

**Looking for and learning  
from birds in plantations.  
How structured bird  
monitoring is changing our  
perspective.**



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**Acknowledge the Wirundjuri Nation NSW, Gunditjmara Nation, Victoria and Pibleman and Minang groups of the Noongar people in Western Australia on whose lands the survey work in undertaken**

BirdLife Australia acknowledges the Traditional Custodians of the Country on which we live and work, and we pay our respects to their Elders past and present. We recognise and are grateful for the immense contribution of Indigenous people to BirdLife Australia through their knowledge and conservation of Australia's birds.

**Looking for and learning from birds in plantations. How structured bird monitoring is changing our perspective.**

## Where we started:

- **Requirements to “maintain and enhance” biodiversity under FSC certification**
  - Basic questions: Did plantations provide useful habitat for native bird species?
  - How were the plantations being used?
  - Was there anything that could be done to “enhance” for bird biodiversity?
- **In 2015 we undertook a pilot round of surveys in Western Victoria.**
- **135 transects were set up and surveyed**
  - 20min 2ha surveys (mainly 400m x 50m transects)

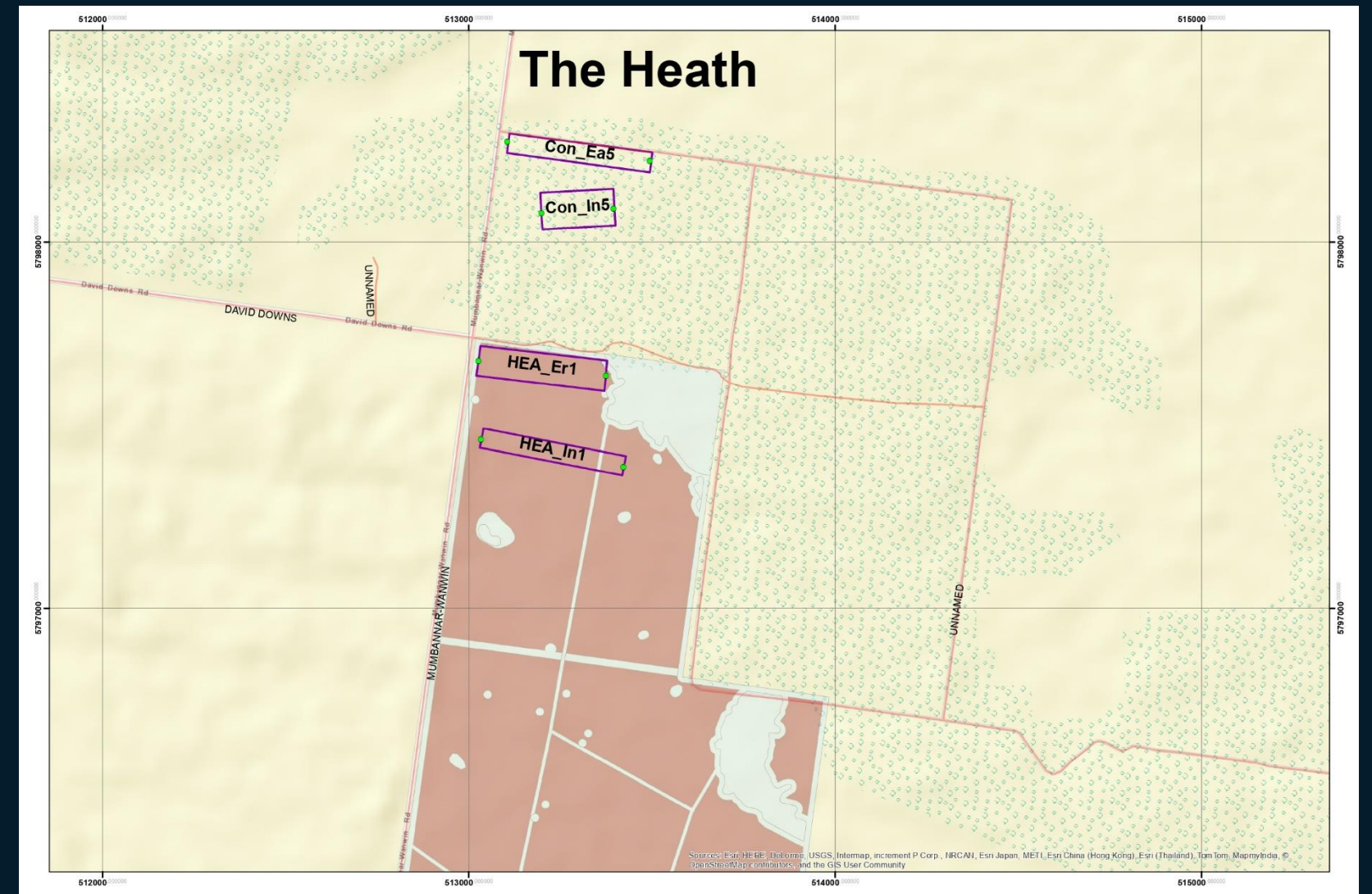


## Survey Design:

- **Aim was to monitor birds in plantations with the potential to direct future on ground management**
- **Design had to enable separation of environmental effects from management effects**
- **I saw it as a chance to also learn a bit more about other various ecological implications of plantation design.**

# Example of Survey Design

- Paired Edge and Internal sites in various aged plantations (age class as variable)
- Paired Edge and Internal sites within control sites (contiguous native vegetation)
- Sites within retained native remnants in plantation landscape



