

# AudioMoth Stewardship

## Program

### Kurri Kurri Co-Opt

### (Judith's Swamp)

## Site Report

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Policy Number:  
Date:

# **Australasian Bittern Recovery Project**

## **General Project Update**

In 2021, the Glenelg-Hopkins Catchment Management Authority's Australasian Bittern Recovery Project completed its third year. Over the last year, the project supported data collection, which better defines the distribution of the Australasian Bittern across the catchment. Intensive surveys in the Portland area, for instance, uncovered a breeding event at Walook Swamp comprising of at least one nesting female with three chicks. Unfortunately, one of these chicks died in the nest. This chick's body was removed from the nest and donated to Museums Victoria, where it will contribute to our understanding of the species through genomic sampling. Further evidence of breeding was uncovered at Bryan's and Brady's Swamp in the Southern Grampians with abandoned nests uncovered close to where booming males were heard a few months prior.

This year has also seen the first round of financial incentives provided to landholders. These incentives will fund works, including fencing and weed control, to better protect and manage wetlands on private properties. These sites are located across the catchment, including Mepunga, Cavendish, and Tahara Bridge. The Catchment Management Authority will be accepting applications for another round of the Landholder Incentives Program in this coming financial year with the view to improve and increase the availability of Australasian Bittern habitat.

## **AudioMoth Stewardship Program**

To date, 89 species have been detected in recordings across all sites via the AudioMoth Stewardship Program. These species range from koalas to cryptic waterbirds with a whole lot of bush birds and frogs in between. Australasian Bitterns were among those detected with males booming well into January at Bryan's Swamp. This is much later than those heard at wetlands closer to the coast and may be evidence that breeding sites shift through the summer.

To assist with detections, 30 citizen scientists from across Australia were recruited.  
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Citizen Scientists from as far north as Brisbane have been listening to and connecting with recordings that you collected. These citizen scientists have listened to hundreds of hours of recordings, all with the aim of uncovering bitterns. For this coming summer, the AudioMoth Stewardship Program will shift its focus to Crown Land and we are currently identifying the next lot of participants.

## **Detection results for Judith's Swamp**

### **Bittern Detections**

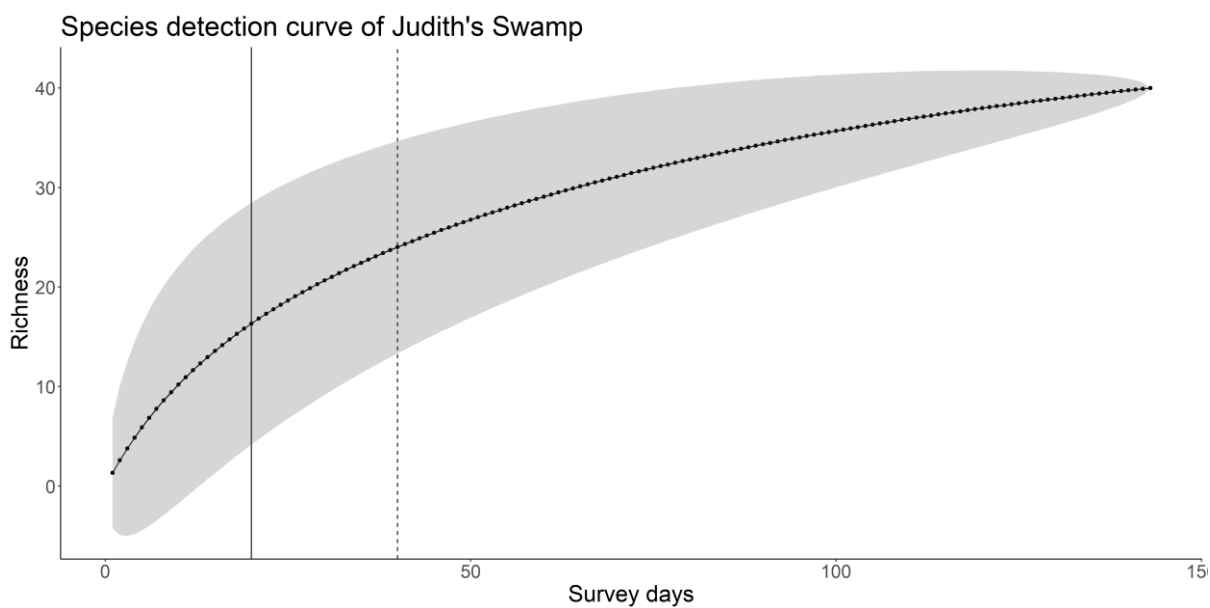
No Australasian Bittern booms have been detected in the recordings from Judith's Swamp. Non-detections, such as these, provide valuable insights into which wetlands are not being used by the species during the breeding season and will allow us to better focus our monitoring efforts. There is evidence that Australasian Bitterns congregate in wetlands near the coast over winter. Given Judith's Swamp proximity to the coast and high-level of frog activity, Australasian Bitterns may still use the site for foraging – although we would be unable to detect this using AudioMoths.



