moehau environment group

KIWI SURVEY 2025

FOLLOW UP AFTER 2005 & 2015 SURVEYS
Preliminary Report to Volunteers Nov 2025

Diane Prince and Paul Johnson

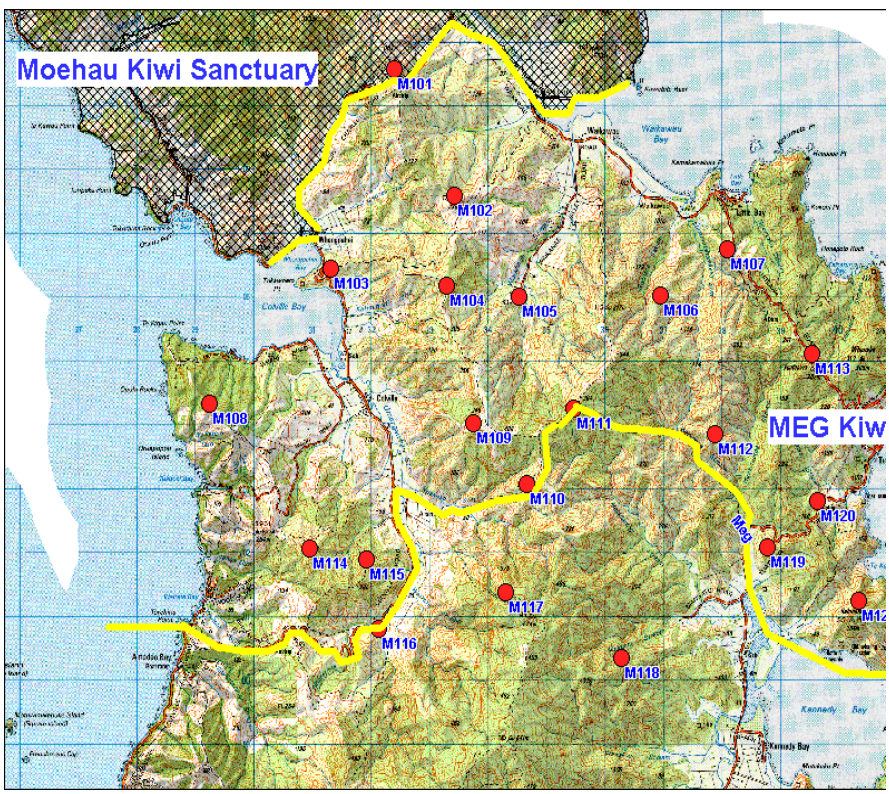
History

- Baseline kiwi call count survey done in 2005 at 19 sites (7,900 ha trapped)
- Repeated in 2015 (8,600ha trapped)
- Repeated in 2025 (16,500ha trapped), sixteen listening sites in common over 20 years, total listening sites = 64
- Increase in kiwi numbers of 36% over the first 10 years of trapping
- Call count rate increased from an average of 1.2 to 2.3 calls per hour in 2015
- Moderate to high count levels (≥3 calls per hour) increased from 2 sites to 6 in 2015

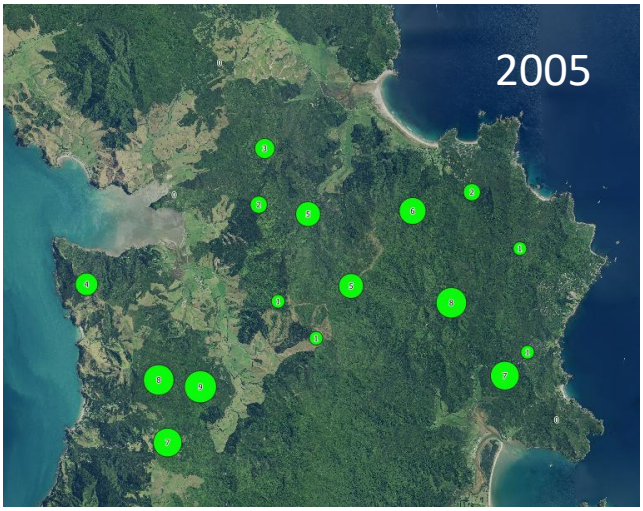
NUMBER OF KIWI DETECTED and CALL RATES 2005, 2015 and 2025

