Cocky Notes

Issue 22: Summer 2015

COCKIES IN CRISIS

BirdLife Western Australia has been working on conserving Carnaby's Black-Cockatoos for over 15 years. From this work, we know a lot about these birds – about their ecology, breeding biology, and movements. With ongoing support from dedicated volunteers, we have also established some fantastic long-term monitoring programmes such as the Great Cocky Count and been working with landowners throughout the breeding range of the Carnaby's Black-Cockatoo to protect, monitor, and add to breeding habitat.

Unfortunately to date there is comparatively less known about our other two southwest black-cockatoos, Baudin's Black-Cockatoo and the Forest Red-tailed Black-Cockatoo, referred to collectively as Forest Black-Cockatoos. Baudin's and Forest Red-tailed Black-Cockatoos are likely to have smaller population sizes than Carnaby's, yet we still lack the critical information about their key habitat requirements to guide our conservation actions. The major threat to both species is habitat loss and Baudin's is also subject to persecution as a pest.

To help conserve these less-understood feathered friends, BirdLife recently launched the Cockies in Crisis project. The project will work on several fronts – to raise awareness of these species in the community, to establish some long-term citizen science projects to monitor population sizes and breeding, and to work with all relevant stakeholders to address the threats facing these iconic West Australians.

How you can help

BirdLife projects cannot run without the assistance of keen-eyed volunteers and the Cockies in Crisis project is no exception. At present, we would be grateful for all reports of black-cockatoos, in particular both of the Forest Black-Cockatoo species, to help add to our knowledge of their habitat use.

We need to know - where and when they feed, drink, investigate hollows or other breeding behaviour, or where they go to roost in the evenings. Sightings forms are available at: http://birdlife.org.au/projects/southwest-black-cockatoo-recovery/publications-and-forms .

Female Forest Red-tailed Cockatoo (Photo: R. Pickering)

In early 2016, we will be establishing surveys at water points used by black-cockatoos. So as the weather warms up, let us know where you see cockatoos drinking – cockatoos usually go to drink in the late afternoon before heading to their evening roost sites.

If you have any questions or are after additional information, contact tegan.douglas@birdlife.org.au, or on (08) 9287 2716.

Tegan Douglas,
Cockies in Crisis Project Coordinator

RESULTS OF 2015 GREAT COCKY COUNT

BirdLife Australia's 2015 Great Cocky Count (GCC) Report was released in October 2015 at the Threatened Species Forum in Geraldton.

The 2015 count had the highest participation rate since the GCC began in 2006, with 606 volunteers surveying 293 roost sites across the southwest.

The total number of white-tailed black-cockatoos counted in 2015 was 9082 across the entire range, which is the lowest recorded in the last three GCC's.

The count of 5518 Carnaby's Black-Cockatoos in the Greater Perth-Peel Region was a decline from the 2014 count. The GCC data shows declining trends in both the fraction of occupied roosts and flock size over the last six years (2010-2015). These declines have resulted in an estimated annual reduction in Carnaby's Black-Cockatoo of 15% per year in the Greater Perth-Peel Region.

While the Great Cocky Count's value remains strongest in and around Perth (now with 5 years of consecutive data), confirmed roosts in regional areas will, in time, provide information on Carnaby's population changes beyond the Swan Region.

Thank you to all the volunteers that participated in this year's survey. The 2015 report and summary is currently available from: http://www.birdlife.org.au/projects/southwest-black-cockatoo-recovery/publications-and-forms

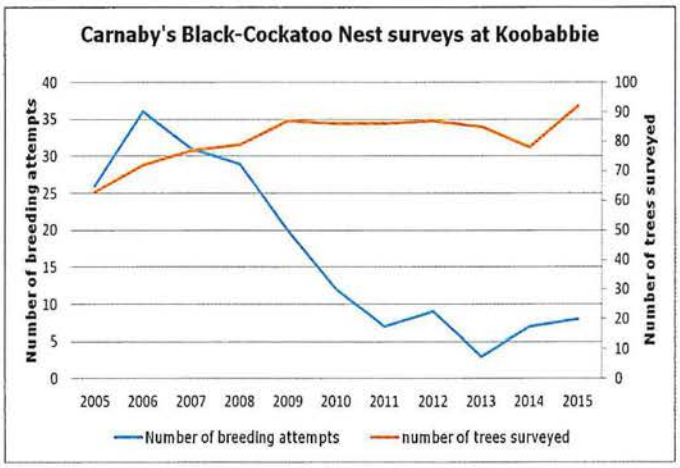
The next Great Cocky Count will take place on **Sunday 3 April 2016**. Please mark the date on your calendars! We hope to welcome a new Great Cocky Count Coordinator on board in January.

