Habitat Restoration and Avian Responses around Cowra, Western Slopes NSW

Project of the Cowra Woodland Birds Program – Birdlife Australia

Julian Reid – The Fenner School of Environment and Society, ANU
Jack Baker, John Rankin, Neale Coutanche, Sue Proust, Peter West, Maret Vesk, Dan Florance, Madeleine Rankin,

Cowra Town Common

Rosemary Stapleton, Malcolm Fyfe, Vanessa Cain, Nick Nicholls, Garry Germon, Joy Pegler

Cowra Woodland Birds

Birdlife Australia

Australia
CWBP Goal: “To reverse the decline of woodland birds in the Cowra district” – the six key declining bird species

- Brown Treecreeper
- Grey-crowned Babbler
- Diamond Firetail
- Black-chinned Honeyeater
- Hooded Robin
- Speckled Warbler

Photograph Credits: Dee Jostanovic (Babbler) and Graeme Chapman (other five)
Aims of this talk
- Summary of CWBP Activities
- Revegetation Measures of Success
- Insights from Continuous Monitoring of Birds for 15 Years

Bob & Nick survey birds in reveg October 2017
Dedicated but aging volunteer ‘workforce’ of legends

Gwen & Allan Bush
retired farmers

Malcolm Fyfe
80 not out
Remnant woodland condition and its influence on woodland bird species richness and community composition

The noisy native: a miner menace?
Noisy miner habitat preferences and influence on woodland bird species richness

Woodland birds and connectivity:
Assessing the influence of scattered trees on resource accessibility

8 August 2008

Julian R.W. Reid2 and Ross B. Cunningham1
1The Fenner School of Environment and Society, Australian National University, Canberra
2CSIRO Sustainable Ecosystems, GPO Box 284 Canberra ACT 2601, julian.reid@csiro.au

A report prepared for the Lachlan Catchment Management Authority (Lachlan CMA) and Birds Australia Southern New South Wales and ACT (BASNA)
‘Warripendi Heath’ – high-quality bird habitat, Conimbla Ranges
Female Glossy Black-Cockatoo
Conimbla NP
Typical Birds – “Increasers” of small degraded sites large or aggressive

Galah

Pied Butcherbird

Crested Pigeon  Pied Currawong

Australian Magpie  Magpie-lark
A Typical Degraded Site – TDS

Most of the fertile sites, in the heavily cleared central portions of the district, are in this category with no or minimal understorey, as here, or weedy
Superb Parrot – Nesting on The Cowra Common
Site ‘lambi 2’ = ‘Reveg 1’ Clover Paddock, being planted in Sep 2005

1600 seedlings across 40 prepared plots on 4 ha
Iambi – 1, House Yard of Grey Box, Yellow Box & Blakeley’s Red Gum

Iambi 2, Reveg 1

2011
Site ‘lambi 4’ = ‘Reveg 2’, 6 ha
Cluster of 8 sites around Morongla Village along Morongla Ck

- 4 Iambi sites
- 3 riparian sites along creek, including a grazing ‘treatment’
- Morongla Cemetery Reserve, 6 ha of Grey Box over dense hopbush, originally used as a local ‘target’ for habitat restoration on Iambi
Morongla Cemetery Reserve
Response of Birds to Revegetation

Change in Landbird Abundance with Time, Lambi Reveg 1

Change in state response, seven years after planting

Change in Species Richness with Time, Lambi Reveg 1

Cumulative landbird species richness
Dynamic Landscapes and Bird Communities

Iambi sites x 4

Reveg 2

House yard
Scattered gums

Morongla Cemetery Remnant

Spp Richness

Nandewah Riparian

Cleared, weedy paddocks
Most strongly correlated spp, $R_m > 0.6$ ($P < 0.001$)

Significantly correlated spp, $R_m > 0.5$ ($P < 0.01$)

Influential Bird Species

Iambi 1 House Yard

Morongla Cemetery

Noisy Miner Proportion of Landbird Abundance
Lessons Learnt

There are actually **two steps/sets of goals** in revegetating land for birds

1. Can we establish and grow new plants successfully?
2. If so, Can we provide appropriate habitat for the birds of concern?

1. **Impediments and Failure to grow/establish plants**
   
   We have several sites in the Cowra area where the bulk of plants died
   
   - insufficient site preparation
   - dry conditions and lack of landholder/CWBP follow-up care/water
   - competition from overstorey gums
   - waterlogging and/or weed competition
   - browsing and trampling (stock, feral deer, lagomorphs, roos, swampy)
   - inflexible funding schedules/requirements

2. **Poor outcomes wrt colonizing birds – the Noisy Miner Problem**
   
   - moderate to high proportion of eucs in the plant mix

   • It’s hard work; needs good oversight and ongoing management.
   • In the Cowra area (!!!), in productive landscapes at least, keep euc numbers low so that their (eventual) cover remains small.
   • Putting shrubs in under euc canopy appears very difficult – perhaps better to ‘shrub-up’ adjacent areas, and so grow patches.
Recommendations & Issues for Discussion - Noisy Miners

In environments like the central portions of the Cowra district there is the potential for ramped-up revegetation initiatives to exacerbate the Noisy Miner problem.

Not just by creating new Noisy Miner estates, but perhaps also by triggering tipping points in the landscape whereby Noisy Miners can expand into and dominate existing native vegetation remnants (the Morongla Cemetery example).

Noisy Miners are a native species and we have many sites where they are a frequent but non-dominating member of diverse bird assemblages, such as riparian habitats. Area for fruitful research

I am not aware of any other site, of ca 120 where we have a medium to longer term sequence of observations, where the assemblage has flipped from ‘Good’ (with visits from, e.g. Crested Shrike-tit, Restless Flycatcher, Painted Button-quail, as in the early years at Morongla Cemetery) to ‘Poor’ and dominated by Noisy Miners and larger species only.
Other Issues for Discussion

**Direct Seeding** – obvious way to go in many areas

**Species provenance** – I am not a purist

Given climate change, perhaps start trialling large areas of revegetation with plants like **Mulga**, which in the west provide **great habitat for many declining woodland bird species**
Gwen & Allan Bush
- private 1.5 ha reveg initiative
- did not meet funding criteria
- lots of spiny and flowering shrubs, not all local native spp

Small, very isolated, highly productive soils

Quickly colonised by Superb Fairy-wrens, Grey Shrike-thrush and three species of Finch, with visits from Brown Thornbill, various small honeyeaters, Grey Fantail, White-browed Woodswallow, Golden Whistler, and few miners:

‘New Nature’
>20 year old reveg on
Breakfast Creek Station
Legacy of Brian Cumberland &
GA Capital’s Direct Seeding program

Wattles, Callitris, she-oaks, hop-bush
Keep the eucs to a minimum

Diamond Firetail, Painted Button-quail, Speckled Warbler and
various Thornbill and ‘flycatcher’ species √ √ √