



Art in the Woolshed
10 – 18 March 2012
Open 10 – 4 daily
Save these dates

TAWHARANUI OPEN SANCTUARY SOCIETY INC.
Newsletter No. 39. December 2011



Two royal spoonbill visit the lagoon at Tawharanui.



Coming Events—Sunday in the Park

Sun. 1 January No Sunday in the Park since this is New Years Day!

Sun. 5 February 9.15 am. Sunday in the Park. Host Joe Crandle. Morning tasks followed by a sausage sizzle and guest speaker Chris Wedding, talks about the Gecko population at Tawharanui 1.30pm.

Fri. 2 March 9.15 am. Builders required to prepare woolshed. Bring lunch. Advise Alison 09 524 0291

Sun 4 March 9.15 am. Sunday in the Park. Host Alison Stanes. Preparing the woolshed for the Art Exhibition. All hands on deck please! Jobs painting, cleaning and tidying the lagoon area and the avenue of trees. Bring good paint brushes and rollers but not gardening tools for fear of bringing in unwanted seeds and bugs to Tawharanui! Sausage sizzle provided.

Sat. 10 —Sun. 18 March 2012. 10- 4 daily TOSSI Art in the Woolshed (AITW).

Brochures are provided with this newsletter. Please give them to friends and family and come along to a special exhibition celebrating 10 years for TOSSI. Volunteers needed see page 11.

Chairman's Report

One of the risks of being involved with a project as open ended as the Tawharanui Open Sanctuary is that it is easy to concentrate on what is to be done rather than what has been achieved. My visits to the park certainly, are more occupied with fulfilling tasks rather than appreciating the park. I therefore enjoyed the opportunity recently to walk around the park with two different groups, both of which were interested in conservation and were keen to see some of the work of TOSSI volunteers.

Of course any walk with a visitor is likely to involve the ecology trail but these two groups gave me the opportunity to revisit the Mangatawhiri wetland and Twin Hills plantings and to view the achievements of TOSSI volunteers through the eyes of visitors.

The Mangatawhiri wetland planting was only completed three and a half years ago and the boardwalks and Thompson track have only just been completed. However the plantings have thrived and although there is scope for further infill planting, the Thompson track is already a pleasant walk particularly with the kauri stands visible at the head of the wetland. The recently cleared track connecting the Mangatawhiri wetland with the West End track will extend walking opportunities within the park.

The extended walk from the Mangatawhiri wetland will bring walkers to the top of Twin Hills. This planting has only recently been completed but viewing it from above or from a distance one can appreciate the work of many volunteers and can also appreciate the increase in bird habitat it will provide in the future. The adjacent Bull Sidling planting, completed about six years ago is now looking very established and tree growth has taken off over the past couple of years. The above plantings represent approximately 100 000 volunteer planted trees.

My two groups of visitors were impressed with TOSSI's efforts and it took my mind away from what is still to be done, albeit for a short time. Thanks to TOSSI members who have contributed to these significant achievements. The plantings are even more impressive when we consider that most of the trees have come from our own nursery.

Steve Palmer Chairperson

TOSSI's nursery needs your help

TOSSI's native plant nursery is gearing up for another busy summer growing season and we're looking for more volunteers to help out. During December we will be getting together every Tuesday morning, increasing in January to Tuesday and Thursday mornings. You don't have to attend every work session; just give as much time as you can spare because it all helps.

The work environment is fun. If you like chatting with interesting and enthusiastic people, if you enjoy wonderful home baking, if you have greenish fingers or if you want to make a valuable contribution to our environment then TOSSI's nursery is the place for you. Please give me a call on (09) 425 9877 or email secretary@tossi.org.nz if you would like to get involved or if you'd like more information.

Also, we'd love to hear from any community or business groups who would like to have a special team-building session in the nursery. It's valuable and rewarding work, not physically demanding but very social.

