ewen was able to point out our silver fern (*Cyathea dealbata*).

Partway along we came to a grassy clearing (exotic pasture and *Juncus* species) and here on the mature manuka we observed a healthy population of *Korthalsella salicornioides*. Although this dwarf mistletoe had been recorded by Alistair MacArthur in the Awhitu District in the 1970s (Cameron 2001) this is the only known recent occurrence, discovered here by Cameron Kilgour in January 2012. Many stages of growth are present in an area covering approximately 25m by 5m with a couple of manuka appearing to be slowly succumbing to this hemiparasite (Figs. 7, 8). Nearby kanuka (*Kunzea ericoides*) was examined as a host but it is only the manuka on the edge of the wetland that has been parasitised. Of interest among the long grass were the viviparous inflorescences of *Juncus acuminatus* and a few plants of a St John's wort species, later positively identified by Ewen as the exotic *Hypericum perforatum*. Here too we were impressed with the beauty of a silver-backed spider (Fig. 9). I later identified it as a horizontal orbweb spider (*Leucauge dromedaria*), an Australian species that is now common in the North Island (Crowe 2007: p.16). By hanging upside down it cleverly disguises itself from below against the sky. Likewise from above its dark body is well camouflaged against the ground. By now it was lunchtime and so we nestled among the grass to stoke up for the afternoon.

As we neared the boundary most notable was the luxuriant growth of *Carex* aff. *geminata*. In parts it had provided welcome summer grazing for the cattle but sometimes it was over head high and we noted the extra-wide bright-green leaves.

We crawled under the fence to cross grazed pasture to an open saltmarsh bordering an inlet of the Rangiriri Creek (Fig. 10). This area would only be covered by salt water during the highest of tides. Most noticeable was the blue-green of *Schoenoplectus pungens* but closer inspection revealed a wealth of smaller species. Prevalent was the exotic buck's horn plantain (*Plantago coronopus*) and we noted *Cotula coronopifolia*, *Samolus repens*, *Sarcocornia quinqueflora*, *Selliera radicans* and *Triglochin striata*.

We crossed another fence onto the mudflat area where sea rush (*Juncus kraussii*) forms islands and walked across through swathes of oioi (*Apodasmia similis*) interspersed with the exotic orache (*Atriplex prostrata*) to the beachfront. Rangiriri Spit stretches

for over a kilometre to the south. Fringed by sea rush, oioi and occasional *Ficinia nodosa* much of the northern portion is invaded by gorse (*Ulex europaeus*) and some pampas (*Cortaderia selloana*). We stayed on the beachfront admiring the very lush growth of *Sarcocornia quinqueflora* (Fig. 11) and only went as far as a patch of *Suaeda novae-zelandiae* (Fig. 12). This succulent-like species is not often seen but occurs occasionally just above the high tide mark on several Awhitu beaches.

We returned along the beach to re-enter the pastureland by the end of a drain and observed a small patch of *Bolboschoenus medianus* where the water seeped into the sand. Skirting around friendly steers we next took a look at a small manuka bog with mounds of *Sphagnum cristatum*, a moss is not commonly seen in the Awhitu District. Of interest was that the *Gonocarpus micranthus* here was of more robust growth than that seen further down next to the saltmarsh.

As we returned along the escarpment Maureen noted an unusually tall and thin tree fern. Crack-shot Ewen felled a piece of frond by throwing a stick (of course he aimed for a fertile bit too!) and there was no need to puzzle for on the back was the silver of *Cyathea dealbata*. We concluded that it must be a very old tree fern. A small area of *Poa pusilla* with a few late inflorescences grew on a steep bank along with *Rytidosperma racemosum*. High up in the shade of old *Pinus radiata* we saw several clumps of *Astelia banksii*.