# Developed a range of indices to track changes over time

**Mean abundance and species diversity**

**Index of biodiversity (Shannon Index)**

**Foraging guild changes**

**Conservation priority species**

**Common species**

**Assessed at both site and landscape scale**



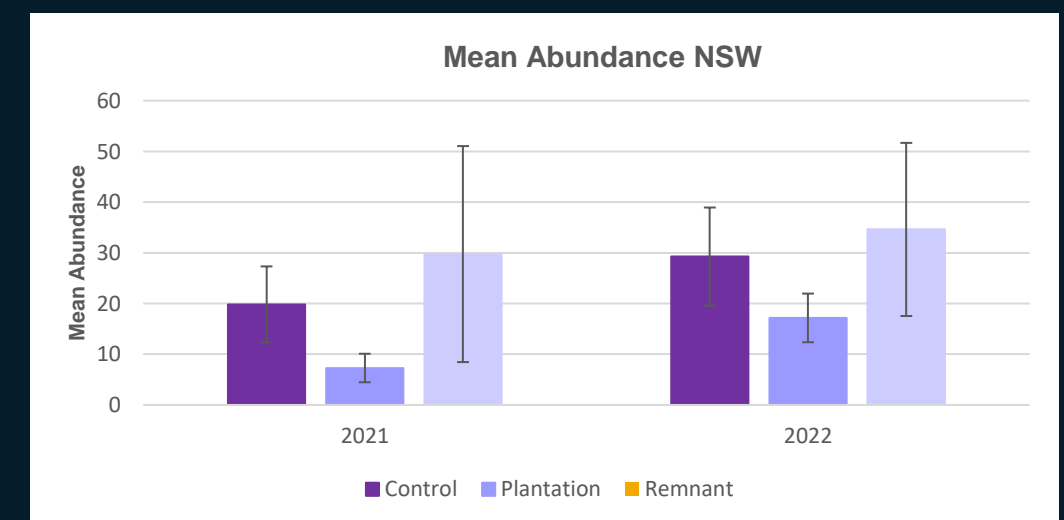
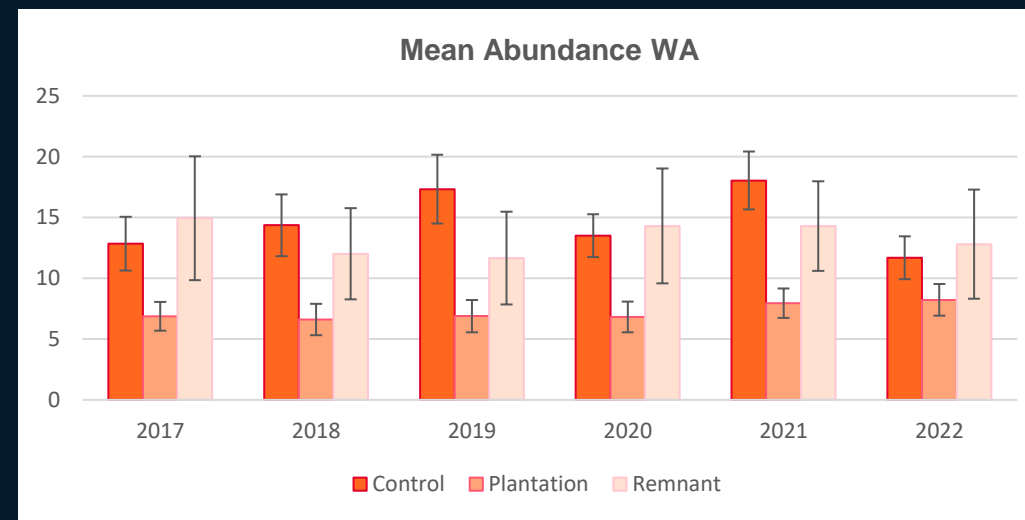
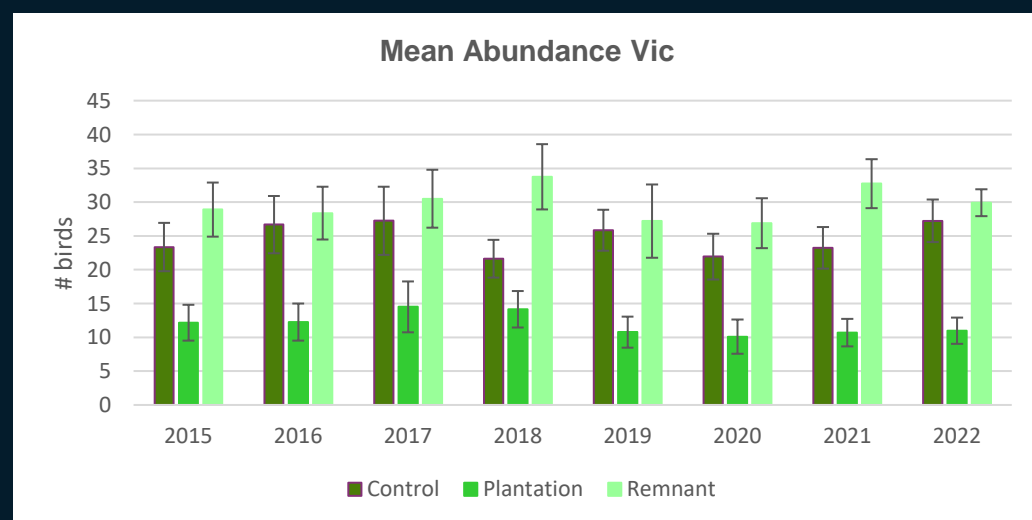
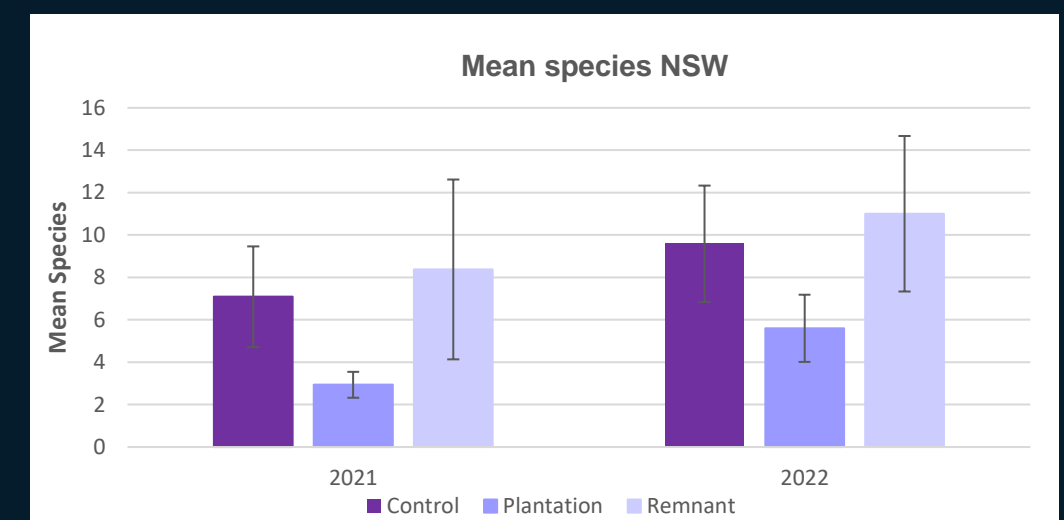
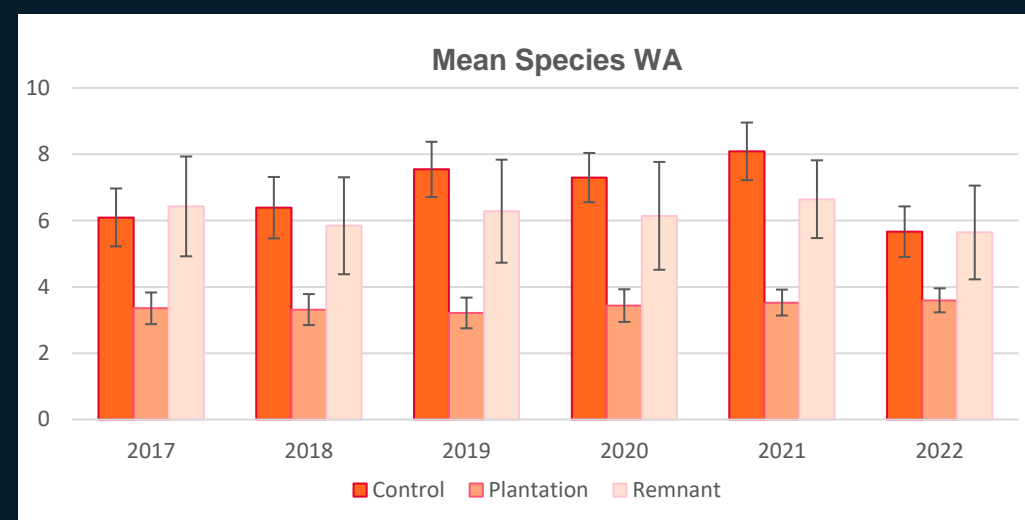
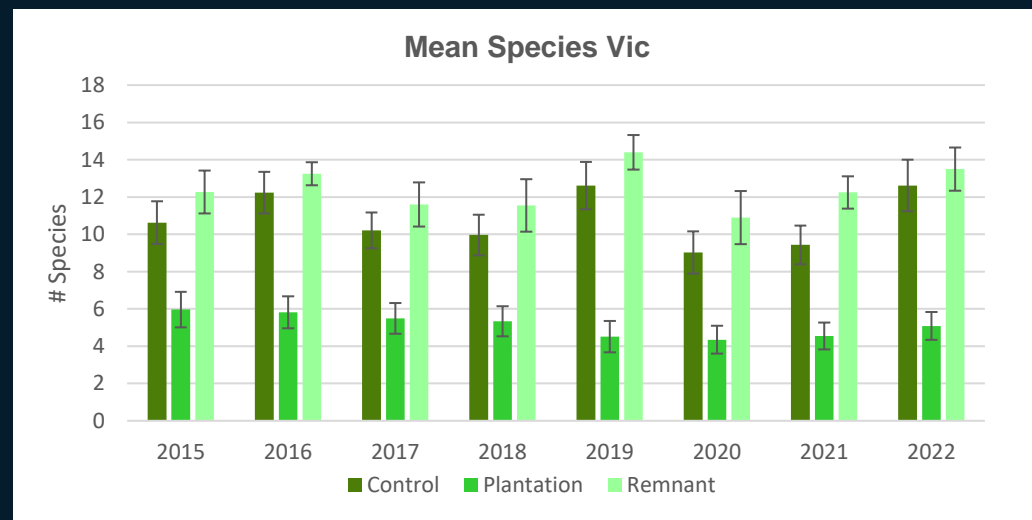
## **Rolled out across other regions**