Paul Williams TOSSI Nursery Coordinator

Open Sanctuary Coordinator Update

Sanctuaries sans frontieres (with apologies to Doctors without Borders) is the notion that our sanctuaries are bigger than the geographic space they occupy. Property boundaries and legal status are largely meaningless to the plants and animals that occupy the landscape, where it is habitat, opportunity, competition and predation that reign supreme. Substantial infrastructure such as our pest proof fence provides a barrier to our target audience (mammalian pests) but not to the many birds and seeds that use the airspace above.

Since the eradication of pests from Tawharanui Open Sanctuary we have seen, as hoped, the biodiversity values within the park substantially increase and we have also observed these values spreading beyond the park. Kaka and bellbird have bred outside the park, with success, thanks to the support of pest control from landowners. Pateke move to and from the open sanctuary to other wetland areas such as Christian Bay and Omaha and are of course vulnerable to predation when outside the sanctuary. NZ dotterel chicks fledged at Tawharanui have taken up territory of their own at diverse places such as Albany and the Weiti River. Dispersal is a normal and important biological action to maximise genetic fitness and population health.

So how best can we ensure the safety of our wildlife beyond the fence? Much the same as we do inside the open sanctuary, by providing quality habitat with reduced pest numbers, we can help ensure the success of dispersed wildlife. Auckland Council is currently supporting an initiative to develop a Landcare style community led network to maximise biodiversity gains on the Takatu peninsula. In its infancy this will likely take the form of a network of landowners and community members collaborating to control key pests that impact on natural values of the peninsula. Likely targets are possums, mustelids and key weeds. If you'd like further information please contact Malcolm at malcolm.harrison@aucklandcouncil.govt.nz

Auckland Council Biosecurity has provided assistance to combating the threat that weeds outside of the park pose to the open sanctuary. Strategic Weed Initiative funds have been allocated for control of climbing asparagus, moth plant and a few other priority species. The target area is from the regional park boundary to approximately Christian Bay, being the dispersal range of fruiting species transported by birds. We thank landowners of the Takatu peninsula for their support in enabling this important work to be undertaken.

Not all of our movement beyond borders is uncontrolled. We have actively supported the establishment of new populations of shore skink and bellbird elsewhere through translocation from Tawharanui. The habitat quality and absence of predators make our populations robust and able to withstand cropping.

The growth of the sanctuary beyond its borders is attitudinal as well as biological. 160,000 visitors per year experience Tawharanui and take away the key messages of habitat and pest management and direct action. Tawharanui Open Sanctuary inspires like minded projects with its successes, as well as pertinent lessons learned from key challenges.

Kind regards,
Matt Maitland Open Sanctuaries Coordinator

I can be contacted at matt.maitland@aucklandcouncil.govt.nz or 09 426 1200



The Pest Proof Fence Monitoring Team.



Left to right: Dave Chittendon, Bronwyn Lane, Barbara Maltby, Elizabeth Clark (behind Barbara) Jenny Clarke, Ray Blackburn, John Maltby, Maggie Cornish, Jim Clarke, Sheila Thompson, Richard Taylor, Pam Brown, Jim McGlashan, and kneeling in front Jenni McGlashan, Jonathan Lane and Rhys Thompson. Children: Troy and Kristen Taylor. Missing: Sue Chittendon, Ross & Natalie Aitken, Rod & Rosalie Miller, Kerry & Nancy Bentley, Noeline Kilby, Brady Doak and Karen Tricklebank.



Sadly earlier this year Ian Scott, a Pest Proof fence monitor died after a brief time with cancer. We send condolences to the family and hope that they are recovering from a big loss. Middle back is Jan Scott with the family at a commemorative visit to Tawharanui. Thank you to Ian and Jan for years of fence checking.

The Pest Proof Fence Monitors

Every week a couple of TOSSI volunteers check the fence to ensure its integrity. They look at the structure for holes or damage, the culverts for blockages, the coverage of the skirt on the outside, trees getting too close and any other problems they may encounter. Recently the pedestrian gates have been giving problems and they are regularly reported.

