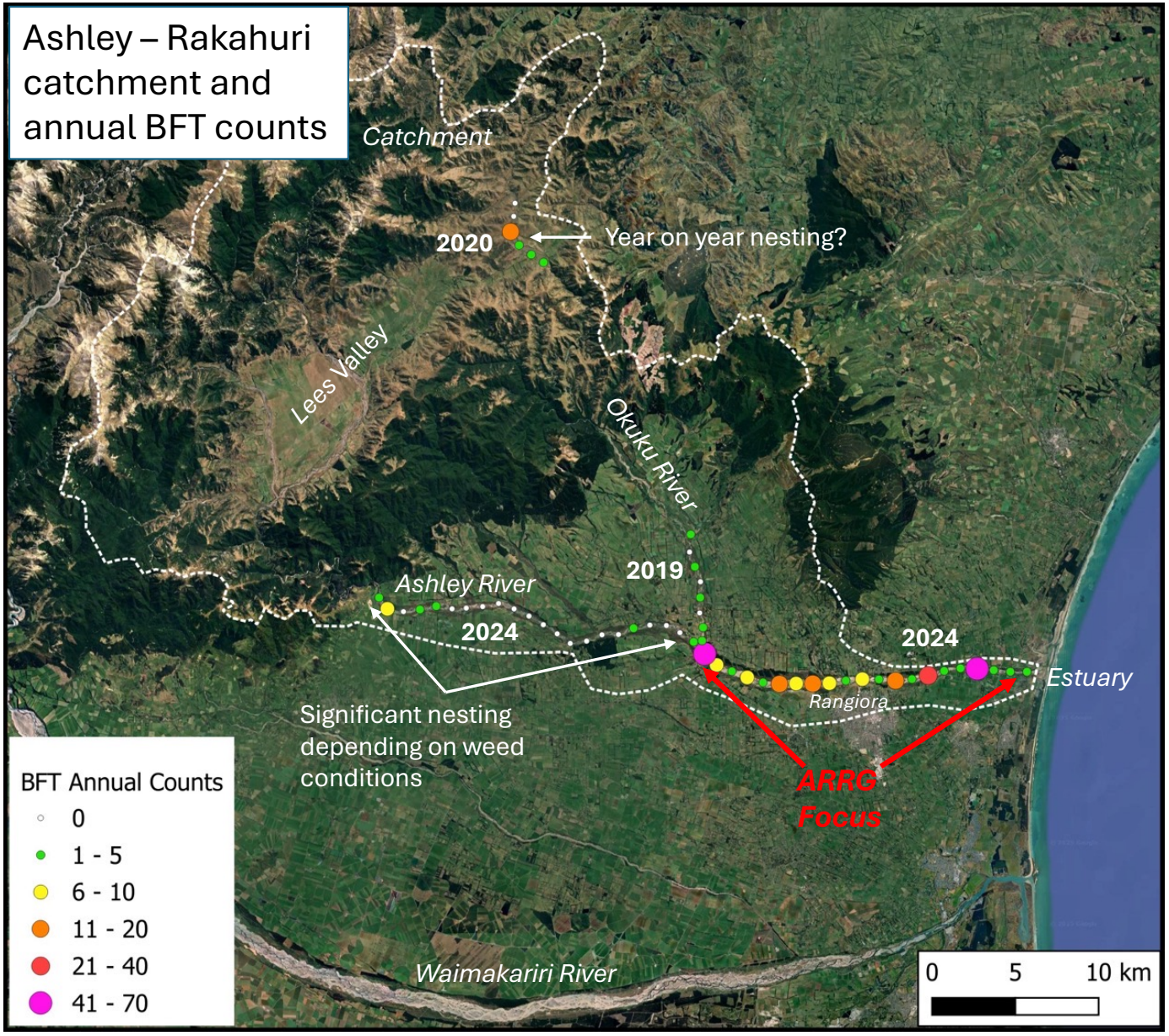
Ashley Rakahuri
RIVERCARE GROUP

Habitat & Site Management

BFT preferentially nest on the lower more braided 19km of the river where ARRG focusses

Annual survey numbers elsewhere are a fraction of those below the Okuku junction. Our work area has natural boundaries.

Green symbols probably don't represent nesting – just feeding birds.

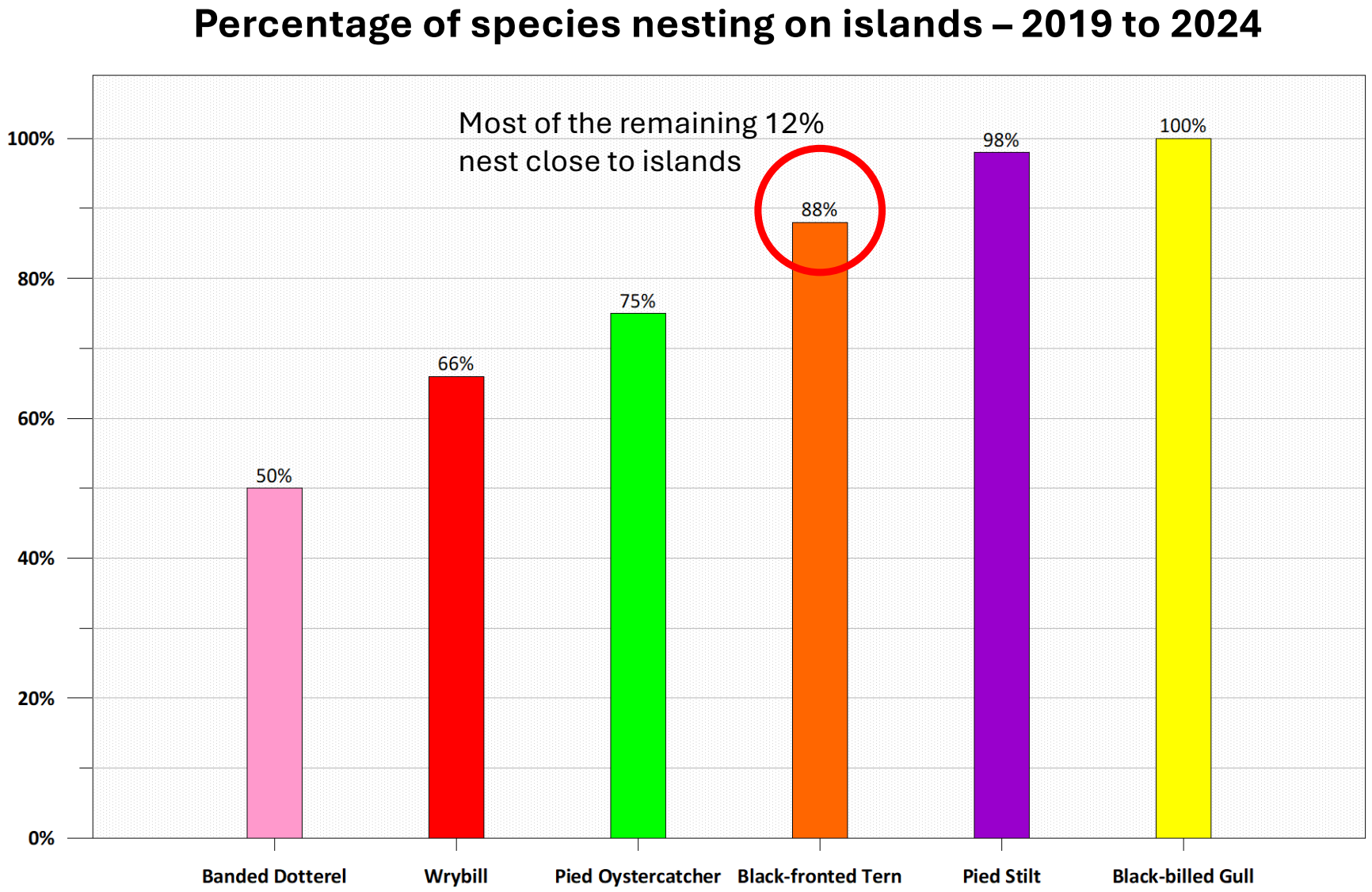


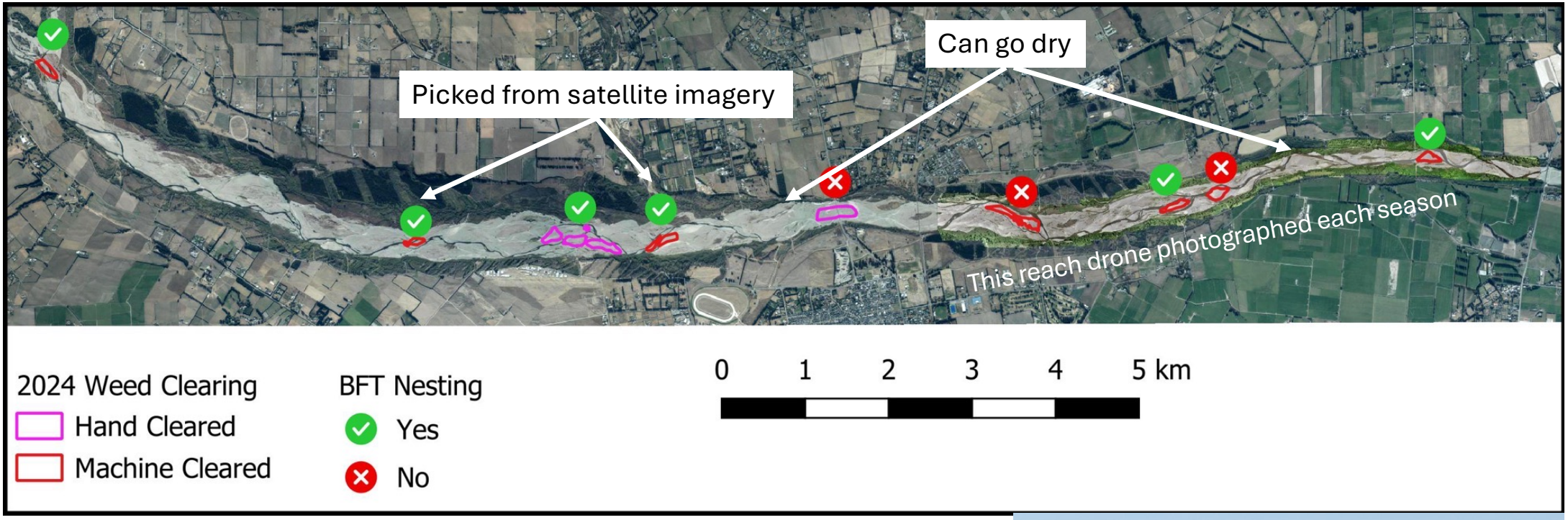
Where do the birds nest?

