TAWHARANUI OPEN SANCTUARY SOCIETY INC.

Newsletter No. 44 March 2013

This season sixty red-billed gulls established a colony on Phoenix Rocks at Anchor Bay.

New Zealand dotterel OW-BO, OB-BY and YG-WG were banded at Tawharanui in 2007. They remain site faithful to their territories. Colour bands are read left to right top to bottom.

Tawharanui Open Sanctuary is a joint project with Auckland Council.

Coming Events—Sunday in the Park

Sun. 7 April	9.15 am Sunday in the Park. Host James Ross. BBQ provided. Speaker Chris Amiot Fantails.
Sun. 5 May	9.15 am. Planting begins. Bring a drink, gloves, sturdy boots and raincoat. BBQ provided.
Sat. 1 and Sun 2 June	Queens Birthday Weekend. Planting. Hosts Alison Stanes and Steve Harrison BBQ too.
Sun. 7 July	9.15 am. Planting Day. Hosts Ngaire Wallen and Pate Williams. BBQ provided.
Sun. 4 August	9.15 am. Planting Day. Host Sue Crawshay and James Ross BBQ provided.

Planting this season 2013

The first Sunday in May planting will be in Hay Paddock, a flat area beside the Anchor Bay Road, providing we get some rain. Planting for the rest of the season is an area known as M16 where there are gentle slopes in a basin facing east. M16 is well down the West End farm road which runs left off the camp ground road. When you arrive follow instructions to the planting site.

Choose your weed - **Chairman's report**

The success of the Tawharanui Open sanctuary has been dependent on the provision of suitable habitat for indigenous species. Habitat creation is dependent on three main factors, pest control, re vegetation and weed control. Pest control is relatively defined involving maintenance of the predator fence, surveillance and dealing with the occasional pest incursion. Re vegetation represents TOSSI's major effort within the sanctuary but again is relatively defined involving seed collection, plant raising and planting. It may take another 20 years to complete the planting programme but it will come to an end. Weed control however is limitless and efforts therefore need to be concentrated on the biggest threats.

Climbing asparagus, periwinkle and moth plant are regarded as the three weeds that are the biggest threat to indigenous habitat at Tawharanui and for which there is essentially a zero tolerance. Control of these three weeds consumes the Auckland Council's weed budget. Pampas, bone seed and woolly nightshade are also threats but at a lower level. TOSSI has been funding bone seed work over the past two years and volunteers are vigilant about removing woolly nightshade plants when they are seen. The dune areas are a special case and TOSSI volunteers have been successful in controlling apple of Sodom and lupin allowing these dunes to recover. Volunteers have also successfully targeted ragwort and sharp rush for a number of years.

The resources of the Auckland Council and TOSSI are insufficient to deal with weeds other than those already mentioned and this leaves a considerable number of weeds where no significant effort to control is possible. A case in point is the lack of weed control after last years planting at Anchor Bay. This now looks little more than a weed patch with Scotch thistles in particular being prominent. Within this apparent weed patch there has been generally a good survival of last year's plantings. It can be argued that the weeds provide a degree of protection especially from the persistent easterlies that we have had during January of this year. There may need to be some directed spraying of kikuyu but the weeds in this planting will eventually be suppressed as the planting takes hold. Longer term members may remember the bull sidling planting which for several years looked rather weedy but over more recent years the trees have begun to dominate the annual and biannual weeds. The question of seeding is sometimes heard as an argument for a higher priority for Scotch thistle control but as the apparently fragile wind blown seed of thistles will survive in soil for up to 20 years one year's control of a limited area makes little difference to the total seed bank.

There will always be a wish for greater resources but when dealing with a limitless problem such as weed invasion the resources must be allocated according to priorities.

Steve Palmer Chairman

Steve Palmer sorting out park issues with Paul Williams over the back of the mule.

Open Sanctuary Coordinator Update

Crikey it's dry out there! While glorious summer sun makes for a lovely day at the park, spare a thought for all the critters doing it tough this summer. Rainfall records for Warkworth are the lowest on record (6mm for the whole month) and soil moisture deficit levels are approaching what is known as the 'permanent wilt point', that is the point from which many plants may not recover even if rain does arrive. Sad looking broad-leaf species droop with the usually glossy and vibrant hangehange perhaps the most notably limp. The foliage of many mature taraire trees is turning orange and I suspect this is the last summer for some of them.