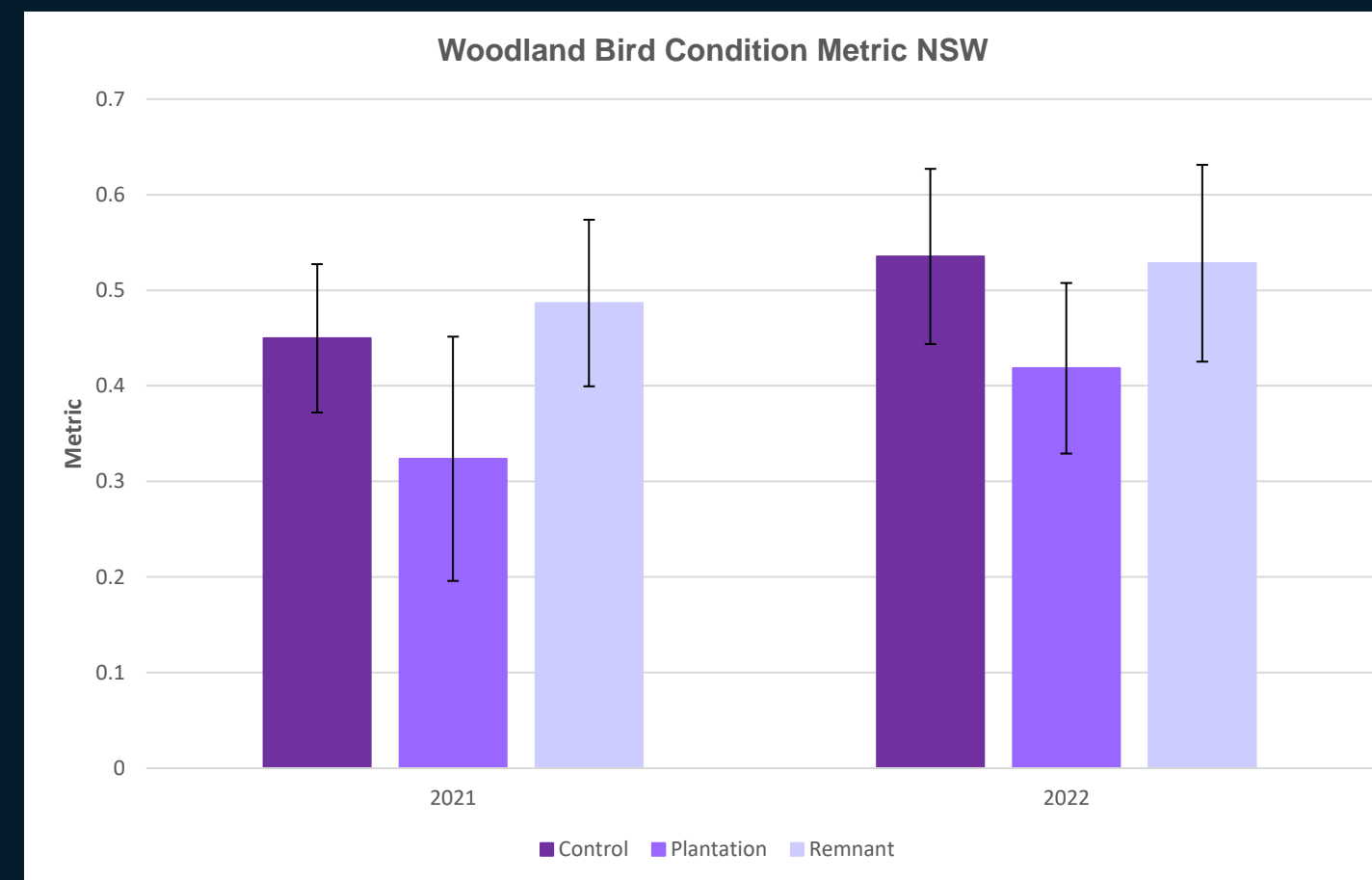
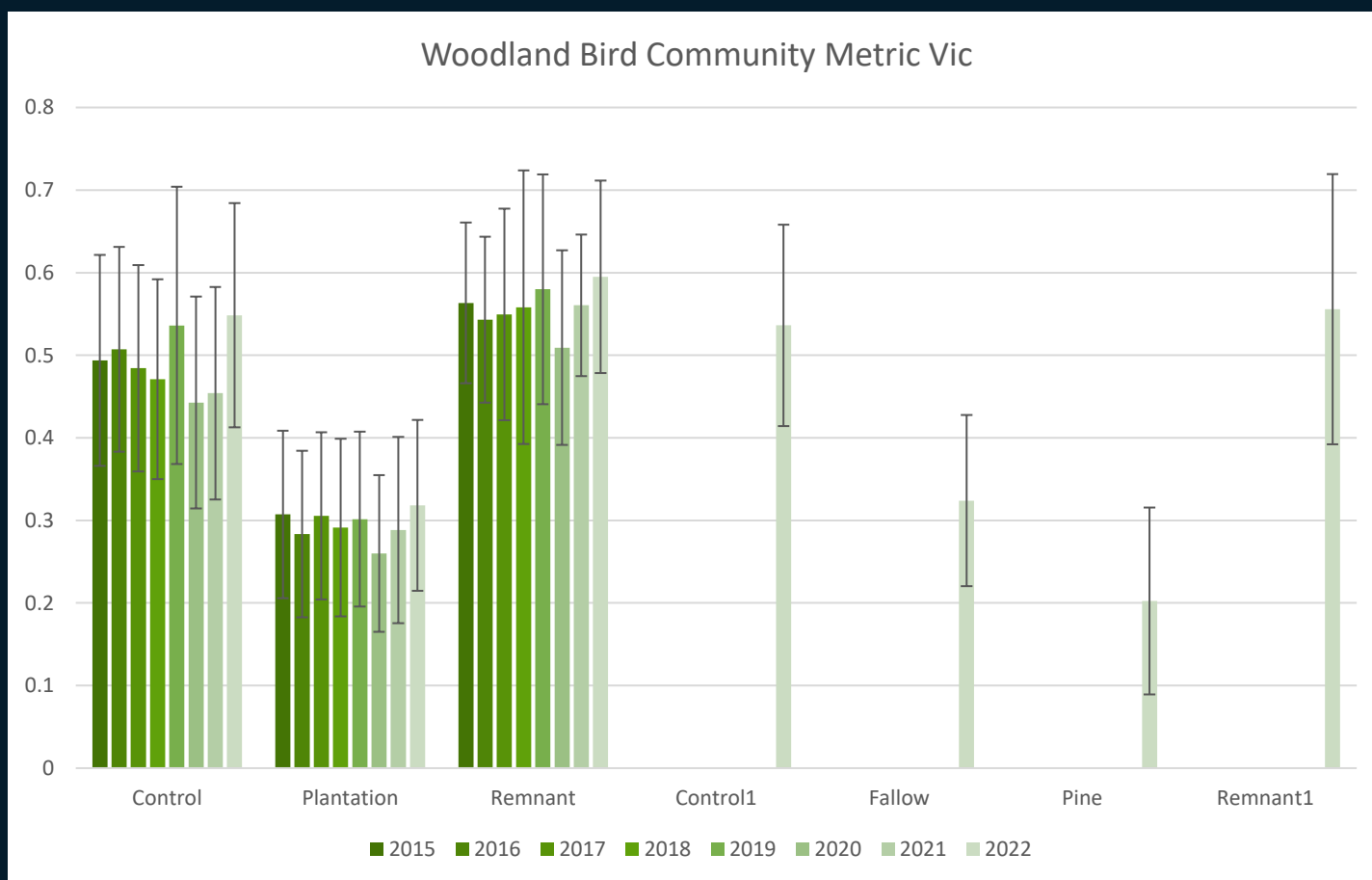
- **In 2017 surveys commenced in Western Australia (137 transects established)**
- **In 2018 surveys were carried out across Kangaroo Island**
- **In 2021 surveys were commenced in softwood plantations in NSW (35 sites)**
- **2022 saw additional sites in Vic and WA established in fallow/cleared and softwood plantations**