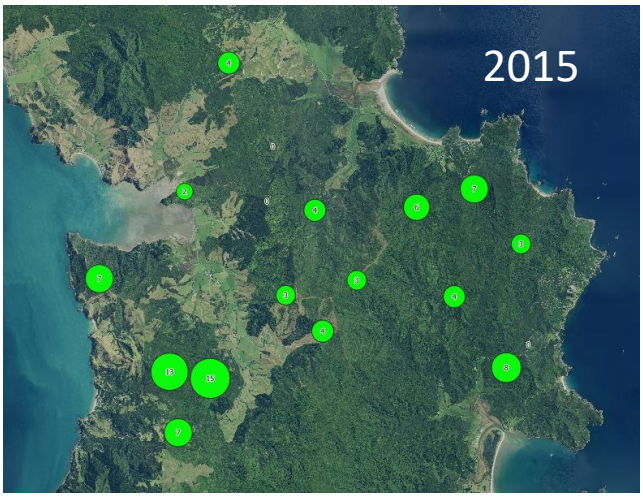
(N=16 LISTENING STATIONS)

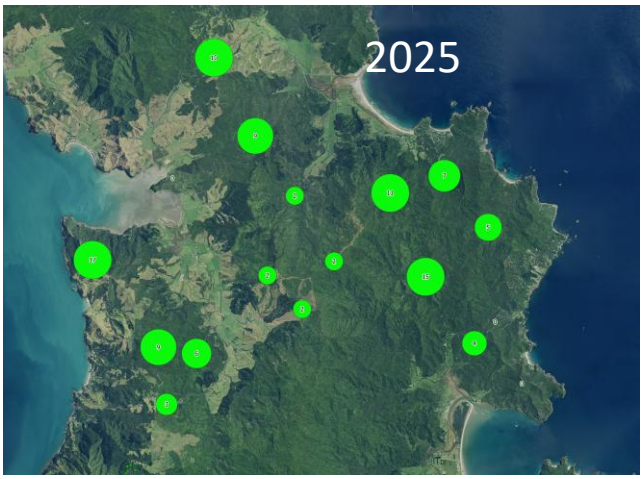
YEAR	TOTAL NUMBER OF KIWI	AVERAGE CALL RATE / HR
2005	64	1.2
2015	83	2.3
2025	87	2.3



Comparative Maps of Kiwi Numbers (n=16 sites)



