

# Pīpipi

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Maurice White Native Forest Trust  
Newsletter from Hinewai Reserve, Banks Peninsula  
Aotearoa / New Zealand

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## Deluge

In mid-December 2021 unusual weather wreaked harsh damage on and near Hinewai. Rain started gently on the 13th. By morning on the 17th, however, the 4-day total at Hinewai weather station was 304.2 mm, of which at least 200mm fell on one prodigiously wet day on the 15th. Huge landslides carried



black-fronted dotterel. See page 9

rocks, earth and trees in to stream courses, gouging out wide swathes many kilometres long and up to 50 metres wide, disgorging across valley flats and out to sea. En route (as we say in Akaroa) they cut roads, tracks, power and phones, swept away mature trees, bridges and small buildings, threatened homes, and obliterated fences. It was life-threatening, but no-one died - or at least no humans did. Along devastated waterways we scooped up stranded eels and smaller native fish, returning them to ebbing floodwaters. Many were already dead.

The mayhem was restricted to the extreme eastern fringe of Banks Peninsula. People in nearby Akaroa,



2 only a few kilometres west, were unaware of anything amiss.

December's deluge joins the lengthening list of calamities that have punctuated Hinewai's 34 year story so far. Nature has always acted thus. She gives, and takes away, and gives again. Now, of course, She has to factor in our own mindless assaults on climate and biodiversity.

The Hinewai project had barely begun when the El Niño drought of 1988-89 startled us. A series of surprises ensued — the Big Snow of 1992, the Wicked Winter of 1995, the Fierce Floods of 1999, the ill-starred earthquakes of 2010-11, the Ferocious Fire of 2011, and yet another Daunting Desiccation in 2013 accompanied by tree-snapping gales.

Of all these diversions, the Deluge of 2021 caused the most impact by far [so far - Ed.]. We have seen slips before. But no-one on Banks Peninsula can recall anything on this scale.







We began laboriously mapping by hand the extent of denuded land, when Geospatial Analyst Peter Pletnyakov dropped in not only with wife Helena and young son Misha (they are a delightful local Russian Kiwi family) but also with an extraordinary satellite map. From the digital data Peter's computer reckoned at least 65 hectares of Hinewai's surface were laid bare. [See opposite. The available data did not allow us to map slips beyond the boundaries of Hinewai and Purple Peak Curry Reserve.].

