Kāpiti-Mana Forest and Bird Newsletter April 2024

Blue Carbon

I have always seen carbon emissions and sequestration related to forests and wetlands.

- Restored wetlands sequester 2t/ha/yr.
- Planting trees (average over 50 years) 5-10t/ha/yr.
- Rewetted peat wetlands stop emitting 29t/ha/yr. and when restored as wetlands will also absorb about 2t/ha/yr. So 31t/ha/yr. in total

I was surprised to read a document from Porirua City Council about the area on the harbour side of Titahi Bay road, a length of about 1.3 km. For much of the road, the sea is eating away at it and there is no footpath on either side. The document entitled *Wi Neera to Onepoto Shared Pathway & Coastal Resilience Project* (https://tinyurl.com/mrs2tm27) was a solution to both the pathway and erosion.
To deal with erosion, the proposal was to use a chenier. This is a long low-lying wavy rock ridge about 10 metres out in the water at about mean high tide height. Inside the ridge is a shallow Chenier plain. The land slopes from above water on the landward side to maybe 1 metre below mean high tide just inside the chenier. It's like a small, long lagoon. The chenier folds back to the land at its ends and in places to allow stormwater to enter the sea directly.
A shared footpath was to be built on the spare land between road and eroded bank and the bank would be planted with terrestrial plantings that would consist of coprosma, cabbage tree, flax, kawakawa, akeake and mahoe, as you would expect.
From the terrestrial plantings to the chenier, there would be 2 planting zones - supratidal (the area above spring high tide) and intertidal (the area above water level at low tide and under water at high tide). In the supratidal zone, toetoe, silver tussock, knobby club rush, pohuehue, saltmarsh ribbonwood and mingimingi would be planted. And in the intertidal zone, jointed wirerush, searush, shore tussock, salt bush, primrose remuremu, iceplant, sea bite, glasswort, and seagrass would be planted. This would provide an excellent nursery for fish. The project noted that there were areas of seagrass growing in the vicinity.
The chenier and planted chenier plain would provide a nature-based solution to the erosion of the road. The energy of the wind, waves and tide would be absorbed by the chenier, by the slow upward slope of the ground and by the plantings. The terrestrial plantings would shelter pedestrians and cyclists using the shared pathway. Fish, crabs and salt tolerant invertebrates would inhabit the plantings over time. The planting would even absorb carbon from the water and atmosphere.
This is a gentle and nature-based method of stopping erosion. It slowly extracts energy by making water move through and lift over the chenier, move through vegetation, and lift vertically up the chenier plain. The most common method is to put up a wall which waves, over time, smash onto and smash apart or wear through. Chenier plains are also a biological asset. They will help the biology of the harbour. In this case, they are a climate adaptation technique and a mitigation technique in one.
Carbon sequestration in the sea is called blue carbon and an article I found says seagrass absorbs carbon from seawater and stores it in its roots and marine sediments and while it was not NZ seagrass and no figures were given, it said that it captured high levels of carbon.
Another item by Blue Carbon Services and NIWA quantified the sequestration potential of NZ kelp. The article said that NZ kelp could sequester 28t/ha/yr., about the same as a pine plantation and the amount that is stopped from emitting when a peat wetland is rewetted. But in the case of NZ native giant Kelp the figure is 52t/ha/yr – almost twice the amount. Kelp forests absorb carbon from the atmosphere via photosynthesis. As kelp matures, it releases organic material which sinks to the bottom of the ocean where it is stored, unlikely to be disturbed for thousands of years. Storage is important. Trees store carbon in the soil, in

their roots, trunks, branches and leaves. Deciduous trees, when they lose their leaves in Autumn can no longer photosynthesize which means that carbon sequestration is halted. Research suggests that, perhaps because of this, evergreens grow more roots than deciduous trees meaning more carbon is held in the ground where oxygen cannot readily turn the carbon back to carbon dioxide. Leaves that fall from deciduous trees mainly turn back to carbon dioxide but apparently this loss of carbon is small.

So, the deep-sea storage from blue carbon is a definite advantage and the project PCC has designed to protect an important road, provide a multi-use path, make a nursery for fish, and sequester carbon all in one is, to my mind, a smart thing to do. Unfortunately, the project has been deferred in the 2024-2044 long term plan and PCC has given no date for its continuance. Encouragement is needed.

Russell

AGM and public meeting

Thanks to all who attended our AGM at our new venue (the Waikanae Community Centre). The election results are as follows: Chair (Pene Burton Bell), Treasurer (Peter Kentish), Secretary (Tom Pesendorfer) remain the same. Committee members are Russell Bell, Tony Ward and Jean Fleming (new). Eraena Catsburg has stood down.

