

Photo: Anita Spencer

## Australasian bittern in Whangamarino wetland

Whangamarino wetland is home to the Nationally Critical and elusive Australasian bittern/matuku (*Botaurus poiciloptilus*).<sup>1</sup> A monitoring programme for this species, and large-scale predator control, are underway.

### A bittern hub

Whangamarino wetland is the national ‘hotspot’ for Australasian bittern, with consistently high numbers recorded from the late 1800s, relative to the rest of the North Island.<sup>2</sup>

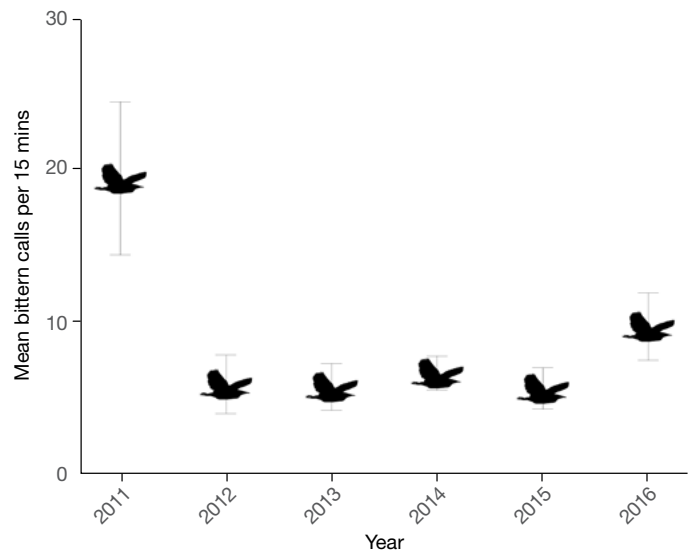
Although monitoring this cryptic bird is difficult, newly developed field-monitoring methods, specific to the bittern, have now been developed and are being used at Whangamarino wetland.<sup>3</sup>

Since 2011, bittern have been monitored within Whangamarino wetland at 40 stations that are visited between October and November.

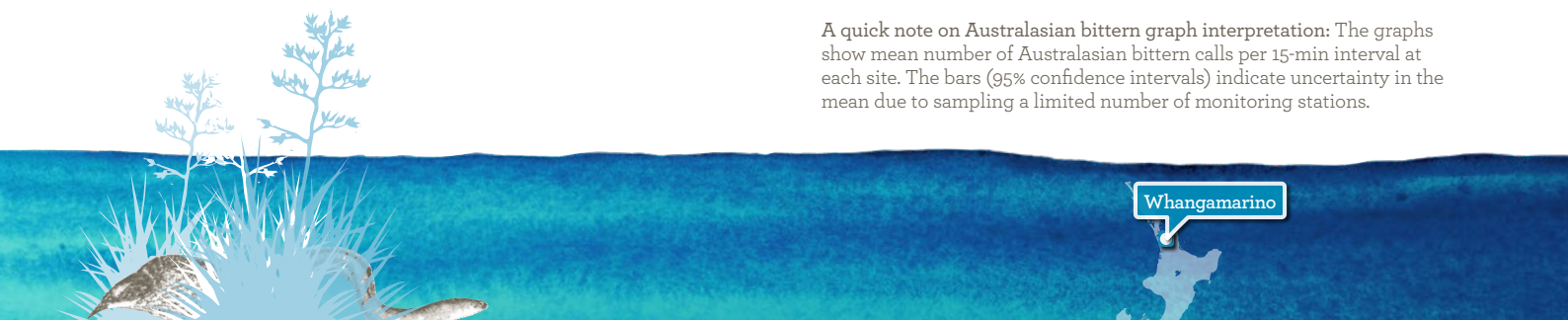
### Cause for concern



Monitoring results show bittern numbers have fallen since 2011 and, although now stable, remain relatively low. Field observations over the past decade support these findings as rangers have also noted a decline in bittern abundance. Research suggests introduced mammalian predators contribute greatly to the decline of wetland bird species.<sup>4</sup> Like many other New Zealand wetland birds, bittern are particularly vulnerable to mammalian predation due to their ground-nesting behaviour. In Whangamarino, rapid changes in water levels are also likely to reduce bittern nesting success.