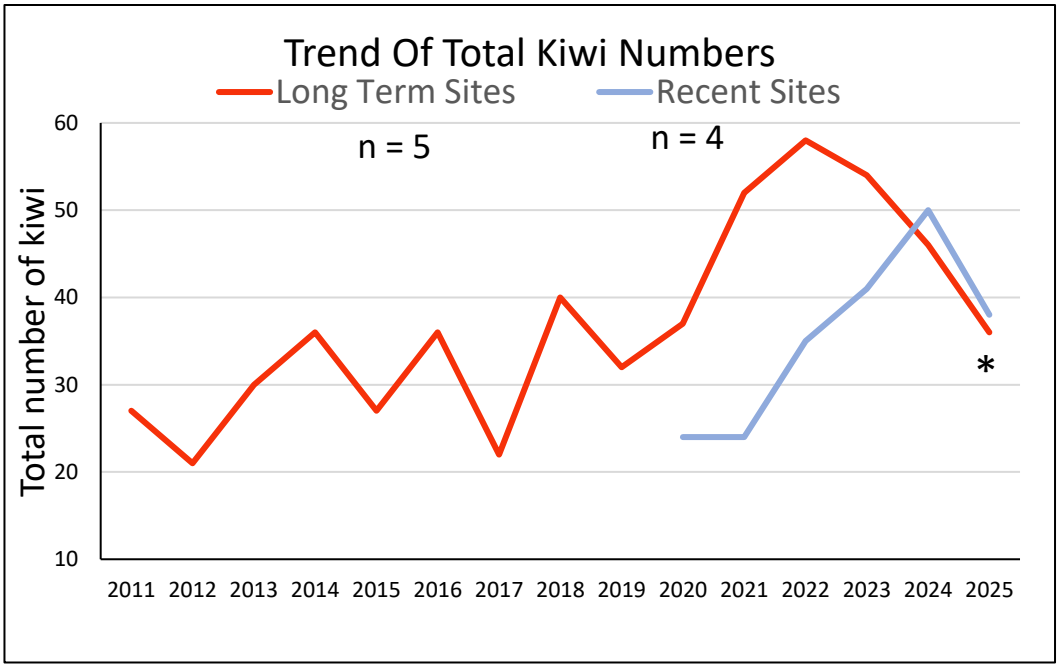




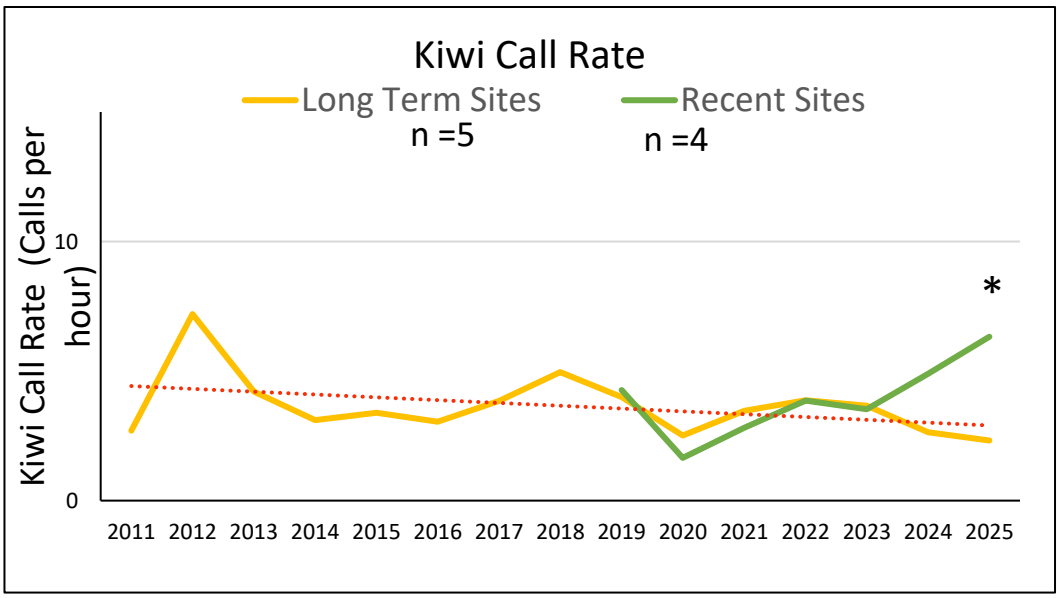
- 2005 – 2015 similar distribution of kiwi numbers across sites
- 2025 Increase in kiwi numbers in north and eastern forest particularly

