



Current and historical distribution of Australasian bittern (*Botaurus poiciloptilus*)



Photo: Peter Langlans

The Australasian bittern/matuku is a Nationally Critical wetland bird species. To guide future recovery efforts, it is vital to understand its historical and present-day distribution.

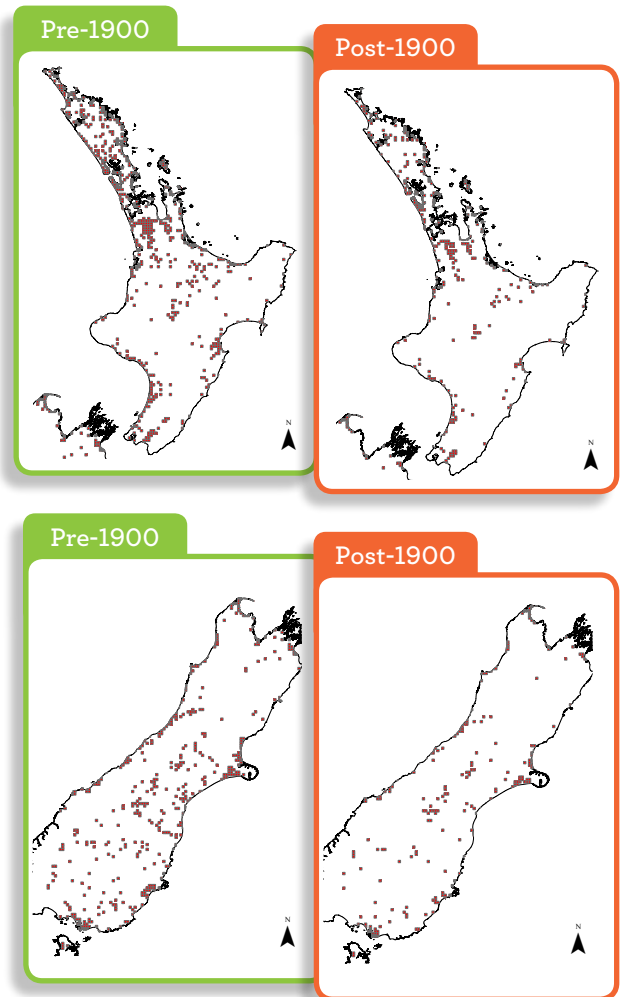
A cryptic species

Australasian bittern/matuku is a cryptic species that is difficult to monitor due to its secretive behaviour, effective camouflage, and wetland habitat that is challenging to access. In 2017, following assessment of its current and historical distribution, the conservation threat status of bittern was upgraded to Nationally Critical.¹

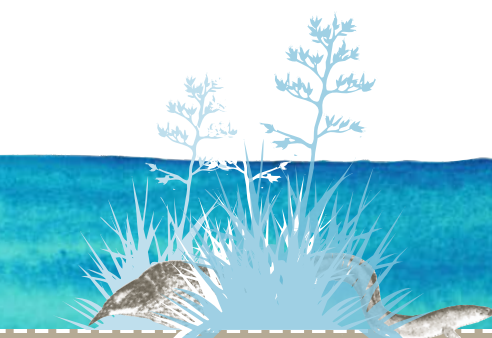
Assessing decline throughout New Zealand



To measure changes in bittern distribution, a national database was created from 4,179 records dating back to before 1900.² Results show a ~50% reduction in the distribution of Australasian bittern since the earliest records, with populations now highly fragmented. The database also includes accounts of large numbers of birds - such as a flock of 60 to 100 birds observed in Hawke's Bay in 1963.³ Large counts like this are no longer seen anywhere in the country.



Maps show 5 x 5 km squares of New Zealand containing bittern.



Habitat loss and predation



Habitat loss and predation may be the greatest causes of bittern decline. Approximately 90% of inland palustrine (inland, non-tidal and substantially vegetated) wetlands have been lost since the mid-1800s.⁴ Currently, 74% of New Zealand wetlands are less than 10 ha in size,⁵ and wetland drainage is continuing, further reducing bittern habitat.

Mammalian predators also contribute greatly to wetland bird species decline, and the ground nesting behaviour of bittern makes them particularly vulnerable to predation.⁶ Other threats include habitat changes from invasive weed species, as well as sedimentation and nutrient increases affecting food sources.

Monitoring bittern populations



In Whangamarino wetland (Waikato) and Awarua-Waituna (Southland), Australasian bittern are actively monitored using automatic acoustic recording devices (ARDs) that record the males' distinctive booming calls. In both wetlands, bittern detections are lower than historical expectations.⁷



Hidden bittern. Photo: Emma Williams

The development and implementation of both a national database and field monitoring techniques by the Arawai Kākāriki wetland restoration programme is a critical step towards bittern recovery.

Although bittern numbers are declining nationally and remain low in protected wetlands, work is underway to better understand threats, and restore bittern habitat in protected areas.



Photo: John Cheyne



References...

- ¹ Robertson et al 2016: [Department of Conservation Threat Classification Series 19. Conservation status of New Zealand birds](#), 2016.
- ² O'Donnell & Robertson 2016: [Changes in the status and distribution of Australasian bittern \(*Botaurus poiciloptilus*\) in New Zealand, 1800s–2011](#).
- ³ Edgar, A.T. 1972. Classified Summarised Notes 1963-1970. *Notornis* 19: 28-29.
- ⁴ Ausseil et al 2008: [Wetland ecosystems of national importance for biodiversity: Criteria, methods and candidate list of nationally important inland wetlands](#).
- ⁵ Myers et al 2013: [Wetland management in New Zealand: Are current approaches and policies sustaining wetland ecosystems in agricultural landscapes?](#)
- ⁶ O'Donnell et al 2015: [The impacts of introduced mammalian predators on indigenous birds of freshwater wetlands in New Zealand](#).
- ⁷ Expert opinion. Dr Colin O'Donnell, Principal Science Advisor, Department of Conservation



You might also be interested in www.doc.govt.nz/documents/conservation/land-and-freshwater/wetlands/arawai-kakariki-report-card-whangamarino-australasian-bittern.pdf

NEXT ACTIONS...



Advocacy...

Raise awareness of bittern throughout New Zealand



Predator control...

Expand predator control at Whangamarino Wetland and Awarua-Waituna and other significant sites