# Challenging thinking around plantations

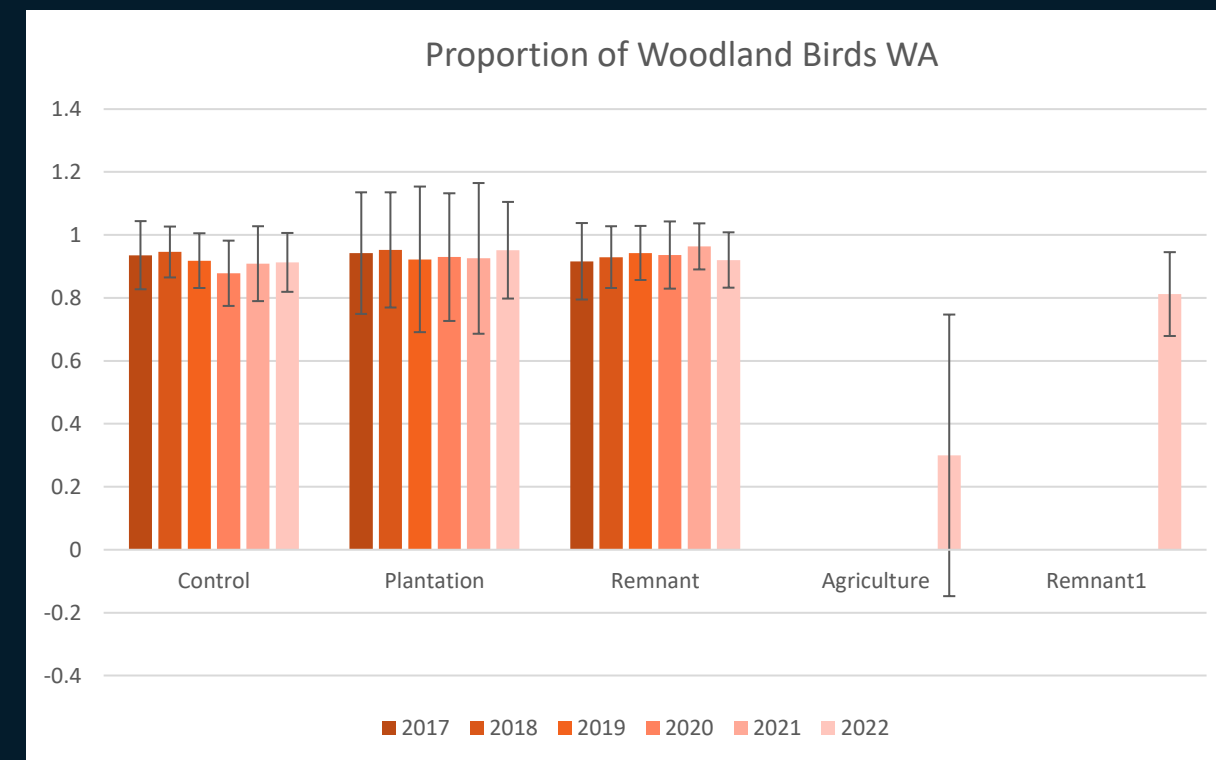
One of the biggest misnomers around plantations (still!) is that they are “biological deserts”.

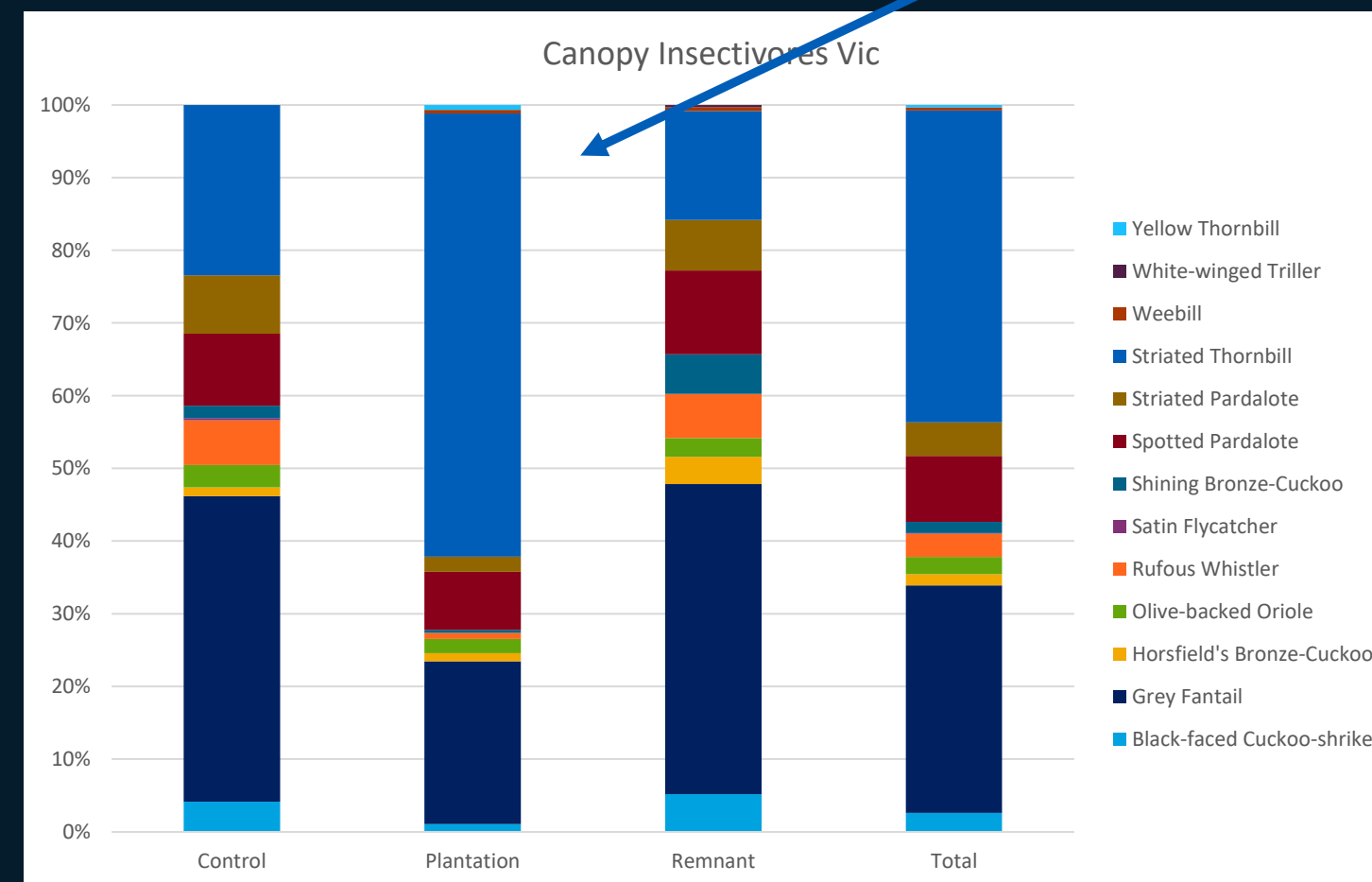
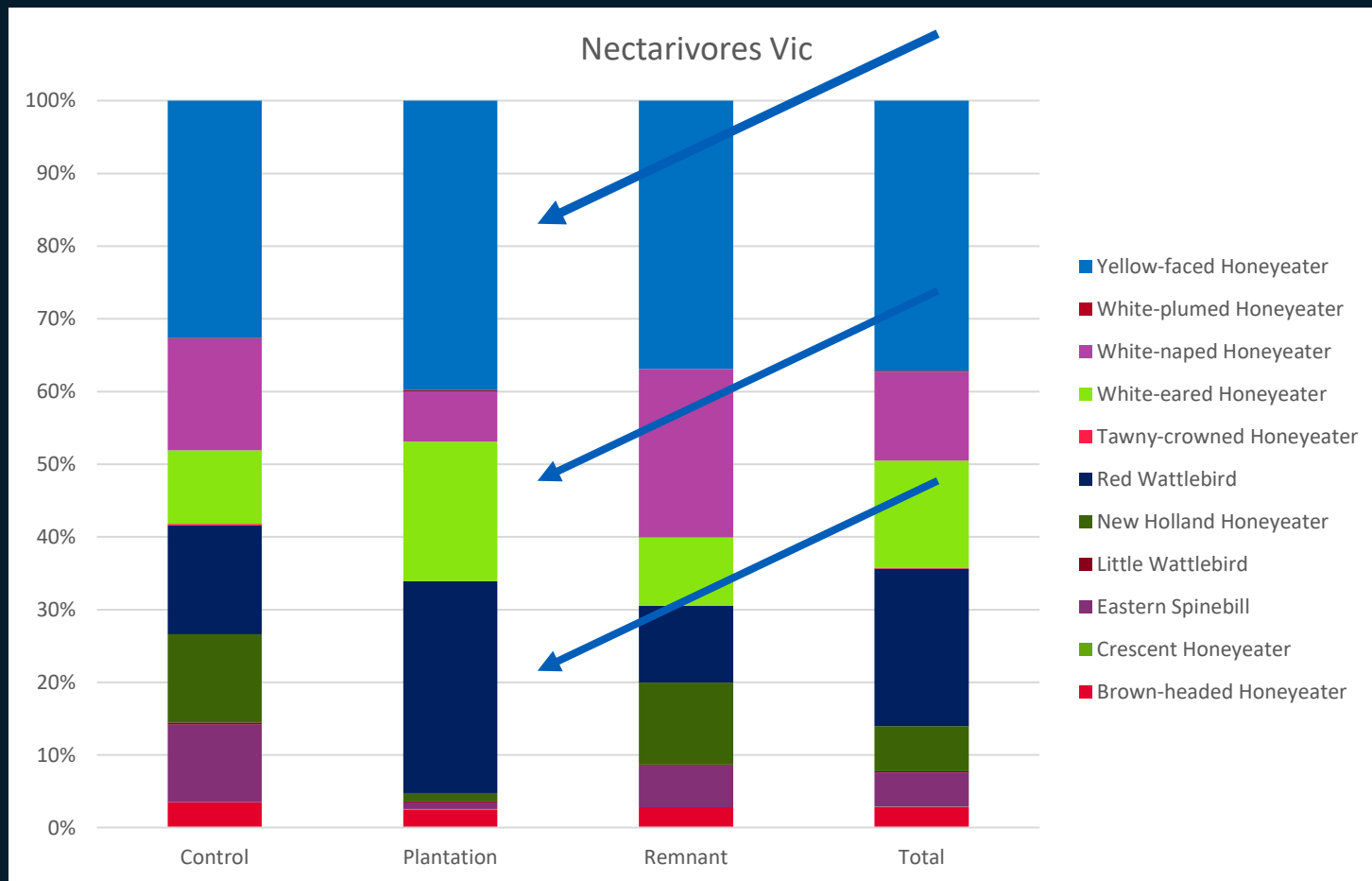




