



TAWHARANUI OPEN SANCTUARY SOCIETY INC.
Newsletter No. 38. September 2011



Bronze plaque celebrating the opening of the Marine Reserve at Anchor Bay.



Octopus and crayfish photographed by Dr Roger Grace in the new Marine Reserve at Tawharanui.

Coming Events—Sunday in the Park

<u>Sun 2 October</u>	9.15 am. Sunday in the Park. A range of tasks available. Sausage sizzle provided. 1.30 pm. Guest speaker James McLaughlin DOC. Pateke status report.
<u>Sun. 6 November</u>	9.15 am. Sunday in the Park. A range of tasks available. Sausage sizzle provided. 1.30 pm. Guest speaker Dr. Roger Grace Marine Reserve Biologist. Potential TOSSI activities in the Marine Reserve
<u>Sun. 4 December</u>	9.15 am. Sunday in the Park. A range of tasks available. Sausage sizzle provided. 1.30 pm. Guest Speaker Mike Wilcox former Chair of Auckland Botanical society. Seaweeds of Tawharanui.
<u>Sat.—Sun. 20 March 2012.</u>	10 am to 4 pm TOSSI Art in the Woolshed (AITW)

Chairman's Report - The value of the predator-proof fence.

Recent articles in Forest & Bird and the NZ Herald have raised questions on the value of fenced sanctuaries compared with traditional pest controlled areas, either mainland islands or off shore islands. These two articles were based on a publication by Schofield et al in the *New Zealand Journal of Ecology*. Unfortunately this article had a number of limitations which meant that the conclusions drawn in the subsequent articles were not based on adequate data.

The cost of a fenced sanctuary was determined by the averaged cost of fence construction for known sanctuaries despite the fact that these sanctuaries differed significantly in size, purpose of sanctuary and whether the fence completely encircled the sanctuary or, as in the case of Tawharanui Open Sanctuary, was constructed across a peninsula. The cost of smaller fenced sanctuaries, often constructed to protect a single threatened species, were of the order of ten times as expensive per hectare as was the cost of the fence at Tawharanui. The average capital cost of fenced sanctuaries (\$3,365 per ha) was then compared with the annual cost of large-scale predator control (\$11-\$155 per ha per year). In the subsequent Forest & Bird and Auckland Herald articles the capital cost of fenced sanctuaries was confused with an annual cost. If the capital cost of the fence at Tawharanui is annualised over a 25 year period the cost is \$49 per ha per year. A further \$60 per ha per year can be added for ongoing maintenance and trap line work with a total annual cost of \$110 – \$120 per ha. This is comparable to the cost of intensive traditional predator control required to protect threatened species such as kokako.

The failure of the authors of the original article to attempt any assessment of ecological benefits of predator-proof fenced sanctuaries is of more concern. They simply dismissed any benefits by stating that such sanctuaries have not, and would not be able to, satisfy two published criteria of ecological benefit. One of the criteria (Dudley) requires no future human interference for the survival of a species, a criterion that may not be achievable anywhere in New Zealand or its off shore islands. No predator-proof fence is total protection against pest incursion but incursions can also occur on off shore islands as has recently been seen on Kapiti island. The authors failed fenced sanctuaries on the criterion of self sustaining species (Townsend) because species are said to be held captive in fenced sanctuaries. We should perhaps tell our north island robins they are captive and should not leave the park.

The ecological recovery at Tawharanui Open Sanctuary since the construction of the predator-proof fence has been spectacular. Nowhere else in the Auckland mainland region has such a healthy population of bellbirds reestablished itself. Other bird species, kaka and grey faced petrels, have begun breeding in the sanctuary without the need for a translocation programme. Translocated species including north island robin, whitehead, pateke and north island kiwi are all successfully breeding within the sanctuary. It is too early to determine how successful some of these species will be in establishing themselves in the wider Rodney district. Some of these successes may have been achievable in a non fenced sanctuary but our planned translocation next year of saddleback into the sanctuary would certainly not be occurring without the fence. Hopefully in the future pest control methods may have improved to a level where better control in non fenced areas can be achieved so that ecological recovery can be seen in larger areas of New Zealand. In the meantime fenced sanctuaries have a role to play in helping achieve some recovery of threatened indigenous species. In my mind the spontaneous return of bellbirds to Tawharanui alone justifies the construction of the predator fence.

