Bream Head CONSERVATION TRUST

FOUNDATION NORTH
Te Kaitiaki Pūtea ō Tāmaki ō Tai Tokerau

COMMUNITY WORKING TOGETHER – Mahitahi!!

Rangers' Report – December 2021 & January 2022

Operational Summary...

Cathy Mitchell bands another GFP/oi chick

Tena koutou katoa

It is with great pride and happiness that I can announce our 2021/22 grey faced petrel (gfp) protection and monitoring a complete and wonderful success! All 10 monitored chicks survived being predated upon by introduced mammalian predators, nine of whom successfully fledged between early December and Mid-January. Seven of the nine chicks were banded with permanent identification bands which is the highest number we have been able to band since monitoring the birds from 2016. In a season with high rodent and stoat numbers being observed around Whangarei Heads the Trust is particularly stoked, and proud that the very intensive protection and monitoring activities at the breeding sites has proved successful and worth the effort!

What a great way to start 2022. We hope that you have all had a brilliant summer thus far too, it has certainly been a lovely festive/holiday season weather wise, with good pre-summer rains recharging the ground water table and beautiful (mostly) calm, warm, sunny days allowing for some great rest, recreation and relaxation. Most of our amazing volunteers have had a good break over January, and some of our rangers too. I am looking forward to some time off in early February with a trip to the South Island.

December 2021 and January 2022 have been just as busy as normal for the ranger team and some of the volunteers with routine mahi still needing our attention, as well as some increased pest plant control too. Predator control during these months have returned some interesting results with our December tracking tunnel survey resulting in a higher than average rat index of 5.48% (+/- 3%) (although still very low compared to most other areas). The index for mice came in at lot lower than average at 18.07 (+/-5%) and insects at a nice high level of 36.30% (+/-6%).
Many locals that I speak with around Ocean Beach, Urquharts Bay, Taurikura, Reotahi have witnessed a very noticeable increase in rodent activity this summer compared to the last few seasons, perhaps a sign of the excellent food abundance after a wet winter and very warm spring producing plenty of food sources in our region. Research does show that when base food supplies (such as seeds for example) are in abundance invasive mammalian predators such as rats breed in high numbers, resulting in more food for stoats, cats etc. who then in turn breed high themselves as well.

Longer term evidence from experts, our data and other similar groups throughout Aotearoa (pre-dating this summer's local rat spike) is indicating that the toxin we have been using known as Double Tap is not suitable for ongoing use, as some rats seem to be averse to the lure or the toxin combination. Double Tap is an excellent toxin to knockdown larger populations of rodents and possums, so the Trust will look to use it as a one off pulse tool in the years to come to switch out our ongoing rodent toxin (usually Pindone). What we do know from our monitoring is that Double Tap is excellent for mouse control. So, the rat increase is potentially linked to a combination of the two aforementioned issues, that being a

natural heightened rodent breeding season and a less effective ongoing rodent toxin in Double Tap. The second issue will be dealt with by a switch out in rodent toxin.

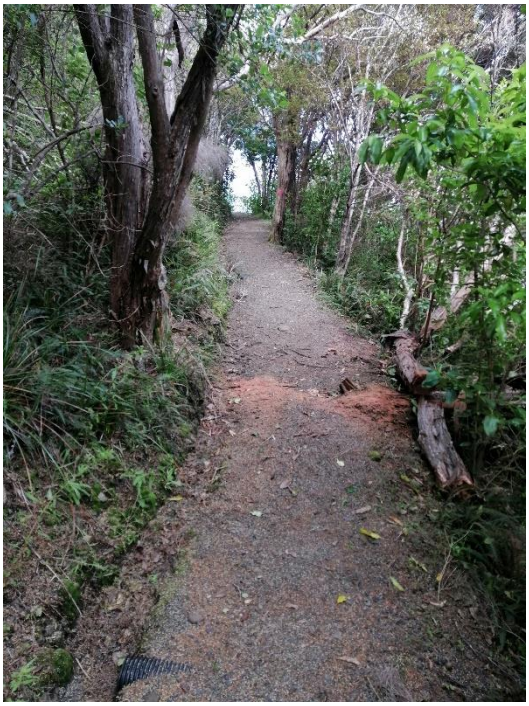
Our recent addition of predator control equipment along the Ocean Beach Road boundary line (known as Load the Road) is really starting to pay dividends now. Our passionate and detailed ranger Keith Townsend checks all the devices along the road every two weeks and as you can see from the statistics in the following table the traps are bedded in and making some very important kills before those predators can reach the buffer and the reserve. We have added a few more traps to the private land buffer area network to the south of Ocean Beach Road and really wish to thank our local landowners for their ongoing support to access their land.

