

Artificial cover objects (ACOs)

ACOs have detected small numbers of geckos in both the treatment and non-treatment area. Like the tracking tunnels, ACOs have detected more geckos in the treatment than the non-treatment area (particularly during summer), but numbers are still too low to make firm conclusions. Skinks have been detected in small numbers only in the treatment area (Figs. 5a and 5b).

Fig 5a: Gekos

Average number per ACO

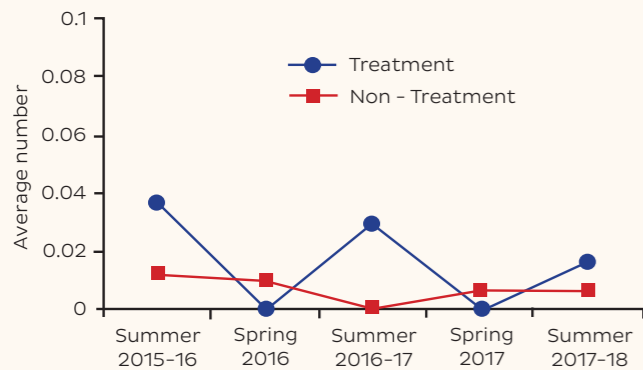
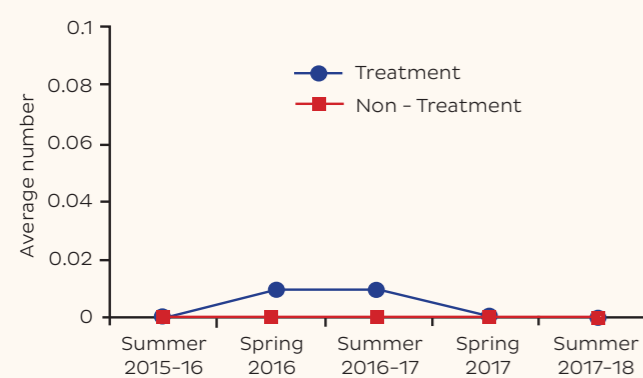


Fig 5b: Skinks

Average number per ACO



While it is still too early to draw any firm conclusions about the effectiveness of the predator control, these preliminary results are encouraging as they confirm that our monitoring methods are detecting a wide range of species. Monitoring will continue each year.

Once predator control has had more time to take effect, we hope to see fewer pests and more native species across the Cape to City area.

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Wētā houses

The average number of wētā found in each wētā house has been slightly higher in the treatment than in the non-treatment area; numbers of spiders and other invertebrates have been similar in both areas (Figs. 6a, 6b and 6c below).