The teams fill in a detailed report which is broken up into segments for the 3.2km of fence. One person either side and a 2 hour walk are the recipe. This report then goes to Matt Maitland for review and if anything major is found a direct report to him is required.

When Sharon Kast and I were asked to set up the group we thought it would be hard to get sufficient people but we have had great support from the start. The monitoring has been going on ever since the fence was constructed and the team formed in April 2005. We have 10 teams rotating the job so we experience the 4 seasons at Tawharanui, doing a worthwhile job and having a pleasant walk as well.

Some of our teams take picnics and make a day of it. The walk along the remote part of the beach is great. We have one family planning to take their young children shortly, and grandchildren have been helping on many occasions.

Everybody has their different ways of doing the job and choosing in which direction they go. It makes no difference as long as the job gets done.

Recently, we (or most of us) got together for a most enjoyable pizza lunch to meet one another and get a photo taken for the newsletter. Four of the teams have now been doing the job for over 6 years. That's dedication for you! We have not made too many mishaps – Sheila got locked in the pedestrian gate at the top and James Ross happened to be passing doing his kiwi monitoring and leapt over the fence to the rescue. Various predators have been found on the outside and slippery slopes have caught out a few people.

Many thanks to all the volunteers and to Jim and Jenni for the use of their property. Keep up the great work.

Rhys Thompson Fence Monitoring Coordinator

Art in the Woolshed 2012 Celebrating TOSSI's tenth year.

The art works at this exhibition have a "nature abounds" theme with a connection to the natural environment keeping with the character of Tawharanui. Seventy leading and emerging New Zealand artists will be exhibiting at Tawharanui from Saturday 10 March to Sunday 18 March. Half of these will be exhibiting sculpture on the lagoon lawn where scattered pohutukawa provides shade. This spectacular exhibition celebrates ten years for TOSSI. During those years ten species have been re-introduced to the sanctuary. All funds raised through Art in the Woolshed 2012 will support current projects at Tawharanui.

The momentum is building. The environment exhibit is a statement about climate change, three large fried eggs with the title 'Frying the Future'. "It's a wake up call about where the planet could be heading!" says environmental artist Rosemary Dobson. There is a giant weta, coming off the back of a truck by crane. There will be kiwi, ponga, kereru and cattle. When artists reply with excitement about the exhibition the emotion has a rippling effect! Excitement is building. The dates are creeping closer.

Artists exhibiting, Andrew McLeod, Anna Kover, Anna Palmer, Alison Stanes, Barry Lett, Ben Foster, Bruce Young, Bruce Ferguson, Charlotte Fisher, Cheryl Wright, Chris Moore, Claudia Pond Eyley, Danny Wright, Darryl Fagence, David Thomas, Debra Keay, Diana L Stewart, Dion Hitchens, Donna Massey, Elaine Barry Conway, Frank Zimmerman, Gabrielle Stevenson, Gary Currin, Grant Williams, Humphrey Ikin, James Pickernell, James Wright, Jane Galloway, Janet Alldritt-Millar, Janet Bothner-By, Jeff Thomson, Jenny McLeod, Jenny Smith, Jim Wheeler, John Oxborough, John Edgar, Juliette Milne, Jury Harrison, Keith Woodley, Krystie Wade, Lindsay Scott, Louise McRae, Mark Dimock, Marte Szirmay, Marti Wong, Mary Taylor, Matt Palmer, Michelle Farrell, Monique Endt, Murray Swan, Nicolas Wilson, Peter Panyoczki, Peter Latham, Phillip Kilmore, Piitaa McIntire, Rebecca Rose, Richard Collins, Richard Smallfield, Richard Wedekind, Robin Pendred, Robyn Stewart, Rosemary Dobson, Russell Jackson, Rustic Twist, Sally Fagence, Shona Woods, Stanley Palmer, Steve Molloy, Stuart Angus, Terry Haines, Tineke Wilde, Todd Douglas, Tui Hobson, Valerie Pendred, Virginia Angus, Virginia King and Wendy Grace Allen.