We returned along the track and time prevented exploration of the cliff top. Bruce collected some *Leucopogon fraseri* for those unfamiliar with the species. As we headed back up through the paddocks to the cars our footsteps disturbed myriads of small brown moths in the short pasture. This widespread native species, the common carpet moth (*Epyaxa rosearia*), is now appearing in large numbers and is especially damaging to plantain crops earning the name "plantain moth" (Rural News 2014).

Birds seen or heard on the day were Eastern rosella, fantail, fernbird, goldfinch, Indian myna, kereru, kingfisher, magpie, paradise duck, welcome swallow and yellowhammer.

### Acknowledgements

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### References

- Cameron, E.K. 2001: *Korthalsella salicornioides* discovered close to Auckland City. *Auckland Botanical Society Journal* 56: 53-54.  
Crowe, Andrew 2007: *Which New Zealand Spider*. Penguin Books  
Rural News: 6 May 2014, *Pasture under attack by 'benign' moth*, Issue 560: 33. Rural News Group. www.ruralnews.co.nz



Fig. 1. ABS members make their way down to the wetland through McConnell's dairy farm. Photo: Philip Moll. All photos 12 April 2014.



Fig. 2. From the north-west overlooking the wetland and saltmarsh bordering Rangiriri Creek at Pollok. Photo: Philip Moll.



Fig. 3. *Nertera scapanioides* and fruit under the manuka. Note few hairs on leaf margins. Photo: Philip Moll.



Fig. 4. Ancient kauri log beside drain filled with *Isolepis prolifera*. Photo: Raewyn McConnell.



Fig. 5. *Tmesipteris elongata* (top) and flatter, shinier fronds of *T. lanceolata* on *Dicksonia squarrosa* trunk. Photo: Philip Moll.



Fig. 6. ABS members note the dry shrubland species at the western end of the escarpment. Photo: Philip Moll.



Fig. 7. Many healthy younger *Korthalsella salicornioides* have established on the manuka. Photo: Philip Moll.



Fig. 8. Mature manuka succumbing to a heavy colonisation of *Korthalsella salicornioides*. Photo: Philip Moll.



Fig. 9. Horizontal orbweb spider, a master of disguise among the long grass. Photo: Philip Moll.



Fig. 10. Saltmarsh area featuring much *Schoenoplectus pungens*. Photo: Philip Moll.



Fig. 11. The luxuriant growth of *Sarcocornia quinqueflora* on Rangiriri Spit beachfront. Photo: Raewyn McConnell.



Fig. 12. A flowering patch of *Suaeda novae-zelandiae* growing just above the high tide mark on Rangiriri Spit. Photo: Raewyn McConnell.

**Appendix: Vascular plants seen at McConnell's wetland/saltmarsh/escarpment, Johnston's neighbouring property and part of Rangiriri Spit. Original list based on records by Tricia Aspin and Bruce McCorry, April 2013.**

**Key:**

+ = recorded by Auckland Botanical Society, April 2014  
 # = additions by Auckland Botanical Society, April 2014  
 \* = exotic  
 pl = planted

§ = species on Threatened and Uncommon Vascular Plant List for Auckland Region (Stanley et al. 1999)  
 Habitats where found: B = Beachfront; C = Cliff; C/g = Cliff, grassy area; S = Saltmarsh; W = Wetland; W/g = Wetland, grassy area

