

Morepork calls higher in areas where rat bait is used – June 2015

The native morepork is a small owl of the Strigidae family that feeds on mice and a diet that is 98–99% invertebrates. It is commonly thought that the ongoing use of rat bait can cause a decline in morepork numbers due to the birds eating affected rodents and invertebrates and dying from secondary poisoning.

In 2008, the NZ Journal of Zoology published a paper by Elisabeth Fraser and Mark Hauber entitled ‘**Higher call rates of morepork, *Ninox novaeseelandiae*, at sites inside an area with ongoing brodifacoum poisoning compared with matched non-managed sites**’. They found morepork call numbers in the Ark in the Park area in the Waitakere Ranges, which has used brodifacoum as its main bait for well over a decade, were significantly higher inside the Park than in the unmanaged area outside. It is now believed that morepork have greater breeding success inside a pest managed area and that there is more food availability due to reduced predation from rats.

In October, 2014, the Windy Hill Sanctuary undertook to research this in local habitat.

The programme for managing rats at that time consisted of stations on a grid at maximum 100 x 25 metre spacings with every second station a trap. Bait being used at the time of the research was diphacenone – a first generation anticoagulant. Brodifacoum had been previously used between 2008 and 2010.

Acoustic bird recorders were established in two sites within the Sanctuary and two unmanaged (Control) sites outside the Sanctuary. One Control site was approximately 200 metres from the perimeter of the Sanctuary and the other control approximately 5 kilometres away. The data was collected daily between 7/10/14 and 25/10/14 with the recorders set to record calls between 9.30 to 10.00pm and 12am to 2 am. Over that time a total of 170 recordings were made.



A morepork in the Windy Hill Sanctuary and an acoustic bird recorder in place.



Over several weeks this year, field worker Henry Cookson has done the painstaking job of listening to many hours of recordings and detailing the results. Within the Sanctuary, site one recorded 80 calls, and site two 90 calls. In the unmanaged Control sites, site one closest to the Sanctuary recorded 64 calls and site two, 5 ks away, recorded just 25 calls. Bird numbers are often higher in areas that are close to the boundaries of Sanctuaries as they benefit from the ‘spillover’ of successful breeding. The number of morepork calls in the Sanctuary totalled 170 compared to just 89 calls in the Control sites.

Initially, this suggests that our results concur with those found by Fraser and Hauber and that morepork, along with other birds, benefit where bait is used to keep rats at low densities. To find out more about the Sanctuary check out the new website www.windyhillsanctuary.nz