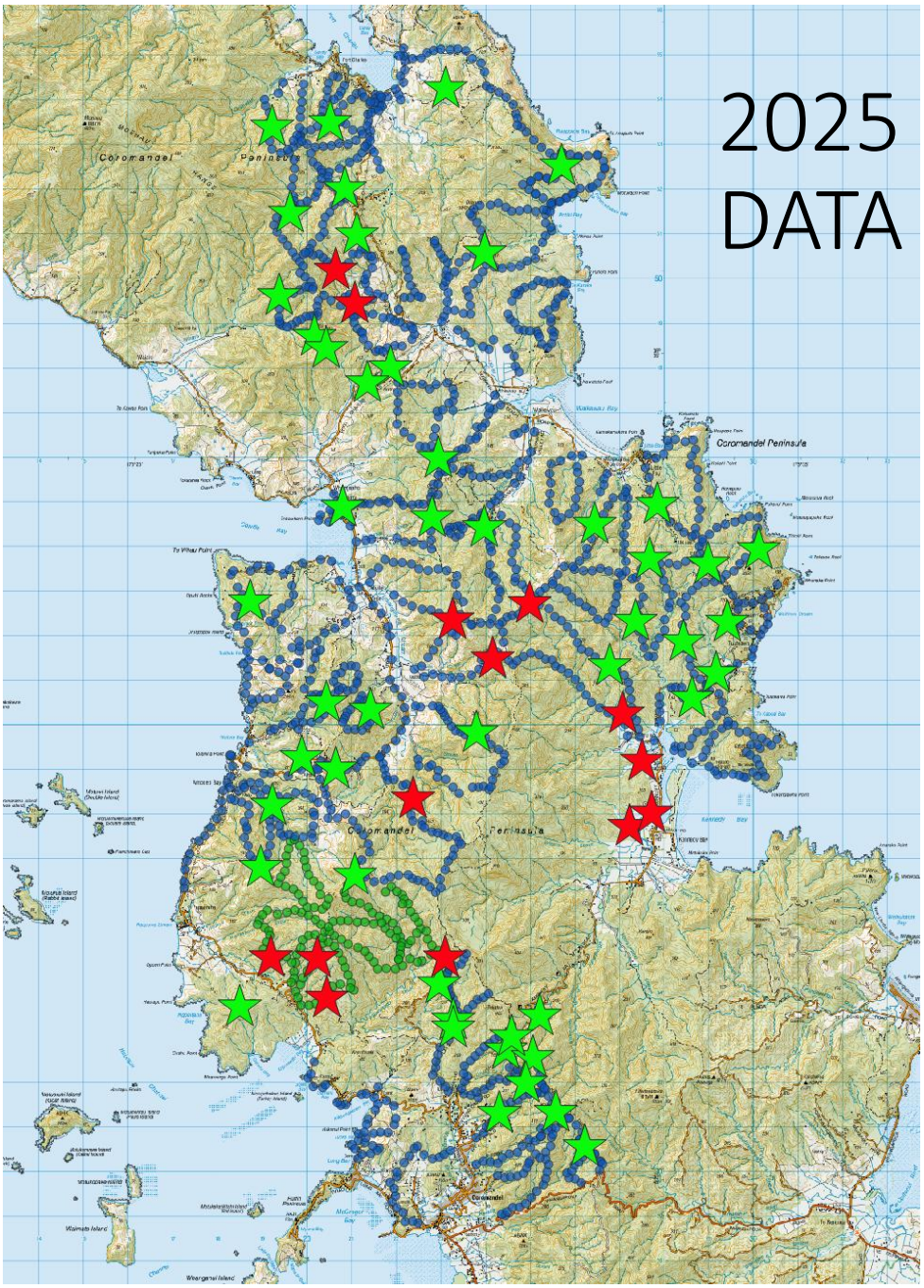
Annual Survey Kiwi Numbers

At nine sites, kiwi listening is conducted annually



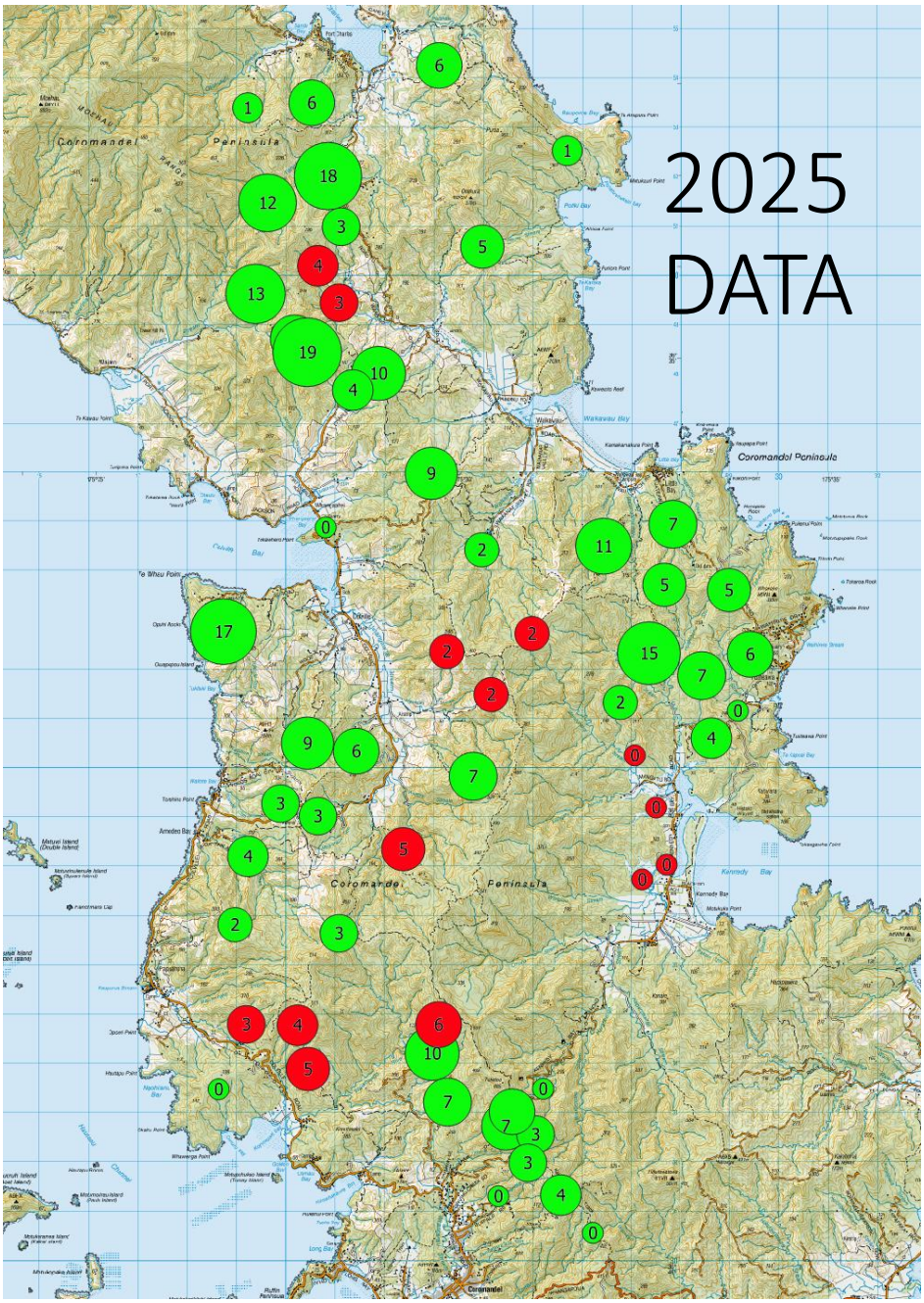
*estimates from 3 nights instead of 5 nights listening





- 46 SITES LISTENED AT BY HUMANS (green stars)
- 18 SITES HAD ACOUSTIC RECORDERS (red stars)
- 64 SITES TOTAL
- Blue dots are traps on stoat trapping lines in the MEG operational area (green lines DOC at Papa Aroha)