Steve Palmer Chairperson



Open Sanctuary Coordinator Update

Good things take time they say, and seventeen years in the making Tawharanui Marine Park is now Tawharanui Marine Reserve, New Zealand's 34th. Approximately 90 people attended a ceremony to open the reserve on 28 August. Manawhenua Ngati Manuhiri welcomed guests with a powhiri, followed by speeches from the Minister of Conservation, Kate Wilkinson and former chair of the Auckland Regional Council, Mike Lee.

A beautiful tactile plaque was unveiled, bearing the whakatauki (proverb) 'He wha tawhara; he kiko tamure ki tai' - the flowering bracts of kiekie on land; the flesh of the snapper in the sea' representing the interconnected fortunes of the land and sea. Take the time to find the plaque on the rock at the high tide line at Anchor Bay.

What has changed with the transition to marine reserve? The main difference is the removal of confusion, the Tawharanui Marine Park (a no take reserve) was located within the wider Hauraki Gulf Marine Park (where fishing within the rules is allowed). Slight adjustments have been made to the northern and western boundaries. Fishers should take the time to familiarise themselves with the boundaries as marked on maps on park and at nearby boat ramps. The marine reserve is administered by the Department of Conservation and any fisheries breaches should be reported to 0800 DOCHOT (0800 363468) or to a park ranger on site.

An exciting botanical find (additional to those in Maureen Young's article) has been the discovery of a healthy specimen of Kirk's daisy (*Brachyglottis kirkii* var *kirkii*) on the Tokatu plateau. This normally epiphytic plant, in this case growing terrestrially (on the ground) is classified as being in 'Serious decline', primarily due to browsing by introduced possums, goats, and in the case of Rangitoto Island, by wallabies. Fortunately such threats are absent from Tawharanui, suggesting a bright future for this species at this site.

Threatened plant conservation efforts continue. Steve and Penny Palmer have translocated green mistletoe (*Ileostylus micranthus*) seed from Mahurangi West to Tawharanui. This involves collecting the ripe seed and placing it in suitable crook of small branches on totara as new host trees. The seed produces its own glue to stick and has good energy reserves to get growing and then undertake the formidable task of tapping in through the bark of the host tree to gain access to the totara's vascular system, upon which it is reliant for moisture and nutrient. Being hemi-parasites, the mistletoe produces its own energy via photosynthesis.

Pomaderris hamiltonii (pale flowered kumerahou) is also the beneficiary of the Palmer's translocation and propagation efforts. This species can be challenging to propagate, so a little bit of experimentation is required to find out what works best.

Spring is upon us and the birds, bugs and plants are busy. Habitat is everything, so a big thank you to all those who helped plant trees this winter.

Matt Maitland

matt.maitland@aucklandcouncil.govt.nz<<mailto:matt.maitland@aucklandcouncil.govt.nz>> or 09 426 1200

Monkeys??

A local angler asked me recently whether monkeys had been introduced to Tawharanui. It took a few minutes but I worked it out; they had heard us testing the new Seabird Attracting Systems at Tokatu Point and yes, I had to admit, the raucous sounds of a seabird colony *could* sound like a troop of monkeys!

Now, after testing, the two systems are up and running powered by solar panels, and hopefully a third system is on the way. The systems run from dawn to dusk playing a range of calls including Grey-faced Petrels, Cook's Petrel, Fluttering Shearwater, Diving Petrels and Buller's Shearwater. Most of these species commonly forage close to the shoreline at Tawharanui at certain times of the year or overfly the headland at night. Seabirds are generally highly faithful to their birth sites ('natal philopatry') and this has significant implications for re-establishment of colonies. So we are hoping to convince them that Tawharanui is a good place to raise kids.

This season we know of at least three Grey-faced Petrel nests in the Park so breeding is happening and hopefully the playback units will accelerate the return of seabirds to Tawharanui.

Many thanks to The Lion Foundation for funding one of the units, to Chris Gaskin of Natural Lines Consultancy for his leadership of this program and to International Student Volunteers for helping to set up the units in the field. James Ross



Transporting plants to steep sites is a major operation. Trailers are loaded at the nursery.



Plants being placed at Twin Hills for Queen's Birthday Planting.



Queen's Birthday weekend planters tuck into hot sausages, a welcome relief after planting in the wet.



In July volunteer planters continued planting on Twin Hills.

