



Duvaucel's gecko Photo: Edin Whitehead

Mark the date

April 5

Sunday in the Park
work day. All welcome.

May 3

Sunday in the Park
work day. All welcome.

June 7

Public planting day.
All welcome.

In this issue

Takahē update	2
Activities in the Park	3
The gecko check-o	4
Yacht runs aground	6
Odds and Ends	8

Support TOSSI

To volunteer, join and/or
make a donation, go to
<https://www.tossi.org.nz/>

From the Chair

Such changeable weather! Summer for a few days, then autumnal mornings, plus tropical downpours. The bush is enjoying the conditions and is looking lush.

Sadly, we've said goodbye to Matt Maitland from his role as Senior Ranger, with no idea at this stage of who's taking over. Matt's knowledge of Tāwharanui is immense and I'm very pleased that he is now a member of TOSSI which means we can still call on his expertise when needed. We wish him all the very best in his new adventures.

I am extremely disappointed (and angry) that people have been seen taking organisms from rock pools within the Marine Reserve. I've had more DoC signs put up along access points and would like to start up a roster system to patrol the area. The problem is that the Marine Reserve is covered by DoC protocols, whereas the Sanctuary is owned by Auckland Council. Because land and sea are so interconnected, we should help out where possible. I'm waiting for a meeting before going ahead but my thanks to people who have already reminded poachers that they face a \$600 fine if caught taking sea-life. If you're able to join a roster system, should it be needed, please get in touch with me. A rāhui (a prohibition notice) along the coast starts soon. The problem is there are so few officers to enforce it.

We still don't have a replacement solution for the cabinet in the Sanctuary Hut where the taxidermied birds were stolen from a year ago. If anyone would like to discuss ideas with me, please do so.

A positive initiative that your committee is working on, is offering guided kiwi walks for people who are not too familiar with the park. This will be done on the basis of a set rate donation to TOSSI. No New Zealander should have to admit that they've never seen a kiwi in the wild (in an enclosure or cage doesn't count!).

Contact Caryn Smith on 021 575 882 for more information or caysmith65@gmail.com for bookings.

Our annual kiwi call counts will be coming up in the next couple of months. If you'd like to be involved, keep an eye out for an email when I have the dates confirmed. New monitors are always welcome.

Enjoy the change of season but I'm sure there will be a few more days of swimming still to enjoy.

Sally Richardson



Tāwharanui Open Sanctuary is a joint project with Auckland Council



Takahē Update

The takahē monitors, Karen and Brady were very excited on 13 December to see a newly hatched takahē chick at the Ecology Trail feeder with its parents and their previous year's chick, Tāwhara. The Possum Gully pair had attempted to nest twice last spring but with no success.

We watched this new chick, guided by three adults, grow steadily but it was last seen before the heavy rain on 21 January and hasn't been seen since. A sad loss! Possibly due to hypothermia.

Late February we set up pens on the Road Flats and around the feeder on the Ecology Trail to help us capture all five of our birds for their annual health check. This check involving four rangers, five TOSSI volunteers and two Auckland Zoo staff was done on Friday 6 March. Food was put in the Ecology Trail feeder and Heaphy (female) and Tāwhara appeared. The pen was quickly closed and the two birds were carefully caught with large nets and gently put into sturdy wooden boxes until the Zoo staff arrived. Heaphy's mate Rochfort was not with the others and unfortunately his transmitter is not working so he couldn't be tracked. As he didn't come to the feeder only Heaphy and Tāwhara were checked.

Heaphy weighed 2 kg (2.5 kg is the expected weight) and Tāwhara weighed only 1.65 kg. However both birds were in good condition. Blood and faecal samples were also taken. Tāwhara was fitted with a transmitter.

It is planned for Tāwhara to join the newly established wild population in the Rees Valley near Queenstown but she really needs to be 2 kg before she can be released so we don't know when that will happen.

Meanwhile the Possum Gully pair had ventured near the feeder enclosure but escaped so were unable to be checked but the Zoo staff weren't too concerned. Catching semi-wild birds is not always easy!

Susan Gibbings



Park rangers are trained how to correctly hold takahē for their health checks.

Above, a transmitter is attached to Tāwhara.



Left, the takahē whānau with the chick, shortly before the chick perished. The chick is the black fluff-ball behind its parents. Tāwhara is on the far right. Aside from not yet having a full red face shield and beak, she looks almost exactly like her parents.

Activities in the Park

How many men does it take to erect a tin shed? Not many, if they know what they're doing! The Nursery team took on the task of creating more storage for equipment by constructing a shed behind the nursery shade house. The shed walls were semi-constructed in sections and carried through the narrow gap between two buildings to be assembled on site, as shown in these photos, clockwise from top right.



Ten Years On: Duvaucel's Geckos at Tāwharanui

This year marks a decade since the reintroduction of Duvaucel's geckos (*Hoplodactylus duvaucelii*) at Tāwharanui in 2016.

The ambitious and highly experimental restoration project was the first mainland reintroduction of this large-bodied gecko. While the species had previously been successfully reintroduced to mammalian pest-free island sites, it was unclear whether it could establish a viable population in the presence of mice. As a semi-arboreal habitat generalist, Duvaucel's geckos are quite adaptable. However, it was unknown whether a population could withstand occasional incursions of mammalian predators such as stoats and rats.

