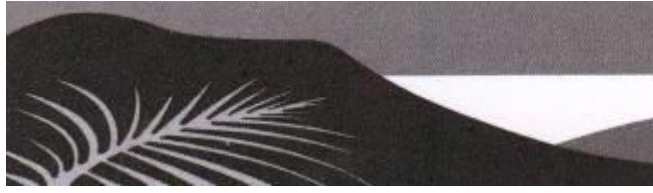


WINDY HILL ROSALIE BAY CATCHMENT TRUST



Windy Hill Sanctuary Newsletter #40 June 2021

Kia ora - Wintery greetings

It's not often that a community group gets the benefit of over twenty years of input from a single individual – for the Windy Hill Sanctuary Dean Medland is our man.

Back in 2000 with less than a year of pest management under our belts, Dean undertook our first 5 minute bird count – 10 stations counted 10 times for 5 minutes over a fortnight. One hundred counts.

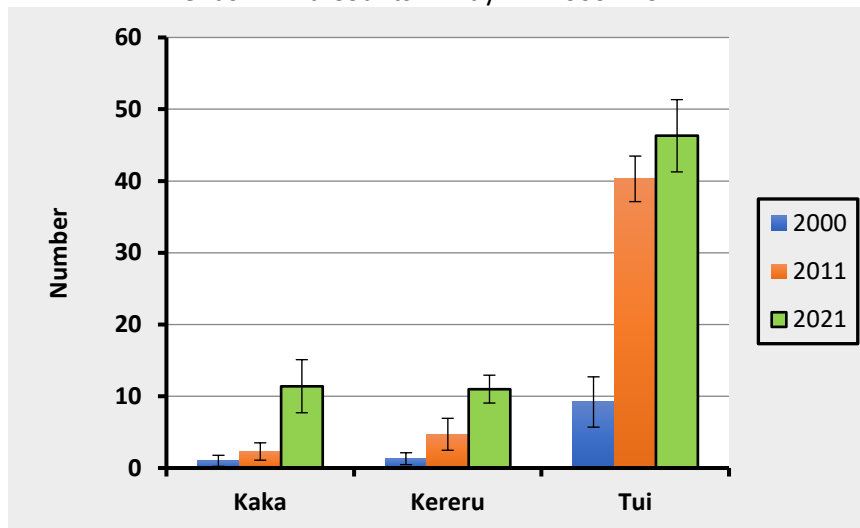
This data got shelved and buried under the more comprehensive annual bird counts started in December of that year. In 2011, sorting through files, the 2000 bird count data came to light and so, curious as to what had happened to our birds over a decade, Dean completed a second count in May that year – same counter, same stations, eleven years later.

In May 2021, 21 years after the first count, our third count has just been completed, again with Dean counting the same stations 10 times for 5 minutes.

This sort of consistent data is rare; often the people counting change, the time of year is slightly different, etc.

The results of our 21 year count show the benefits of sustained pest suppression with tui, kaka and kereru still on the rise.

Trends in Bird Counts Windy Hill 2000 - 2021



The presence or abundance of birds is caused by many variables not just the impact of mammalian pests – droughts severely impact on the abundance of food for different bird species, both in terms of insects but also berries and seeds. In a dry year birds die of starvation as the little that is left is competed for with rats. Our counts have found the small, mainly insectivorous birds, (fantail and grey warbler) fluctuate in frequency and show no clear trends because of these variables. Another factor is the change in the forest over time as kanuka declines and fruit and nectar bearing trees increase suiting the bigger birds. Silvereye also shows large annual fluctuations, but 2021 counts were significantly higher than 2011.

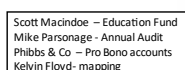
There have now been two volunteer Great Barrier Island birds counts undertaken in December 2019 and 2020 over 18 sites, including Rakitu (Arid Island). These data can be compared with earlier data, compiled by volunteers organised by the Great Barrier Environmental Trust in 2006 and 2007. From these results we can begin to see what levels of birds we have now and whether or not they are stable, in decline, or increasing. Within the 18 sites there are three Sanctuaries with suppressed levels of rats and Rakitu as a pest free island providing a good basis for comparison over time for the remainder of the island which is not managed for pests.

Thus, there is a large amount of bird-count data, spanning over 20 years. Although comparisons are fraught with difficulty due to slight changes in methods, sites and personnel, never-the-less certain trends are clear. The first is that there are more birds of all species in areas where rats are greatly reduced compared to unmanaged 'control' areas. The second is that the longer rat-suppression is maintained, the more the bird populations increase. A third point is that the one species (North Island Robin) introduced to two Sanctuaries, soon left them, but went on to establish a breeding population on Hirakimata. Thus, those introductions, apparently disappointing at the time, must now be deemed successful. A survey and banding of these Hirakimata robins is planned for September – from here we will be able to determine if this population is self-sustaining.

Finally, it can be noted that the combined data from all studies indicate widespread (Aotea – wide) increases in Tui, Kereru, and Kaka since 2006. This may be because more gardens are being used by these species, but increased breeding success in the Sanctuaries is likely also resulting in the export of birds to the whole Island.

From the difference between bird population sizes in managed (rat-reduced) areas and unmanaged areas ecologist John Ogden has estimated the losses due to predation, mainly on eggs and chicks. These losses amount to c. 3500 birds annually in the Windy Hill Sanctuary. This equates to a staggering 70,000 birds over 20 years. If this is extrapolated to the whole of the unmanaged forest cover of Great Barrier, the figure is c. 86,545 per year, or c. 1.7 million over 20 years. Even if the true figure is only 10% of this, it is still a very large number (173,090). There can be no doubt that bird mortality due to rats on Great Barrier is enormous; the good news is that the Sanctuaries, community trapping on private properties and planting gardens and reserves with native trees, are combining to make a difference. At least for some species numbers are creeping up again.

The incredible and sustained support we have received over many years from funders and sponsors has enabled the great outcome detailed in this newsletter. Thank you. Thank you to our splendid field team Kevin Parsons, Corey Hardstaff, Dan Williams, Dave Harland, & Maxine Barrowman.



Judy Gilbert & John Ogden - Trustees