Queen's Birthday Weekend Planting

This year's Queen's Birthday weekend planting evolved into a Queen's Birthday week of planting. Close to 9 000 trees were planted covering an area of approximately 1 ha. A major contributor to this result was the availability of two outside volunteer groups.

International Student Volunteers (ISV) is a not for profit volunteer organization based in North America and operating in 7 countries. The organisation attracts students with the prospect of volunteering for 2 weeks then touring for 2 weeks in a foreign country. The New Zealand projects focus on community conservation projects including re-vegetation, weed control, building and maintenance. Once their volunteering has been completed they fly to Queenstown and tour their way up the country. The Women's Outdoor Pursuit group (WOPS) has previously volunteered at Tawharanui and we always look forward to their energy which results in much fun as well as productivity.

Our week of planting began on the Thursday prior to the Queen's Birthday weekend with the start of plant shifting from the nursery. For the next two days TOSSI members, ISV volunteers and park rangers helped transport and place 7 000 trees in the Twin Hills area. The weather the following Saturday was disappointing with squally rain and generally miserable conditions. Nonetheless 25 planters braved the elements and had planted approximately 1,500 trees before retiring for lunch. Recreational Services kindly provided their "bbq" truck and cooked sausages while Elizabeth and Steve Harrison provided extras. The Sunday was an entirely different day and the change in weather attracted 80 volunteers who quickly moved up the slopes enthusiastically planting trees. It was great to see so many families and children. After lunch we even attracted the ISV group and a number of the public back to the planting area so that by the end of the day over 6 000 trees had been planted for the weekend. This in itself would have been regarded as a successful planting.

But wait there's more. The weekend was followed by two further days of plant shifting and planting made possible by the continued presence on the park of the ISV group and by the visits of two WOPS groups, with the outstanding result of having 9 000 trees planted over a week. On these two weekdays Elizabeth and Steve Harrison organized the bbq lunch, supplemented by home cooking from the WOPS groups. The second WOPS group celebrated 3 70th birthdays by planting bigger trees then indulging in much hilarity during lunch, precipitated by a balloon tying competition.

The achievement of this weeks planting is testimony to the cooperation of many people and groups. Thanks go to Paul Williams and the TOSSI nursery group, other TOSSI members, members of the public, the two volunteer groups, ISV and WOPS and the park rangers. Thanks also to the two hosts, David Stone and Roger Williams. Steve Palmer

Sunday 4 June. Additional note

I hosted this workday Sunday 4th June on behalf of Patte who was sick. Many thanks to all those who attended the workday in appalling conditions. We worked in the lower gully with our backs to the wind and were all happy to call it a day at midday. We returned to an excellent lunch provided by Recreational Services with Steve and Elizabeth in close attendance. I realised just how wet it was when I went to use my cell phone in my Parka pocket and found that it worked better as a spirit level! Roger Williams

3 July Sunday in the Park

They say that many hands make light work. Over ninety hardy volunteers turned up for the July Sunday in the Park planting day and the mood was definitely "go hard, go early". The occasional horizontal rain whipping along the exposed ridge seemed to spur even faster planting as we closed in on the last of 4,000 plants – who would get the last one? I couldn't see, the ruck was too well packed. And then it was lunch and the squalls abated and the sky cleared and we all rejoiced in the sumptuous fare provided by the combined efforts of TOSSI's own Harrison Catering and the Auckland Council's Food Crew (aka Recreational Services).

So what made it such a streamlined exercise? As usual the hard work of the backroom. Once again the plants grown by the TOSSI nursery were superb and that makes for easy planting. International Student Volunteers and the TOSSI nursery crew along with AC rangers spent two days putting out all the plants ready for planting. Meanwhile the picnic site was set up with the Auckland Council marquees and all the gear needed for lunch moved into place.

The end result is happy volunteers and happy plants. The planting days of the past two years have seen the Twin Hills covered in plants and for those of us that did look up while planting the view was spectacular. Thanks again to Auckland Council for sponsoring the day and especially to Ranger Hamish, the Nursery Crew, the Harrisons and to ISV. James Ross

Tawharanui Marine Park officially changes to a Marine Reserve.



The Minister of Conservation the Hon. Kate Wilkinson MP leads dignitaries and honoured guests to the new plaque for the unveiling and official opening of the Marine Reserve.

