Cocky Notes

Issue 30: Summer 2019/20

REVEGGNANGARA

BirdLife Australia has been campaigning about the issue of the clearing of pine plantations north of Perth for many years. The plantations used to cover 23,000 hectares but now stand at 5,000. This will all be gone in 4-5 years and there are currently no revegetation plans. This is a big problem for Carnaby's Black-Cockatoos, which roost and feed in the plantations. The Great Cocky Count shows that Perth's Carnaby's population has declined by 35% in the last decade and this is mainly due to habitat loss.

RevegGnangara group
Photo: Christine Groom

In the absence of any action from the McGowan government on this issue, BirdLife has decided to act. In September we launched a crowd funding campaign called RevegGnangara to start revegetation of some ex pine plantations. Evidently people share our concern about this issue since we have raised $18,800! Birdlife are in negotiations with the Department of Biodiversity Conservation and Attractions (DBCA) and a site has been selected in Pinjar. We are also hoping that DBCA will help out with site preparation and planting costs. The funds should purchase roughly 10,000 seedlings, which will cover 35 hectares at a low density (300 stems per hectare). Seedlings of Banksia attenuata, menziesii and prionotes, Corymbia calophylla and Eucalyptus rudis have been ordered from Chatfield's Nursery. Thanks so much to everyone who donated. We will be organising a planting day in June or July 2020, so watch this space!

BREEDING SEASON SURVEYS

Every year BirdLife staff and volunteers venture out of the city to peer into nesting hollows in the hope of seeing cocky chicks or eggs. As this goes to press these surveys are ongoing, but we can give a summary to date. 526 natural and 172 artificial hollows have been surveyed (either with 'tap and flush' or 'cocky cam') and 141 and 51 breeding attempts have been recorded respectively by Carnaby's Black-Cockatoos. This shows an occupation rate of 27% in natural hollows and 30% in artificial hollows. 300 staff hours and 1600 volunteer hours were spent doing this work. The standout results were at Cocanarup Reserve near Ravensthorpe and the ECU Joondalup campus. At Cocanarup 75 occupied nests were recorded of 203 nests surveyed. Considering this site has no artificial hollows, it probably represents the most important breeding site in the south of the state. In Joondalup, one natural hollow and nine artificial hollows were occupied this year. This is the best result at this site since surveys began in 2016.

The perils to both chicks and hens was shown this year as a carpet python was caught red handed emerging from an occupied nest at Mogumber Reserve! Our thanks go out to all the volunteers and land owners who helped us out this year. Two of our long standing volunteers will be passing on the baton next year. The work involved is tough physically and skills and experience are needed to locate nests. If you are interested and are available for a week or two in October/November 2020 please email carnabys@birdlife.org.au.

Adam Peck
Black-Cockatoo Project Coordinator

OPERATION RAINBOW ROOST

Operation Rainbow Roost is a BirdLife Western Australia project aimed at locating roosting sites for the introduced Rainbow Lorikeet (*Trichoglossus haematodus*) and is currently funded by Lotterywest. Rainbow Lorikeets are a declared pest species in south west Australia. Each February for the past three years, BirdLife Western Australia has coordinated a count at Rainbow Lorikeet night roost sites across the Perth Region to estimate the overall population of the species in south west WA, understand more about the distribution of this pest species and to assess the impact of management actions.

- We need **YOU**! Volunteer to count a roost site by filling out the form at https://forms.gle/coP7aaaJFwFzL9nHA.

Roosts counts are conducted in the last week of February 2020 from 6:30pm to 7:30pm.No experience is necessary and it takes just an hour or two.

Rainbow Lorikeet rampant.
Photo: Maris Lauva

Rainbow Lorikeets roost communally in tall trees each night when they are not breeding. The number of birds staying in communal roost sites peaks in summer after the main breeding season. Lorikeets arrive at the roost sites around sunset in noisy groups. They leave their roosts in the pre-dawn (prior to 5am) during the summer months and this means that early morning sightings are often distant to the roost site. Roost sites are often many kilometres from feeding sites that the lorikeets use during the day, so it is important to only report sites where you see lorikeets at sunset.