The newly installed Predator Free Whangarei (PFW) trail cameras, which are paired to an automated lure dispenser (ALD), are picking up the invasive predators such as stoats within and around the reserve, as well as on private land over Taurikura and out eastward to the coast. This intensive network of cameras is providing us with such amazing new data, it's new baseline data like we have never had before, and it's been a real eye opener about the true picture of what's going on in the reserve and other areas at the heads. At Bream Head/Te Whara however the good news is that out of the 805ha reserve only one possum has been seen on the camera network that monitors the entire reserve, and only four rats – which is outstanding and proves our rodent and possum control is working very effectively indeed. But it's the stoat, the old arch nemesis to all those in conservation around Aotearoa, who is still evading our traps and causing the biggest headache. We have seen 20 stoats on camera and have been able to catch 11 of those this summer thus far, but there are still those cunning, wily few who will not engage with a human made device which we cannot trap. We look forward to the technology being rigorously tested right now that will pair with this great new monitoring system, to give us the tools to eliminate those remaining stoats. This tech may still be a little way off yet, so the trust is looking at its options for stoat control and the possibility of once again using secondary poison delivered via our intensive bait station network this coming winter/spring.

Alongside the predator control is the ever important, and often overlooked, pest plant control that is so essential in maintaining the natural endemic habitat which is the life sustaining force/mauri for all our species. Our rangers and volunteer Marc Lawrence have been focusing in on mothplant control, targeting the mature flowering plants before they develop their large seed pods which, if allowed to mature, can burst and send 1000s of individual seedlings flying into the air and up to 25km away! This control is a long term operation as the mothplant seed can stay viable in the soil for 10+ years. So, after mature plants are controlled we must revisit and control seedlings for many years – as well as search for any new infestations. It is a long term process that requires a very strategic approach and lots of hours, which is something the Trust hopes to find more funding for and volunteer support of. At this present time, we are well short of being able to control pest plants over the entire reserve, we are managing to slow the spread within several key areas by targeting mature plants but we a far from being able to contain all matures, let along eliminate pest plants at Bream Head/Te Whara. The crazy thing is, we have the tools and technology to eliminate pest plants, we just do not have the necessary funding, hopefully one day that will change.

Other operational outcomes have been achieved throughout the summer period, such as the install of eight PFW cameras and ALDs on the private buffer between the reserve and Ocean Beach Road, new traps added into the buffer zone to finish the intensive grid, six new volunteers have signed up and been inducted, Tracking tunnel index survey, planning and preparation for a possible Vespex wasp control operation in late February, preparation for the biannual lizard survey to be conducted in February, public track and hut maintenance by our wonderful volunteer team, trap line maintenance, plant nursery shade house development

New BHCT volunteers Paula, Helena & Naomi



Track clearing on Peach Cove Track

Monthly predator control results: December 2021

	BHSR							LTR & Buffer	
Pest/ Predator	**Total # caught this month BHSR.**	**# caught this month previous year in BHSR.**	**# of total rats caught this month Norway or Ship rats?**	**Total # caught inside res. this month (i.e. not on boundary/buffer).**	**Total # caught inside res. this month previous yr (i.e. not on boundary/buffer).**	**# caught 2021 YTD**	**# caught 2020 YTD.**	**Total # caught this month LTR.**	**Total # caught this month BUFFER.**
Rat	6	2	6 ship rats	3 of 6	1 of 2	73	45	9	0
Possum	0	3	-	0	3 of 3	10	22	0	0
Stoat	5	17	-	3 of 5	11 of 17	14	25	1	0
Weasel	0	0	-	0	0	24	17	0	0
Ferret	0	0	-	0	0	0	0	0	0
Feral cat	0	0	-	0	0	0	1	0	0
Mouse	5	6	-	1 of 5	3 of 6	85	83	8	0
Hedgehog	2	2	-	2 of 2	0	17	12	1	0
Totals	**18**	**30**	**-**	**9 of 18**	**18 of 30**	**205**	**175**	**19**	**0**