Fig 6a: Wētā

Average number found in weta house

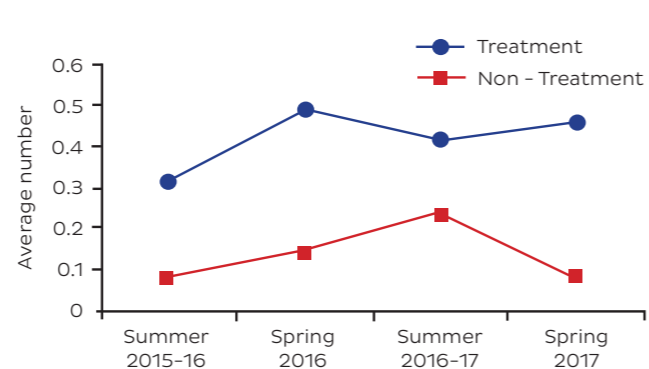


Fig 6b: Spiders

Average number found in weta house

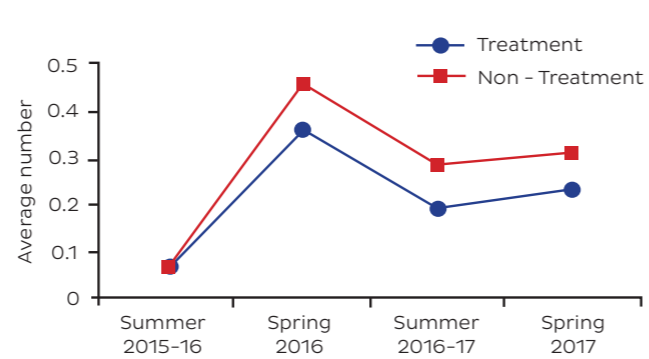
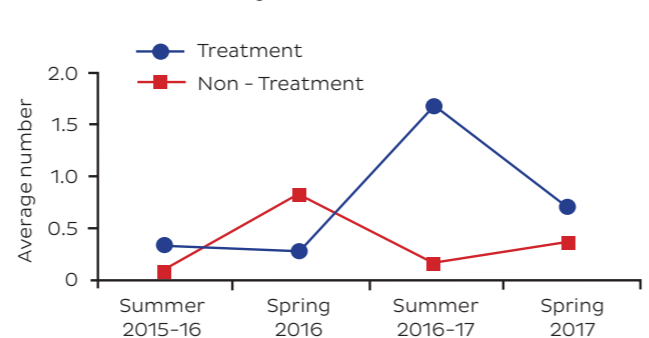


Fig 6c: Other invertebrates

Average number found in weta house



2018 PROGRESS REPORT

Biodiversity monitoring

IN CAPE TO CITY

Compiled by Al Glen

Monitoring is essential. It tells us if predator numbers are being reduced by the trapping, and populations of native species are recovering as a result.



Image: a juvenile common gecko (Woodworthia maculatus) found in one of our artificial cover objects.



Suppressing invasive predators

The Cape to City programme aims to suppress populations of invasive predators (stoats, ferrets and feral cats) by trapping across 26,000 ha of Hawke's Bay. Rats are also being controlled in some selected areas.

Monitoring is essential to tell us if:

1. Predator numbers are being reduced by the trapping, and
2. Populations of native species are recovering as a result.

Trapping started in 2016 but it took two years to roll out the trapping network across the whole Cape to City area.

Manaaki Whenua is monitoring biodiversity in the Cape to City area, and in an adjacent non-treatment area for comparison.

Predators are being monitored annually using motion-triggered cameras. These have shown that feral cats are common and widespread throughout the area, while stoats and ferrets have been detected in low numbers.

Although trapping began in April 2016, the roll-out of the trap network was only completed in late 2017, so it is too soon to expect any measurable reduction in predator numbers. However, our monitoring results from these early years provide a baseline for comparison in future years.

As predator populations are reduced, we would expect native species to become more common and widespread. We are monitoring populations of native lizards and invertebrates. Birds are being monitored by a local environmental consultant. Tracking tunnels are being used to monitor lizards and invertebrates (as well as rodents), wētā houses for invertebrates, and artificial cover objects for lizards.



Motion triggered cameras (A) have detected feral cats (B), stoats (C) and ferrets (D) in the Cape to City area and adjacent non-treatment area.

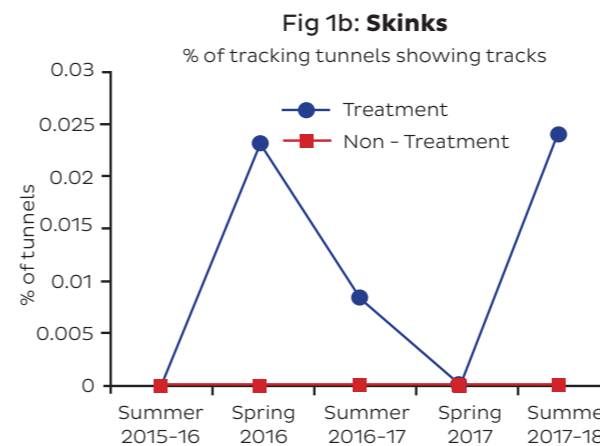
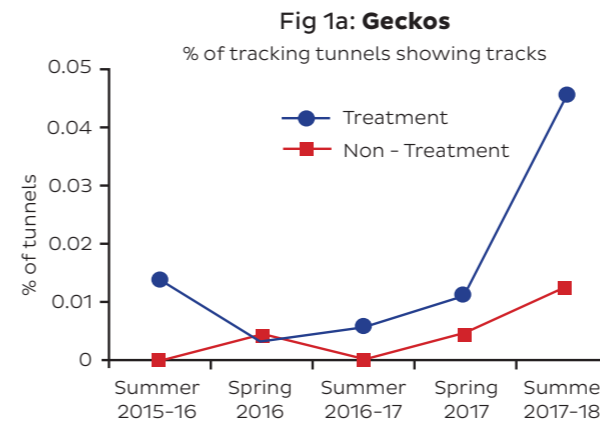


Tracking tunnels

Lizards

Small numbers of geckos have been detected in tracking tunnels in both the treatment and non-treatment areas. Last summer, gecko footprints were five times more common in the treatment area than in the non-treatment area (Fig. 1a). While it is still too early to be sure, this could represent the beginnings of a biodiversity response to predator control.