Please check inside the back page of this newsletter to see how you can help. We are asking for volunteers. Alison Stanes Art in the Woolshed Coordinator

Mangatawhiri Valley Wetlands (now aka Thompsons Track)...and how it all began



Mangatawhiri Valley, October 2005



It all started as a discussion June 2007 Russell Jonas, digger operator Atiu Creek Regional Park talks it over with Matt, Maurice and Tim Lovegrove, Natural Heritage Scientist then ARC.

It was great to be present last month when Rhys and Sheila Thompson cut the tape to open the new Thompson Track walk through the Mangatawhiri wetlands. It was the culmination of many years planning and action.

The area was identified in the early pre-TOSSI Boffa Miskell report as being of high ecological value. It had become a very non-descript wasteland, thick in unkempt kikuyu, having been retired as marginal pasture land. There had always been a plan to rehabilitate the area and a number of experimental methods were tried to revegetate the valley, including some attempts by Maurice and fellow rangers at direct sowing of manuka (partly successful, some trees are still there).

In 2006, Mark Newcombe (Warkworth resident and TOSSI member) provided the spark to get the valley restoration underway. He gave TOSSI the names of some groups to approach. Nigel Miller (DoC Pateke recovery Group) and Ossie Latham (Ducks Unlimited) visited and assessed the site giving the thumbs up for a pateke release. Funding was then successfully sought from Banrock Station Wines.

Discussion and planning with ARC technical staff lead to the earthworks in June 2007. Russell Jonas and the Atiu Creek digger just happened to be on the Park, Russell skilfully crafted the wetland excavations you see today. TOSSI funded the transport of the digger, with Rhodes for Roads giving us a generous discount.

Since then, countless volunteer hours have been spent on planting and track construction. Roger Williams and his team completed building the boardwalk and Paul William's nursery group raised the plants. The result of all this hard work is a wonderful asset that will be visited and enjoyed by many. It provides a glimpse of a habitat quite different to the sandy beaches, bush walks and big coastal views that Tawharanui is known for. It really is a story of how bit by bit TOSSI has made a difference.

Les Cave former TOSSI Chairman



Russell and the digger in action



Sharon gets it sorted!

Opening on a new track

TOSSI celebrated the opening of the Thompson Track at our November "Sunday in the Park". The new track meanders through the Mangatawhiri Wetlands upstream from the Lagoon amidst plantings that TOSSI instigated in 2007. Several boardwalk sections form crucial links along the way. Together with the new Lagoon Boardwalk, these were constructed by TOSSI volunteers led by Roger Williams. The new Track is named in recognition of Rhys and Sheila Thompson, stalwarts of TOSSI, who have been with the group since 'before it started' and were fundamental to its inception and have been involved in all aspects of TOSSI's activities since. The Thompson Track is a small acknowledgement of their own efforts and of their ability to inspire action in others. Together with Paul Williams and Les Cave, Rhys was a driving force behind the TOSSI-led restoration of the Mangatawhiri Wetlands. Our thanks also to the Chisholm Whitney Family Charitable Trust for their generous contribution towards the construction of the boardwalks.
James Ross TOSSI Committee



Rhys Thompson, Paul Williams, Roger Williams, Sheila Thompson and Les Cave cut the ceremonial flagging tape.



Sheila and Rhys Thompson are the first to test the new boardwalk on the Thompson Track in the Mangatawhiri wetland.



Now who is going to cross next????

Introducing New Committee Member Ngaire Wallen

My partner and I are foundation members of TOSSI, and we have enjoyed many trips to the park for afternoons at the beach, doing various 'rat runs', and the odd planting day. It was with some trepidation I offered to be treasurer as I have enjoyed being hands on, however my background as a Chartered Accountant and more recent qualification as a Landscape Designer made it hard to resist Steve's plea for help. I look forward to 'stepping up' to the challenge and working with the highly skilled and experienced members of the Committee.

