WINDY HILL ROSALIE BAY CATCHMENT TRUST

Newsletter #24 Annual Report December 2013

Wow, what a year this has been for the Windy Hill Sanctuary – we have achieved our lowest ever rat tracking percentages, surveys have confirmed seabirds are returning to breed, we have completed our Red Crowned Kakariki aviary, and sustained employment for seven people over the year. The field team of Kevin Parsons, Rachel Wakefield, Kyle Penton, Henry Cookson, Dave Harland, along with volunteer Greg Elliot, have performed excellently throughout 2013 undertaking integrated pest management and species monitoring to a high standard. Our applications for continued funding have been well received and we are financially secure for the year ahead.

Highlights:

- A most welcome, generous, and unexpected donation from Sharon and Bruce Prichard who raised funds through an Open House and Garden tour and chose our Trust as the recipient.
- Auckland University Student Asher Cooks GBI Environmental Trust's sponsored 5 minute bird counts early this year confirmed that Windy Hill has the highest densities of birds on the island.
- With some help from a drier climate, we have proved that trapping combined with a just 50 grams of low potency rat bait, can deliver great results.
- Seabird Surveys with Jo Sim and her dogs led to the discovery of 3 new Black Petrel burrows, with another Black Petrel found on the surface, a new Grey-Faced Petrel colony found near Smugglers Cove, and new Grey Faced Petrel burrows & chicks confirmed at the site found last year. Of great excitement were the 5 Kaka nests detected by the dogs at ground level in hollow puriri trees. Nesting like this can only be successful where rats are at low numbers.

Kaka chicks in a hollow log at ground level -5 eggs

Maddi finds a kaka nest

- Whoever would have dreamed that one could focus a Masters study on the parasites found in lizard poop? In late December, Trent Bell from Ecogecko brought University of Otago student, Sarah Mockett, to Windy Hill so that they could utilise the hundreds of lizard motels we have to assist her to collect lizard poop to study for nematodes (roundworm). Sarah is studying the relationship between nematodes and their lizard hosts so that their evolution together over time can be mapped.
- A seabird calling unit, with two speakers calling different seabird calls, was installed over the winter. Thank you to James Ross for his technical input and to Auckland Council for supplying the unit. Some feathers have been found directly under the speakers indicating birds are coming in.

A night motion activated camera (Thank you, Auckland Council Heritage Fund) has been installed underneath the speakers but so far has only captured a RABBIT!

- The red crowned kakariki aviary has been completed and awaits the birds that will start the long term breed and release programme to stop these birds from becoming extinct on Great Barrier. We hope to source 4 breeding pairs from the Mokohinau Islands next year. Thank you to our field team and Chris Thompson for the massive effort of putting the jigsaw puzzle of this large four flight aviary together. Thank you to Auckland Council EIF for funding its purchase.

The aviary nestled into its bush site all ready for birds next year

- With support from COGS, the Trust sponsored Henry and Kyle through a five day metalwork training with local welder extraordinaire, Bill Climo. Organised by the Aotea Family Support Group, this course allowed the boys to learn a bunch of new skills that will support them in their lives on Barrier.

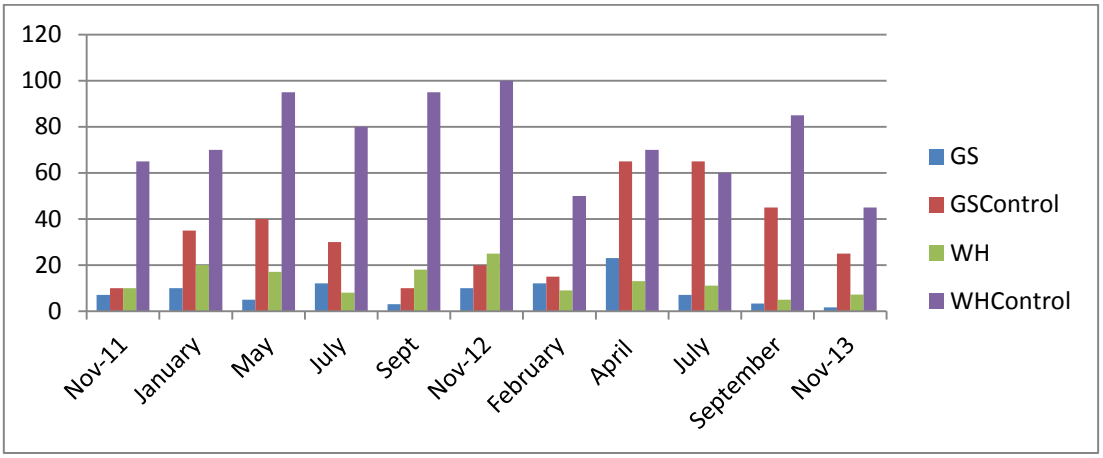
Kyle and Henry fixed a boat trailer, made a smokehouse, fixed tools, and made a porters trolley.

