



WINDY HILL - ROSALIE BAY CATCHMENT TRUST

Windy Hill Sanctuary
Goodnature A24 Trap Project



Report 6 – 18 July 2017

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Background

The Goodnature A24 Trap project is a collaboration between the Great Barrier Local Board, Auckland Council, DOC, Goodnature Ltd, and the Windy Hill Sanctuary. Its purpose is to establish how effectively the non-toxic, self-setting, multi-kill Goodnature A24 trap is at reducing both ship rat and kiore densities within a pest managed Sanctuary on Great Barrier Island over a two year period. This objective supports the local community aspirations to find ways to manage these pests with non-toxic methods.

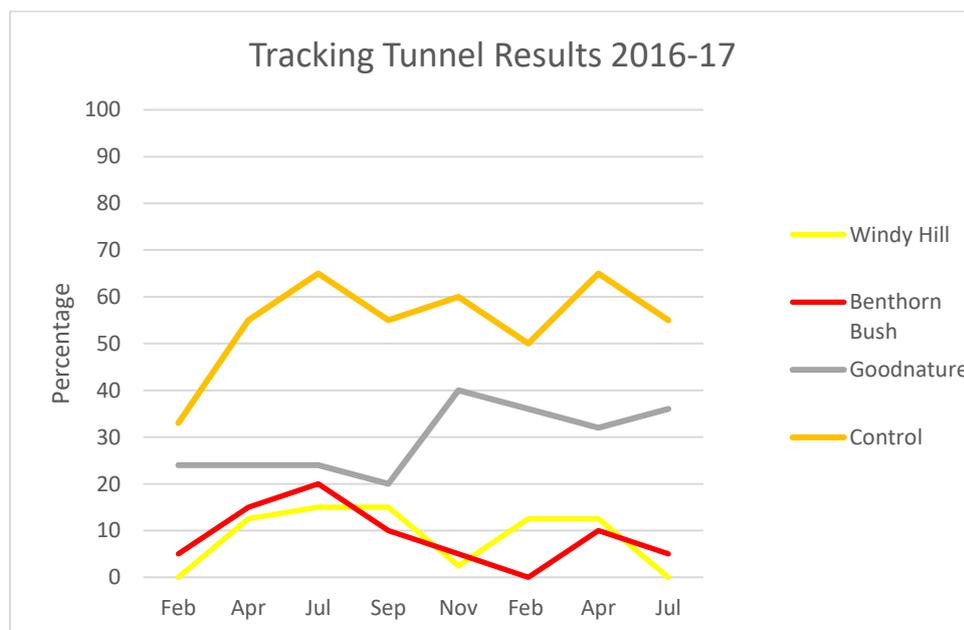
Two hundred and ninety-three A24 Goodnature traps were established in the Big Windy Hill Pest Managed Area between February 22 and 24, 2016 by a team made up of personnel from Auckland Council, DOC, Goodnature, and the Windy Hill Sanctuary.

Traps were checked monthly for the first six months, and then every 3-6 months following the replacement of the manual lure with the auto-lure pump (ALP) in August 2016. Bait and gas cylinders have been replaced at six monthly intervals since that time and rat tracking tunnel monitoring undertaken in January, April, July, September and November each year.

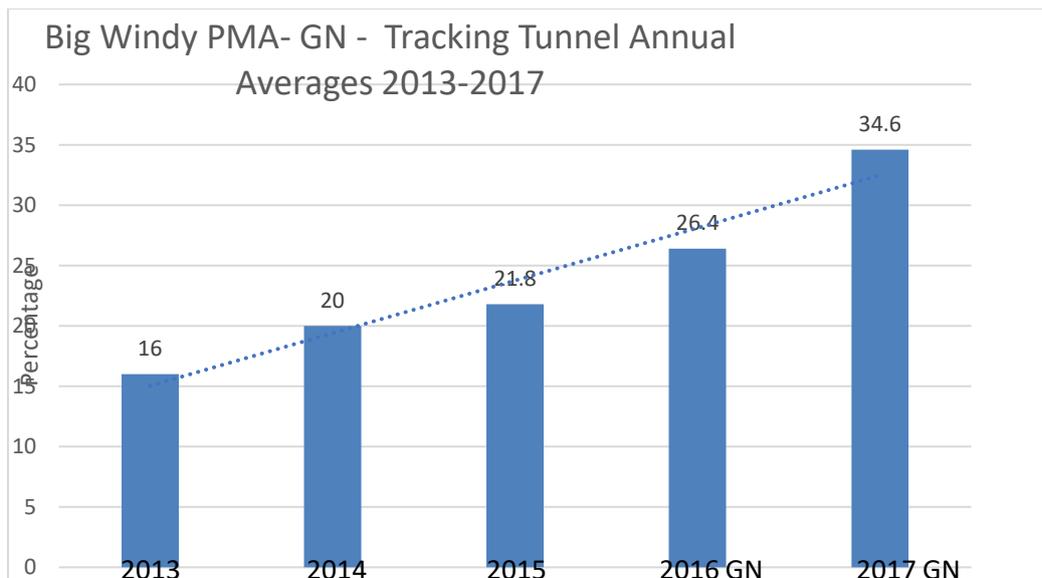
Outcomes

Since the last report in March this year there have been a number of initiatives to establish the cause of the elevated tracking tunnels in the Goodnature A24 project area.