Photos in this newsletter attest to the dry conditions. In some cases the term 'wetland' seems wildly euphemistic. Small ponds where a pateke broods were raised are now dry and baked hard. Three young fledged pateke have been collected dead here with both being in very poor body condition, indicating an inability for some of these young birds to find sufficient food in such trying conditions.

A key aspect of a restoration project such as Tāwharanui Open Sanctuary is building ecological resilience – the ability to withstand adversity such as drought, flood or disease. Robust populations of plant and animal species provide the ability to repopulate and fill any gaps when conditions improve. Various species have their tactics for this, whether it be the large brood size of pateke allowing parents to play a 'numbers game' where some young may survive, or the long lived seed of many plant species providing a replacement source. Size does matter and as we provide more habitat and increase wildlife populations, our overall resilience improves.

The swings and roundabouts of good years and bad is also a feature of the 'long game' view we adopt when managing these sites. An example of this is this years NZ dotterel breeding success with only two chicks fledged, quite a contrast to our all time high of 17 chicks in the 06/07 summer. This years productivity was limited by various 'natural' factors such as native predators (e.g. black backed gulls), unusual delays in nest establishment and one nest was lost to a spring tide. What is important is we are still well ahead of our target of an average annual productivity of 0.5 chicks per pair per year, generally being 5 chicks from our average 10 pair on site. This enables Tāwharanui dotterel to make a positive contribution to the national population as well as for the park. Dotterel GR-OW hatched at Tāwharanui has now taken up residence at Shakespear Open Sanctuary and has been part of their best ever breeding season, perhaps some of their young will migrate back up this way?

There's always something new and exiting happening at Tāwharanui. This breeding season saw the establishment of a red-billed gull colony on Phoenix Rock, immediately west of Anchor Bay. A few birds roosted there last summer, possibly casing the joint for the thirty odd breeding birds this year.

Kind regards,
Matt Maitland

NZ Dotterel Annual Summary Tawharanui

Year	Nests	Pairs	Eggs	Eggs Lost	Chicks	Fldgd	Chicks Lost	Adults lost	
06-07	**16**	**9**	**40**	**14**	**26**	**17**	**9**	Males GO-OG and MOR off nests. WR-OB died	3
07-08	13	10	32	10	22	**10**	**12**	Male YM-YK lost off nest	1
08-09	15	10	44	10	31	**4**	**26**	Males GO_GY and YR-YR lost with 3 chicks	2
09-10	17	11	49	21	28	**13**	**15**	UB +OB-WG last seen 12/11/09 lost off nest	1
10-11	13	10	34	15	19	**9**	**10**	BW-KO 31/10/10 at Omaha.UB at Anchor	2
11-12	17	11	46	20	26	**8**	**17**		0
12-13	11	10	30	13	17	**2**	**15**	KO-KO Carcas found. Lost off nest outside PPF	1
								Total Adults lost	10

An article on ways of detecting the culprits for the demise of a dotterel nest is on page 10 of this newsletter.

Pateke adapt to dry conditions

Camp and Hayters wetland have dried up. Fortunately there is still water in the lagoon Mangatawhiri and Ecology wetlands that pateke can move to. Three of the twenty seven juveniles reared this season grew too weak before they shifted and have been found dead, most likely through food shortage.

Pond in Camp wetland at the western corner of the camp ground where pateke flourished. Oct. 2010

The same pond in Camp Wetland Jan 2013 when Warkworth has had the driest month since records began.

National Annual Pateke Survey

Sharon Kast lead the National Annual Pateke Survey. Six volunteer teams clambered through wetlands counting pateke at Tawharanui as well as a neighbouring property. Bands on some of the original birds were recorded.

m-KKW and KRR-m roosting together near a pond well up the Ecology Stream. (m is metal K is black W is white)

KGW-m and partner on rocks beside Ecology Stream not far from the beach. 3 large eels shared their pond.