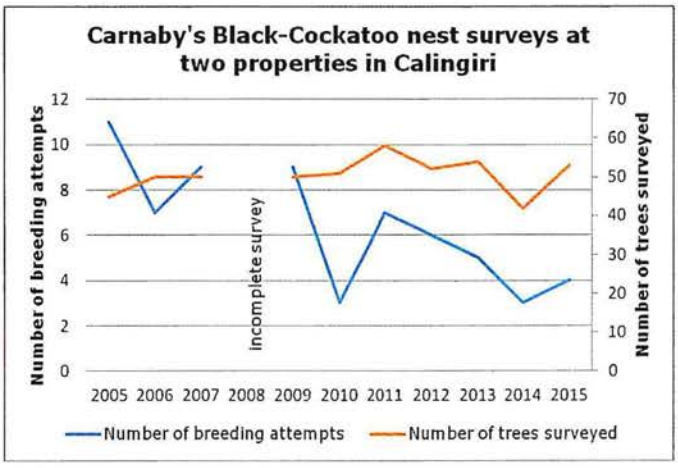
A Flock of Carnaby's Black-Cockatoo (photo courtesy: Keith Lightbody)

RECORDS OF CARNABY'S BLACK-COCKATOO NESTING ATTEMPTS

A review of data collected from long-term nest surveys is cause for concern. This shows that the population declines noted in the Great Cocky Counts are not just confined to the Greater Perth-Peel Region.

Nest surveys at Koobabbie Station in Coorow and two properties in Calingiri have been conducted now for over 10 years. The graphs below show that nesting attempts at these properties has declined dramatically even though the number of trees surveyed has increased. These declines are consistent with the observations of long-term property owners in these areas, who tell us of large declines in Carnaby's sightings and nesting, despite the availability of nesting hollows on their properties.





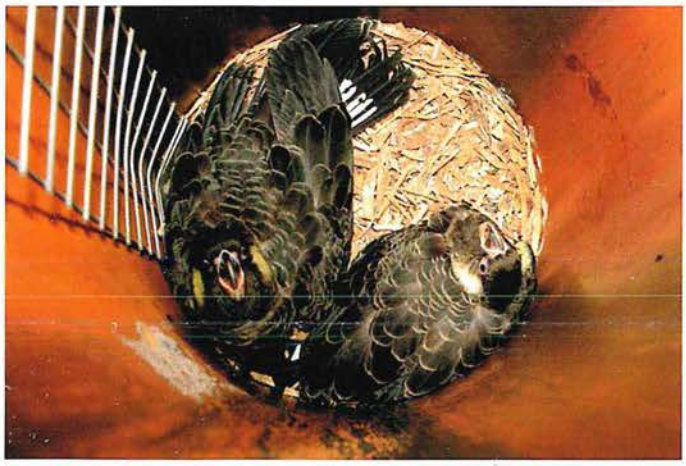
These results show the importance of conducting Carnaby's Black-Cockatoo nest surveys over many years. BirdLife Australia has funding to continue the nesting surveys in 2016. Thanks to all our volunteers who have conducted nest surveys.

PREFERENTIAL USE OF ARTIFICIAL HOLLOWS BY CARNABY'S

The Department of Parks and Wildlife along with Dr Denis Saunders have been monitoring artificial nest hollows and natural hollows at Coomallo Creek for 6 years. New data indicates that Carnaby's Black-Cockatoos are preferentially using large artificial hollows rather than natural hollows available in the area.

The table below of the 2015 nesting season to date shows that while there are fewer artificial hollows available, more of these are being used for breeding than natural hollows.

	Number of hollows available	Number of chicks fledged	Number of nestlings	Number failed	Totals
Natural Hollows	94	5	27	13 (28.9%)	45
Artificial hollows	62	6	37	12 (21.8%)	55
Totals	156	11	64	25 (25%)	100



Two Carnaby's Black-Cockatoo chicks in one of the large artificial hollows (photo courtesy: Rick Dawson)

Artificial hollows provided 39.7% of available hollows at Coomallo Creek, with 55% of the breeding attempts made in them.