We had a few people come by train (which is part of the reason we've moved venues), and we thought it might be useful for members to know that a train arrives at Waikanae Station at 7:15pm (so you'll still have 10 minutes to have a cuppa before we start), and departs at 9pm (we're normally finished in good time to catch this, though we ran about 15 minutes over this time).

Our future meetings will be there, the next one is scheduled for Wednesday 19 June 2027 (Speaker tbc).

Our speaker for the AGM evening was Russell Bell who updated us on the excellent outcomes from the Inspired by Sanderson project (which has 12 subprojects). Amongst other things, this project will result in 27,000 tonnes of carbon saved by 2050 and 80,000 tonnes saved by 2100 in addition to seeing four wetlands planted and enriched, thousands of extra trees (3000 tōtara, 1000 kahikatea, 700 akeake) being planted, riparian planting on Waterfall stream before it enters QEP, and new planting techniques being tested. The rewetting project did not get started and we returned $114,000 to the funders. But we are told by GW that the rewetting we planned will go ahead. All in all, we think it represents an excellent investment of $276k - $114k over three years. Well done to Russell and his team, working in conjunction with Kāpiti Coast Biodiversity Project.

Be our Porirua Contact Person

One role we're keen to fill, to help us better defend nature in Porirua, is a contact person who lives closer, understands what is and isn't allowed (from a nature perspective), can react more quickly than us, but keep the committee in the loop and use us for backup. If you might be able help us with this, please call Russell to discuss.

Toetoe vs Pampas – a reminder

Remember last year we featured an article about this? Well, now is a good time of year to spot pampas as toetoe is well past it's best, whereas pampas still has full seed heads at the moment. A reminder that toetoe heads tend to lean over to one side a bit like the fringe of a shawl, whereas pampas looks like an erect feather duster.

Also, if you try and break the leaf of **t**oetoe by hand you will find it **t**ough, try the same trick on **p**ampas, and it will be **p**uny.
Go on, try it… Cutting off seed heads is one way to slow the spread of pampas, but really they need to be poisoned with glyphosate as a permanent solution.

Have Your Say….

If you have been wrangling with the Fast Track Approvals Bill this month like me, it is quite likely you just don't want to know. As one person said: 'this month will surely go down in history as the most submissions written ever!' It's a drag, I know, so thanks heaps to all of you who made the effort to comment. In addition to submitting, I made contact with both our local MPs (email to Tim Costley, National for Ōtaki Electorate; and Barbara Edmonds, Labour for Mana Electorate in person) to lobby our cause.

Some people also commented on the Greater Wellington Long Term Plan (Forest and Bird did a submission too), and our branch also submitted on the Porirua Long Term Plan and on the Kāpiti Long Term Plan.

MPI is consulting on a special permit to allow them to deal with the kina that are causing kina barrens (remember we had a talk on this). Submissions close on 3 May 2024. Details here: https://tinyurl.com/2aaeptww

Get planting!

Actually, it's a bit early to get planting right now, but we did come across a very interesting report on a survey conducted for Greater Wellington on what people thought about planting by GW. Read more here: https://tinyurl.com/4c22jv6v.

Here's three key findings:

1. The top four reasons people think it's important are
   - Provide habitat for wildlife
   - Improve water quality
   - Clean air
   - Carbon absorption.
2. The top four activities in order of importance and interest are
   - Restoring wetlands
   - Planting our riverbanks
   - Planting in regional parks
   - Planting farms and private lands.
3. 33% were very interested in attending a community planting day, with residents surveyed in Porirua-Tawa extremely interested in attending community planting days.

We will make sure GW tells us when there are opportunities to do planting in our rohe.

Vehicles on Beaches

In the Autumn 2024 issue of the Forest and Bird magazine you will likely have read about the damage caused by vehicles on beaches. Protection in Kāpiti was considered good (though I feel it is under-enforced). While Porirua City does provide SOME protection (they banned some vehicles on Tītahi Bay beaches in 2021), we think there is room for improvement and plan to write to the council about this. Some evidence of careless driving on local beaches affecting fauna and/or flora will help make our case, please send photos or records of incidents to us including details of where and when it was.

Crazy critter of the month: Variegated Longhorn

The variegated longhorn beetle (coptomma variegatum) is sometimes called a tawa longhorn which is endemic to New Zealand and found in forests throughout New Zealand. It can be up to 22mm long (that must not include the antennae as ours had a body that length). Those feelers are where the species gets its name. Often, they are found on dead trees as they are a type of borer (and in our case, our mature kowhai looks like it's losing the battle). Huhu grubs/beetles are from the longhorn family too, and kanuka has its own species too.

Russell and Pene

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Your feedback on this newsletter would be most welcome as would contributions to future newsletter.