Other ways you can help Operation Rainbow Roost

- Don't feed Rainbow lorikeets.
- Cut back the dead leaves and stems on your date palm or cotton palm trees to reduce Rainbow Lorikeet nesting opportunities.
- Never release a Rainbow Lorikeet from captivity.

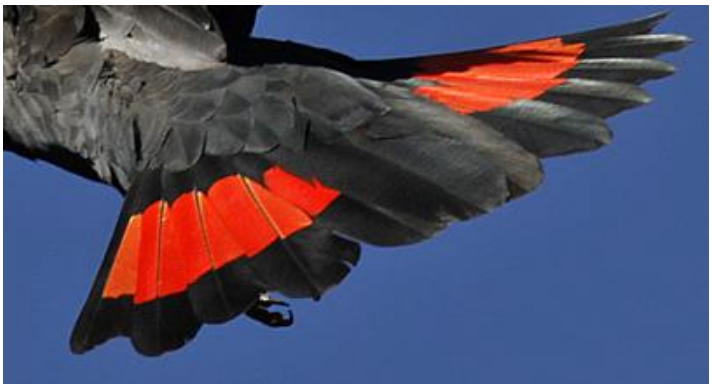
You can report night time roosts by emailing rainbowroost@birdlife.org.au or by phoning the WA office on 9383 7749.

Robyn Pickering
Operation Rainbow Roost Project Coordinator

FOREST RED-TAILED ROOST COUNT

Recent Great Cocky Count (GCC) surveys have shown a large increase in FRTBC numbers in coastal areas in April. This increase is thought to be due to birds foraging on Cape Lilac seeds. Last year we started a new count to survey FRTBC roosts in spring. The aim was to find if FRTBC stay in coastal areas all year or return to forested areas. So, do the birds stick around all year? We recorded more FRTBC in spring 2019 compared to 2018, which shows that their movement patterns may change from year to year, however the numbers are still low in comparison to autumn GCC counts. Average counts of all sites were 74 in the GCC, 3 in October 2018 and 21 in October 2019. In coastal areas the GCC average was 104 compared to 14 for October counts. In the Perth hills the GCC average was 47 compared to 18 for October counts. This shows a seasonal redistribution of birds, moving from coastal Perth (summer/autumn) to forested areas (winter/spring). We recorded two large roosts in Dwellingup (145 and 150). In the Perth hills they do not necessarily roost at the same sites throughout the year, preferring different roosts in spring vs autumn. This illustrates the fact that more roosts remain to be reported to us, so if you know of a FRTBC roost in the Perth hills or our southwest forests please let us know (greatcockycount@birdlife.org.au). Thanks to all the volunteers and land owners for their time and access to their properties. These data will be included in the 2020 GCC report. This work was funded by The Alcoa Foundation. For more on Red-tailed related news see Erika Roper's article overleaf.

Adam Peck
Black-Cockatoo Project Coordinator



Detail from a Forest Red-tailed tail
Photo: Keith Lightbody

RETURN OF THE KARAK

You might have noticed that winter in Perth is a lot quieter these past couple of years, largely due to the lack of Karak (Red-tailed Black-cockatoos) in the city. Once restricted to the Jarrah forest, since 2000 the Karak has been a common sight in Perth, with many people hosting these special visitors in their neighbourhoods as they feed in gardens and street trees. A few years ago, they were urban dwellers year-round, but now the Karak is a summer visitor, visiting Perth between November and May (approx.).