The use of the large artificial hollows is also increasing the amount of breeding occurring in the study area. In 2009 there were only 41 breeding attempts, but after installing 62 large artificial hollows and repairing natural hollows the number of breeding attempts has increased to 101 last year and 100 this year.

A female Carnaby's Black-Cockatoo in one of the large artificial hollows (photo courtesy: Rick Dawson)

The most successful artificial hollows have been those that are 40cm in diameter, 1.1m deep and 4m above the ground. The Department of Parks and Wildlife is proposing to install large artificial hollows in the southeast of the bird's breeding range during 2016 in an attempt to increase breeding attempts and success in that region.

Rick Dawson and Denis Saunders

KEEP UP WITH THE FLOCK!

The Southwest Black-Cockatoo Recovery Program is on social media! Keep up to date with all the latest happenings:

Southwest Black-Cockatoo Recovery Program

@blackcockatoos

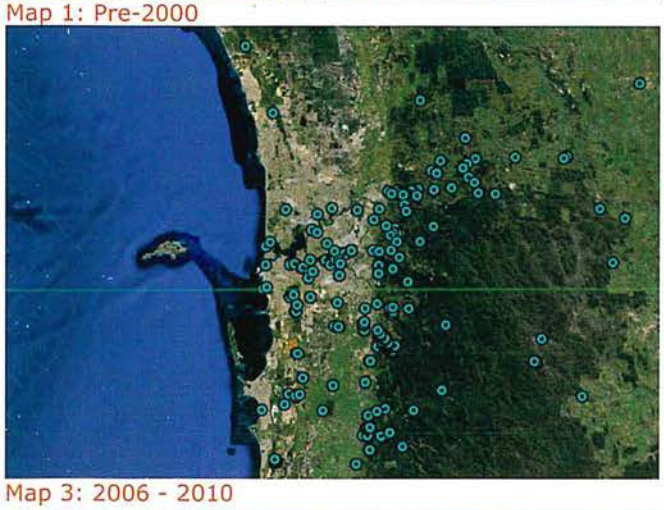
URBAN RED-TAILED BLACK-COCKATOOS

If you have lived in Perth for a while you might have noticed a recent addition to the city's cockatoo coterie. The forest red-tailed black-cockatoo (*Calyptorhynchus banksii naso*), commonly known just as 'red-tail', is a large black-cockatoo which can be easily distinguished from the white-tailed Black-Cockatoos by both plumage and call. Male red-tails have solid black plumage and bright red tail panels. The female has yellow and orange striped tail, yellow spots on the face, and yellow barring on the chest. Historically, the species has been restricted to the Jarrah forests of southwest Australia, where it feeds on the seeds of Marri (*Corymbia calophylla*) and Jarrah (*Eucalyptus marginata*), and nests in large Marri trees. However, the red-tails have begun to move out of the forest, and into the city.

Movement into urban areas

Before 2000, red-tails were very rarely seen out of the Jarrah forest (dark green, map 1). Between 2001 and 2005 a few red-tails were sighted out of the Jarrah forest, and in Perth city (grey, map 2), and since 2006 these sightings have progressively increased (map 3 and 4). There is a resident, breeding population at Murdoch University.

Map 1: Pre-2000



Map 3: 2006 - 2010

Several other populations are also believed to be resident. Many other red-tails appear to be transient, and move between the forest and the city.

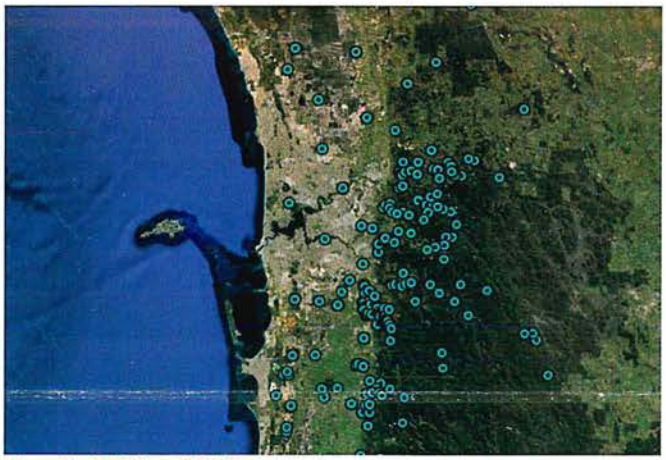
Habitat use

A new project has started looking at the urban red-tails and how they are using this landscape. Local knowledge tells us that urban red-tails are feeding on novel food sources, such as introduced ornamental species like Cape Lilac (*Melia azedarach*) and Illyarrie (*Eucalyptus erythrocorys*). This raises many interesting questions. Do these novel foods sources provide energy to the red-tails when food availability in the forest is low? Are the novel foods easier to eat? And do they provide more energy? This project will answer these questions and more!