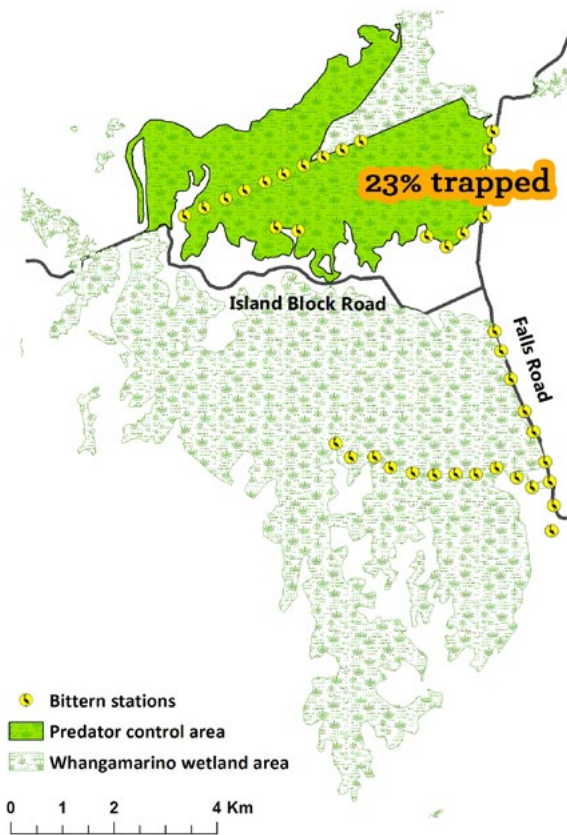
A quick note on Australasian bittern graph interpretation: The graphs show mean number of Australasian bittern calls per 15-min interval at each site. The bars (95% confidence intervals) indicate uncertainty in the mean due to sampling a limited number of monitoring stations.



## Controlling predators



To reduce the predation pressure on species like bittern, a predator-trapping network covering ~2000 ha has been set up in Whangamarino – targeting mustelids and cats, and intercepting reinvasions from outside the wetland.



With a bittern-monitoring programme and a predator trapping network now established, ongoing monitoring is needed to determine if predator control is reducing predator numbers and aiding the bittern's recovery.

## Further research needed

A more in-depth understanding of the causes of bittern decline in Whangamarino is still needed. Future research will assess how water levels, food sources, sediment levels, nutrient levels and vegetation structure affect bittern numbers and their recovery.



Photo: John Cheyne



## References...

- Robertson et al 2016: [Department of Conservation Threat Classification series 19. Conservation status of New Zealand birds, 2016.](#)
- O'Donnell & Robertson 2016: [Changes in the status and distribution of Australasian bittern \(\*Botaurus poiciloptilus\*\) in New Zealand, 1800s–2011.](#)
- O'Donnell & Williams 2015: [Protocols for the inventory and monitoring of populations of the endangered Australasian bittern in New Zealand.](#)
- O'Donnell et al 2015: [The impacts of introduced mammalian predators on indigenous birds of freshwater wetlands in New Zealand.](#)



You might also be interested in [www.doc.govt.nz/Documents/conservation/land-and-freshwater/wetlands/australasian-bittern-national-report-card.pdf](http://www.doc.govt.nz/Documents/conservation/land-and-freshwater/wetlands/australasian-bittern-national-report-card.pdf)

## NEXT ACTIONS...



### Management plan ...

Create a management plan for Australasian bittern in Whangamarino wetland



### Monitor...

Implement predator monitoring techniques to improve estimates of predator population density



### Predator control...

Expand predator control at Whangamarino Wetland