Photo Credit: Helen Cunningham, 2021

## Other Notable Detections

Despite no booms, a broad array of species has been detected in the recordings from Judith's Swamp. In Fig. 1, we have a species detection curve for Judith's Swamp. This curve "plateaus", indicating that the number of calling species detected in our recordings is representative of the larger portion of those present at the swamp. Rare species, however, contribute uncertainty to all estimates of overall species richness – a new species may be detected tomorrow and so, all curves tick upwards over time.



**Figure 1**

The Australian Magpie was the most detected bird species in recordings followed by Grey Fantail and the Superb Fairy-wren. Among the forty species detected, were five frog species with the Common Froglet the most detected of them. Some other notable detections include the Bassian Thrush, which was one species impacted by last year's bushfires and the Brown-headed Honeyeater, which prefers dense bushland habitat. This suggests that Judith's Swamp (and Kurri Kurri) is a refuge for birds within an agricultural landscape.



Bassian Thrush (*Zoothera lunulate*)



Brown-headed Honeyeater

(*Melithreptus brevirostris*)

Appendix 1. contains a complete list of those species detected, so far.

### **Thank You!**

On behalf of the GHCMA's Australasian Bittern Recovery Project, I would like to extend a quick note of thanks to the Kurri Kurri Co-Opt for participating in the AudioMoth Stewardship Program. We have learned a lot through this process and your contribution to the program has provided insights into how citizen scientist-led acoustic monitoring of wetlands can be conducted. Thank you also for your commitment to the conservation of wetlands and the wildlife that depend on them.

This project is supported by Glenelg Hopkins CMA through funding from the Australian Government's National Landcare Program.



## Appendix 1 List of species detected at Judith's Swamp ranked by number of detections

Species	Common name	Detection Rank
<i>Gymnorhina tibicen</i>	Australian Magpie	1
<i>Rhipidura albiscapa</i>	Grey Fantail	2
<i>Crinia signifera</i>	Common Eastern Froglet	3
<i>Malurus cyaneus</i>	Superb Fairy-wren	4
<i>Litoria ewingii</i>	Southern Brown Tree Frog	5
<i>Pachycephala pectoralis</i>	Australian Golden Whistler	6
<i>Cormobates leucophaea</i>	White-throated Treecreeper	7
<i>Limnodynastes peronii</i>	Striped Marsh Frog	8
<i>Limnodynastes dumerilii</i>	Eastern Banjo Frog	9
<i>Corvus coronoides</i>	Australian Raven	10
<i>Cacatua galerita</i>	Sulphur-crested Cockatoo	11
<i>Colluricincla harmonica</i>	Grey Shrikethrush	12
<i>Acrocephalus australis</i>	Australian Reed-Warbler	13
<i>Rhipidura leucophrys</i>	Willie Wagtail	14
<i>Zoothera lunulata</i>	Bassian Thrush	15
<i>Limnodynastes tasmaniensis</i>	Spotted Marsh-Frog	16
<i>Cacatua sanguinea</i>	Little Corella	17
<i>Eopsaltria australis</i>	Eastern Yellow Robin	18
<i>Cacatua tenuirostris</i>	Long-billed Corella	19
<i>Manorina melanocephala</i>	Noisy Miner	20
<i>Pachycephala rufogularis</i>	Red-lored Whistler	21
<i>Lichenostomus chrysops</i>	Yellow-faced Honeyeater	22
<i>Platycercus eximius</i>	Eastern Rosella	23
<i>Acanthiza pusilla</i>	Brown thornbill	24
<i>Grallina cyanoleuca</i>	Magpie-lark	25
<i>Anas superciliosa</i> standing together to stop extinctions	Pacific Black Duck	26

Platycercus elegans	Crimson Rosella	27
Melithreptus brevirostris	Brown-headed Honeyeater	28
Pardalotus punctatus	Spotted Pardalote	29
Calyptrorhynchus funereus	Yellow-tailed Black Cockatoo	30
Gallinula tenebrosa	Dusky Moorhen	31
Acanthiza lineata	Striated Thornbill	32
Rhipidura rufifrons	Rufous Fantail	33
Sericornis frontalis	White-browed Scrubwren	34
Acanthorhynchus tenuirostris	Eastern Spinebill	35
Megalurus gramineus	Little Grassbird	36
Vanellus miles	Masked Lapwing	37
Corvus mellori	Little Raven	38
Cracticus nigrogularis	Pied Butcherbird	39
Petroica multicolor	Pacific Robin	40