Tawharanui at last a Marine Reserve

On 28th August 2011 about 150 people witnessed the final chapter in protection for the marine life on the northern side of Tawharanui Regional Park. The Marine Park set up under Fisheries Regulations and the Harbours Act in 1981, was finally changed to a Marine Reserve under the Marine Reserves Act. Hopefully the fish and crayfish will not notice a thing. They have been protected since 1981, and will continue to be fully protected in the Marine Reserve, but with perhaps a little more security of tenure.

Technically the fisheries regulations could have been changed relatively quickly and easily, and a “rogue” Minister of Fisheries could have opened up the Park to fishing. But in a Marine Reserve the protection offered is more secure, the protection effectively being “in perpetuity”.

This is great for the marine life, as studies have shown that the longer protection is in place the more valuable the area becomes as a haven for marine life, as a breeding stock for species heavily fished elsewhere, as an example of a fully recovered ecosystem, and as an amazing place to go and see what our seas were like before heavy fishing pressure drastically changed the appearance and content of our coastal waters.

The ceremony at Anchor Bay included a welcome and comments from the local Tangata Whenua Ngati Manuhiri, and comments from the Minister of Conservation Kate Wilkinson, who later unveiled a bronze plaque on a rock at Anchor Bay. The plaque depicts a large snapper, now common in the shallow waters of the Reserve, and the flowers of the kiekie, a climbing plant common in the native forest remnants on the Regional Park.

After the ceremonies and afternoon tea, my mate Vince from Northland donned his wetsuit and snorkel gear and paddled out from Anchor Bay to groove with the big snapper and crayfish on Phoenix Reef. Unfortunately the water was a bit cold for me, otherwise I would have raced him to be the first person to snorkel in the new Marine Reserve! But that is a privilege that nobody can now take away from him! That was his personal unique experience.

Dr. Roger Grace



Left Ringi Brown blesses the plaque with a karakia in preparation for unveiling. Along side is Mook Hohneck, Centre Vern Rosieur, the Hon. Kate Wilkinson MP, Mike Lee former chair of the Auckland Regional Council, Matt Maitland (in the orange hat) Open Sanctuary Coordinator and Mat Vujcich Principal Ranger North.

7 August Sunday in the Park

This was the last planting for 2011 bringing the total plants now in the ground to 17,000.

Over 80 volunteers arrived in really good weather, despite the forecasts we'd heard and read!

The native trees planted were mainly manuka. Otherwise some large pohutakawa specimens, mahoe and kowhai. 1500 plants were soon in the ground so it was then off to the marquee for the sumptuous lunch, prepared by the guys of Recreational Services. Their cooking is great and this time we even had steak! Thanks again to Steve and Elizabeth for their part in preparing the extras for the lunch and arranging all the furniture and tablecloths, etc for our lovely picnic spot. The children loved finishing off the biscuits at the end.

That is all the planting to be undertaken at the Twin Hills, unless it is decided to plant into the landslides which occurred earlier this year. Already, these areas have been covered with Manuka slash which holds the seed capsules. Once the seed dries and drops to the ground, the ensuing seedlings should become a good restorative cover over the clay. Thanks to Steve and Penny, assisted by the ISV (International Student Volunteers) who have been staying at Tawharanui, for placing all the plants out in preparation for the Sunday planting. Also a very large thank you to Paul and the wonderful Nursery Volunteers who have toiled all year to produce these 17,000 plants. Well done! The two 'bag boys', Toby and Daniel did a great job racing about the planters and collecting the black polythene bags.

It was impressive to meet up with a couple from Kerikeri. They had received the e-letter and drove down for the day. What a commitment. Thank you! It was great to meet up with a new group of volunteers from West Auckland. Most of these folk are from the Phillipines and like doing volunteer work such as this in their group. So we hope to see them again another time. Several local teenagers came, some on their own others with a friend, and they all really enjoyed the experience and fun of the day.

So it was a really good day which was finished off with a really good lunch. Thank you everyone for all your effort.

Patte Williams, Host Sunday in the Park

4 September Sunday in the Park

A weed team led by David Stone were pleased to find that the on going management of dune weeds is keeping the weed pests under control. Another team led by Steve Palmer headed for the South Coast and planted two hundred large healthy tree specimens on the coastal bush fringes. Patte and Roger Williams went out to the Pest Proof fence and trimmed back manuka. The volunteers retired for a welcome sausage sizzle followed by the AGM. Three new committee members were appointed. This was followed by a talk by Dr. Richard Taylor from the University of Auckland, based at Leigh Marine Laboratory.