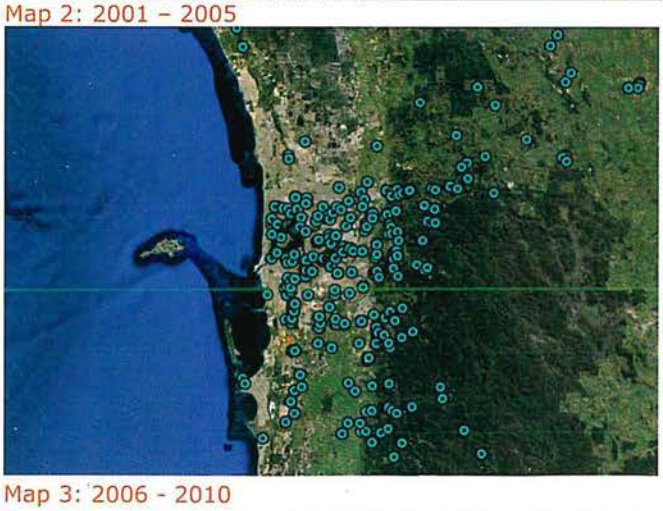
How you can help

Please send any sightings of red-tails roosting or foraging in urban areas to Erika Roper (erika.roper@research.uwa.edu.au or 0432 243 778). If you find red-tails foraging, please note the food species, location, time of day, and number of birds. For more information on Erika's research project please email her, or visit erikaroper.wordpress.com

Erika Roper
PhD Candidate, University of Western Australia



Map 2: 2001 – 2005



Map 3: 2006 - 2010

CARNABY'S ROOST RESEARCH

For many animals, communal roosting is an integral life-history characteristic. Roosts give individuals an opportunity to preen, rest, and remain vigilant for predators. Carnaby's Black-Cockatoos have large night-time communal roosts, and are an ideal model species to test some of the theories about the benefits of roosting.

Feeding and roosting habitat, are vital components for the survival of this species during the non-breeding season. Currently little is known about the nocturnal roost site structure and associated roost site characteristics used by these cockatoos. Roost structure and landscape composition are critical for foraging and roosting habitat selection by Carnaby's on the Swan Coastal Plain.

I have been using data from the citizen science project, the Great Cocky Count, which has provided data on flock sizes and locations of confirmed roost sites. The objectives of my study are to:

- characterise the nocturnal roosting habitat of Carnaby's in terms of the tree species and structural characteristics,
- roost site characteristics,
- and landscape characteristics, and
- from these variables develop a model of Carnaby's Black-Cockatoo roosting habitat.

The species is in need of special protection because it is endangered and the Swan Coastal Plain is critical landscape for supporting current and future populations of Carnaby's Black-Cockatoos during the non-breeding season. With the help of the roosting habitat model this study will provide a deeper understanding of Carnaby's roosting and habitat requirements. Land-use decision-making will also be informed by the outcomes of this study, to further aid in sustaining and conserving Carnaby's Black-Cockatoo.

Candice Le Roux,
Masters student, Edith Cowan University

Roosting Carnaby's in the evening light (Candice Le Roux)

BAUDIN'S AND BIRD NETTING

Baudin's Black-Cockatoos' penchant for apples is well known, and this has long brought them into conflict with orchardists in the southwest. While illegal persecution of Baudin's still persists, a range of non-lethal techniques for scaring and deterring birds are used by the majority of orchardists throughout the southwest to keep birds out of orchards, incorporating use of sound, sight and presence of potential predators as cues.

However the most sure-fire way of keeping Baudin's and other birds out of orchards is by excluding them entirely - using netting.

Rohan Prince and Susan Murphy-White, from the Western Australian Department of Agriculture and Food, are in the middle of a project looking at exactly how exclusion netting benefits apple production.

Results from the first year of the study, conducted at multiple sites near Manjimup used different coloured nets and a combination of irrigation systems and showed some exciting preliminary findings – for lovers of both apples and cockatoos.