Analysis:

- Fewer total catches in December 2021 compared with December 2020
- 50% of total caught were caught on the boundary before entering the reserve.
- Higher rat catch rate than December 2020. All were caught in the reserve.
- 17 stoats caught – highest stoat catch for a month on BHCT records.
- Year-end totals – Total catches for 2021 up on 2020, mainly in rats and weasels. Even though December was high it is good to see the total number of stoats caught for all of 2021 (14) nearly 50% down on 2020 (25).
- Also great to see under half the possums caught compared to all of 2020.

KEY: **BHSR –** Bream Head/Te Whara Scenic Reserve. **LTR –** Load the Road (All Ocean Beach Road).
BUFFER – Private land b/t BHSR and Ocean Beach Road.

Monthly Species monitoring results/updates: December 2021

Species	Method	#	ID	Sex	Location	Status/comment
GFP	Burrow scope and sweep, check infra-red camera data.	2	Burrow's B4 and C4	n/a	GFP site B & C	Successfully fledged
Rats, Mice, Invertebrates	Tracking Tunnel survey	150 Tunnels	n/a	n/a	Entire reserve	Rats 5.48% (+/- 3%) Mice 18.07 (+/-5%) Insects 36.30 (+/-6%)

Stoat caught using dead rat as lure

Now thats a rat!

Monthly predator control results: January 2022

BHSR								LTR & Buffer	
Pest/ Predator	**Total # caught this month BHSR.**	**# caught this month previous year in BHSR.**	**# of total rats caught this month Norway or Ship rats?**	**Total # caught inside res. this month (i.e. not on boundary/buffer).**	**Total # caught inside res. this month previous yr (i.e. not on boundary/buffer).**	**# caught 2022 YTD**	**# caught 20201 YTD.**	**Total # caught this month LTR.**	**Total # caught this month BUFFER.**
Rat	11	7	3 Norway/8 ship	3 of 11	1 of 7	11	7	8	3
Possum	2	0	-	2 of 2	0	2	0	0	0
Stoat	6	4	-	5 of 6	3 of 4	6	4	1	0
Weasel	2	1	-	0	0	2	1	0	0
Ferret	0	0	-	0	0	0	0	0	0
Feral cat	0	0	-	0	0	0	0	0	0
Mouse	5	3	-	3 of 5	1 of 3	5	3	5	0
Hedgehog	3	2	-	0	1 of 2	3	2	6	4
Totals	**29**	**17**	**-**	**13 of 29**	**6 of 17**	**29**	**17**	**20**	**7**

Analysis:

- Higher catch rate total due to higher catch rate in most species
- Two possums caught were only ones seen on PFW cameras for entire reserve. Both on the boundary of the reserve.

KEY: **BHSR –** Bream Head/Te Whara Scenic Reserve. **LTR –** Load the Road (All Ocean Beach Road).
BUFFER – Private land b/t BHSR and Ocean Beach Road.

Monthly Species monitoring results/updates: January 2022

Species	Method	#	ID	Sex	Location	Status/comment
GFP	Burrow scope and sweep, check infra-red camera data.	7	Burrow's A2, A5, A7, A10, B2, B5, B6	n/a	GFP site A & B	Successfully fledged

Update from the Predator Free Whangarei project

Predator Free Whangārei

Tiaki te whenua, tiaki te tangata

Kia ora tatou,

We hope everyone has had a safe and lovely summer break. It's been a long time coming, but we now see the 'dead possums at the end of the tunnel'. Getting to this point has involved meeting 197 landowners, hours of meetings with community groups, various applications to agencies to allow us to use the tools we want where we want, and lots of navigating bush and setting up of hundreds of eradication and detection devices. Just a few more loose ends to tie up and we're ready to remove possums.