Ngaire Wallen



The other two new committee members, Sue Crawshay and Dr. Kevin Parker, will be introduced in the next newsletter.



A flock of pateke gather on the Lagoon.

October 2 Sunday in the Park

Although the weather forecast was a bit gloomy, TOSSI again defied the odds and Oct 2 turned out to be quite a nice warm day, with only a couple of brief rain squalls which were not sufficient to impact on the tasks to be performed. An early Spring agenda for action included temporary fencing barriers around the dotterel nesting sites (which have some eggs already there) led by TOSSI host Sharon Kast; continuation of the sand dunes weeding program led by Alison Stanes. Placement of manuka branch slashings on to the slip areas for reseeding to enhance the re-growth of trees on the newly exposed clay slopes, managed by Patte and Roger Williams. There were 26 adults and three children signing in which included many locals, a couple from Waipu and a Rugby World Cup visitor from Canada.

The presentation after the sausage sizzle lunch was by the Pateke team from DOC, James McLaughlin and Jenny Rickert, who have been involved in the translocation and monitoring of the brown teal over the last several years. It was good news to hear that there was a flock of 30 pairs now breeding in the park and that these rare little ducks were spreading out of Tawharanui to other ponds in Christian Bay, Hubbards Bush wetlands, and Omaha. Jenny suggests that TOSSI help get the word out about these off site Pateke populations to the residents near their new areas. DOC has produced a publication regarding this species with information for people who see them outside the park to assist in their survival.

An unusual feature of the presentation was that it was also enjoyed by about 100 sheep who were in the woolshed (but not in the audience) keeping dry prior to their being dagged on Monday. I understand they appreciated we were serving all beef sausages and not the lamb and mint variety that were enjoyed on the previous workday.

Steve Harrison

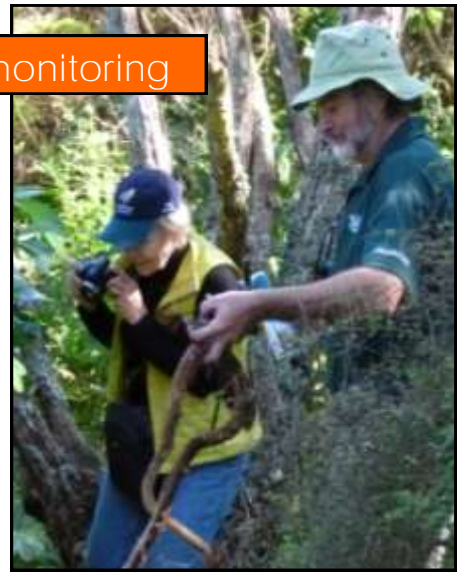
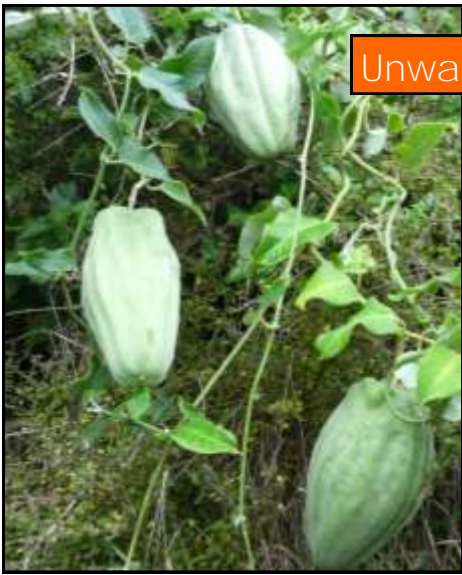
November 6 Sunday in the Park

"Sunday in the Park" was very well attended in November and a number of tasks were undertaken. Weeding continues in the dunes and Twin Hills, the boardwalk team has now decided to tackle the Pete's Bush Track, some predator fence maintenance was conducted and the Information Koru given a spruce-up. As always the BBQ was beautifully prepared and well received.