A male (foreground) and female (behind) in Ecology Bush determined not to expose any colour bands.

1 of the 3 large eels among fern reflections in Ecology Stream mouth pond temporarily dammed by beach sand.

What are the Tawharanui saddlebacks up to?

Hopefully many of you have now encountered a noisy saddleback or two at Tawharanui. These engaging and conspicuous birds were introduced to the park in March/April 2012 and as we approach one year post release there is lots of good news. Survival has been high with 86 of the 90 released birds having been observed in the park since release and 50-60 sighted at each two month survey. Intriguingly, I have observed at least two birds not seen since release in every survey, including the January survey just completed. This is likely a reflection of the low density of saddlebacks in the park which means they have much bigger territories and are more inclined to range over a large area. As an example, there is a pair that ranges all the way from Tokatu Point, along the South Coast and into Ecology Bush which requires moving through the territories of several other pairs. This is relatively unusual behaviour for saddleback and will likely change as density increases in the park and territories become smaller.

Tawharanui has proven itself as a site where saddleback will stay and settle. However, the critical test is successful breeding within the park. This test has been passed with most of the resident pairs having been observed with at least one fledgling over the last few months with one pair on the North Coast managed to rear at least one brood of four chicks, which is a very large saddleback family. Of the nests I have located most have been in relatively inaccessible sites, typically dense flax or vegetation on steep cliffs. Some of the birds started to breed very early (September) whereas others took a very casual approach and delayed rearing a family until quite late (December). The young birds typically stay with their parents for weeks to a few months after leaving the nest and the family will forage together as a group. There is a pair of birds (OW-RM and RY-WM) with three fledged chicks that can be observed relatively easily between the pump shed and the entrance to Ecology Bush.

There were a few birds from the 2012 releases, mostly males, who did not have mates at the start of the breeding season. Of these, one (GB-WM) has moved from Ecology Bush to the South Coast in search of a girlfriend. Another (YR-YM) has recently been observed with a juvenile from this breeding season and it is likely that they will pair up. This is quite common where a single bird will "befriend" a dispersing juvenile with an eye to the next breeding season.

Over the next few months dispersing juvenile birds will set up territories of their own. Hopefully most of these birds will stay in the park and your observations, especially of unbanded birds, will be very valuable. As an example in early November a report came through from TOSSI nursery volunteers that a saddleback was calling from the wrong side of the fence. This bird (KW-YM) had been living in a bush patch adjacent to the fence at the West End so it is not too surprising it decided to go exploring. Thankfully, Tim Lovegrove and I were able to quickly catch the bird. Rather than take it back to the West End we released the bird out at Tokatu Point, as far from the fence as possible, and it has since been observed on the South Coast where he will hopefully stay. Saddlebacks are extremely vulnerable to mammalian predation and any birds that go over the fence are unlikely to survive.

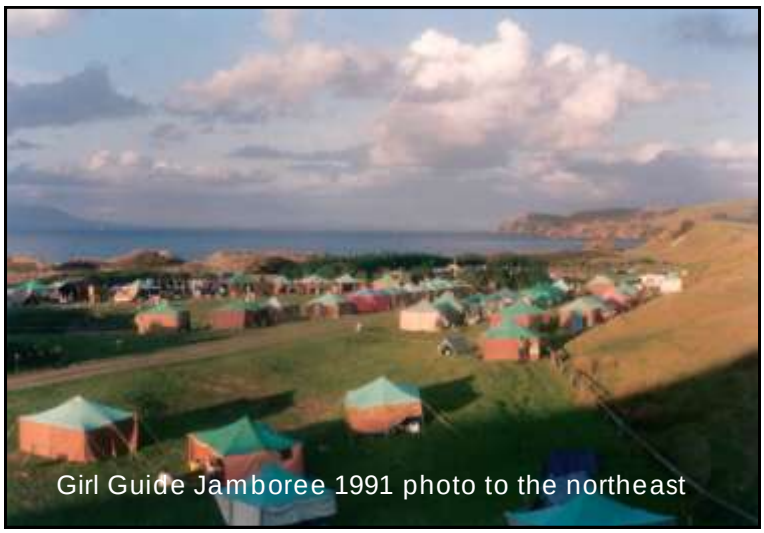
The combined efforts of council staff and TOSSI volunteers in keeping Tawharanui pest free provides the saddlebacks with the environment they need to breed and prosper. At a very personal level I find it both satisfying and humbling to be able to walk through Tawharanui, to hear saddleback calling and to observe them busy at being saddleback, noisy, messy and feeding with fantails, whiteheads, robins, bellbirds and tui. They are a sign of management success and an integral component of the ongoing ecological restoration of Tawharanui and mainland New Zealand.