Please see below for some key updates and what's to come next for us.

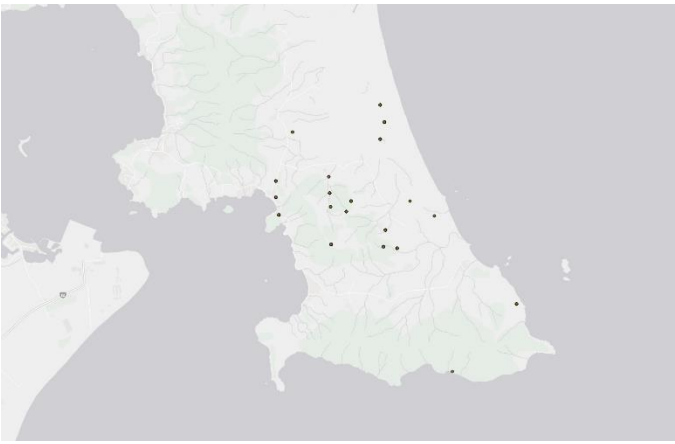
Latest updates

- We have welcomed new field staff to the team! Joining Oly Hopwood on the ground are Gaelyn Dewhurst (a local you may know), Zac Coffin, and Riley Edwards. Joining the wider team were Sam Johnson, the Predator Free Tai tokerau Manager, and Joanne Kim, the Communications and Engagement Co-ordinator.

  Sadly, we farewelled Ripley Dean, the Predator Free Whangārei project manager, as she embarked on a different pathway. We wish her all the very best.

- *On the ground* – Almost all kill traps and bait stations have been set up in the forested areas of the Taurikura working block. Thanks to the help from BHCT,we've also installed 75 trail cameras and automatic lure dispensers in total across Bream Head/Te Whara and Taurikura – and have captured all sorts of footage! Unsurprisingly, we found that possum presence in Bream Heads is minimal, but in Taurikura, they're more abundant. Hopefully we can see those dots in the map below dramatically decrease in the weeks to come.
  Of no surprise to yourselves and pleasing to confirm is the high number of cameras that we saw kiwi on!

  Bream Head/Te Whara working block – 6% (2/32) of cameras had possums present and 69% (22/32) had kiwi.
  Taurikura working block – 60% (26/43) of cameras had possums present and 70% (30/43) had kiwi.



Black dots showing where the possums have been captured in the trail cameras. Data between August 12th – December 16th 2021.

An exciting part of the project has been implementing the new technologies available for possum eradication. We've been installing the leghold live capture traps and the signal hubs, testing out this auto-reporting technology to ensure it is safe and effective. This tool means that we won't have to be checking each trap each day, as this MPI-approved technology will alert us when a possum has been captured. When this happens, a team member will be there within 12 hours of sunrise to remove it. This tool is an efficient way to catch any possums wary of taking toxin or putting their heads inside traditional traps.

What's next?
We'll complete installations in the Bream Head/Te Whara working block and start removing possums! We'll also continue installation of removal devices in the Taurikura area.

Thinking ahead – we're still collecting possum ears so we can get DNA samples, which will help us determine whether a possum detected in an eradicated zone is an invader or has been resident. Those of you with kits, please keep saving those ears for us, others please give your fresh or frozen ears to the rangers with a location and date – thank you ☺.

COVID-19
The wellbeing of the community and our staff are the highest priority. We are writing up a safe and logical continuity plan so that we can still keep the ball rolling as much as we can. Please rest assured that we are following all government and Northland Regional Council's COVID-19 protocols.

Any questions or queries relating to Predator Free Whangārei please do not hesitate to contact Joanne Kim at joannek@nrc.govt.nz or 027 275 5167.