A pair of Forest Red-Tailed feeding on Cape Lilac seeds
Photo: Erika Roper

The presence of Karak in urban areas is closely tied to the availability of their favourite urban food, cape lilac seeds, which they extract from the berries with ease. Cape lilac is an exotic street tree that was planted extensively in Perth in the last century. Cape lilac is an interesting tree, the berries stay on the tree for most of the year, as the berries ripen from green (unripe), to white (ripe), to gold (overripe). Overripe berries usually fall from the tree in spring, when the tree develops flowers. Karak will eat the seeds from berries at all ripeness stages, which means that cape lilac can provide food for the Karak for most of the year. Assuming that there are berries on the trees…

The Great Cocky Count shows us that Karak numbers in Perth have drastically increased in the past few years, from 771 in 2016 to 3499 in 2019. This population increase has changed the availability of cape lilac over the year, which in turn has altered the presence of Karak in the city throughout the year.

Prior to 2017, the Karak would stay in Perth year-round, as there were enough trees and berries to support the small urban Karak population. With more Karak feeding on cape lilac in the summer, the food supply doesn't last as long, and the berries are eaten by winter. Some Karak seem to stay for a while, switching to different foods like Liquidambar and Tipuana, however they too move on eventually, as these foods are only available for short periods. The Karak likely return to the Jarrah forest, where marri and jarrah seeds are usually available somewhere. But come the end of spring, when a new batch of cape lilac berries are developing, the Karak return to the city once more, to fill the skies with their calls, and the ground with the debris from their feeding.

For more information about the urban Karak you can follow me on Twitter @_erikaroper, on Facebook facebook.com/UrbanCockatoos, or at my blog erikaroper.com

Erika Roper
PhD Candidate, UWA

MAJOR MITCHELL'S BREEDING

In 2014 Keith Lightbody installed an artificial nest log at The Eyre Bird Observatory. A Cocky Cam inspection in October 2019 showed three Major Mitchell's Cockatoo chicks, which fledged at a later date. To our knowledge this is the first report of this species breeding in an artificial hollow. Well done to all involved!

Adult Major Mitchell's Cockatoo in residence
Photo: Keith Lightbody

TRACKING COCKIES

I started my PhD research 4.5 years ago on the movement ecology of the three threatened black cockatoo species (Baudin's cockatoo, Carnaby's cockatoo and Forest red-tailed black cockatoo) endemic to Western Australia. The first three years were spent conducting fieldwork over various release sites across these species' distribution range, following flocks in the field and collecting telemetry data. To track the movement of these species I used a combination of GPS and satellite PTT tags. The satellite tag allowed me to find roosts of black cockatoo flocks and to follow flocks during the day to collect information on the flocks' daily activities. The GPS tag provided fine scale movement data which was used to perform intricate analysis methods to estimate their home range, daily movement distances and the frequency of visitation to certain key habitat sites.

For my research, I wanted to ensure that I only investigated flock movement, which meant the tagged birds had to be integrated into a wild flock of black cockatoos; this was confirmed through behavioural change point analysis and field observations. After confirming that the data was representative of flock movement, I analysed the satellite data to determine differences in movement across regions. The GPS data was used to identify key roost and foraging sites by means of a revisitation analysis, and to estimate resident home ranges and the distances different flocks moved in these, dependant on the region.

The results of my research showed that key roosts sites for the three species predominantly occurred on public green space and private property. These were closely associated with foraging habitat which mainly occurred as remnant vegetation in the landscape or as nature reserves. Riparian zones and roadside vegetation were shown to play a crucial role as foraging habitat and in providing connective landscape structures. Analysis of the movements of black cockatoos indicated that foraging movements differed both between and within regions depending on the structure of the landscape and its available food resources, resulting in varying home range sizes.

These results suggested that movement for the three black cockatoo species is region-specific, driven by food resources in the landscape. In addition, between species, movement varied as each species uses the landscape in different ways, depending on seasonal movements and ecological requirements.

At present it is still difficult to determine the requirements for the three black cockatoo species in the Western Australian landscape. Further long-term tracking studies are required at a regional level, in combination with habitat modelling in order to gain further information on the requirements for black cockatoos to persist in a human modified landscape.