Dr. Kevin Parker Itinerant Ecologist

Tawharanui Camp Ground Over The Years

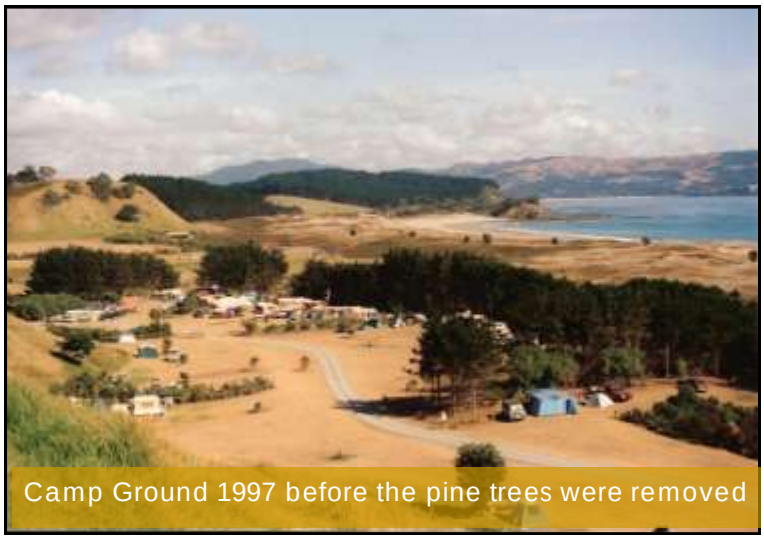
Girl Guide Jamboree in 1991 The pine trees were removed for another camping bay and natives planted.

Same site in 2012 Some of the pohutukawa planted in the dunes have survived the sand and are growing slowly.



Girl Guide Jamboree 1991 photo to the northeast

Similar area 2012 with native plantings



Camp Ground 1997 before the pine trees were removed

The same site 2012 with native plantings

Camp Ground 1997 before the pine trees were removed

School camp 2012 surrounded by native plantings

The TOSSI nursery volunteers take a break from their busy work schedule for their annual Xmas lunch. Note the lovely baking that Paul is photographing for his recipe book. If you would like to join the nursery team please phone Paul Williams on 425 9877 or email secretary@tossi.org.nz

Enthusiastic holiday makers from the Tawharanui Camping ground turned out in big numbers on seven occasions to help pot up seedlings. Nursery volunteers were kept busy demonstrating how to pack the potting mix down firmly into the bags and monitoring campers efforts. Children were entertained with exciting activities by Steve Harrison and Maurice Puckett. Great fun was had by all.

Junior Ranger season 2012 -2013

There are three Junior Ranger modules run in the Tāwharanui Campground each summer and are run on a yearly change cycle. They are

Junior Ranger Discovery
Junior Ranger Open Sanctuary
Junior Ranger Passport.

The Purpose of the Junior Ranger Program is to encourage children to observe, experience and learn about the natural surroundings they are presently living in by using self guided task sheets that encourage the person to fulfil a number of activities that are handed into the Duty Ranger, Camp host or posted to the Wenderholm office upon completion and a certificate and /or Badge issued.

The Program is intended to be targeted to all ages and provides an opportunity for families and older children groups to work together and appreciate their parks. This should present an exiting and interactive way for the next generation of land stewards to enjoy their environment and it is intended to encourage people to explore the park.