# Challenging thinking around plantations

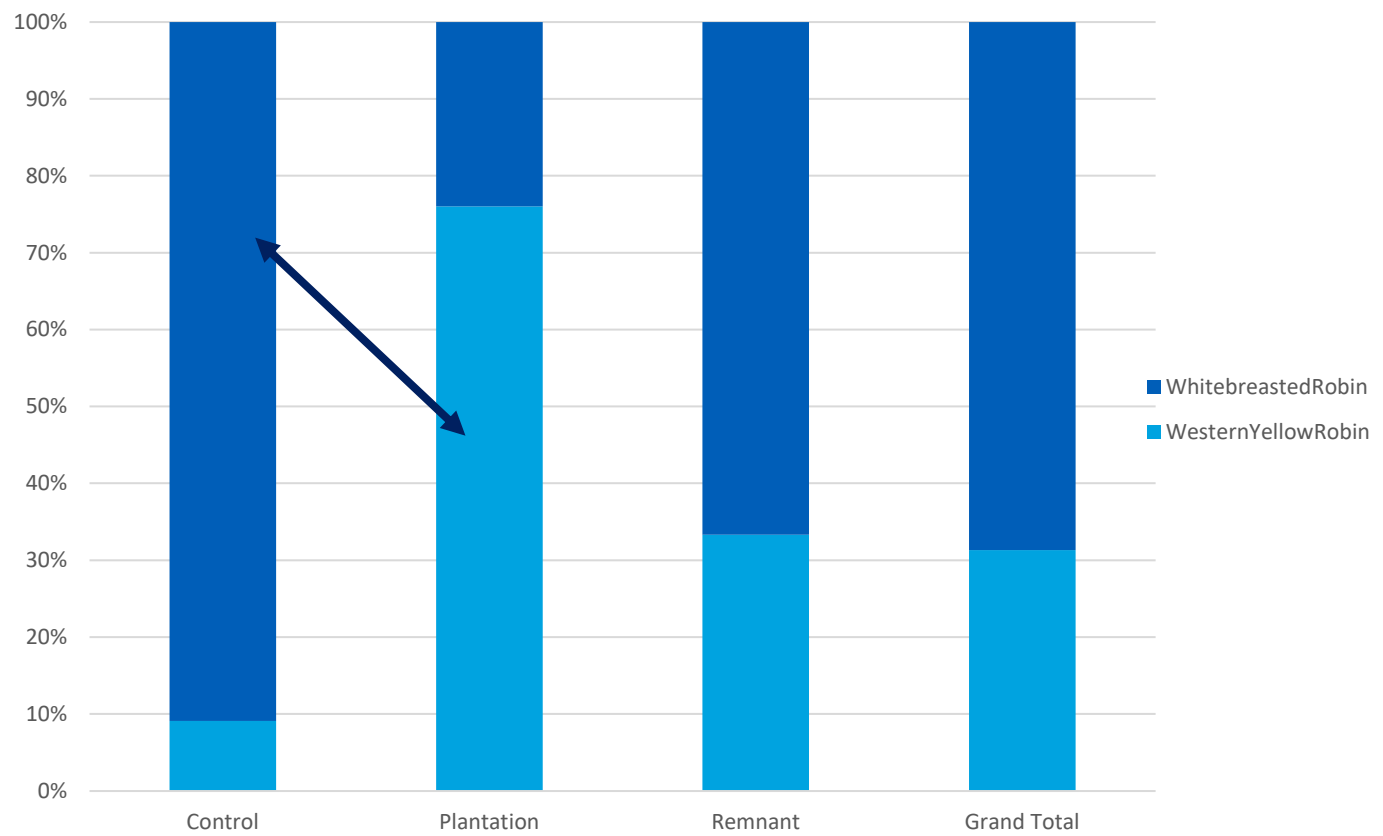
That species present are going to be those associated with heavily modified environments