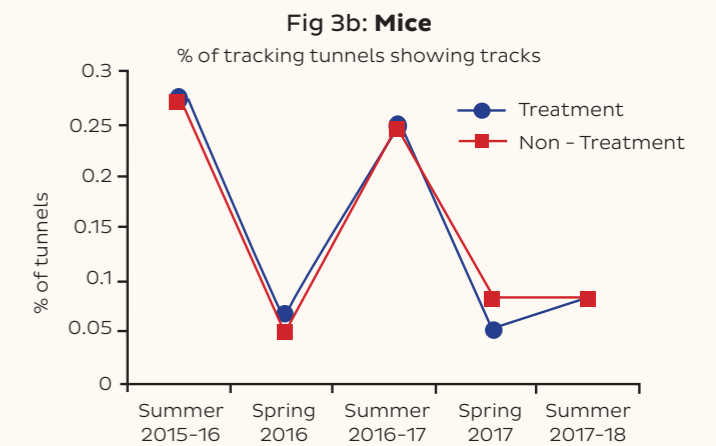
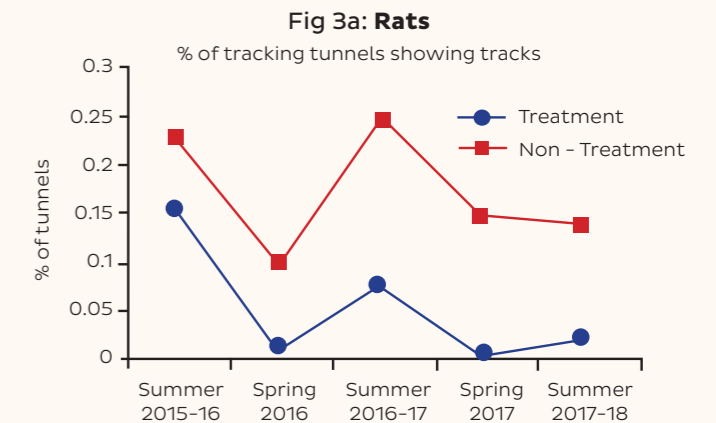
Skinks have been detected in a small number of tracking tunnels in the treatment area only (Fig. 1b).



Rodents

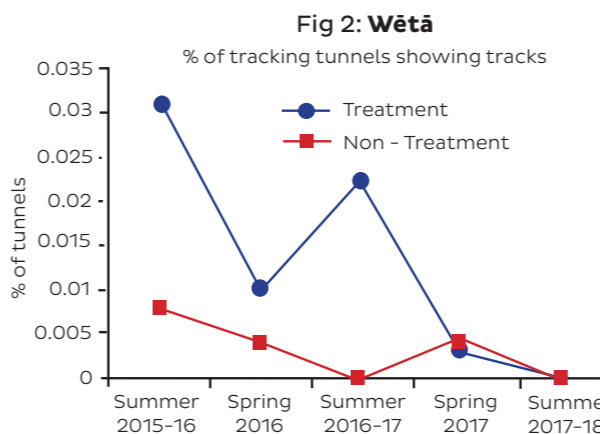
With the exception of a few small areas, rodents are not being targeted for control in Cape to City. However, our tracking tunnels do detect rodents.

Tracking rates of rats are lower in the treatment area than in the non-treatment, while tracking rates of mice are similar in both areas (Figs. 3a and 3b below).



Wētā

Wētā tracks have been detected in tracking tunnels in both the treatment and non-treatment areas (Fig. 2). However, with such low numbers of detections, it is too soon to say if there are any trends in wētā numbers.



Mohi Bush

One of the areas where rats are being controlled is Mohi Bush, where tracking rates have declined from 62% before rat control to between zero and 31% since control started (Fig. 4 below).