This year we did the Junior Ranger Passport. 200 passports were handed out and 52 Badges issued. It was such a delight to see the kids faces when they were presented with their completed passports and badges.
The Junior Ranger passport has a volunteer component which was run by TOSSI. We had up to five TOSSI members on a Tuesday running sand ladder replenishment, beach clean ups and campground litter patrol.
All in all we had a great response to this years Junior Ranger activity and I would like to thank TOSSI for their involvement.

Hopefully over the year we can come up with another module to add to the list so if anyone has any ideas please feel free to let me know. Thanks.

Maurice Puckett Resident Ranger

TOSSI help with Junior Rangers Tawharanui 2013

The special excitement of being presented with a Junior Rangers badge is available to every child between 5 and 12 years who stay in the Tawharanui Camp Ground during the Christmas/New Year holiday period. Once weekly, TOSSI representatives arrange special jobs for the children and often their parents come along too.

This year the jobs undertaken were filling the 6 sand staircases along the dunes and rubbish collections in various parts of Tawharanui Regional Park. Collecting the sand and making a 'human chain' up the staircase was such fun for the children. They carefully handled the buckets 1/2 filled with sand, up the slope, then tossed them back once emptied! The adults were usually doing the shovelling on the beach! A talk about what the staircases were for, informed the children about protection against erosion of the dunes and also the protection of possible nesting sites.

The rubbish collection was a huge task. The groups divided up and several went right along Anchor Bay and the surrounding grassy areas, tracks and car parks there. The bushy areas within the camp ground, the hills behind, were and Jones Bay were targeted. The rubbish consisted of disposable diapers, plastics, cardboard, bottles and cans. Knives, forks and spoons found in the bushes, had been tossed over the fence with the tablecloth!

The transparent white seaweed found lying on the stones at Jones Bay was amazing. It was cool and yet not wet and looked very like bubble wrap! The children were fascinated. Birds seen en route were pointed out to the interested helpers.

At the end of the hour, faces were well lit up with the excitement of it all. Each child was thanked and felt so proud to have been so helpful and delighted to receive the Tawharanui stamp in their workbook.

Well done everyone!

Patte Williams TOSSI Committee

Campers take up Junior Rangers tasks with enthusiasm

Junior Rangers repair the sand ladders.

Junior Rangers clearing rubbish from Jones Bay.

TOSSI volunteers Roger and Patte Williams managed Junior Ranges with some of their tasks.

Camp host Karen Van Beynen stamps Leilani **Findlay's Junior Ranger passport..**

Bird watching hide on the lagoon nears completion.

Flooring goes into place in the hide.

Visitors test out the bird watching hide.

Plantings will soon camouflage the structure.

What happened to the NZ dotterel nest?

You're monitoring a New Zealand dotterel nest, and one day when you check...it's empty. What happened? First, remember that when you're checking a shorebird nest, you should be walking *past* it 2-3 metres away, not up to it and back. Walking right to the nest can make it more vulnerable to predation by leaving a scent trail that mammals can follow, or a visual trail that gulls can use to locate it.

As soon as you realise the nest is empty, stop. This may be a crime scene. It's tempting to go right up to the nest immediately and look for clues, but in doing that you could destroy vital evidence.
The first question to ask is: have the eggs hatched? You may know that the nest is not due to hatch, but if you don't know when incubation started, look around for the parents. If the eggs have hatched, the parents will be agitated, calling a lot, may be flying around calling repeatedly, and are likely to be doing distraction displays (rat runs, broken wing, etc). Depending on the situation (the size of the territory and the time since you last checked the nest), you may need to back away from the nest and walk around the area looking for the adults – dotterel chicks are very mobile and can be taken hundreds of metres from the nest site in the first couple of days. If the parents seem relaxed and are quiet, the eggs probably haven't hatched. Another possibility is that the nest has been lost to a big tide. This is usually fairly easy to determine from recent tidelines on the beach.
Next, check whether the nest has been crushed – are there human footprints or vehicle tracks through the area and the nest.