Most species strongly prefer weed-free islands.

Otherwise OK nesting habitat off islands has greater area than islands.

Islands often morph into mainland with less flow.

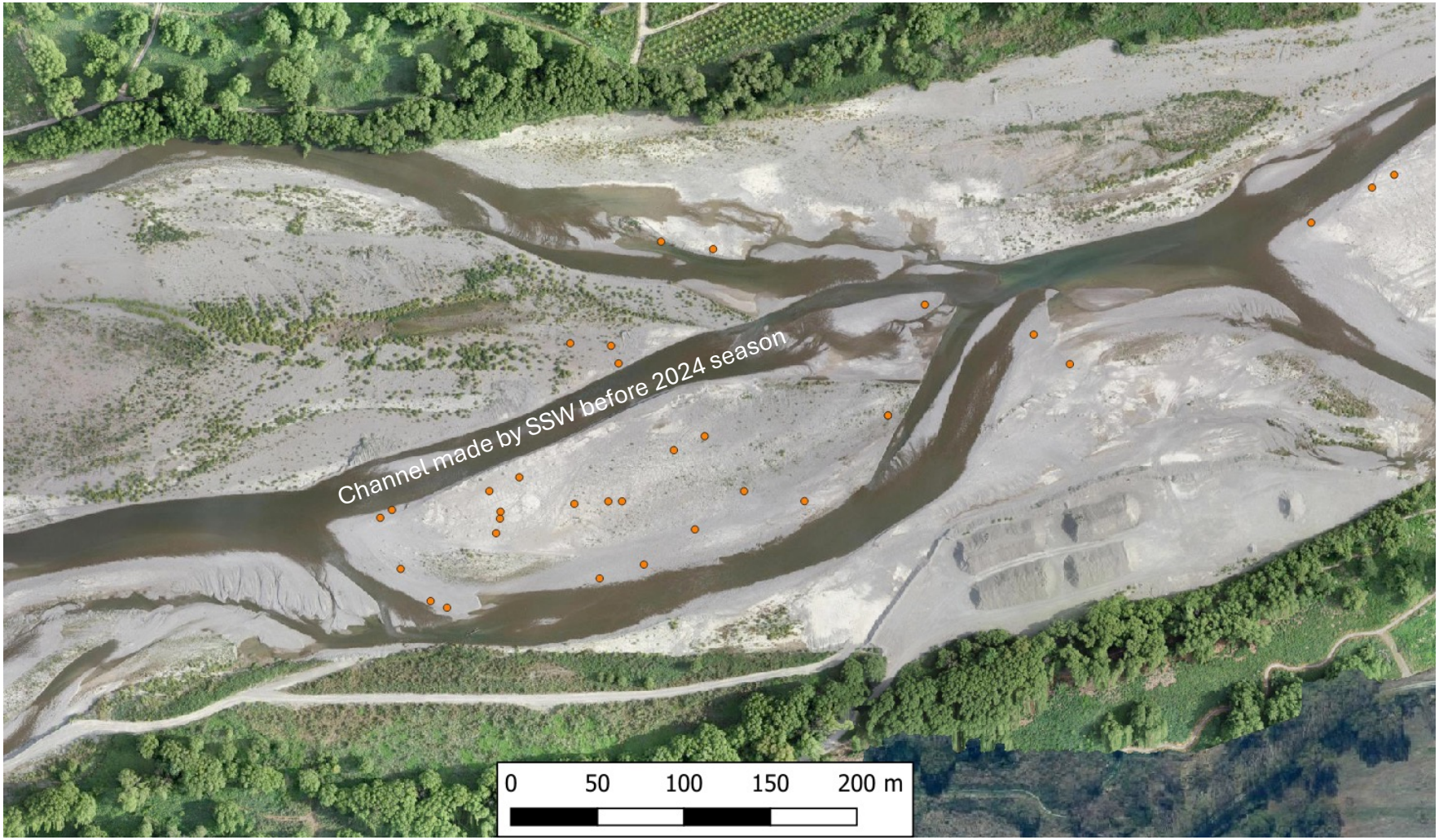




In 2024 – 2025 we successfully predicted BFT nesting areas with 6/9 cleared islands used. Nine colonies in total developed.

Success was partly due to the river not changing since the previous season. Weed growth in some of these places wasn't extreme – the birds may well have nested here without clearing.

No islands made by us, no consent. Liaison with extraction companies & ECan to create islands.



Disturbance measures & BFT nests

- BFT colonies
- Most vehicle
  quadbikes ar
- Advocacy is a
  media. Howe

Temporary ARRG sign

Permanent ECan sign

Blocks and contractor paid by ECan, planned & supervised by ARRG

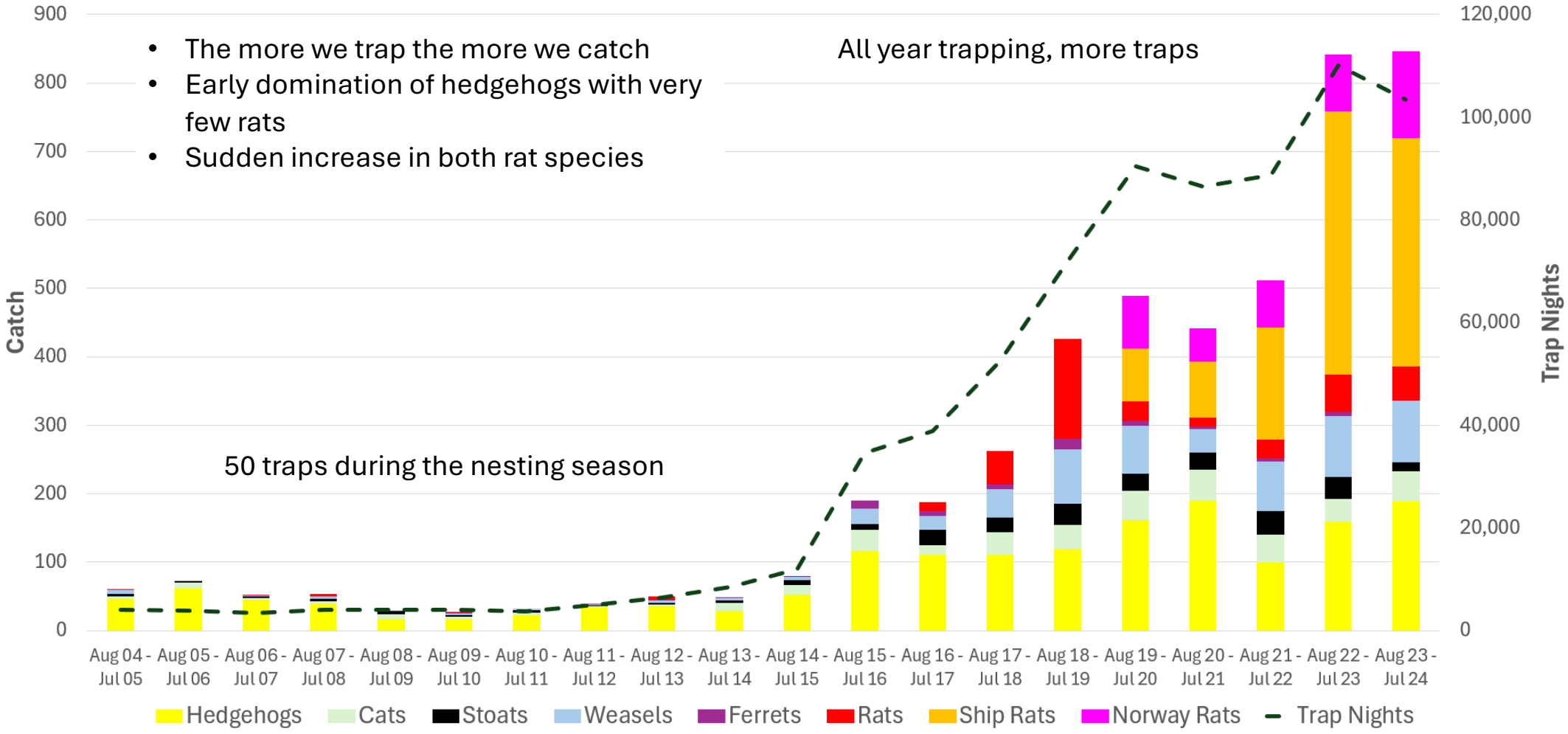
Predators

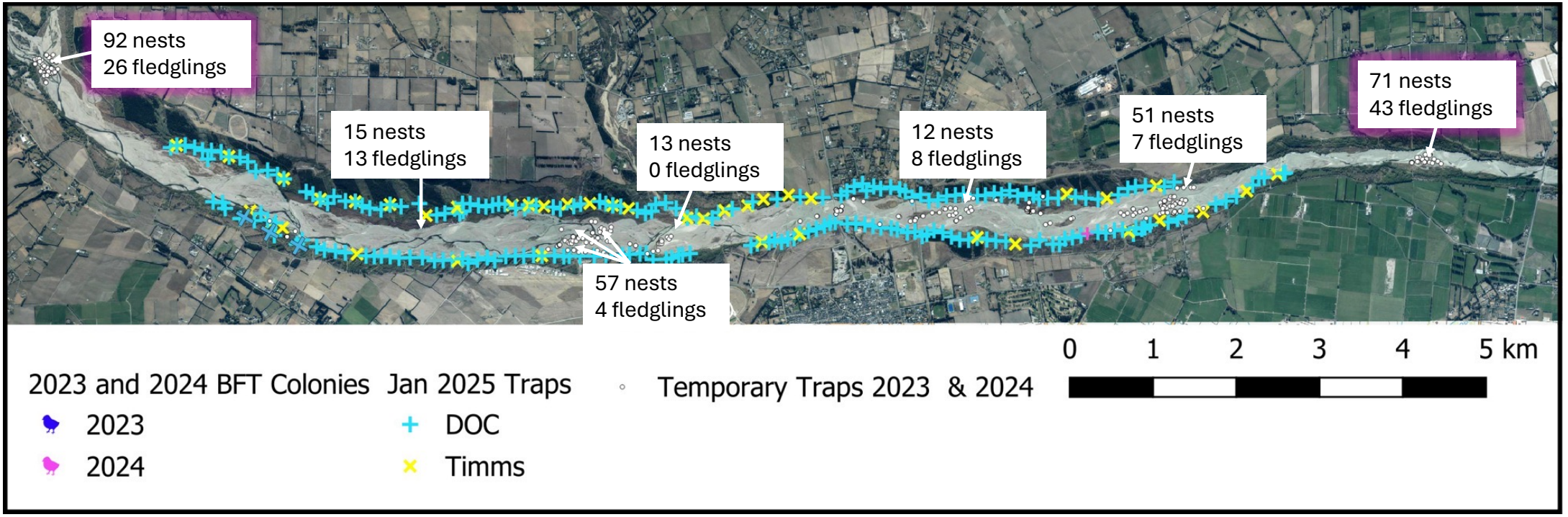
- Norway rats – 2019 to 2023 most important predator
- Cats – 2024 most important – much evidence gained of activities at nests, previous years they have been suspected of taking chicks that had left nests.
- Stoats – intermittently a problem, numbers low due to cats?
- Harriers - intermittently a problem, large in 2019, minimal in 2024.