Over the years, the monitoring team has observed changes in the behaviour and space use of the geckos, particularly following a stubborn rat incursion in 2019/ 2020. We used tracking tunnels and live traps to detect and capture geckos. Once captured, the lizards were measured and examined to assess their health and determine whether new individuals had been recruited into the population.

The first three years showed remarkably high detection rates of the founder animals (up to 40%), as well as new recruits; exceeding results from similar monitoring efforts on pest-free islands. Following the rat incursion, however, tracking rates dropped markedly. Live trapping had to be put on hold because the risks to geckos outweighed the benefits. Without effective ways to monitor, we could not tell whether the population had survived.

But our hope didn't die! The monitoring team kept at it, and once the rats were eradicated, gecko tracks reappeared on the tracking cards. Not only adults, but also juveniles and newborns were detected at both release sites. Trapping success however, remained extremely low, making it difficult to assess population size or identify individuals. A change in approach was needed.

For the ten-year post-release monitoring, we had to step things up. We are now using tunnels with an inbuilt camera system (Crittterpics) that allow us to detect geckos non-invasively and identify individuals based on their unique dorsal patterns. Twenty camera tunnels are currently collecting data during the February - March monitoring period and will provide a much clearer picture of the population's composition and size.

So far, our monitoring has revealed a good number of geckos, most of them born on site. Several individuals have been recorded in previous monitoring sessions, suggesting they are persisting, but at least half are new records. Among the visitors were gravid (pregnant) looking females and juveniles. The geckos appear healthy and in good body condition, with no signs of injuries. The cameras have also captured a variety of nocturnal macro invertebrates, offering a glimpse into potential food sources for these mostly night-active lizards.

The results so far are promising, and we hope that ongoing data collection will confirm that the population has successfully established.

This work, including the hire of the camera tracking tunnels, has been made possible through funding from TOSSI and Auckland Council, as well as the many dedicated community volunteers who have supported the project over the past ten years.

For information about volunteering or project-related questions, please contact Dr Manu Barry at duvaucels.gecko@gmail.com.

Dr Manu Barry

These images were taken in the Critterpics tunnels.

Left, a young Duvaucel's gecko. The back patterns are unique, just like fingerprints.

Below, two adult Duvaucel's geckos. The lizard at the bottom has a regenerated tail and very good fat reserves.

Below left, a likely gravid female.



Right, a Duvaucel's gecko in the wild.

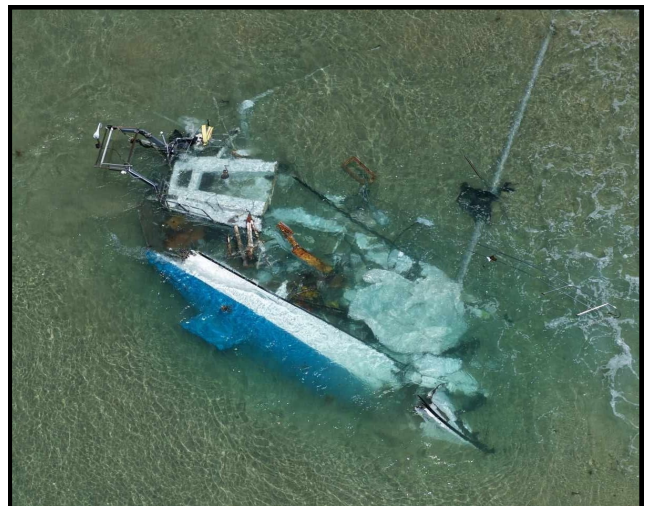
Photo: Jennifer Moore

The Tāwharanui yacht wreck and recovery

On New Year's Day, a privately owned ferro-cement yacht was grounded on a sandbar within the Tāwharanui Marine Reserve, after encountering difficulties offshore. Over two weeks the owners carried out the initial clean-up work. However, due to the vessel's construction, size and its position in a high energy wave zone, the wreck posed both environmental and public safety risks. Auckland Council's Harbour Master team issued a wreck notice, which wasn't met, so it was followed up with a recovery notice. Council then took on the full salvage operation and will seek to recover the costs from the owners in the future.

In mid-January the Park ranger team, with the help of SALT's diving team and local company Rhodes for Road, were able to remove almost the entirety of the vessel over a three-day period. The vessel had become partly buried in sand and was entangled in rigging and steel rods (which the hull was made of). Hydraulic cutters and dredging equipment were used to separate the hull into manageable sections which were then pulled ashore by a digger and loaded onto a truck. While the beach was thoroughly cleaned, some debris may remain buried beneath the sand. A buoy now marks the site, warning signage remains in place and rangers will continue monitoring for any future debris.

Larissa Bickers Cherrie
Tāwharanui Community Ranger





Left, the grounded yacht's name plate was found amongst the wreckage.

Right and below, the wreckage was dragged ashore and removed by truck from the Park.



Odds and Ends



Above, a giant native centipede visited a Duvaucel's gecko Critterpics camera tunnel at night.
Above left, a Duvaucel's gecko and Carabid beetles in a tunnel.



The grassed area above the beach at Anchor Bay looked like a tent town over summer, despite the occasionally inclement weather.
The TOSSI Committee bought a gazebo to provide shade for the aging stuffed predators on display with the Information Trailer.
The volunteer guides also benefitted as they talked to visitors at Anchor Bay.