After lunch, Dr Roger Grace captivated the TOSSI crowd with the results of 20 years of monitoring at Tawharanui and other marine reserves. The astounding recovery of crayfish numbers, and indeed the entire aquatic environment, within the Tawharanui Reserve during that time are an eloquent and compelling testimony for effectiveness of marine no-take areas and the need for more and bigger reserves in New Zealand waters.

Following Roger's talk, some TOSSI members have decided to form a Marine Group to carry out further monitoring and other Marine Reserve activities. If you are interested contact Anna Berthelsen 021 1125775 James Ross

Unwanted plants require vigilant monitoring



An out break of moth plant an unwanted climber was discovered in a south coast Gully recently. Here Sharon Kast and Keith Edwards explore its tangle. Twelve known moth plant sites are checked annually, some by volunteers and more serious sites by professionals contracted by Auckland Council. Moth plant seeds disperse by wind. The vines grow to thirty metres and are a threat to the forest. Seeds last in the ground for years so sites have to be carefully monitored. Just when you think a site is clear the weather conditions cause germination of stored seeds and there is a new flush of unwanted seedlings.



Woolly nightshade is regularly dealt to by volunteers and rangers whenever it is sighted.



A small outbreak of *asparagus smilax* was discovered recently and dealt to immediately.



Asparagus scandens has spread across Tawharanui by birds. Professional spray contractors deal to it.



Volunteers removing lupins

Lupins no longer belong in the dunes and we are making very good progress with removing them. Each weeding sweep gets easier. In this photo Barry Ferguson removes one of the last big ones.



Purple groundsel is an annual that disperses its seeds by the wind. The seeds last in the ground. We thought we were nearly rid of it, until weather conditions this season sent old seeds back to life with a vengeance!

Bird News

Pateke In October and November pateke brought their juveniles out and made their annual flock to the lagoon. Often up to twenty four could be seen basking on the shores or feeding in the shallows. Saline waters here give them a welcome break from pukeko who send pateke scurrying for cover, under flaxes and rushes, on the edges of the fresh water ponds in Tawharanui wetlands. It is pleasing to see pateke meander between the lagoon under the culvert to Mangatwhiri stream just beside the Anchor Bay Road.

Kiwi Hercules is the last kiwi with a transmitter. According to the transmitter he was on two nests each of 80 day incubation. Kiwi monitoring is done by annual call counts. Occasionally they are sighted at night down on Tokatu Point or in Ecology bush. Regular footprints of adult and young are seen in the sand on the south coast.

Banded Rail these shy handsome birds may be seen around the lagoon margins. One was sighted recently in the Mangatawhiri Stream with a small black chick.

Brown Quail families can be seen darting for cover at the Anchor Bay car park along the coast in the dunes as well as in the camp ground area.

Kakariki Several pair have been sighted on the South Coast, in Ecology Bush and at the entrance to the park.

Pukeko Forest and Birds "Bird of the Year" are numerous in every paddock in the park and are testament to the sanctuaries pest free status.

Royal Spoonbill In November two royal spoonbill made a brief visit to Tawharanui. They were sighted and photographed feeding in the lagoon and later the Mangatawhiri Stream. Later they were seen feeding at Baddleys Beach. Spoonbill arrived in New Zealand in the 1940's and breeding was confirmed during the 1950s.

New Zealand Dotterel Surveillance cameras this year are helping provide information about nest activity. They confirm how many chicks hatch at each nest and so we know how many juveniles to expect to see with colour banded parents, a month later when they fledge. On the northern ocean beaches spend most of daylight hiding under cover protected from black-backed gulls cruising over head wanting a tasty warm morsel! The dotterel chicks feed mainly at night. This season on the north coast four pairs of dotterels have chosen to nest perched on grassy outcrops on the sand wall between the dunes and the beach. Throughout six years of dotterel monitoring at Tawharanui we have not seen this before. Earlier years the sand bank was lower and chicks could access it so that the birds nested back in the dunes. When the wall first grew taller after a storm in 2008 it was too steep to nest on. Now a few dune grasses established on the wall face provide somewhat precarious perches. Only one of these nests was successful.