- Hedgehogs – not a problem since 2019, potentially major if river dries early.
- Ferrets - very few in area, none seen or caught on fairway.
- Weasels – not seen or caught on fairway.
- Ship rats – not seen or caught on fairway.

About 75% of what we catch (including mice and hedgehogs) are not a danger to braided river birds

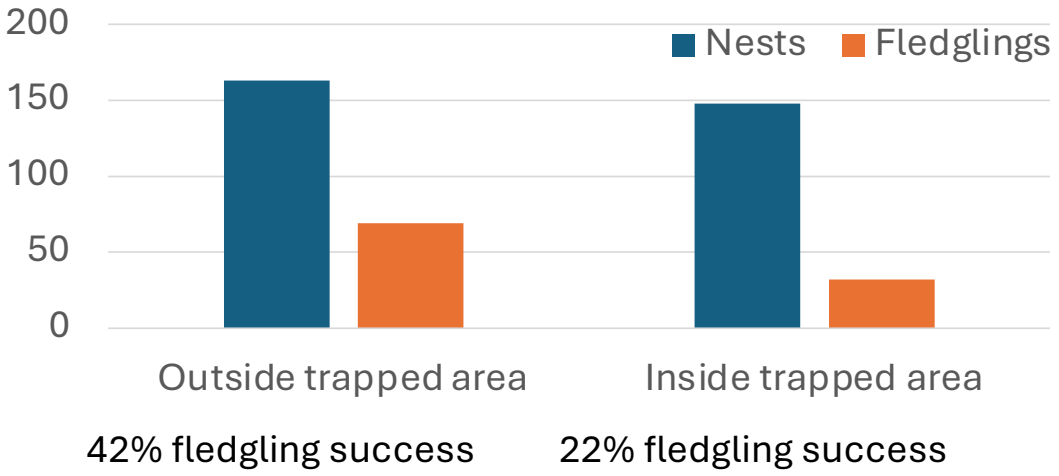
2004 – 2024 Predator Catch and Trap Nights (includes line and nest protection traps)





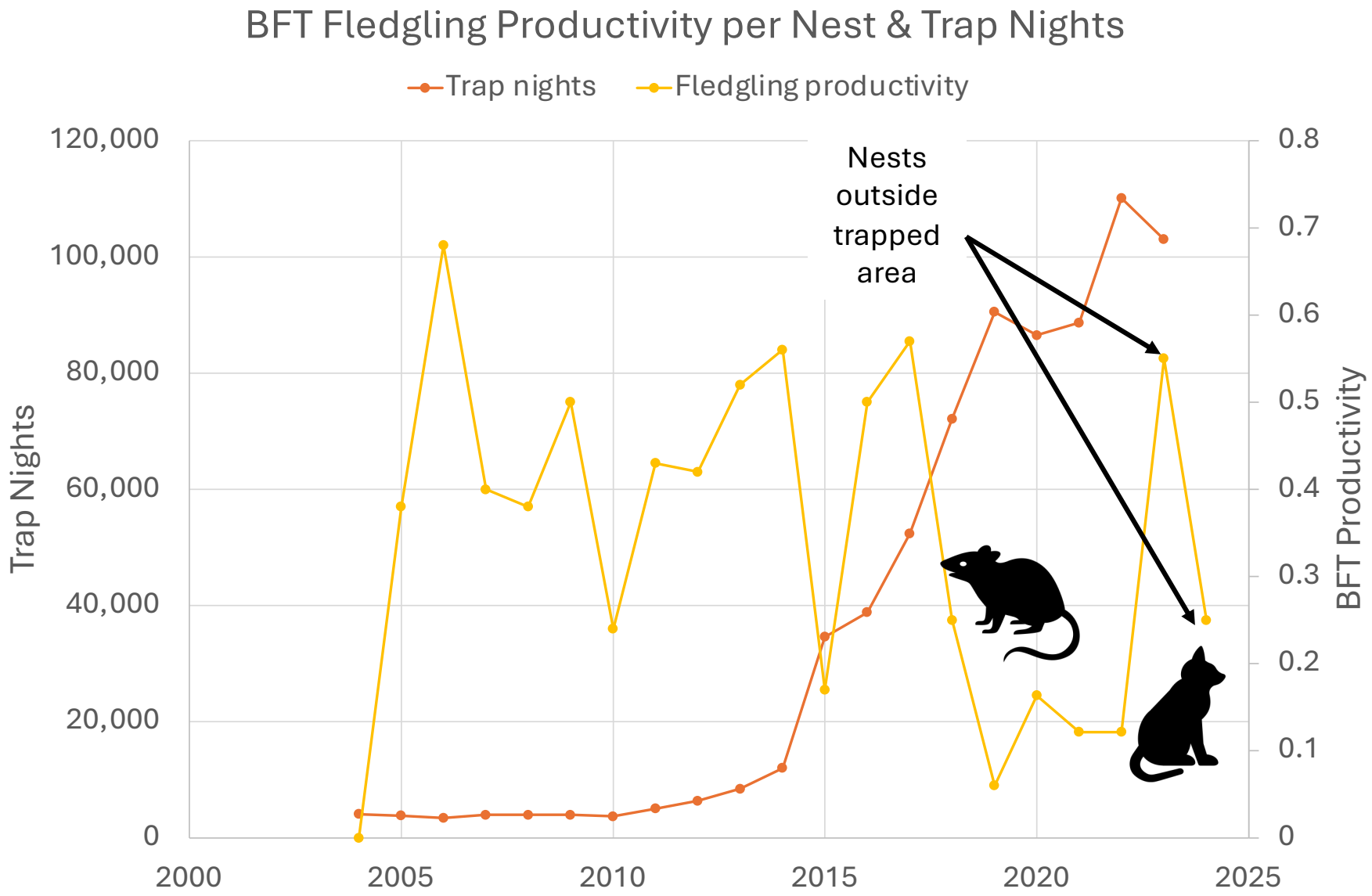
2023 & 2024 BFT colonies: nest & fledgling numbers in trapped and non-trapped areas

The birds were better off nesting outside our trapped area than inside it. How can a single line either side of the river be expected to work given predator population in surrounding area & breeding rates?

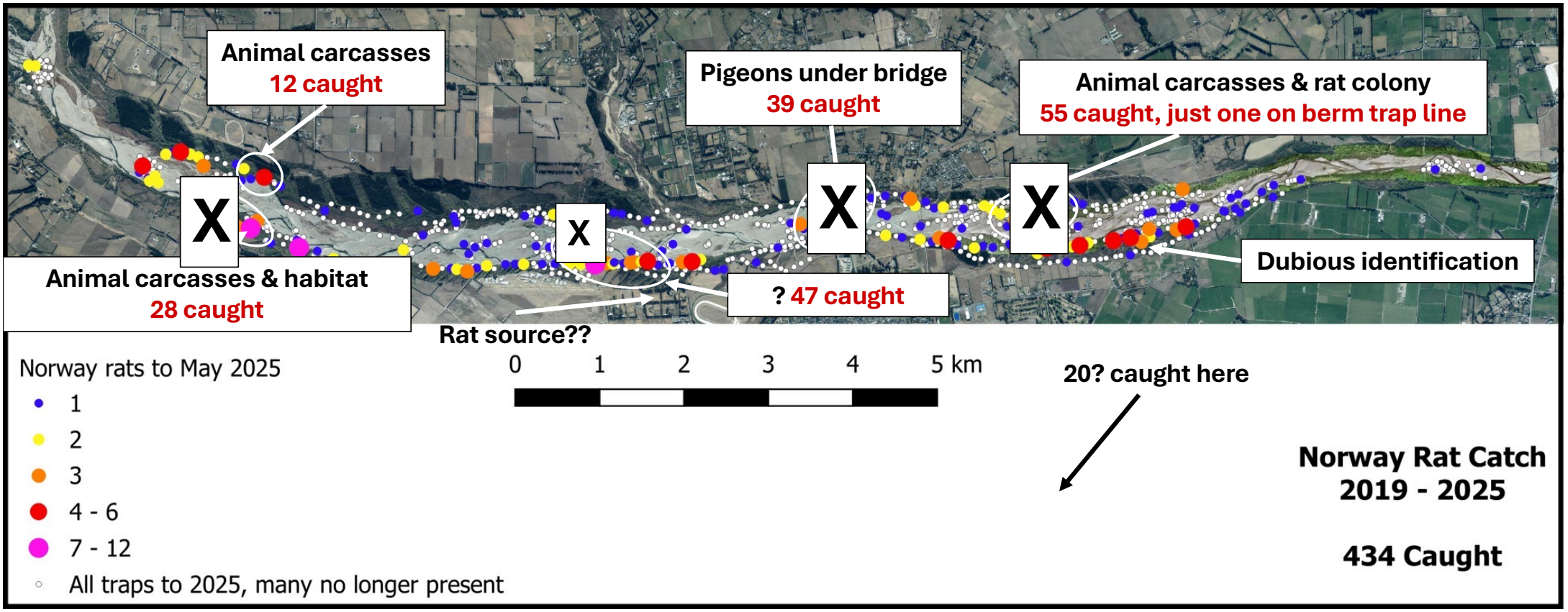


Inverse relationship between BFT fledgling productivity and amount of trapping.