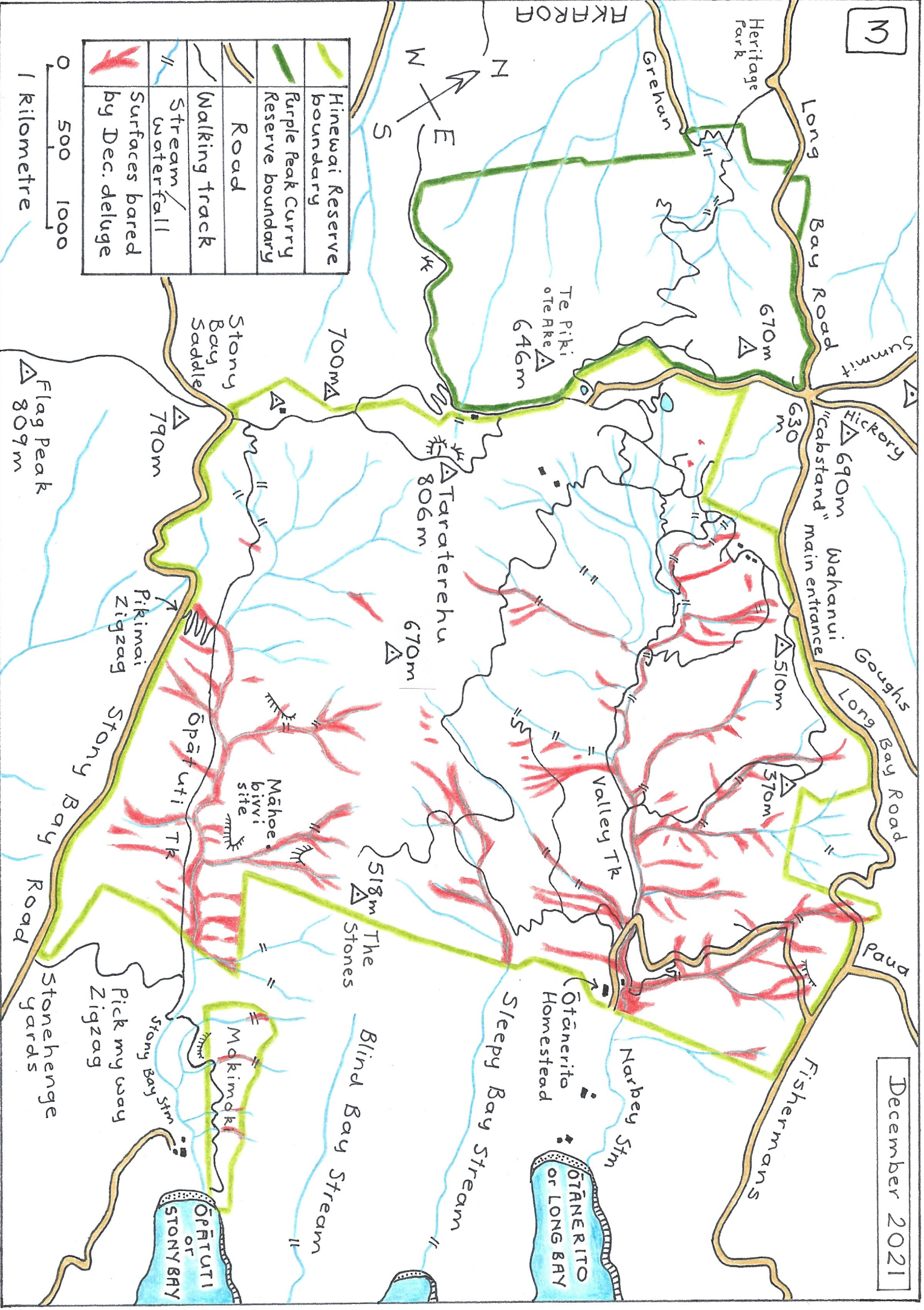
### What's normal now?

Christchurch City Council's computer concluded that the deluge was a "once in 150 years" event. Neighbour Marie in Goughs Bay mentioned this to Orion staff restoring power. "Ha ha" said a linesman, "we are getting called out to 100 year events every few months these days." And indeed, all round us, near and far, rare or unprecedented floods and droughts are coming thick and fast.

What does Hinewai's 34 year rainfall record



	Hinewai Reserve boundary
	Purple Peak Curry Reserve boundary
	Road
	Walking track
	Stream/waterfall
	Surfaces bared by Dec. deluge





4 show? We have already experienced rainfall approaching that of last December. Two June days in 2013, for example, totted up 257mm in Hinewai rain gauge, Skyline rain gauge overflowed. There were significant slips across the reserve - about 16 of them - but overall the damage was far less than in 2021. Cyclone Gita in February 2018 gave us a new daily record of 181.1 mm (256.0 mm for the 4-day event) but caused no significant slippage at all. Yet a much more subdued rainfall in June of that year caused some major landslides near the sea. How come? Normally the valley heads receive three times the



rainfall of the coast, both for annual totals and for single storms. Cyclone Gita matched this pattern. June 2018 reversed it; by far the heaviest rainfall was along the coast itself. December 2021 was different again. That weather system dropped around 300mm right across

the whole reserve. The valley heads are used to that sort of rainfall from time to time; any slip-prone land there has had opportunities to be bared, stabilised and revegetated, almost like a vaccination programme. In contrast, 300mm downvalley is far from usual. Unprepared, the slopes gave way all over.

### Ōtānerito woes

On that fateful Wednesday afternoon Paul Newport's vehicle found itself trapped between two huge slips across lower Long Bay Road. He set off back down the road on foot. Landslides ahead and behind volleyed and thundered. He made it home to an anxious Tricia. Later that day Paul phoned Bruce Hansen in Christchurch to say that Narbey Stream was in unimaginable flood, deflected by a gargantuan alluvion that had gutted the entire length



of Pīwakawaka Valley and exploded out across the narrow flats, straight towards Ōtānerito Homestead.