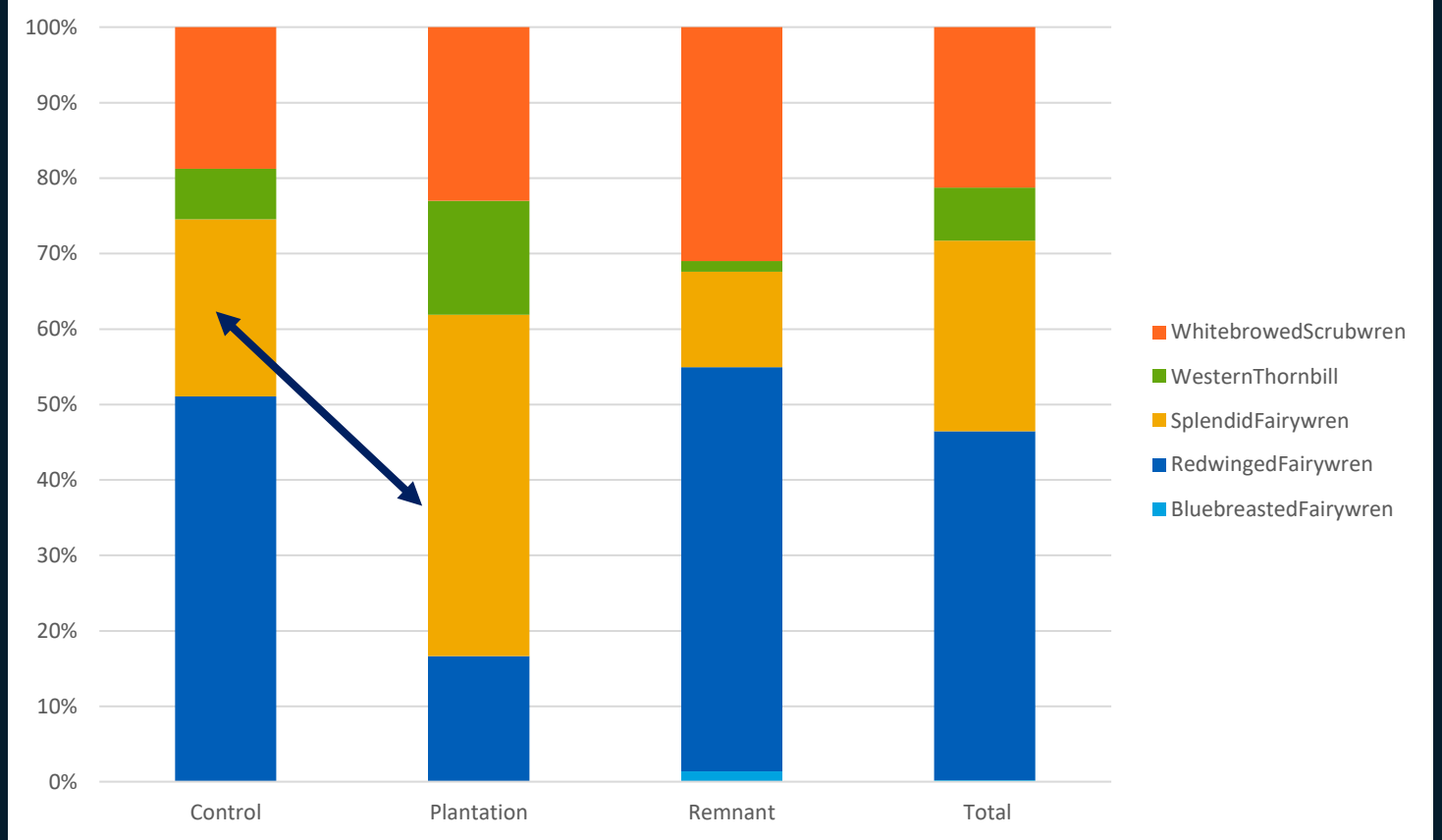


**Guilds follow Loyn *et al.* 2007**

Damp Ground Insectivore WA



Low Shrub Insectivores WA



# Challenging thinking around plantations

## The impacts of age class and harvesting



# Challenging thinking around plantations

That fewer species are able to use plantation sites, thus losing species from the landscape