Despite the "predator control" productivity has worsened.



Norway rats



Norway rats are more abundant in certain parts of the river –

- South bank
- Where there are dumped carcasses – pigs, deer, sheep, cattle, fish.
- Where pigeons nest under the road bridge.

How abundant are they off the river??

X Under control, temporary?

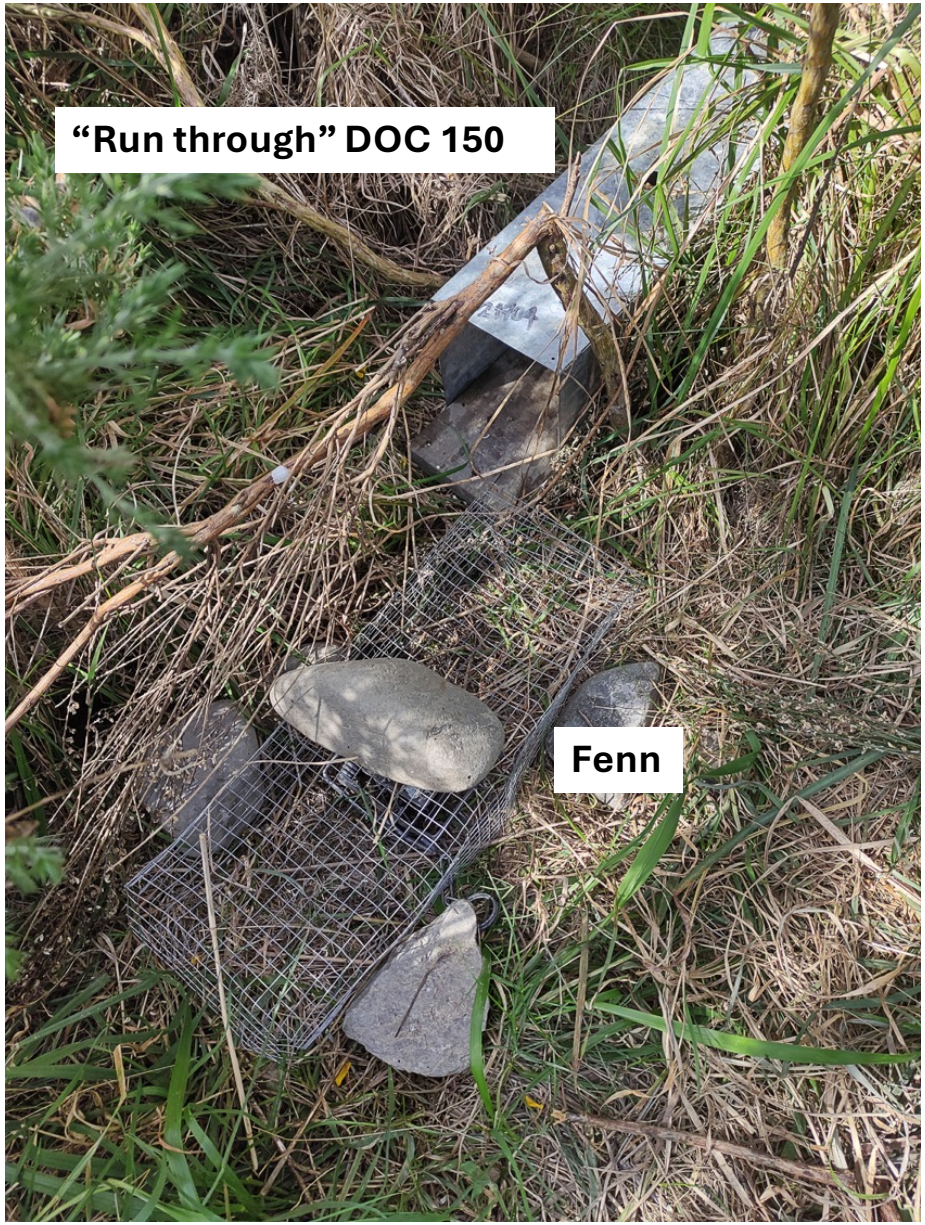
DOC 200 and Timms traps overwhelmingly used on permanent berm trap lines.

Fenns and DOC 150s used at BFT colonies - hidden beneath driftwood and attached to it. Pictured at Norway rat colony, in this location the Fenn was much more successful.

Fenns are flush with ground surface and have a mesh cover. Peanut butter and salmon food bait.

For cats Timms and Sentinel traps have meat or salmon frame bait.

Live capture traps, only used at nests and colonies, have sardine bait.



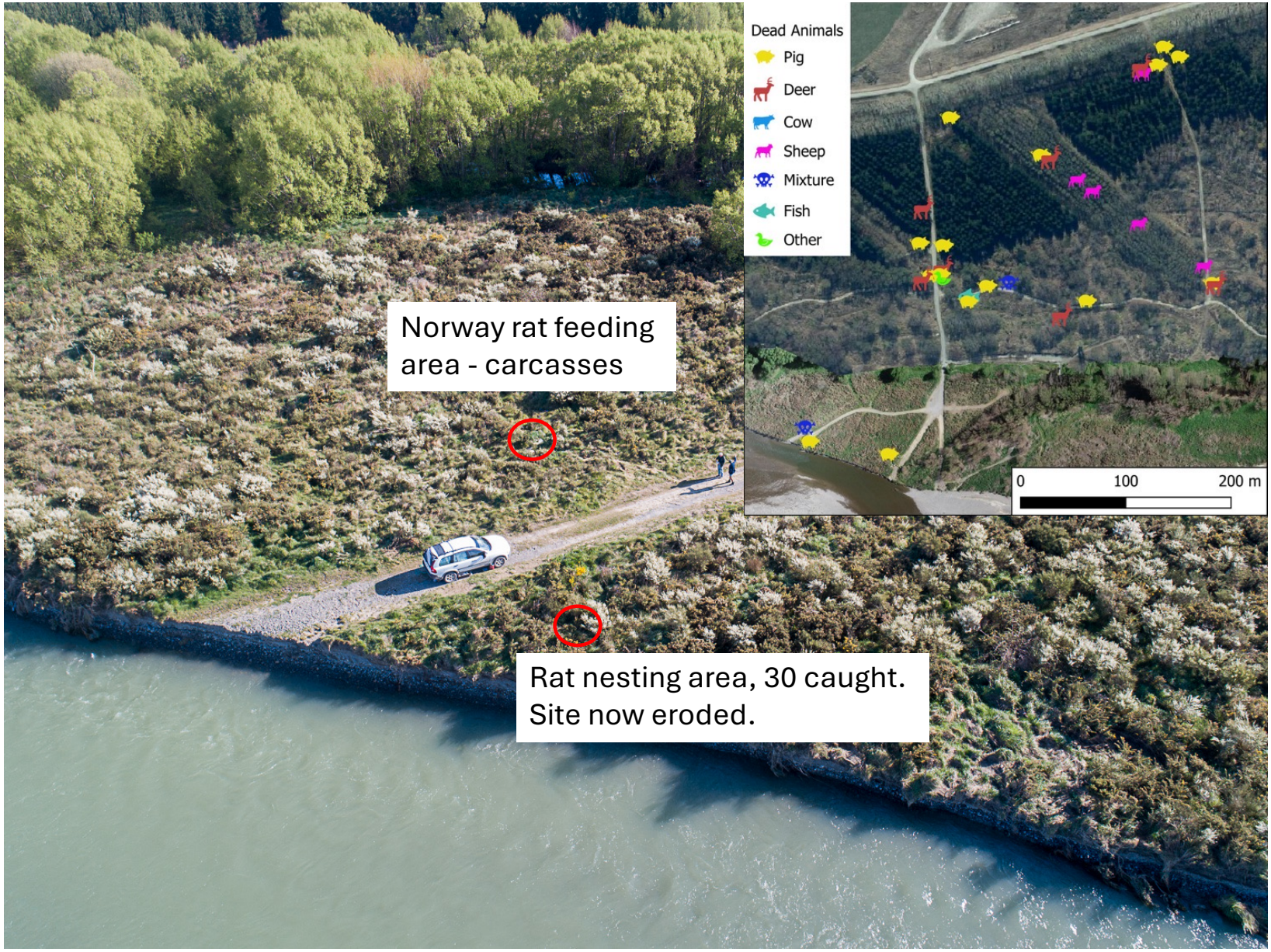
Fairway home for Norway rats.

Six Norway rats caught under this log, detected by rat dog, before the season, they live and breed out on the river. None caught during the BFT nesting nearby when they wiped out a colony the year before.

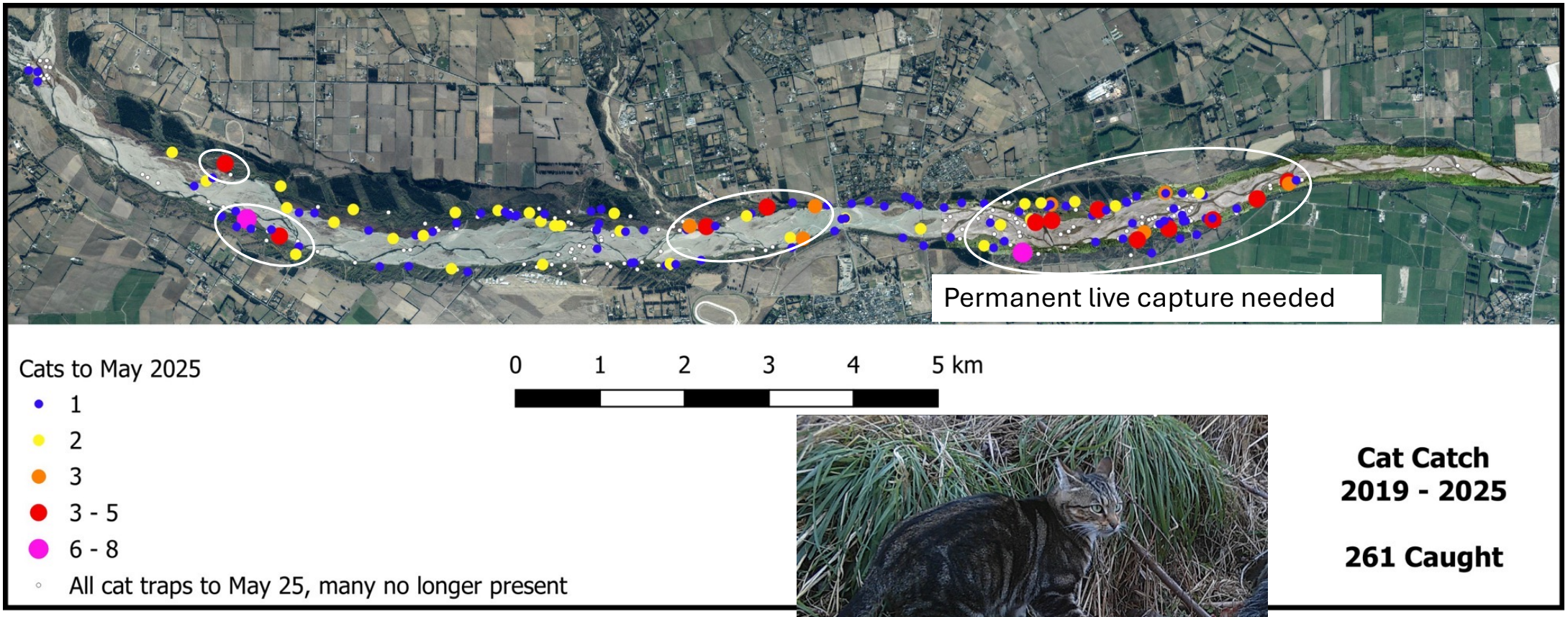
Norway rat colony at discarded animal carcasses. Possibly an important long-term breeding site.