Alison Stanes on behalf of David Stone, Host Sunday in the Park

Planting Plans 2012

With the 2011 planting season behind us we are already starting the nursery and planning work for the 2012 season. With 2012 being the 10th anniversary it is appropriate that next year's planting will be in a more prominent part of the park than usual. The major area to be planted will be the area behind the Sanctuary Hut at Anchor Bay. Given the recent refurbishment of the Sanctuary Hut that has been completed by the Auckland Council planting the hill behind the hut should lead to the hut becoming an attractive asset.

The proposed plant mix for this area will be a little different from the mix for the Twin Hills planting with additional hebe, karo and ngaio being used because of the coastal nature of the planting. We also have some coastal astelia that have germinated which hopefully will grow quickly enough to be used. Other areas that will be planted next year will be the area behind the ecology entrance track and some further planting on south coast which ISV began this year.

It is pleasing to have completed the Twin Hills planting and thank you all for the support you have given through the nursery group and on planting days. With seed already being germinated the nursery group will soon be back in production. Anyone interested in joining this group on a Tuesday morning can contact Paul Williams on 09 425 9877.

TOSSI Committee



TOSSI committee elected at the AGM. Left Alison Stanes, Ngaire Wallen Treasurer, Sharon Kast, Steve Harrison, Sue Crawshay, David Stone Secretary, Steve Palmer Chairman, Patte Williams. Missing from the photo are James Ross, Joe Crandle and Kevin Parker.

August Planting Volunteers



Treasures and Trash at Tawharanui

The following is the tale of two cryptic botanical treasures that I have found during my wanderings at Tawharanui, and there is also a precautionary tale of how the forces of nature conspire against the best efforts of the weed team.

Danhatchia australis is a mushroom coloured saprophytic orchid that appears above ground early in December and has disappeared by February. It was unknown to science until found by a teenage schoolgirl on a Botanical Society trip to Waipoua Forest in 1955. It was then included in the genus *Yoania*, but further study proved that it was unlike any other orchid, so the genus *Danhatchia* was erected for it, celebrating the name of New Zealand orchidologist, Dan Hatch. It took another eight years for a second site to be found, and although it still remains a very elusive and rare plant, Lower Northland seems to be a hot spot for it.



Taraire forest is where this small plant is found, and spotting a brownish spike about 10 cm tall among the thick layer of brown taraire leaves is no mean feat. Eighteen months ago, in December 2009, I was exploring the patch of bush that is outside the predator proof fence on the south-west side of the park. As I was scuffling through the taraire leaves, ever observant at that time of the year, I was delighted to find several *Danhatchia australis* spikes with fleshy stems and 2-5 pale pinkish/white insignificant flowers. Some weeks later I was botanising in Possum Gully and I found another 40 stems of *Danhatchia australis*.

The threat classification of *Danhatchia* is 'naturally uncommon', but another inconspicuous plant found at Tawharanui is listed as 'nationally critical'. This is a tiny member of the daisy family, *Centipeda minima*, or sneezewort. This species of *Centipeda* is so tiny that it can't withstand any competition from larger plants. It is usually found in damp sites in the summer. It dies down at the end of summer, and the seeds lie in the mud, often under water, over the winter months. As the weather warms and the water evaporates the seeds germinate to start the cycle over again. At Tawharanui I found it on the side of a rather muddy track between the Ecology Trail and the track to Fisherman's Rock. As long as the track is not sprayed for weeds the *Centipeda* should survive from year to year. I also know of it growing locally on Little Barrier Island, Kawau Island, and beside the dune lakes at Te Arai Regional Park.

Now for the bad news. While exploring in Possum Gully I found on the ground a small bird's nest, probably that of a chaffinch, lying squashed at my feet. It had a lovely soft lining of a white thistledown-like substance. As both pukatea (*Laurelia novae-zelandiae*) and the vine, native jasmine (*Parsonsia heterophylla*), have silky hairs that act as parachutes to help carry the seed away from the parent plant, and both grow in the gully, I was curious to know which of these was the source of the silk. At home I put the nest in a pot of soil and kept it watered. To my dismay, about 5 weeks later a crop of moth plant (*Araujia sericifera*) seedlings began to appear. On checking with ARC staff, Bec Stanley and Holly Cox, I was informed that there are half a dozen known sites for moth plant in the park, and these are regularly monitored and the plants treated. My experience shows that weeds have many allies when it comes to dispersal, and if I hadn't removed the nest there may have been a new infestation of this pesky weed.