If it hasn't hatched, hasn't been flooded, and hasn't been crushed, it's likely the nest has been lost to a predator. In fact, at unmanaged sites predation is the biggest single cause of loss, accounting for about 60 % of all dotterel nesting attempts. While it would be useful to know what was responsible in every case, it isn't always possible to tell. In some cases however, there may be useful clues.
First, before going too close, look around for tracks. Bird and mammal tracks are usually easy to distinguish, but telling the various mammals apart (cats, stoats, and hedgehogs are the commonest) may not be easy, especially in soft sand or if there has been a lot of wind. Keep an eye out for feathers and bird remains too – sometimes an adult is killed on the nest in addition to the eggs being taken.
Then there's the evidence from the nest itself. Have a careful look at what remains in the scrape – there may be nothing, there may be congealed white or yolk in the sand, and there may be shell fragments of various sizes. Different predators operate in different ways, and the state of the nest can be very helpful in deciding what has happened.

Black-backed gulls usually eat dotterel eggs whole, either at the nest or after carrying them away, so the nest is completely empty. At Tawharanui a camp visitor saw a black-backed gull carry off whole hen eggs that had been left out by school children after an egg and spoon race. The gulls dropped the eggs from a height to break them open. After eating each egg they returned for another. Black backed gulls also eat dotterel chicks.
Stoats sometimes eat eggs at the nest, leaving crushed shell pieces. However, they may also roll whole eggs away and store them in a cache nearby. Stoats also kill dotterel chicks and adults.
Rats normally eat eggs on site, leaving crushed shells in the nest. Tooth marks are often visible after rat predation. They can probably also kill young chicks.
Harriers eat dotterel eggs and chicks leaving eggshells that often have distinctive small holes; they also usually leave messy remains scattered around the nest.
Dogs often chase shorebirds. Sometimes they catch dotterel chicks and flick them in the air; the chicks normally die from a broken neck or back or crush injuries, and are not usually eaten.
Cats take eggs, chicks, and adults. Eggs are sometimes removed whole, and sometimes eaten on site, leaving large crushed shells near the scrape. Cats and stoats are the main predators of adult dotterels. Male dotterels incubate at night, and are more likely to be killed by cats and stoats than females.
Red-billed gulls eat the eggs at the nest. They usually stab a hole in the top side of the egg and drink the contents, leaving much of the shell intact; egg contents often spill, resulting in clumps of white and yolk mixed with sand in the bottom of the nest.
Hedgehogs typically eat one egg at a time, and may return over several nights until the whole clutch is gone. Most other predators will clean out a clutch in one sitting. Hedgehogs tend to leave very small shell fragments, and to spill egg contents into the base of the nest.

And remember these aren't the only possibilities. Other birds have been recorded eating or breaking dotterel eggs, including spur-winged plover, pukeko, and variable oystercatcher. Stock and horses are known to have crushed nests, too. When in doubt, photograph tracks and/or egg remains (remember to include a scale – pencil, notebook, mobile phone, coin, etc), and seek a second opinion from someone familiar with the subject. If you find any remains, collect these too; sometimes tooth marks in the eggshell help identify the predator. Sometimes, it simply isn't possible to tell what happened to a nest. But often, by observing and recording carefully, then putting all the evidence together, the culprit can be identified with a fairly high degree of certainty. Then we know what to target next time. Dr. John Dowding

Sunday in the Park February 2013

Most Sunday volunteers worked in the nursery where they are barely keeping up with the seedling growth. Thank you to a small group of Sunday volunteers who were pleased to remove large lupin that had somehow been missed earlier. Thanks goes to Sue Hoyle who later spent a three day holiday removing lupin seedlings so that after four years we have very few lupin left! WOW. Fortunately fleabane in the dunes is dying off with the dry weather. A barbecue and a fascinating power point presentation by Sarah Wells on tui mating relationships followed. DNA tests of juveniles at Tawharanui indicate that some adult females mate with their male partners as well as males on neighbouring territories! Alison Stanes Editor

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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
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Membership fee:
$20 single membership $_____
$30 Family membership $_____
Additional contribution (optional) $_____
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Gift Membership:
Please send membership to
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Amount of Gift membership(as above)$_____
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

Red-billed gull colony on Phoenix Rocks

We acknowledge with grateful thanks Warkworth Printing Ltd. for their assistance with the printing of this newsletter.
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