To what extent are Norways present away from the river??

Trapping at rat feeding or nesting sites massively more successful than at trap lines



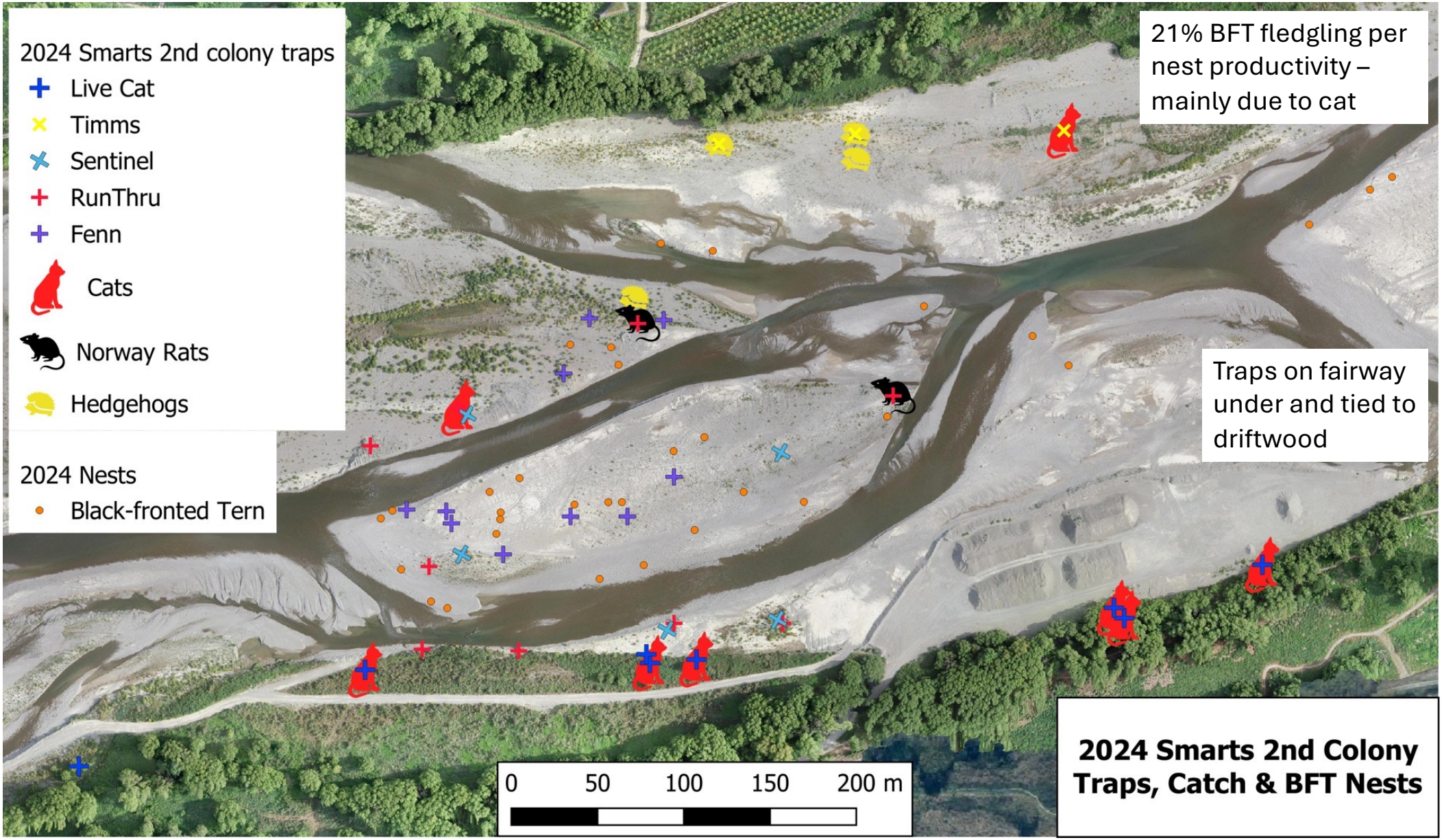
Cats



Cat Catch
2019 - 2025

261 Caught

Some correlation with dumped carcasses


2024 Smarts 2nd colony traps
Live Cat
Timms
Sentinel
RunThru
Fenn
Cats
Norway Rats
Hedgehogs
2024 Nests
Black-fronted Tern
21% BFT fledgling per nest productivity – mainly due to cat
Traps on fairway under and tied to driftwood
0
50
100
150
200 m
2024 Smarts 2nd Colony Traps, Catch & BFT Nests

150 x pindone bait stations – ECan funded and arranged – aimed at Norway rats. Many kg of pindone has been taken, **predominantly by mice**. Mice are very strongly attracted to the bait and in turn attract the other predators. Norway rats only seen where I knew they were present. As many stations visited by cats as by rats. Bait stations being taken out.

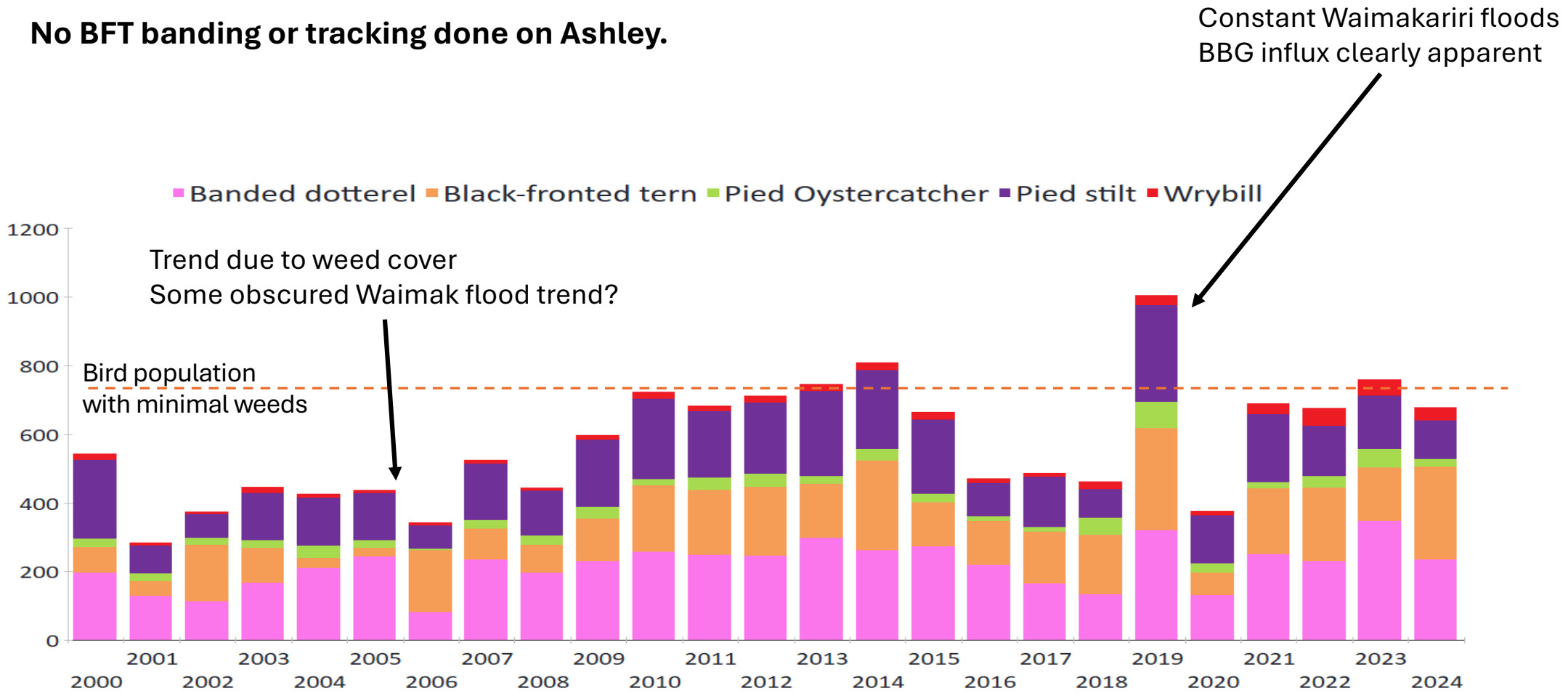
Monitoring

- 25-year unbroken bird surveys.
- Colonies found by early season visits to likely sites, sometimes found during November annual count.
- Nest finding by flushing birds off nests, sometimes by later grid search – 6m spaced lines. Chick poo indicates hatching. Possible confusion with stilt nests.
- Data recorded in QField for QGIS compilation. Nests found and visited approx. 3 times weekly.
- Usually about 5 trail cameras per colony, shifted as necessary.
- Fledglings counted from multiple visits, success measured per nest. Attempts made to measure per pair.
- Essential to understand the threats. Too intrusive?? No real evidence for this.