Pīwakawaka Valley  
from Ōtānerito Homestead  
30 January 2022



Raging muddy waters, churning with trees and debris, were rising towards the house. Paul and Tricia were preparing to evacuate to higher ground. From then on repeated attempts to phone the lower valley got no response at all. We feared the worst. Before dark on Thursday, despite continuing low cloud, the local police managed to send in a helicopter along the ravaged coast. They found everybody "safe and well and hunkered down" but without power, access or communication. Officer Tim conveyed this welcome message to Hugh just before Hugh's phone too faltered and died.

Ōtānerito had lost not only power and phone, but also their sewage system, their extensive vegetable garden, and the weather station. The outside ablution block was smashed. Water had undermined the workshop and buckled the concrete floor. The footbridge was flung downstream and dashed against one bank. How the roadbridge survived beggars belief.

Electricity was restored to Ōtānerito six days after the deluge, but the phone company dithered and dallied. For five hassled weeks there was no connection. Eventually Chorus laid out a makeshift link. It failed a few days later when a Narbey sheep tripped over the wire. Paul found the break and



6 fixed it. It remains thus as I write, 21 weeks on.

Other families in neighbouring bays related similar terrifying ordeals.

### Aftermath

Only three weeks after the rampage, trillions of gorse seedlings were obvious across bared ground, followed soon after by quadrillions of native wine-berry, poroporo and others. [Did you count them? — Ed.]. The mind boggles to imagine how Nature not only produces so many seeds, but delivers them to just where they are needed. Of course She has been practising for millions of years. However, She is leaving entirely to Us [us — Ed.] the restoration of tracks, fences, bridges, etc. When the sun came out again we began reinstating tracks across the landslides, measuring up for replacement bridges, checking what was lost and what remained. There were some heartbreaks. All that remained of Māhoe kivvi, for example (a little overnight hut that brothers Jim and Hugh had built 23 years ago in what was then the reserve's remotest corner) were the stumps of two foundation piles, severed at ground level, and the long-drop loo, just above the line of devastation. There were also joyful surprises. Fuchsia Falls and Hinewai Falls were unchanged, fern-draped and canopied, as lovely as before. And, I hasten to add, MOST of Hinewai is intact, and as beautiful as ever.

A noticeable change is that some waterfalls, long-obscured by verdant vegetation, are now starkly obvious. (Secret Falls on Kererū Stream has blown its cover; all is revealed). Vast amounts of rock chundered over these falls so we expected the deep pools at their feet would be choked with spoil. Not so. The tremendous force that flung the debris down must also have hurled it on and out.

### Help at hand

Phone companies aside, aid came from all



directions. Power was restored within days. Contractors Fulton Hogan not only resurrected the roads, they donated their skills and machinery to clear flood-wrack from our valley floor. It looks as if insurance will cover much of the repairs around the homestead and workshop. Local fencer Mark L. repaired some boundary fencing at Stony Bay. Our insurance does not stretch to fences, but the Regional Council has offered help. Rural Women Aotearoa left



morale-boosting bags of goodies at gates, including ours. The New Zealand Native Forest Restoration Trust was particularly big-hearted, even though their Purple Peak Curry Reserve escaped untouched (see map, page 3).

Best of all, our temporary workers arrived as planned at the start of January, impeccably timed for the clean-up. On their first day they worked with Hugh to clear and re-bench a route across one of the big slips that severed East Track. Ash is 30, originally from remote England. During his four months here he married his long-time partner Elisha (Kiwi-born) in Akaroa. Max is 27, brought up locally in Pigeon Bay. Both proved excellent value and we are scheming to get them back.

### Only words

A favourite topic for work-face discussions this summer was accents. Hugh and Max claimed they didn't have one. "Yer rickon yer don't hev 'n



Ashley Lennon, Peter Joyce and Max Croll Dowgray.

Māhoe Gully 11 Feb 2022



8 exist?" (this the English Ash, gently mocking).  
"Well" said Hugh "at least we sound the "t"s in  
"bottle" and "pottle". " "Wha's a po"le?" asked  
Ash. He thought it careless that Hugh, Max, Paul and  
Peter all pronounced "bear" and "beer" identically.  
"They're the same" said Max. "No they're not" said  
Ash, and demonstrated. "Gosh" said Hugh, "it's  
subtle, but I do believe I can detect a slight dif-  
ference. How about "stake" and "steak" then?" "They-  
re the same" said Ash. "I rest my case" said Max.