Estimated Kiwi Numbers



- Green sites listened at by humans, red sites had acoustic recorders
- Kiwi widespread from northern boundary with Moehau down to Coromandel town.
- 51 SITES HEARD KIWI (80%)
- AVERAGE CALL RATE PER HOUR = 2.3
- While kiwi not heard in some sporadic locations throughout, they were notably absent from 4 listening sites in an area where stoat trapping no longer occurs (Harataunga/Kennedy Bay)

2025

At the 64 sites:

- 226 ESTIMATED MALES HEARD
- 88 ESTIMATED FEMALES HEARD
- 314 ESTIMATED TOTAL

Note: acoustic recorder underestimated numbers, but was included

ASSUMPTIONS

At the 64 sites:

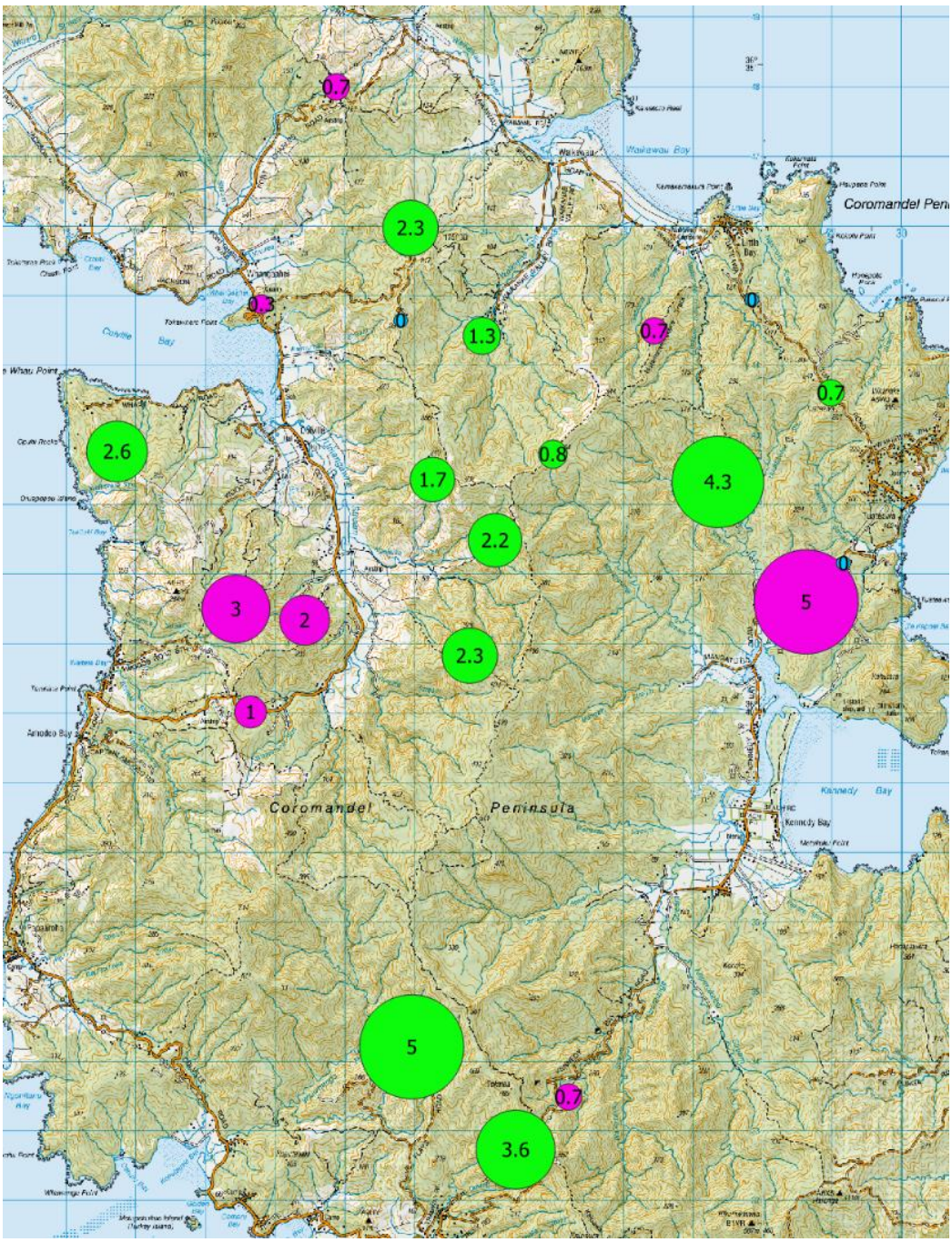
- 226 estimated males heard
- assume each has a partner = 452 kiwi
- assume can hear 500m radius at each site.
- 4345ha suitable kiwi habitat - i.e. not pasture - surveyed of total of 12,600ha of suitable habitat (includes Papa Aroha)
- add another 10% for males not detected by this methodology