Unbroken surveys for 25 years

Not our birds. The Ashley/Rakahuri is close to the Waimakariri, birds move back and forth due to floods and weed conditions.

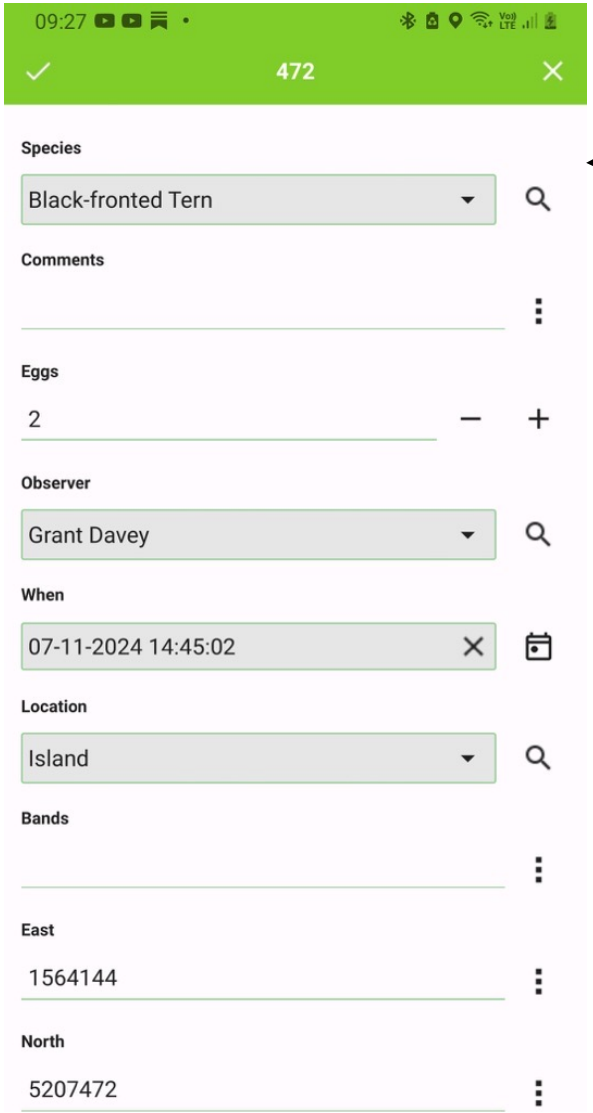
No BFT banding or tracking done on Ashley.

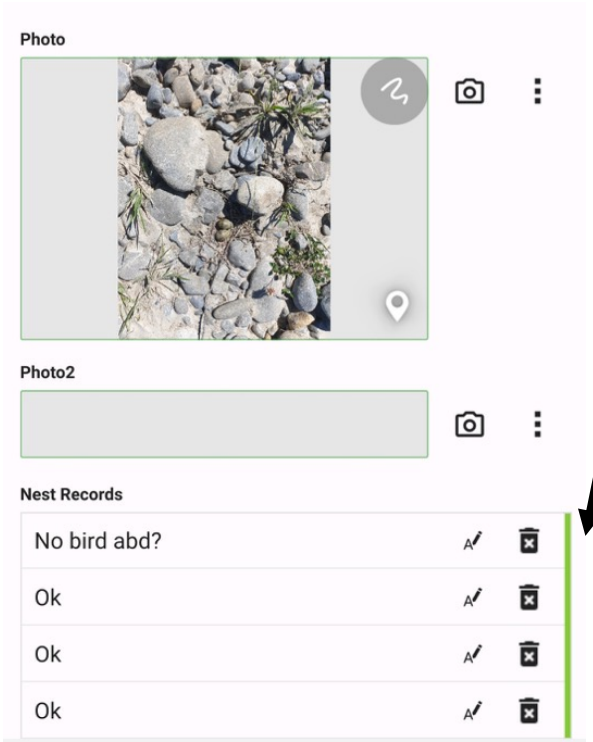


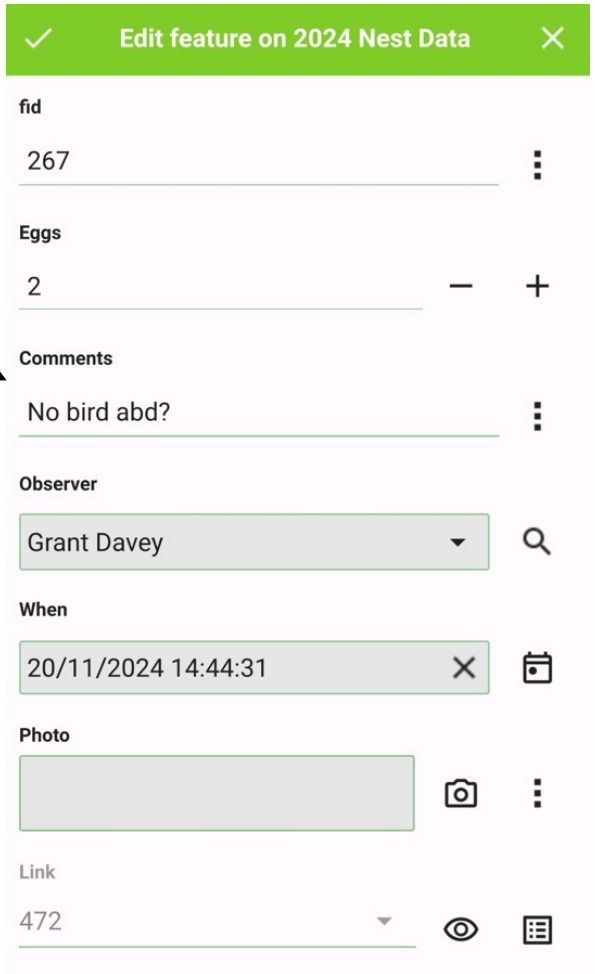
QField Tables

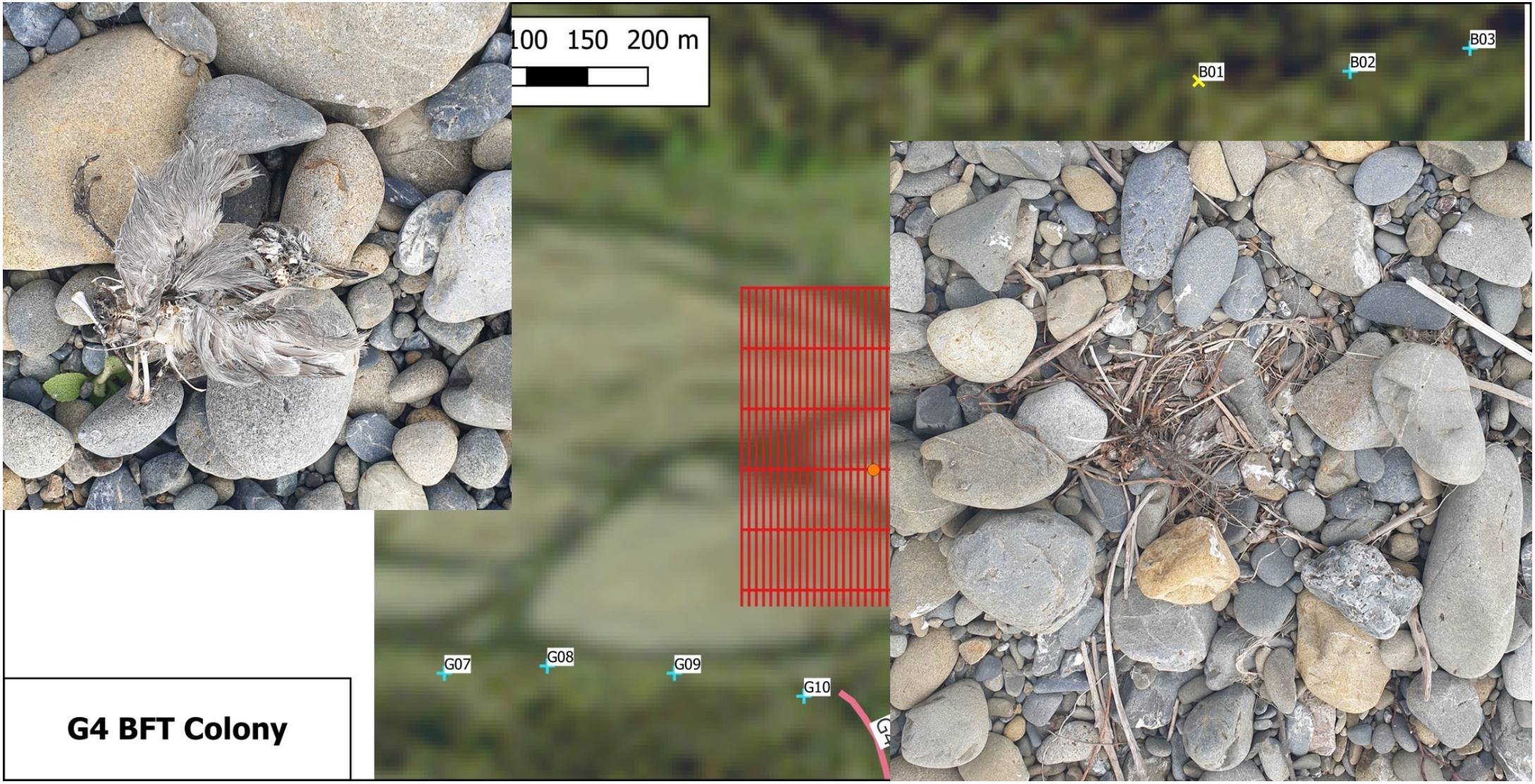
Primary nest data table for initial visit