	April 2014	habitat type		
<b>Ferns</b>			<i>Korthalsella salicornioides</i> §	+ W
<i>Adiantum cunninghamii</i>	+	C	<i>Kunzia ericoides</i>	+ C/g
<i>Adiantum hispidulum</i>	+#	C/g	<i>Leptospermum scoparium</i>	+ C,W
<i>Asplenium flaccidum</i>	+#	C	<i>Leucopogon fasciculatus</i>	+ C,W
<i>Asplenium polyodon</i>	+#	C	<i>Leucopogon fraseri</i>	+ C/g
<i>Blechnum filiforme</i>	+	C, W	<i>Melicytis ramiforus</i>	+ C
<i>Blechnum minus</i>	+#	W	<i>Muehlenbeckia australis</i>	+# C
<i>Blechnum novae-zelandiae</i>	+	W	<i>Muehlenbeckia complexa</i>	+ C, S, W
<i>Cyathea dealbata</i>	+	C	<i>Myrsine australis</i>	+ C
<i>Cyathea medullaris</i>	+	W	<i>Olearia furfuracea</i>	+ C
<i>Deparia petersenii</i>	+#	W	<i>Olearia solandri</i>	S
<i>Dicksonia squarrosa</i>	+	C, W	<i>Parsonsia heterophylla</i>	+ C
<i>Doodia australis</i>	+	C	<i>Piper excelsum</i>	+ C
<i>Gleichenia dicarpa</i>	+	W	<i>Plagianthus divaricatus</i>	+ S
<i>Gleichenia microphylla</i>	+#	W	<i>Pseudopanax crassifolius</i>	+ C
<i>Histiopteris incisa</i>	+	W	<i>Rubus fruticosus</i> agg.*	+# W/g
<i>Hypolepis distans</i>	+	W	<i>Salix cinerea</i> *	+# W
<i>Lastreopsis glabella</i>	+	W	<i>Solanum mauritianum</i> *	+# C
<i>Microsorium pustulatum</i>	+#	W	<i>Ulex europaeus</i> *	+# C/g
<i>Paesia scaberula</i>	+	C, W	<b>Dicotyledons (herbaceous plants)</b>	
<i>Pneumatopteris pennigera</i>	+	C	<i>Achillea millefolium</i> *	+# W/g
<i>Pteridium esculentum</i>	+	C, W	<i>Atriplex prostrata</i> *	+# B, S
<i>Pteris macilenta</i>	+	C	<i>Calystegia sepium</i> subsp. <i>roseata</i>	+ W
<i>Pteris saxatilis</i>	+#	C	<i>Centaurium erythraea</i> *	+# W/g
<i>Pteris tremula</i>	+	C, W	<i>Centella uniflora</i>	+ C, W
<i>Pyrrosia eleagnifolia</i>	+	W	<i>Cirsium vulgare</i> *	+# W/g
<i>Tmesipteris elongata</i>	+#	W	<i>Conyza sumatrensis</i> *	+# W/g
<i>Tmesipteris lanceolata</i>	+#	W	<i>Cotula coronopifolia</i>	+ W
<b>Conifers</b>			<i>Daucus carota</i> *	+# W/g
<i>Agathis australis</i>	pl	W/g	<i>Drosera binata</i>	W
<i>Pinus radiata</i>	pl #	C	<i>Gonocarpus incanus</i>	C/g
<b>Dicotyledons (trees, shrubs and woody climbers)</b>			<i>Gonocarpus micranthus</i>	+ W
<i>Acacia verticillata</i> *	+#	C	<i>Hypericum perforatum</i> *	+# W/g
<i>Avicennia marina</i>	+	S	<i>Hypochaeris radicata</i> *	+# W/g
<i>Berberis glaucocarpa</i> *	+#	C	<i>Jacobaea vulgaris</i> *	+# W/g
<i>Coprosma propinqua</i> x <i>C. robusta</i>	+	C	<i>Lactuca ? virosa</i> *	+# W/g
<i>Coprosma robusta</i>	+	C	<i>Linum bienne</i> *	+# W/g
<i>Coprosma tenuicaulis</i> §	+	C	<i>Lobelia anceps</i>	+ C
<i>Geniostoma ligustrifolium</i>	+	C	<i>Ludwigia palustris</i> *	+# W
<i>Haloragis erecta</i>	+	C/g	<i>Mentha pulegium</i> *	+# W/g
<i>Hebe stricta</i>	+	C	<i>Nertera scapanioides</i> §	+ W