This research has provided critical baseline data required to address knowledge gaps listed in Recovery Plans for the three species of black cockatoo and has shown that research of this kind can definitively identify key habitat sites for black cockatoos.

As black cockatoos have moved into the urban areas it is highly likely that, at some point, most remnant native vegetation is used by black cockatoos. As they are vulnerable to vehicle strikes it is important to slow down when they are spotted feeding on roadside vegetation. In addition, it is important to retain native vegetation as much as possible within urban areas and, if possible, to plant native vegetation in your own garden to supplement black cockatoos on their daily trips through your neighbourhood. Securing your garbage helps black cockatoos indirectly as well, as garbage attracts ravens which are known to attack black cockatoos. Although ongoing research into the conservation of these species is certainly required, real differences are made every day by people volunteering their time or doing just that bit extra in their daily lives to ensure the preservation of these beautiful birds which live amongst us.

Sam Rycken

PhD Candidate, Murdoch University

A carpet python at Coomallo breeding site, with Carnaby's chick inside and adult Carnaby's also predated.
Photo: Rick Dawson

NEW FUNDING!

A new Federal government fund of $4 over three and a half years starts soon. This funding will be delivered to NRM groups (NACC, SWCC, PHCC, SCNRM and Wheatbelt NRM) to do on ground work with farmers and other land owners. BirdLife Australia are contracted to provide support to this exciting project to enable the best outcomes. We will be trying to locate new breeding sites and supporting land owners to revegetate, fence remnant vegetation and install artificial hollows (depending on the relative need for these activities). A new project officer will start work soon!

COCKY WATCH

CockyWatch is a citizen science road transect survey for black-cockatoos that was developed by BirdLife Australia and the Department of Biodiversity, Conservation and Attractions (DBCA) to assist in better estimating and tracking changes in populations of all three southwest threatened black-cockatoos species, including Carnaby's, Baudin's and Forest Red-tailed Black-cockatoos, across their southwest range.
The method involves volunteer citizen scientists recording black-cockatoos seen as they drive a pre-determined transect, recording the start point, end point and the numbers and distance of flocks of birds from the road.

The contribution of a small group of 22 dedicated volunteers has been tremendous. Over the past 18 months, 431 surveys were completed across 212 individual transects covering an incredible distance of 32, 096 kms. While it will take many more surveys and more coverage of the southwest to estimate population sizes of the three cockatoo species, the data is providing valuable information about all 3 species across some regions of the southwest that have been well surveyed.

A total of 2,262 black-cockatoos were recorded along transects (i.e. about one cockatoo per 14 km of survey) in 337 flocks that varied in size from 1 to 100 birds. Of these flocks, 161 (48%) were groups of Red-tailed Black-cockatoos, 68 (20%) were Carnaby's and 30 (9%) were Baudin's.

Despite the higher numbers of flocks of Red-tailed Black-cockatoos compared with the two white-tail species, their average flock size (4 birds per flock) was more than half the size which meant they were not the most abundant species recorded. Carnaby's Black-cockatoos were recorded in the highest numbers across a greater area of the southwest, typically in larger flocks (average 11 birds per flock) than Red-tails. Baudin's Black-cockatoo were the least recorded of the three species and their average flock size was similar to Carnaby's. What really stands out is how infrequently large flocks (greater than 100 birds) were sighted, when historically large flocks reportedly blanketed the skies in some parts of their range.

Preliminary analysis also reveals:

- Forest Red-tails to be the predominant cockatoo species in the Jarrah forest (Fig. 1);
- An association of Forest Red-tails with peri-urban habitats and farmlands away from the Darling scarp, and including the Swan Coastal Plain;
- Baudin's stronghold in the farmlands, Jarrah and Karri forests of the Warren region, with higher densities than in other regions.
- Cockatoos were more likely to be observed in the afternoon, most likely when they were in flight heading to roosts.