Linked data field for subsequent visits



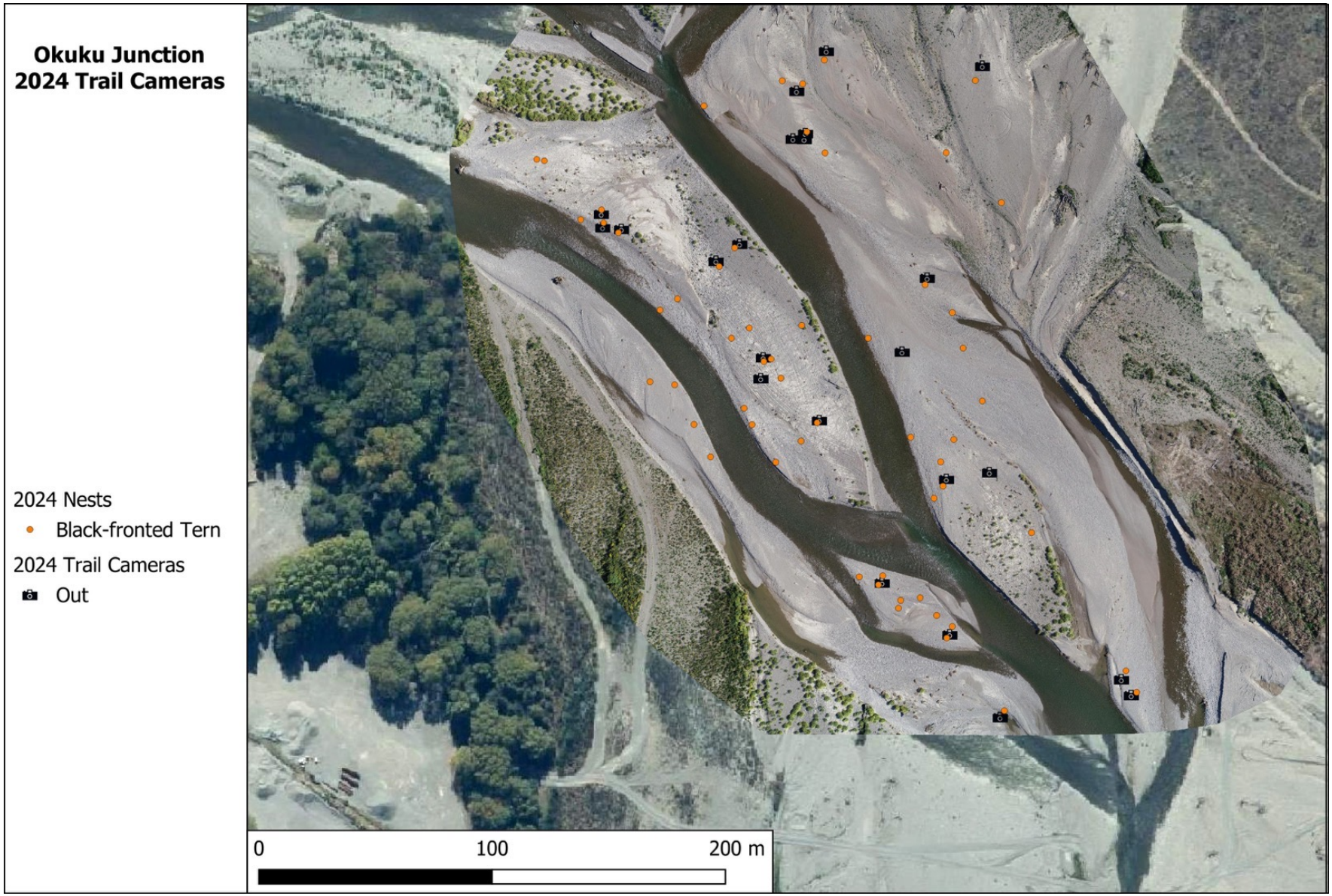






6m spaced counting lines - counts can be done after fledging – problems are PS nests and natural twig accumulations.

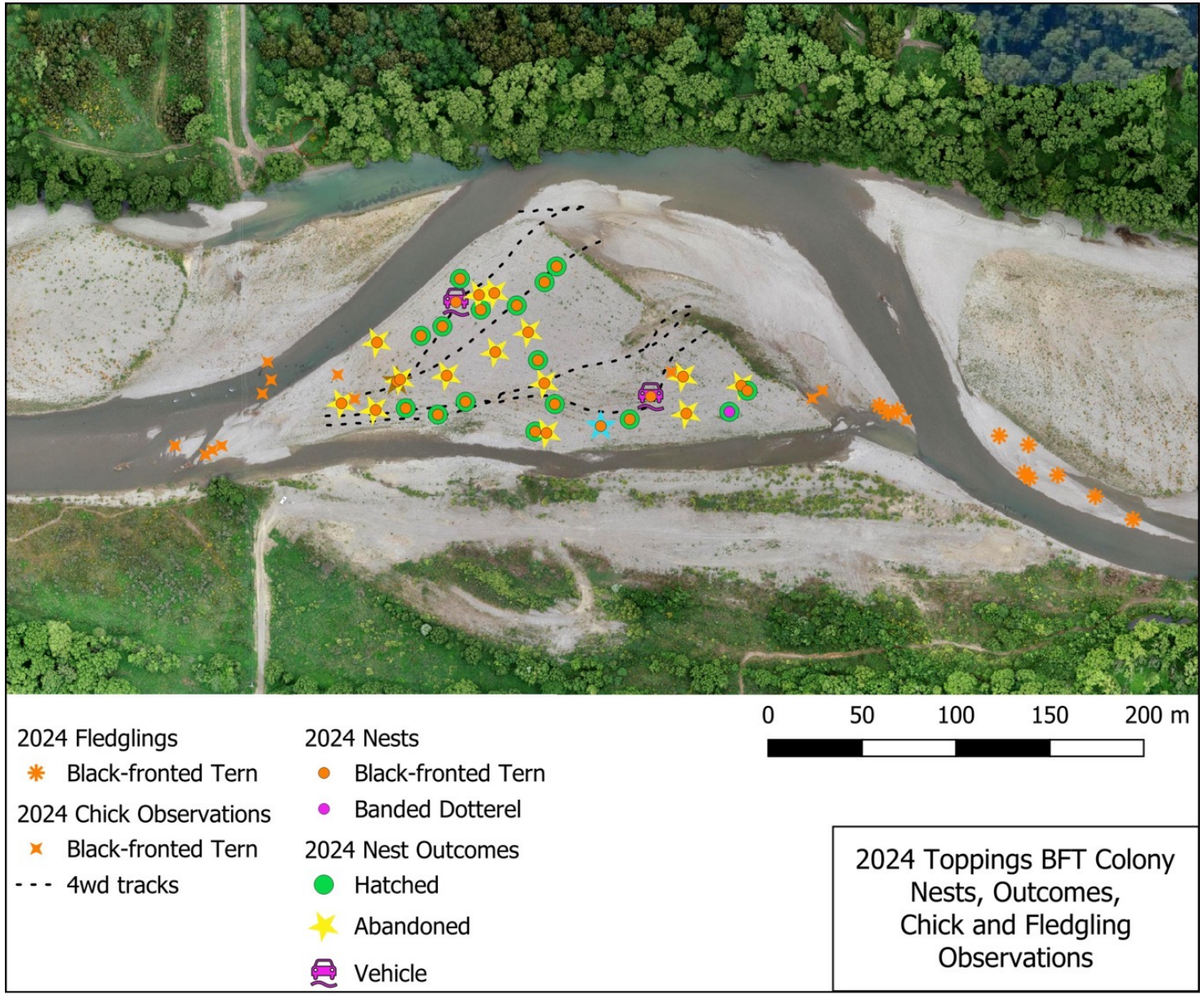
Everything of potential interest recorded with QField – nests, bird observations, chicks, cameras, traps, 4wd tracks, blocks, carcasses, vegetation…



Separate QGIS/QField tables for nest outcomes and chick observations.

Easy & accurate fledgling counting, all gathered together and stayed put. Counting done over several visits.

Previous year in this spot – all fledglings scattered around the island.



Very difficult to count, fledglings scattered everywhere and flying around. Multiple visits made, several counts made each visit. Highest “good” number chosen.

2023 colony in this spot also difficult. Fewer fledglings but the long nesting period meant that perhaps fledglings had departed before some had fledged.

Multiphase colonies are even more difficult. One had at least three phases of nesting due to two floods and rat and cat predation. Fledglings were definitely moving away while other chicks were small. Multiple counts necessary – including to several km downstream.

Fledgling counts often cannot be done in just one visit.

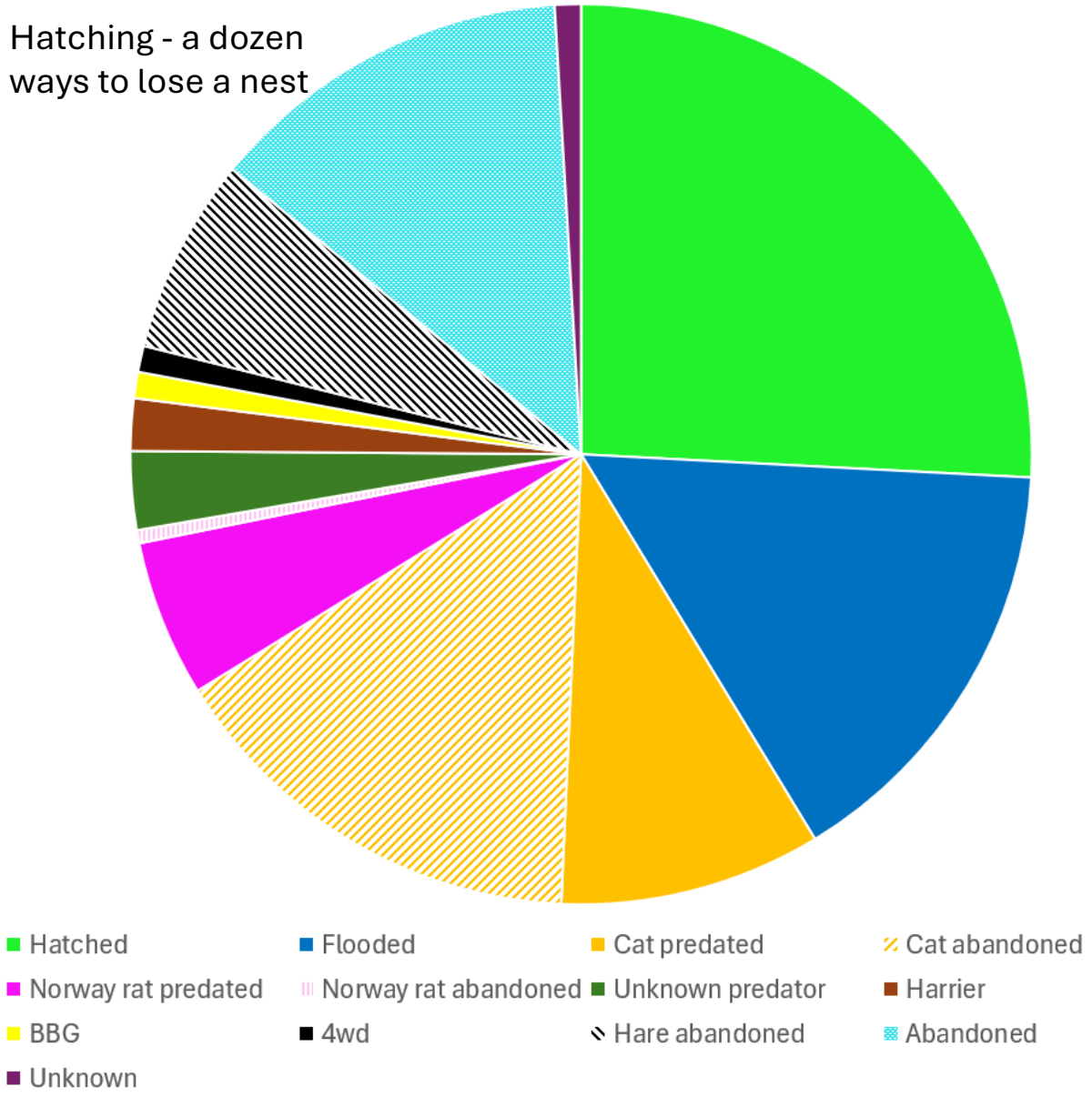
2024 – 2025 BFT Nest Outcome Summary

- **228 nests, 56 fledglings = 25% fledgling success.** Without predators we can get 90% plus per nest.