Working on Wahanui Track one day, Hugh decided  
not to cut off a low-flying fivefinger bough but in-  
stead hang a little warning on it: Max. clearance 1.4m  
"Oh" said Max, "you didn't need to put up a little notice  
just for me." Next day he sported a bump on his fore-  
head. "I cleared the branch" he explained "but I  
hit my head on the sign".

Another day Ash and Max had to foray far up  
tangled Kahikatea Stream to suss out a suspiciously  
exotic-looking tree turning autumnal yellow. "What  
is it?" asked Hugh, on their return to the Mānatu  
Track workface. "It's me!" cried Ash. "It's an English  
Ash!" This is the first time we have found this hand-  
some but mildly invasive exotic species in the wild on  
Hinewai.

### Housing the helpers

Uniquely skilled David Brailsford, assisted by part-  
ner Jan and local tradies, had the revamped old  
house ready for Ash and Max by New Year. Later in  
January he completed his makeover of the basement.  
Hugh set up sign-making shop there, happy as a pipit.

### Healing Hugh's hip

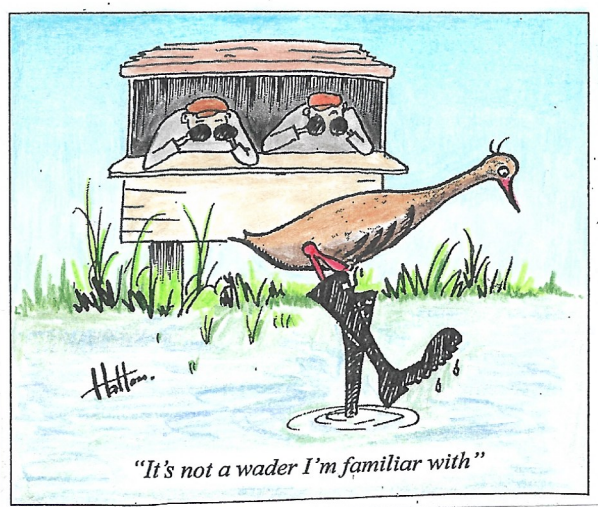
Although 76 at the time of his surgery in November,  
Hugh had never overnighted in a hospital before, nor  
feigned death under general anaesthetic. "I hope  
they did the right hip" remarked Paul Broady of  
Kāpuka. "I'm very glad they didn't," replied Hugh,  
"it was the left one that was crook." Two weeks later



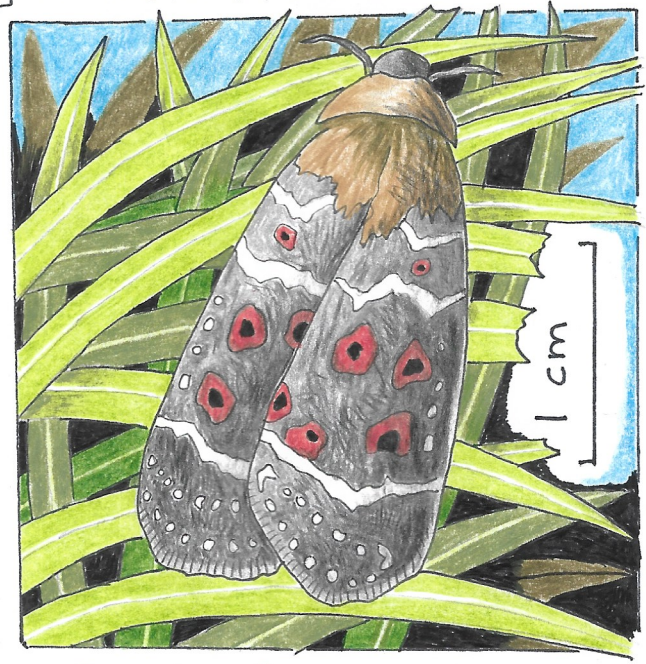
he was making crutch-abetted walks up to two kilometres long ("probably the outer limit of what you should attempt at this stage" said the slightly startled surgeon). Four weeks after that he was allowed back on his bike.

Handsome strangers

En route to Hinewai, Chris of Auckland had photographed a bird at Le Bons Bay beach and showed it to Hugh for identification. It was a black-fronted dotterel, a small goodlooking wader that colonised New Zealand from across the Tasman in the 1950s. Only locally common it is far from being a familiar sight on Banks Peninsula, and Hugh had never seen it here before.