Approximate ADULT POPULATION in operational area = 1,442 calling adult kiwi.

Average population density = 11 kiwi per 100ha (or 17.5ha per pair) in suitable habitat.

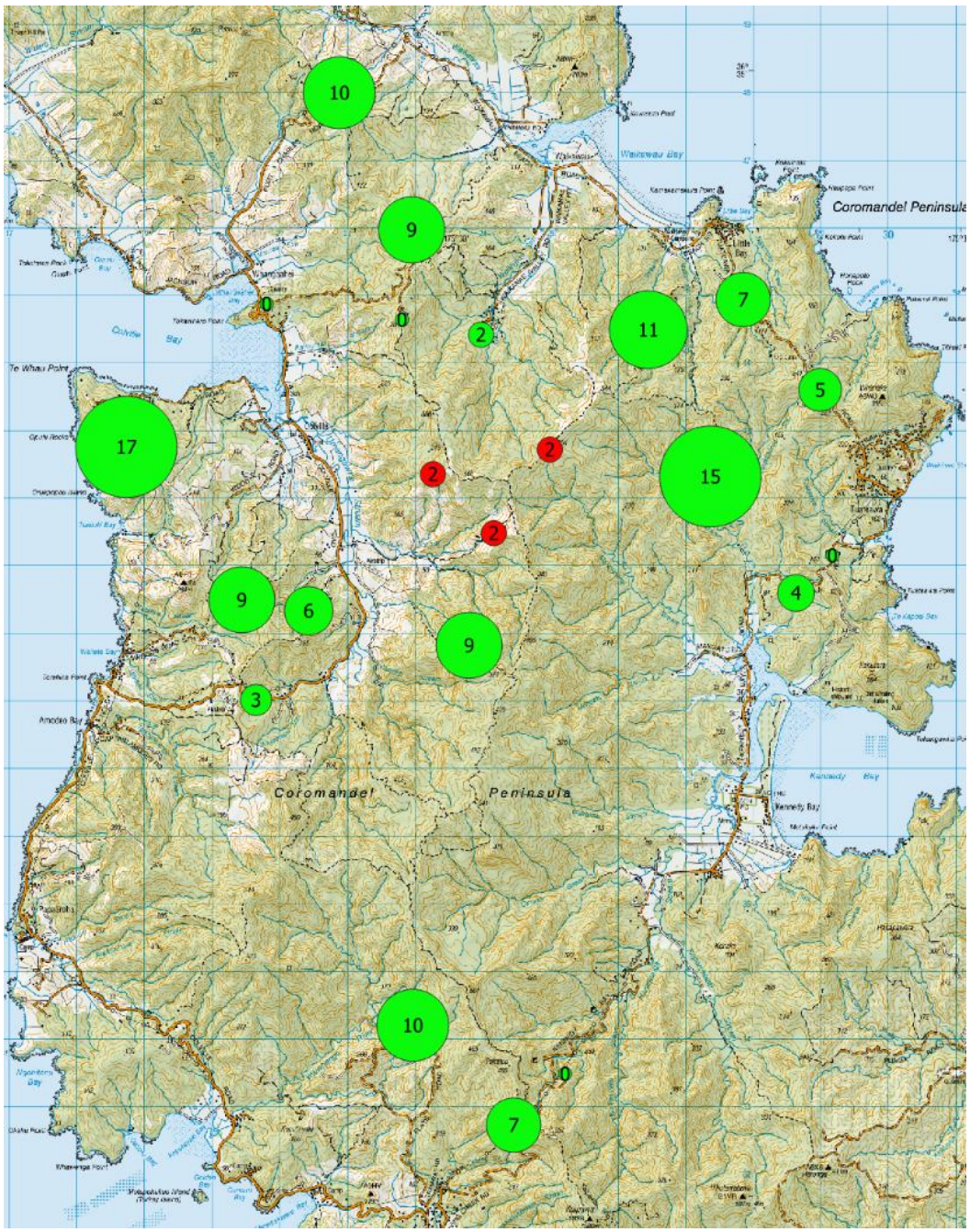
Call rate/h difference between 2015 and 2025 at 22 sites in common