Meet a volunteer…

Written by BHCT volunteer Bill Mallett

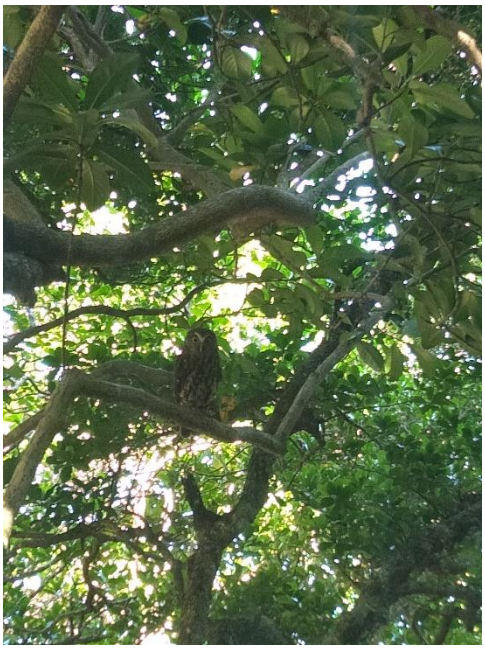
This month, we'd like you to meet one of our Trustees, who is also one of our trappers, in fact Bill has been covering three difficult pest/predator control lines for the past few years. He pitches in for track maintenance, helps out with re- supplying the Peach Cove hut, tops up our three kauri dieback stations and at any BHCT event, you will usually find Bill behind the BBQ.
On the trustee side, he is the treasurer looking after all the trust finances and is an integral part of the fundraising committee.
He has shown many of our new volunteers the "ropes" (literally) as some of the areas he covers are pretty challenging.
When we asked Bill what motivates him he said " It's the combination of a restoration project, physical exercise, being part of a dedicated group of people and putting some accounting experience to good use. Ticks many boxes".

Rangers' reports… *Written by BHCT ranger Keith Townsend:*

I routinely check the Load the Road (Ocean Beach Road boundary trap line), buffer, and Busby Head mustelid trap lines, and this means a lot of opportunity for interactions with visitors and members of the community. It is a real highlight of my day sharing the reserve with you all and spreading the joy of wildlife conservation mahi. I love to chat but don't let me get off track I've got a lot more traps to check, and they've been catching well too. Ocean Beach road is stopping stoats dead in their tracks, and we've caught a number of them lately. It's that time of year and also it's been a productive spring and summer after two drought years. La Nina!

The summer heat has triggered the flowering/fruiting cycle of many of our environmental weeds on the reserve. A major one for us to control each year is mothplant. I'm sure you have all seen the white flowered vine smothering trees on the roadside into town. These develop into pods containing a thousand wind spread seeds. Please, if you see any of your lines or around the reserve let one of the ranger team know. It's not a weed we want getting away on us. It can smother seedlings and collapse canopies!
This season we enlisted the help of Goodwood Aotearoa to knock down the bulk of the infestation on the northern side central valley. Cheers guys it's dirty work and we appreciate your efforts!

If any of you are interested in joining our Forest Restoration Team (FoRT) to tackle the easier to reach weeds in and around the reserve, and enjoy the social side of meeting like-minded people please Contact me (Keith) if you would like to join the mailing list.
keithhtownsend@gmail.com



Rangers' reports continued…

Written by BHCT ranger Hadden Morrison:

Well it feels like the past two months have flown past, it's always a busy time of year with balancing friendships, whanau and mahi. The highlight of December for me was securing a contract (on behalf of BHCT) with Northland Regional Council/Predator Free 2050 to install 170 bait stations along the Ocean Beach Scenic Reserve (picture attached). On Xmas eve we got confirmation which made it extra satisfying going into a couple of days off. I had considerable help from Geoff Pike and Adam who revealed that it was a piece of the Heads puzzle the Trust had been wanting to take on for some years. The install of the Sentry stations targeting possums between Proctors and Kauri Mountain has started and will hopefully be finished early March. The rest of December was filled with maintaining my usual lines, training a new volunteer on G-Line, installing and recovering tracking tunnel's and starting to build the shade house at the nursery. Sadly time hasn't allowed too much more progress on the shade house but it's something we'll chip away at. In January took a week off staying on Aotea / Great Barrier with my wider whanau which was a first for me, lovely spot, blessed with great weather and company. Coming back to work, Keith and I did a day of spraying mothplant between the lighthouse and radar station, one of the toughest days on the hill I've done but satisfying. The rest of January will be classifying images (images attached) from the PFW cameras dotted around the maunga, installing the OBSR bait stations and hopefully fostering a relationship and working with some of our iwi partners. Thank you very much for your valued contribution and support. See you out on the hill!