- Grants were received this year from Auckland Council Heritage Fund ($12,000) and EIF ($3,921) with continued funding from ASB Community Trust and the Biodiversity Condition Fund. Thank you.

- The keen eyes of the younger members of our field team, Kyle and Henry, have led to some interesting discoveries.....

The markings on this large rock are naturally formed, believe it or not, and the above piece of Black Argillite has been worked into a knapped blank for a chisel – this rock probably originated from D'Urville Island.

- Since 2011, Glenfern Sanctuary and Windy Hill Sanctuaries have synchronised tracking tunnel timetables. Rat densities are measured five times a year using tracking tunnels and the percentage of these tunnels with rat prints in are used to measure how well our pest management programmes are working.



Both Sanctuaries are really pleased with their results this year. The graph above shows what huge numbers of rats there are in the Windy Hill unmanaged Control site (purple lines) compared to Glenfern's and that, as an unfenced Sanctuary, we are performing well.

- For the last eight years we have been trialling different methods of keeping rats at low densities with the aim of using as little and as lower potency bait as possible in combination with rat traps. We are working to achieve a cost effective and socially acceptable long term approach. This year we achieved our lowest ever Sanctuary rat tracking tunnel annual average of 7.25% with half of our 5000 stations in traps and the other half holding just 50grams of bagged Rat-Abate (diphacenone).
  The following chart shows the history of our programme development and the results to date. If funds are available, next year, the Trust is planning to start a 2-3 year trial of Vitamin D3 (cholecalciferol) as the main rat bait – this non persistent bait has been approved for use on organic farms.

Development of Pest Management Programme and Tracking Tunnel Outcomes

Date	**Management**	**Tracking Tunnel % annual average Pest Managed areas in Sanctuary**				**No management**
	Tracking Tunnels were introduced in 2004 – prior to that Catch per Trap Nights were measured	Little Windy Hill	Benthorn Farm	Big Windy Hill	Rosalie Bay	Control
1999	Trapping Only					
2000	Trapping Only					
2001	Trapping Only					
2002	Trapping Only					
2003	Trapping only					
2004	Trapping Only	39.5				
2005	Trapping with 2 x 1 week pulses cholecalciferol Strikers	42.5	38			
2006	Trapping with 2 x 3 week pulses cholecalciferol Strikers	15.8	49			79.2
2007	Trapping with 2 x 6 week pulses cholecalciferol Strikers	8.2	10.4	9.6		91.2
2008	Trapping with 2 x 6 week pulses cholecalciferol Strikers	15.2	15.2	8.4		82.5
2009	Brodifacoum	11	9.4	17.6		48.3
2010	Brodifacoum	14	7.4	9.8	8.8	76
2011	Trapping 50% & 50% 150gram Diphacenone Feb-May 2 x 20R brodifacoum perimeter track only	8.5	8	8	22	56
2012	Trapping 50% & 50% 100gram Diphacenone Feb-May 2 x 20R brodifacoum perimeter track only	15	8	16	28*	88
2013	Trapping 50% & 50% 50gram Diphacenone Feb-May 2 x 20R brodifacoum perimeter track only	6.5	5	16	10	62

* Remained in brodifacoum thru 2012

- Waste or residual rat bait has been a problem to dispose of so we are trialling putting two different baits into separate worm farms. This was begun in September and after 6 months or so Auckland Council Biosecurity will test the worm castings for any toxin remaining from the bait.

So, exciting times ahead as over the summer we bring on the lizard monitoring programme and research the next bait option for trial. We are also to be involved with the field trials of a new bait delivery system for rats.

Happy holidays

Kind regards

Judy Gilbert
Trust Manager