On the south coast a nest at Blue Bell Point was lost to a spring tide. The pair are incubating on a second nest a little higher than the tide line. A new pair of New Zealand dotterel with no colour bands are nesting at Three Post bay. At Jones Bay two chicks are almost ready to fledge. This is the most successful pair of dotterels on the park. They are fortunate to be able to feed in daylight hours well camouflaged, from avian predators, by the beach pebbles,

It is fortuitous that a young German exchange student, Robin Misterek has volunteered to help monitor New Zealand dotterel at Tawharanui. He has done extensive observations with surveillance cameras on hawk nests in Germany. He also happens to have a whanau teacher at Mahurangi College called Les Cave, former chairman of TOSSI.

So far this season there have been 14 nests, 36 eggs, 9 eggs on site at the moment, 16 eggs lost, 4 chicks lost and hopefully 8 chicks are hiding away and will appear on the beaches when they are closer to flying.
Alison Stanes and Sharon Kast

North Island Robins. At the start of the season in August-September, Richard Chambers and I located 12 pairs of robins at Tawharanui. There were 8 pairs in Ecology Bush, 3 pairs in Takatu Bush and one pair in Possum Gully. During October, two of the females disappeared, one in Ecology and one at Takatu, so we now have 10 pairs. This is the same number of pairs as we had at the same stage of the breeding season last year. So far 35 chicks have been banded and have fledged. There is one other nest currently with chicks, that is too high to reach for banding. The 35 young produced so far are from first and second brood nests, and some pairs have just begun incubating their third broods. Last year 51 young fledged, and we expect to get a similar total this year. The young birds this year are cohort banded green over metal on the left leg with two other colours on the right leg.

Tim Lovegrove

Art in the Woolshed Volunteers please.

Volunteers hours

Full day. 10 - 4 with a lunch break. Bring your own lunch or buy it from the Coffee kitchen on site.
Half day morning 10 - 1 and afternoon 1-4.

Volunteer staff are required are in the following areas

TOSSI Tent, Artists Shop, Woolshed main gallery, Woolshed stock pen gallery, Sculpture garden.

Contact Patte Williams now with your contact details and please indicate your choice of a full or a half day, on week days or during weekends.

Patte Williams email port.williams@clear.net.nz or phone 09 425 9127

Closer to the exhibition, days and times and positions will be sorted and confirmed.

TOSSI Committee

Chair	Steve Palmer	09 422 6441
Vice Chair	James Ross	09 422 6760
Secretary	David Stone	09 528 5712
Treasurer	Ngaire 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 9127
	Dr. Kevin Parker	

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:

Planting/workdays Bird Counts
 Fund raising Administration
 Monitoring Pests Nursery
 Predator fence monitoring
 Environmental educational
 Publicity/promotion
 Art in the Woolshed
 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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At Tawharanui New Zealand Dotterel Select a Variety of Sites to Nest



A dotterel nest on the lagoon lawn in sprayed kikuyu beside the old concrete foundations of the cottages that once stood there.



A dotterel nest on Jones Bay hidden well in fresh kikuyu and protected from hot stones. This was photographed before the third egg was laid.



The new unbanded pair of dotterel at Three Post Bay have a nest among the pebbles. White shells might keep the area cooler than hot stones.

Oystercatcher nest



This is one of four nests on the sand cliff face on Ocean Beach. The nests on the cliffs sites were difficult for photography and surveillance cameras!

Pukeko nest



This pair of oystercatcher always choose a dry site. This year they nested beside the base of a pohutukawa tree on the lagoon lawn. One chick has just hatched in the photo. All three are doing well.



A pukeko nest in the paddock beside the woolshed clearly shows the cooperative breeding behaviour. Two females have laid in this nest. The two eggs bottom right are slightly different from the others.