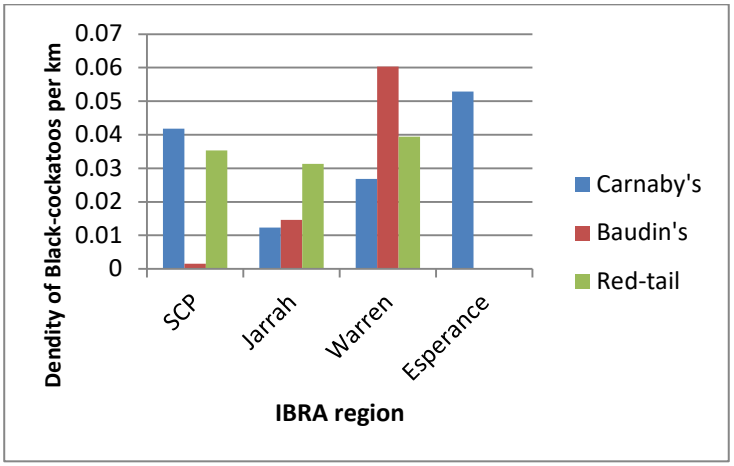


Fig. 1. Relative densities (number of birds per km) of the 3 Black-cockatoo species across the southwest. To date, no birds have been recorded in the wheatbelt and very few have been recorded across the Geraldton sandplain, but these areas have not been adequately surveyed.

If you would like to contribute surveys, please go to our website at: http://birdlife.org.au/projects/southwest-black-cockatoo-recovery/cockywatch where there are instructions and data sheets. Also feel free to contact Vicki Stokes at vick.stokes@birdlife.org.au if you have any questions. In early 2020, recording surveys will become much easier when the data collection form will be available on our *Birdata* phone app and website. Keep tuned about this!

Surveys can be done at any time of the year and you can repeat surveys of the same transect if you travel the same route at different times of the year. This will help to identify seasonal changes in cockatoo occurrence. For example, throughout the year I travel the same route between Perth and Albany several times and each time I do a CockyWatch survey. Sometimes I see no birds, but that is fine because that information is just as important as when birds are seen. We really do appreciate everyone's contribution and surveys can be a fun way for the family, friends or individuals to pass the time, particularly on long travels. And at the same time you are enjoying seeing the birds and collecting valuable information to help better understand them and where they spend their time throughout the year.
Safe and happy travels!

Vicki Stokes
WA Program Manager, BirdLife Australia

THE COCKY CONSERVATION TEAM

Adam Peck, Black-Cockatoo Project Coordinator

Adam works on all things Black-Cockatoo related - from running the Great Cocky Count, to coordinating Black-Cockatoo breeding season surveys and raising awareness to making sure the voices of our cockatoos are heard. If you would like to volunteer to assist with these projects or if you know where Black-Cockatoos feed, drink, nest or roost for the night please contact adam.peck@birdlife.org.au or (08) 9287 2251.

Vicki Stokes, WA Program Manager

Vicki is our Perth-based manager for BirdLife Australia's WA funded projects, including the Southwest Black-Cockatoo program. Contact Vicki for questions about the program at vicki.stokes@birdlife.org.au or (08) 9287 2204.

Cocky Notes is published with funding from The Alcoa Foundation. The Southwest Black-Cockatoo Recovery Program is funded and supported by a number of organisations, including State NRM and those represented here:

HAD A CHANGE OF ROOST?

If you've moved homes or changed email addresses, or if you don't want to receive Cocky Notes in the future, please let us know at wa@birdlife.org.au

2020 GREAT COCKY COUNT!

Registrations for the 2020 Great Cocky Count are now open! This year the Count will be held on Sunday, April 5, at sunset. We need your help to make it bigger & better than last year. Register online by March 15 at:

https://forms.gle/H4skzKN1a5omXhwY8

If you know of any areas where black-cockatoos roost overnight, please let us know at greatcockycount@birdlife.org.au so that we can include it in this year's count.