Purple = decrease, Green = increase



- Two areas of interest to investigate declines

TOTAL ESTIMATED NUMBERS OF KIWI in 2025 at 22 sites



- INCREASE BY 30% between 2015 and 2025

DISCUSSION

- Kiwi widespread from Moehau boundary down to Coromandel town, heard at 80% of listening sites, notably absent in areas where no current stoat trapping e.g. listening sites in Harataunga/Kennedy Bay, suggesting the trapping is important to continue.
- In sites monitored from the beginning, numbers of kiwi have not increased from 2015 to 2025 and this is concerning (or indicates habitat reaching carrying capacity and kiwi dispersing further away).
- However at 22 sites in common from 2015-2025, estimated number of birds up 30% and two areas of decrease identified for more investigation.
- First ten years of trapping seemed to make the biggest impact on predators and kiwi numbers, consistent with data from five other DOC Kiwi Sanctuaries
- Trapping is holding the kiwi population steady, but kiwi may be dispersing from the early monitored areas or we may have a problem of trap-shy stoats that cannot be caught by current methods.
- Annual survey results at 9 sites suggest that some negative change has occurred in last few years – possibly ferrets, dogs, feral cats, habitat loss, and is important to watch.
- Stoats are predators not scavengers, and our trapping methods may need to change or increase frequency of clearing.
- We recognise the importance of DOC/IWI continuing predator control on Moehau and encourage continuing landscape scale operations.

ACTIONS

- MEG to provide stoat trappers with data for their traplines so they can look at underperforming traps and reposition
- MEG to try to recruit more volunteers for trapline clearing
- Look at alternate, fresher (bloodier) bait at important breeding times and at the two locations of concern
- MEG to meet with DOC kiwi scientists to discuss predator control regime and conduct comparison of data

Other species

- 100% SITES HEARD RURU (n=40)
- 67% SITES HEARD KĀKĀ (n=39)
- 65% SITES HEARD WĒTĀ (n=37)
- 53% SITES HEARD POSSUM (n=38)
- 15% SITES HEARD PIGS (n=40)

Big thanks!

- to everyone doing the listening
- to those who do the trapping, our MEG volunteers and contractors, and

  including all the other groups doing predator control in northern coromandel – e.g. Ko Moehau ki Tai, DOC, Habitat Tuateawa, Driving Creek, Buffalo Biodiversity Collaboration – Whakanekeneke Catchment, Colville Junction, Predator Free Hauraki Coromandel, Nicholls Family Trust, Whisky Bay, Tukituki farm, Te Ranga Wairua, Waiaro sanctuary and all other private landowners….
- to all the landowners with traps and/or listening sites
- and the organisations who fund MEG for the trapping, the main ones being Waikato Regional Council and Save the Kiwi

Volunteer Pete Hall at a kiwi listening station. Photo credit Wendi Lane