Rat tracking indices have been higher than any other pest managed area in the Sanctuary since the Goodnature project commenced. For the latest tunnel run in July 2017, the rat tracking tunnels in the Goodnature project area stood at 36% compared to neighbouring pest managed areas Windy Hill at 0% and Benthorn Bush at 5%. These are significant differences. The unmanaged Control came in at 55%. See Graph 1 below.



The upward averaged tracking tunnel trend over time is also significant as shown in Graph 2 below.



We suspect that the elevated tracking tunnels are primarily caused by kiore. History of trap catches in the Sanctuary indicate that as ship rats are reduced through trapping and baiting the number of kiore rise. These animals are much more cautious as was shown on the camera clips taken of rat/GN A 24 trap interactions early in the project and are less easily caught. They can establish themselves in smaller territories avoiding both traps and bait – this has been demonstrated at Glenfern. Catches in the Sanctuary in 2016 were 56.4% kiore of animals trapped. When trapping first commenced in 1999 they were less than 10%.

In order to more clearly establish what animals were in the GN project area 2 trapping lines (BW I 3 - with 14 traps and I 6 with 21 traps) were re-opened between April 19th and July 5th with the aim of identifying rat species caught in the traps. Initially, checks were done fortnightly but animals were too decomposed to properly identify and this was stepped up to weekly. Early on, John Ogden undertook an audit of the field team's ability to identify kiore correctly and was impressed with their skill.

Over that time 31 animals were trapped - 15 kiore, 11 ship rats, and 5 unidentifiable. This means that 57.6% were kiore which is a very similar percentage to that in the Sanctuary area though this would rise slightly if some of the unidentified animals were kiore. It confirms that kiore are an issue and supports the A24 total body count of 90% ship rat and 10% kiore.

Auto-Lure Pump (ALP)

Autolure bait dispensers – it was noted in an informal check that one of the A24 Auto-Lure pumps was completely empty after 3.5 months and in a conversation with DOC's Lindsay Wilson (who is using hundreds of A24s,) he felt that a noticeable number didn't last longer than 4 months. On this basis, the Trust undertook a spot check on 20 lures in early June - 1 lure was empty, 3 had not dispensed bait at all, 1 had bait build up on the trigger and had outgassed. Out of just 20 units, this added up to a concerning number of devices potentially not functioning in the field.

A report brief on this matter was sent to Jeremy Warden and Goodnature Ltd. Goodnature replaced lures, and one trap that had trigger failure, and responded that they felt that mice were probably taking the Auto-Lure bait without triggering the device. However, in our experience, it would be unusual to have mice in an area with so many rats.



Bait covering the trigger.

Goodnature, Jeremy Warden, Windy Hill, and DoC are now in the process of planning a 'think tank' to more fully address the issue of kiore. Goodnature are also in the process of researching different bait delivery mechanisms.

Discussion

- After nearly 18 months of using the A24 traps it is clear that they are underperforming, as indicated by tracking tunnel indices, compared to baiting and trapping methods in neighbouring pest managed areas in the Sanctuary.
- More research is required into the persistence of kiore and the need for different bait or lure mechanisms to get these animals into A24 traps.

Goodnature have been exemplary in responding to issues and defective equipment. Their rat tracking tunnel results from other parts of NZ with kiore and ship rats are considerably less than ours (8% on the Hollyford Track) but these are areas in the South Island with much colder temperatures and probably a lot less animals.

Next steps

- The project has seven more months to run.
- ALPs and gas cylinders will be refreshed in August 2017.
- A think tank will get together soon to discuss ideas for improving kiore catch.
- Discussions are also needed to decide on the application for the A24s once the project at Windy Hill is completed in February 2018. This could include further research at Windy Hill into the traps as a perimeter only trap to trial if reinvasion could be reduced into the Sanctuary by catching more ship rats on the edges. It is thought that ship rats, which will be dominant outside the Sanctuary, will therefore be more frequent re-invaders. Installing the A24s on the perimeter, replacing standard rat traps and reducing labour significantly, will be a way of assessing their efficacy as a perimeter tool for other projects. Historic data of both perimeter and internal track rat catches will be used to compare the efficacy of the A24 as a perimeter trap tool.

Thank you, Nick Graham(Goodnature), Darren Peters (DOC), Auckland Council, and the Great Barrier Local Board for your involvement and support of this very worthwhile project. Thank you, also, to Kevin Parsons, Rachel Wakefield, and Henry Cookson for their diligent work as the Sanctuary field team.

Judy Gilbert
Sanctuary Manager