Weed of the Month

(from the Whangarei Heads Weed Action website http://weedaction.org.nz/weed-of-the-month/)

Jasmine ***Jasminum polyanthum***

What does it look like? This is an evergreen climbing vine that grows up to mid-canopy height. It has very long, non-woody, round, tough, stems that root at the nodes. Smooth edged leaves are arranged in opposite pairs on stems, and are divided along the midvein into usually 7 leaflets with the terminal leaflet (up to 7 x 2.5 cm) the largest. Leaves are dark green when mature, new growth is tinged with red. It has masses of highly scented, small white tubular flowers, mainly in spring followed by occasional glossy black fruit.

Why is it a problem? Highly shade tolerant vine which grows rapidly over forest floor, and into the canopy, forming dense, long-lived masses that smother and kill all plants from ground level to medium to high canopy. Stems layer profusely and runners spread long distances over tough sites under buildings, rocks, and so on. Ingress into established forest is rapid via ground or canopy. High shade tolerance means it can flower under full canopy, and tolerates drought, damp, wind, salt, differing soil types, and damage. Extremely hard to kill.

How does it spread? Birds readily spread seed where it is produced, but most spread is from fragments dumped in greenwaste and by runners from garden infestations at bush margins. Very rapid growth from stem fragments.

How much of it do we have on the Whangarei Heads Peninsula? Jasmine infestations are quite localised around the Heads because it does not produce much seed. Infestations are usually concentrated around gardens, and on bush margins and roadsides where garden waste has been dumped. Where infestations do occur, they are frequently extensive. These infestations are of particular concern where they occur at bush margins and are rapidly infiltrating the bush.

What can we DO about it at Whangarei Heads? Jasmine is very hard to kill once established so the best thing to do is to ensure you don't introduce it to your property, deliberately or accidentally, and ensure that you dispose of your garden waste responsibly if you have it at your place. Controlling infestations thoroughly when small and following up until eradicated will also save significant effort, focusing first on keeping it out and away from bush areas. For large well established infestations control is still achievable, the approach just needs to be tactical, moving in a rolling front and undertaking the necessary follow up to ensure complete kill at the retreating margin.

How do I control it?

Special disposal notes: Spread primarily by garden dumping. Dispose of appropriately.

- Manual control difficult due to growth form (stems root wherever they contact the ground). Vines can be progressively rolled up, and disposed at a refuse transfer station, or by drying thoroughly and composting, or drying and burning, or burying deeply. Stem fragments left in soil after rolling will re-sprout, and then these can be manually pulled (or followed up with herbicide methods below). Intensive follow up required to locate and pull regrowth from any remaining stem fragments.
- Prune vines as close to original stem as possible, then immediately treat cut stem with (5g metsulfuron + 1ml penetrant/1L water), or (250ml Banvine® + 10ml penetrant/1L water). Dispose of all cut stems at a refuse transfer station, or by drying thoroughly and composting, or drying and burning, or burying deeply.
- Cut back & spray regrowth (wait for healthy, mature foliage) with (5g metsulfuron+10ml penetrant/10L water), or (120ml Banvine® + 10ml penetrant/10L water).

Not prolific seed production – spread largely through dumped garden refuse. Very rapid growth from stem fragments. Once established it is hard to kill & dispose of – prioritise preventing spread into new areas. Most infestations will require several follow-up treatments.

Coming up in February/March:

Summer weed control... BHCT rangers and those in the Forest Restoration Team (FoRT) will sweat it out on the hill in an effort to suppress those nasty invasive weeds, eliminating as many mature plants before they can reseed.

Biennial Lizard Survey... the Trust rangers, along with help from Pete Mitchell will conduct the BHCT lizard monitoring survey over five consecutive nights and six days.

Vespex wasp control... a full reserve wasp control operation will be implemented again this summer, to knock out the vespular wasp (Vespular germanica) and stop it from predating upon the important insect biomass, and make is safer for us and our visiitors to the reserve.

Mauri ora - Keep well my friends!

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