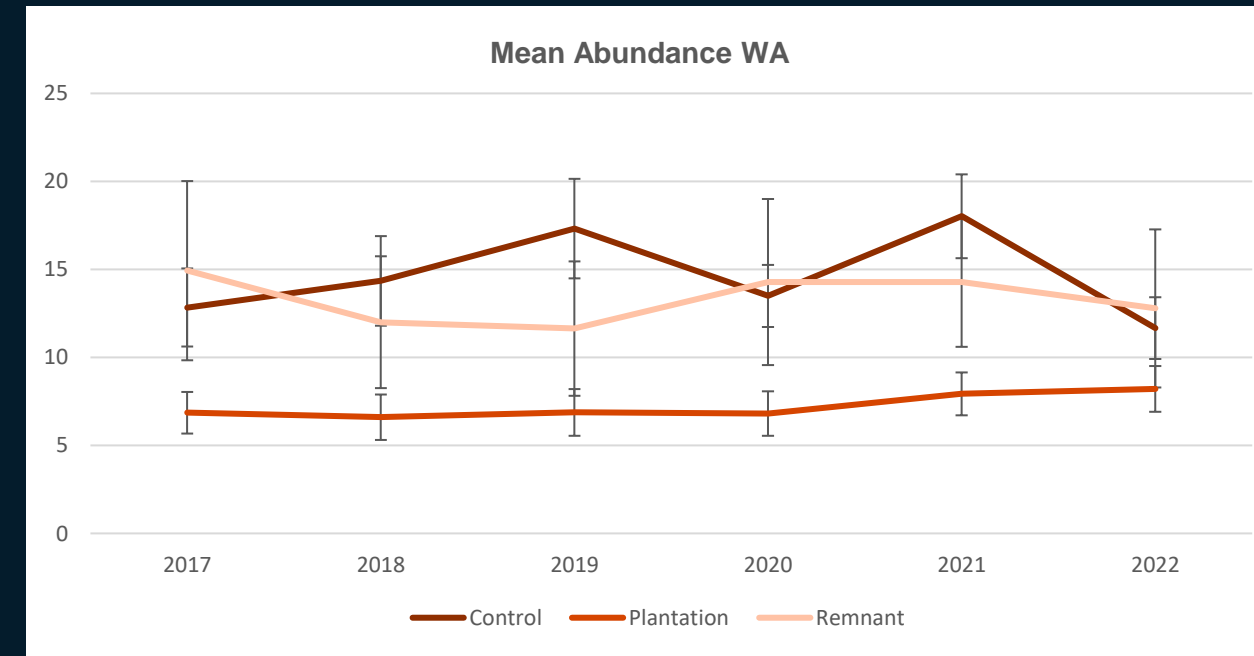
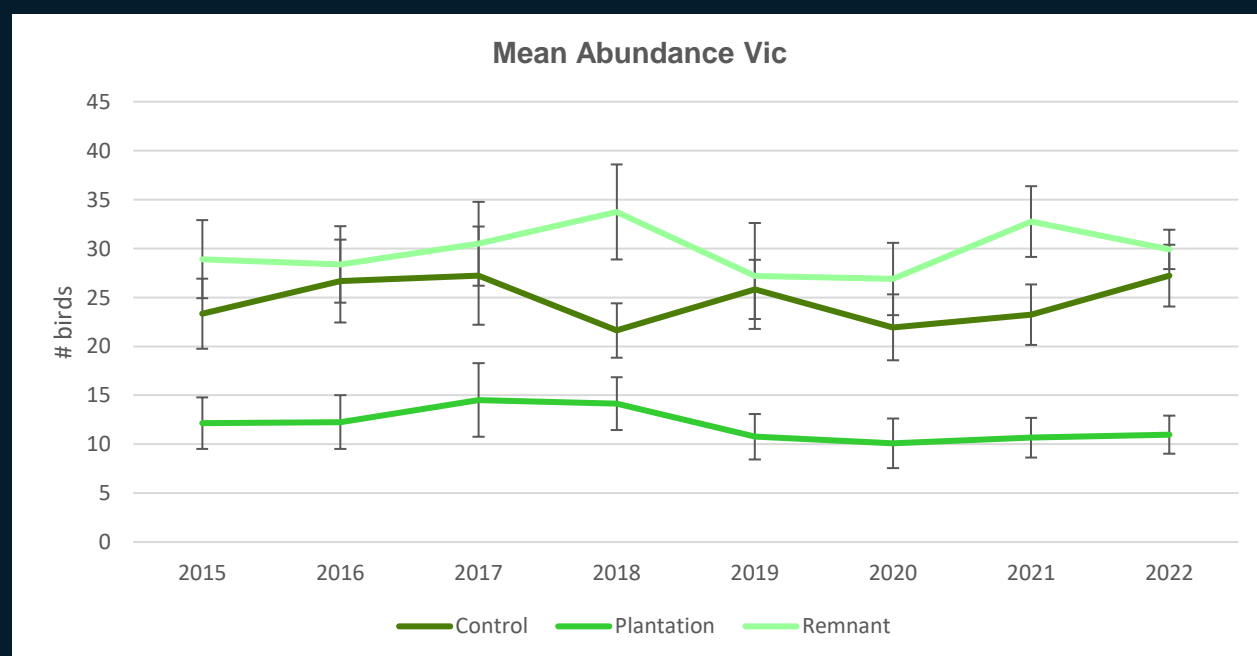
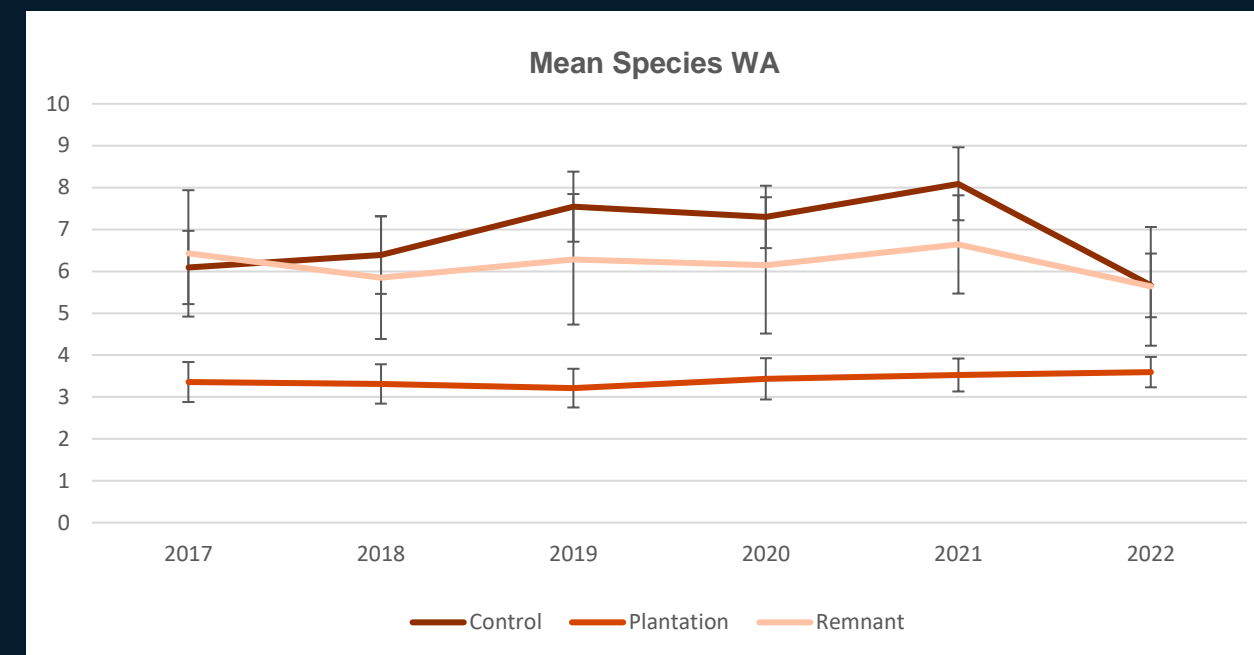
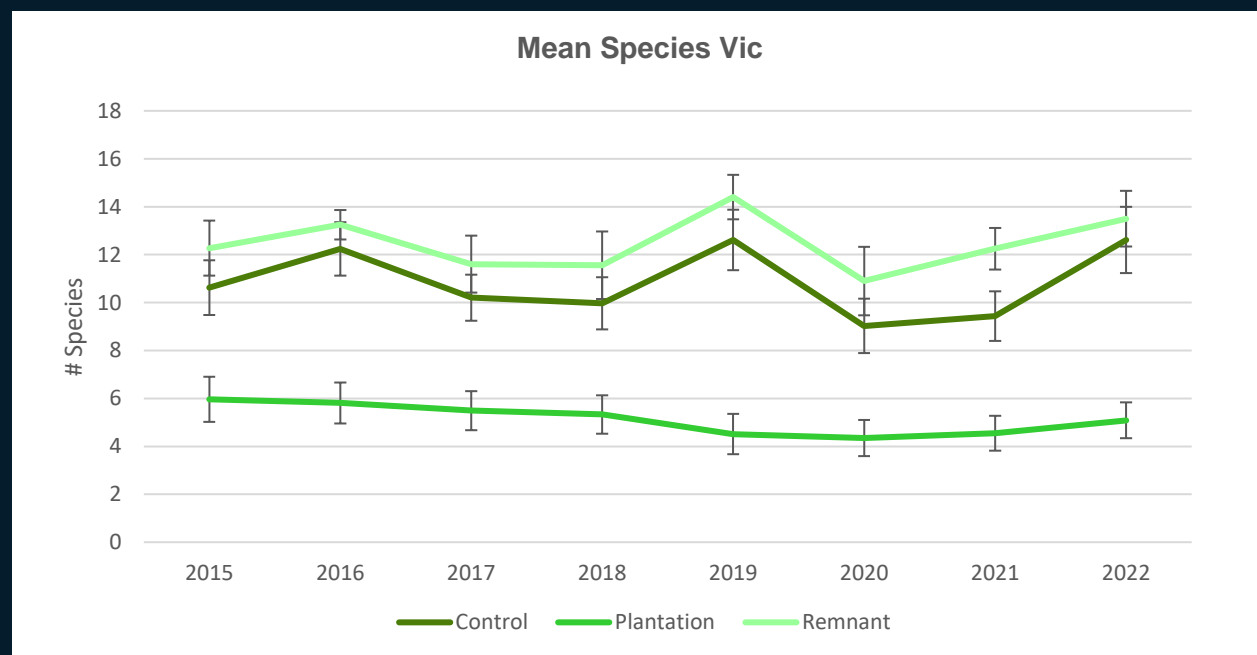
	Agriculture/Fallow	Control	Hardwood	Softwood	Remnant	Total
WA	6	62	63		56	85
NSW		55		51	54	80
Vic	9	80	88	7	65	108

# Why more species recorded across plantation sites?

- **There are 19 species of birds that have only been recorded on plantation sites in Western Victoria, in WA 14 species**
- **These fall into three groups – Open Country species or Waterbirds, with the addition of Raptors across WA sites**
- **The process of harvesting plantations makes habitat available in the landscape that otherwise wouldn't be there.**