In early February Max and Ash photographed an attractively patterned moth at Beechgate. Although very distinctive, we could not identify it from New Zealand moth guides. Even more distinctive, Lepidopterist Brian Patrick was prompt to reply to our queries. It's called *Proteuxoa sanguinipuncta* (= "blood spotted", an apt epithet). Like the dotterel, it also introduced itself from Oz. Seen first in the North Island from 2010 onwards, it had spread to North Canterbury by 2021. This is a new record for Banks Peninsula and Hinewai. We saw several more in ensuing weeks, always in grass, on which their caterpillars feed.



Bridges over troubled waters

December destroyed fourteen of the 45



10 footbridges we had one by one added over the years to the track network. Now one by one we are building replacements. Of all the de-bridged crossings, the one at Boundary Falls confronted walkers with their biggest challenge. Way back in January 1989 Martin Oelderink had created a sturdy structure here. He positioned it in the lee of an immense boulder which protected it from flood after flood for 32 years. The Great Deluge spared nothing but this huge central rock and Martin's concrete abutment on the east bank.

Paul cleverly drilled in to the top of the rock and bolted on a bracket, key to a new traverse. Completed in April, the span is a metre higher than before, and perhaps a little more immune to future ruin.

### Back on track

Devastation in Stony Bay Valley rendered the Banks Track route unwalkable. How could we keep that venture going? Mark Armstrong cleared and brushcut a detour from their valley floor up to



Stony Bay Stream, 58 days after the December deluge  
11 Feb. 2022



Stony Bay Road at the Stonehenge yards. He // called it "Pick my Way Zigzag" in line with Hine-wai's "Pikimai Zigzag" further upvalley. (Piki-mai translates as "onwards and upwards"). Booked trippers could choose whether to take the detour or get a refund. Very few chose the latter. While we scrambled to restore Ōpātuti Track, the walkers trudged along Stony Bay Road to rejoin the proper route on Tara Track at Stony Bay Saddle. The narrow shingle road was a poor substitute but it provided grandstand views of the deep valley and its dramatic landslides. By mid-February Ōpātuti Track was passable again.

### A dash of orange

For several weeks after the Great Deluge, submerged rocks along the devastated streams turned orange with a soft algal-like coating. Paul Broady identified this as "iron bacteria". They do not photosynthesise but derive energy by oxidising iron. Thus their sudden abundance was not due directly to the removal of shady tree canopy. If the landslides released a sudden burst of extra ferrous iron in to the streams, it can't have lasted long. Patches of orange persist, but only in a few quiet backwaters.

The moist summer must have been favourable for the bright orange poreconch fungus *Favolaschia calocera*. We encountered vivid drifts of it on wet dead wood in Mokimoki and in the adjoining Armstrong covenant. Thought to have originated in Africa, it somehow found its way to Aotearoa by the 1960s and has since colonised the whole country.



### Regeneration

As Pīpipi goes to print, the slips continue to green



12 over with a complex mix of natives and naturalised exotics. Some deep scars, though, still look pale and raw. Growth has been favoured by ample moisture, even though April's rain was meagre.

## Degeneration

Broken boundary fences are a continuing challenge. Unsurprisingly our favourite fencer is overwhelmed with work. Paul Newport and Brian Narbey tackled crucial fencing at Ōtānerito. In Stony Bay Valley some pushy woolly ones have been sampling gourmet understoreys of māhoe, kawakawa and fern.

## How much carbon?

Our periodic carbon sequestration field measurements involve visits to 28 plots randomly assigned across the reserve by a computer. Access to many of them is arduous. One would be tempted to make the computer go and find the lot. Instead, Timo and Harry, two fit young fieldworkers from Carbon Forest Services Limited, based themselves in our Lodge for several days in March, pored over maps with Hugh, launched themselves in to the wilderness, and achieved what the computer couldn't do even in its wildest dreams.



Pīpipi appears twice each year. There is no sub and no obligation to donate, but donations of any size are hugely helpful and much appreciated. We will post a receipt but need your postal address if we don't already have it.

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HUGH'S PHONE (best evenings)

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CC 111 07 [Pīpipi 55]