<i>Persicaria decipiens</i>	+	W	<i>Isachne globosa</i>	+	W
<i>Persicaria hydropiper</i> *	+#	W	<i>Isolepis cernua</i>	+	W
<i>Plantago coronopus</i> *	+#	S	<i>Isolepis prolifera</i>	+	W
<i>Plantago lanceolata</i> *	+#	W/g	<i>Isolepis sepalcralis</i> *	+#	W
<i>Prunella vulgaris</i> *	+#	C, W/g	<i>Juncus acuminatus</i> *	+#	W/g
<i>Ranunculus repens</i> *	+#	W/g	<i>Juncus articulatus</i> *	+#	W/g
<i>Samolus repens</i>	+	B, S	<i>Juncus effusus</i> *	+#	W/g
<i>Sarcocornia quinqueflora</i>	+	B, S	<i>Juncus edgariae</i>	+	W/g
<i>Selliera radicans</i>	+	B, S	<i>Juncus kraussii</i>	+	S
<i>Solanum nodiflorum</i>	+#	C	<i>Juncus pallidus</i>	+	W/g
<i>Suaeda novae-zelandiae</i>	+#	B	<i>Juncus planifolius</i>	+	W
<i>Trifolium dubium</i> *	+#	W/g	<i>Lemna cf. disperma</i>	+#	W
<i>Trifolium repens</i> *	+#	W/g	<i>Lepidosperma australe</i>	+	C
<i>Veronica plebeia</i>	+#	C/g	<i>Lepidosperma laterale</i>		C/g
<i>Wahlenbergia violacea</i>	+	C	<i>Machaerina juncea</i>	+#	S
<b>Monocotyledons</b>			<i>Machaerina rubiginosa</i>	+	W
<i>Agrostis stolonifera</i> *	+#	W/g	<i>Machaerina sinclairii</i>	+	C
<i>Anthoxanthum odoratum</i> *	+#	W/g	<i>Machaerina tenax</i>	+#	W
<i>Apodasmia similis</i>	+	B, S	<i>Machaerina teretifolia</i>	+	W
<i>Astelia banksii</i>	+	C	<i>Oplismenus hirtellus</i>	+	C, W
<i>Austrostipa stipoides</i>	+#	S	<i>Paspalum dilatatum</i> *	+#	W/g
<i>Bolboschoenus medianus</i>	+#	B	<i>Paspalum distichum</i> *	+#	W/g
<i>Carex dissita</i>	+#	W	<i>Paspalum vaginatum</i> *	+#	W/g
<i>Carex aff. geminata</i>	+#	W	<i>Poa pusilla</i>	+	C
<i>Carex lessoniana</i>	+		<i>Phormium tenax</i>	+	W
<i>Carex ochrosaccus</i>	+#	W	<i>Rytidosperma racemosum</i> *	+#	C/g
<i>Carex virgata</i>	+	W	<i>Schoenoplectus tabernaemontani</i>	+	W
<i>Cenchrus clandestinum</i> *	+#	W/g	<i>Schoenoplectus pungens</i>	+	S
<i>Cordyline australis</i>	+	W	<i>Schoenus maschalinus</i>	+	W
<i>Cortaderia seloana</i> *	+#	W	<i>Schoenus tendo</i>	+	C
<i>Cyperus congestus</i> *	+#	W	<i>Stenotaphrum secundatum</i> *	+#	W/g
<i>Cyperus ustulatis</i>	+		<i>Tetraria capillaris</i>	+#	W
<i>Dactylis glomerata</i> *	+#	W/g	<i>Thelymitra</i> sp.		C/g
<i>Dianella latissima</i>	+	C	<i>Triglochin striata</i>	+	S
<i>Eleocharis acuta</i>	+#	W	<i>Typha orientalis</i>	+	W
<i>Eleocharis gracilis</i>	+	W	<i>Uncinia uncinata</i>	+	C
<i>Ficinia nodosa</i>	+#	B			
<i>Gahnia lacera</i>	+	C			