# Importance of Retained Remnants



# Species of Conservation Significance

**Gang-gang Cockatoos**

**Blue-winged Parrots**

**White-tailed Black-cockatoos**

**Red-tailed Black-cockatoos**

**Australasian Bittern**

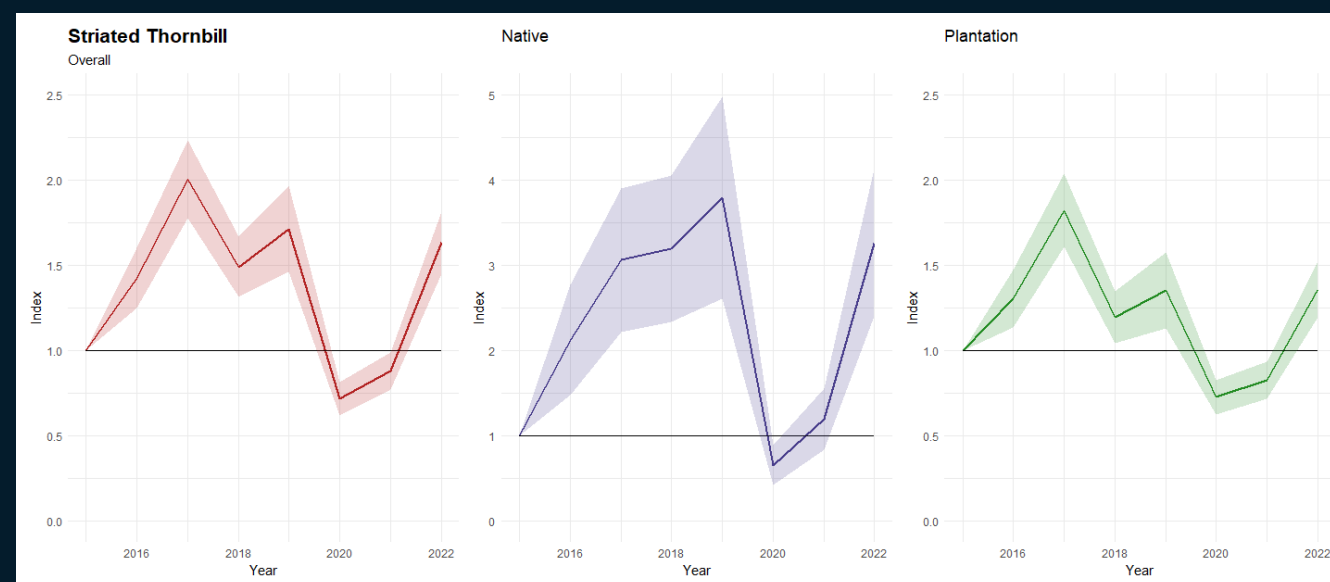
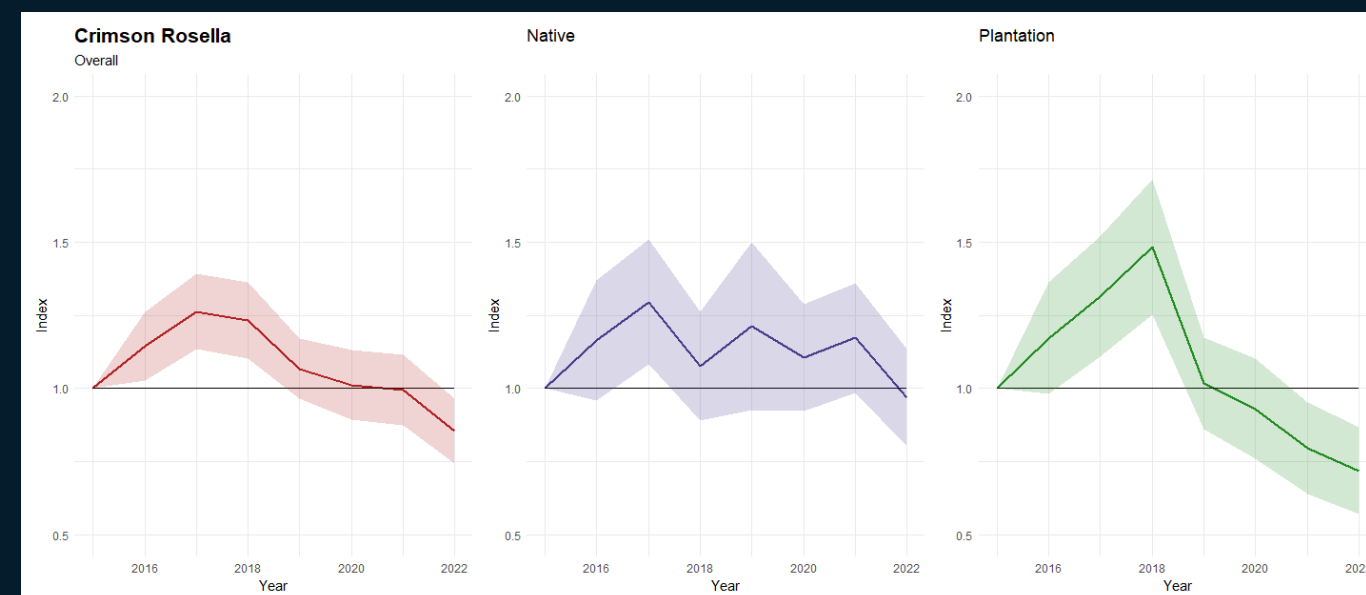
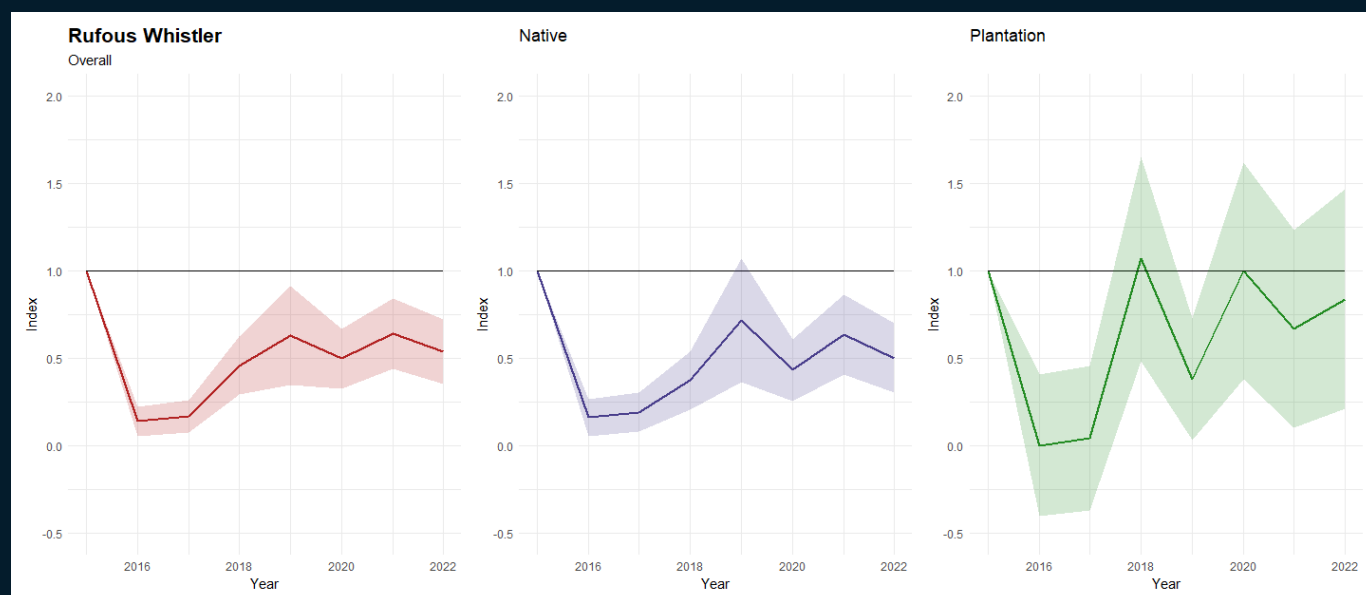
**Brolga**

**Speckled Warbler (NSW)**

**Victorian Temperate Woodland Bird Community**



# Common Species



# Going Forwards

- **Almost 10 years of monitoring is providing a better understanding of how different birds use plantations**
- **Decision making on what to plant eg softwood vrs hardwood**
- **Works on habitat improvement and HCV management**
- **Scope for contribution to species research – eg: Gang-gang Cockatoo Management Plan**
- **Further explore the nature accounting systems**

**PFOLSEN**



**New Forests**

**BirdLife Australia is leading the way in bird conservation. Today, we are proud to be Australia's largest bird conservation charity, made up of hundreds of thousands of members, volunteers and supporters across the country.**

**We work locally, nationally and globally to drive the recovery of threatened birds, restore nature and stop extinctions. Science and our supporters are vital ingredients in achieving our goals.**

**We collaborate with leading experts, partner with landholders, lobby governments and meet with schools and communities — and more — to protect Australia's birds and their habitats and stop bird extinctions.**