- **Astonishingly – 56 fledglings from 57 nests hatched**

- Most nests lost to abandonment – mainly due to cats and hares
- Predation mainly from cats (20 nests - eggs mainly) and Norway rats 12). Four lost to harriers, 6 unknown predator.
- Four chicks from 2 nests killed by BBG
- **Three adult BFT killed by cats, Most cat problems ever.**

- Significant interpretation involved in these statistics



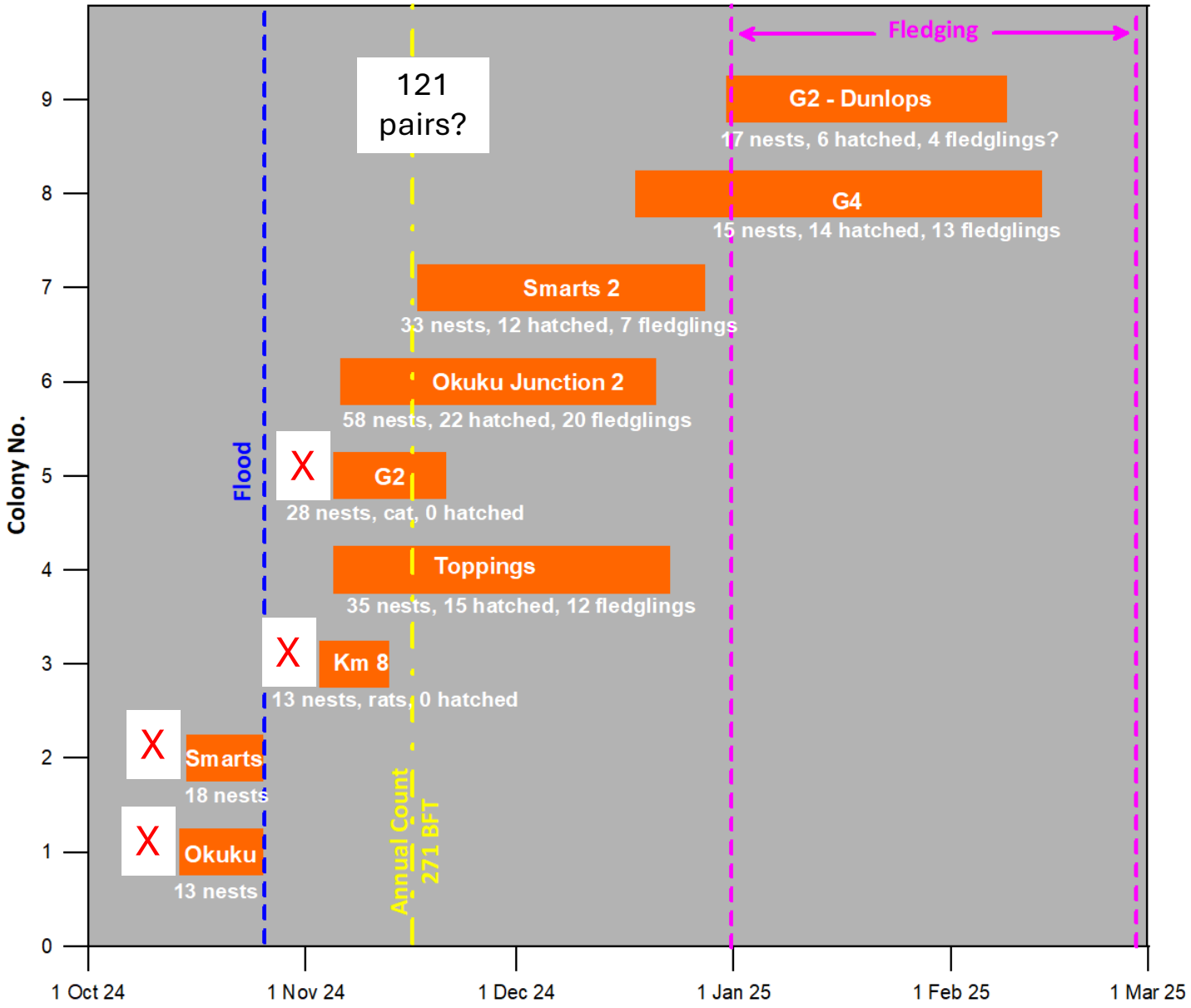
2024 - Nine BFT colonies in seven localities, with some nesting very late

228 nests – the most nests and colonies on record

2 colonies wiped out by a flood, 1by rats and 1 by a cat.

Assuming these birds renest, productivity goes from 25% per nest to 37% per pair. Or if pairs at annual count day used, 46%.

No bands means no proof of renesting.



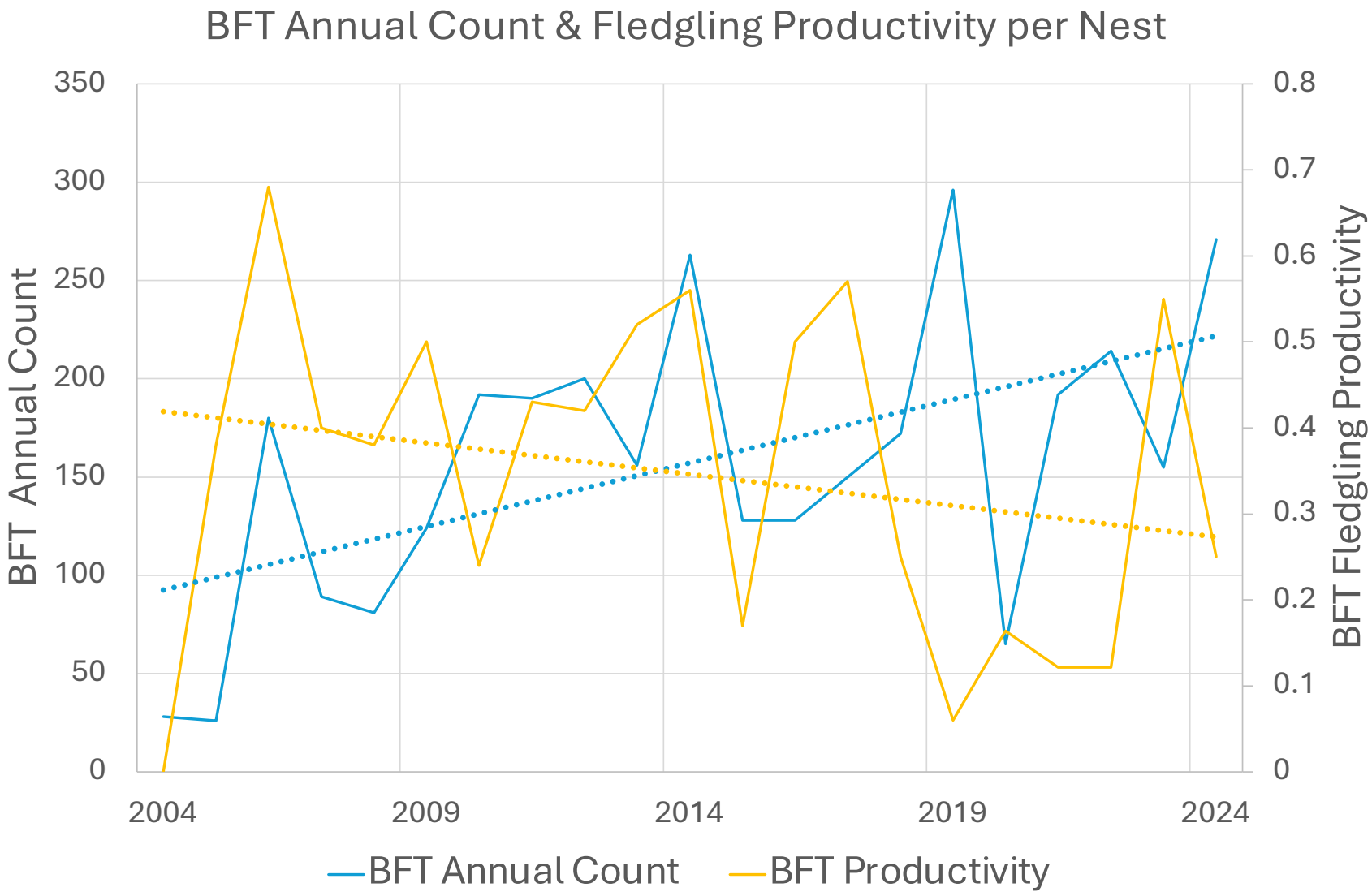
The worse nesting productivity gets, the more BFT there are

These aren't "our" birds, they move between rivers.

Why are they coming to us??

More Waimakariri floods?

Continuing reduced weed cover since 2004?



The worse predation (and nesting season flooding) gets, the more nests we have

Notes:

- Half annual count used to approximate nesting pairs – assumes little movement between rivers
- **2024 - 47% fledgling success based on annual count/2 - 10%**
- **Fledgling success summary – between 25 and 47%**