Moth plant seedlings

Maureen Young

Three NZ dotterel chicks from Jones Bay survived their first winter,
but where have they gone?

There is no doubt spring is in the air. Reports have come into Dr. John Dowding that the 3 New Zealand dotterel chicks from Jones Bay survived their first winter. These chicks were the first to hatch last year at Tawharanui on 16 October. It would appear that the earlier it is in the season, the lower the number of people on the beach, and the lower potential for disturbance to NZ dotterels. Traditionally, the Jones Bay NZ dotterel pair (GO-YO and YW-RB) are early nesters and fledge chicks successfully each year. Colour leg bands are read from left to right, top to bottom. Dr. Dowding banded OR-GR, OB-GR and OW-GR on 20 November. First-year birds nearly always wander, and these three NZ dotterel chicks are no exception. They are also a nice example of the fact that sibling don't necessarily stick together when they leave home, in this case Jones Bay at Tawharanui. Check the top of the next page to see where they travelled.

The letters represent the coloured leg bands on the Jones Bay NZ dotterel chicks -
 OR-GR this is the home body of the three – moved the short distance to Omaha and seems to have
 been there most of the winter in the large flock. Straight-line dispersal so far is 7 km to the north-west.

OB-GR this one also moved to Omaha in December after fledging seen by OSPT trustee Marie Ward on
 22 December. However, it didn't stay long and moved to the Kaipara Harbour on the west coast, where
 it was first seen at Big Sand Island in February by OSNZ member Phil Hammond. It has been in the central
 Kaipara area ever since as far as we know – last seen at Kellys Bay on the east coast of Kaipara North
 Head in June. Straight-line dispersal so far is about 55 km westwards.

OW-GR Vanished from sight for a while, but was then found at Albany Mega Centre by fairy tern expert
 and OSNZ member Gwenda Pulham; it has shown some signs of being territorial on its first year on this
 non-coastal site. Straight-line dispersal so far is 40 km to the south-west.

The parents (GO-YO and YW-RB) of these chicks are back on territory at Jones Bay. They are showing
 early evidence of breeding. Will keep you posted on their activities.

Sharon Kast

TOSSI Committee		
Chair	Steve Palmer	09 422 6441
Vice Chair	James Ross	09 422 6760
Secretary	David Stone	09 528 5712
Treasurer	Ngairé Wallen	09 627 1526
Editor	Alison Stanes	09 524 0291
	Joe Crandle	09 425 8573
	Sue Crawshay	09 534 0414
	Steve Harrison	09 425 8500
	Sharon Kast	09 422 9990
	Patte Williams	09 425 6030
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Correspondence Chair or Membership Secretary	P.O Box 112 Matakana 0948	
	Email secretary@tossi.org.nz	
	Website: www.TOSSI.org.nz	

Application form for NEW MEMBERS Tawharanui Open Sanctuary	
Name(s):	_____
Address:	_____
Phone No.	_____
E-Mail	_____
Occupation	_____
How did you hear about TOSSI?	
Please tick how you would like to help:	
<input type="checkbox"/> Planting/workdays	<input type="checkbox"/> Bird Counts
<input type="checkbox"/> Fund raising	<input type="checkbox"/> Administration
<input type="checkbox"/> Monitoring Pests	<input type="checkbox"/> Nursery
<input type="checkbox"/> Predator fence monitoring	
<input type="checkbox"/> Environmental educational	
<input type="checkbox"/> Publicity/promotion	
<input type="checkbox"/> Art in the Woolshed	
<input type="checkbox"/> Other	_____
Membership fee:	
\$20 single membership	\$ _____
\$30 Family membership	\$ _____
Additional contribution (optional)	\$ _____
Donations over \$5 are tax deductible	
Gift Membership:	
Please send membership to	
Name:	_____
Address:	_____
Amount of Gift membership(as above)\$	_____
Total amount enclosed	\$ _____
Please make cheques payable to Tawharanui Open Sanctuary Society Inc. and return the completed form to:	
TOSSI Membership Secretary P.O.Box 112 Matakana 0948	

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Last planting for 2011



Pukeko



Pukeko



Native Clematis flowering on the South Coast



Returning from the last planting for 2011

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