Netting reduced sun damage to fruit and completely eliminated bird damage (by cockatoos and other parrots). Sites that were both netted and used drip irrigation had substantial reduction in water use, a fantastic outcome in a drying climate. Although no hail was recorded during these seasons, data from other states demonstrate that netting also reduces hail damage to fruit crops.

The research highlighted that some tweaks are needed to fully make the switch to netted orchards and maintain fruit colour and quality. The current harvest will adopt these changes, and hopefully the results will provide further incentive for orchardists to use nets to increase production, save water and keep Baudin's Black-Cockatoo out of mischief.

We look forward to hearing the results from the 2015-2016 harvest. More detail about the work can be found at http://apal.org.au/netting-trial-results-wa/ and from the Forest Black-Cockatoo Symposium Report, available at: http://www.birdlife.org.au/projects/southwest-black-cockatoo-recovery/publications-and-forms

Tegan Douglas

HAD A CHANGE OF ROOST?

If your home or email address changes, or if you don't want to receive Cocky Notes in the future, please let us know at wa@birdlife.org.au .

THE COCKY CONSERVATION TEAM

Tegan Douglas, Cockies in Crisis - Forest Black-Cockatoo Project Coordinator

Tegan is based in the Perth office working on the Cockies in Crisis project. This project includes all three threatened black cockatoos within the south-west Forest area, but particularly Baudin's Black-Cockatoo and the Forest Red-tailed Black-Cockatoo. Contact Tegan if you know where these species feed, roost for the night, drink or nest, at tegan.douglas@birdlife.org.au or (08) 9287 2716.

TBA, Carnaby's Black-Cockatoo Project Officer

BirdLife WA is in the process of employing a new project officer to take over the long running Great Cocky Count and Carnaby's Black-Cockatoo nest survey projects. If you would like to volunteer to assist with these projects or know where Carnaby's Black-Cockatoos feed, drink, nest or roost for the night please contact carnabys@birdlife.org.au or (08) 9287 2251.

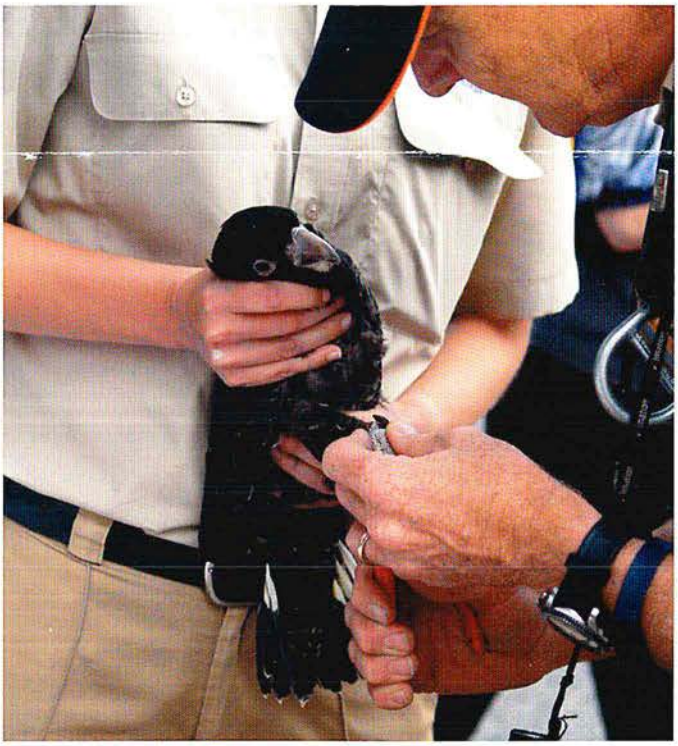
Helen Bryant, WA Program Manager

Helen is the Perth-based manager for BirdLife Australia's WA funded projects, including the cockatoo program. Contact Helen for questions about the program, at helen.bryant@birdlife.org.au or (08) 9287 2204.

HOT OFF THE PRESS:

Carnaby's Black-Cockatoos breeding in City of Joondalup!

Recently a pair of Carnaby's was discovered breeding in the City of Joondalup, and successfully raised a chick. This is extremely unusual, as Carnaby's normally breed inland, beyond the Darling Scarp. If Carnaby's are starting to breed closer to Perth, remnant bushland in the Perth area becomes even more important to protect. Rick Dawson and Karen Smith from the WA Department of Parks and Wildlife were on site to weigh and measure the youngster and give it a unique metal leg band.



Karen and Rick measure the youngster (Candice Le Roux)

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