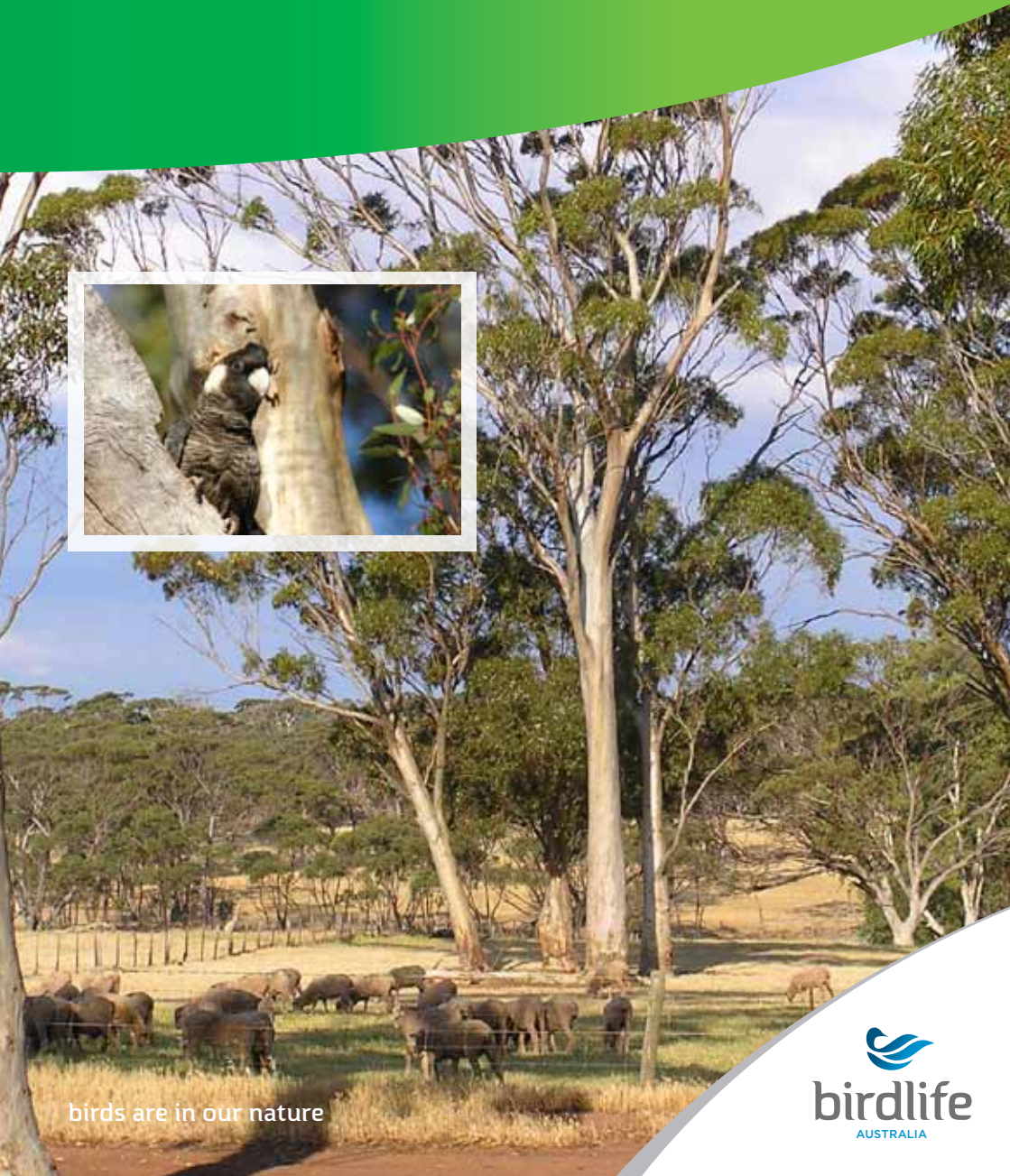
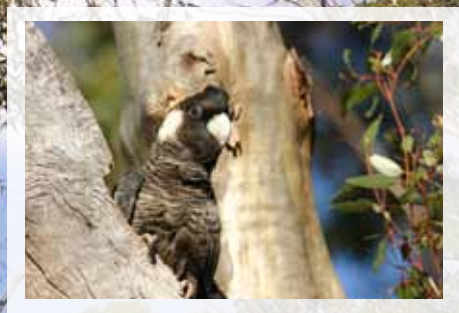


Carnaby's Black-Cockatoo and your farm



birds are in our nature

BirdLife Australia

BirdLife Australia is the only national conservation organisation focused on our native birds and their habitats. With over 100 years of experience across our unique and varied landscapes, we are the heart of bird research and conservation in Australia. New members and supporters are warmly welcomed.

Carnaby's Black-Cockatoo conservation is an important part of BirdLife Australia's work in Western Australia. We have the longest-running, community-based Carnaby's conservation project in the state, and have been working with landholders, land managers, communities and government to better conserve and manage the species since 2000.

Carnaby's Black-Cockatoo

Carnaby's Black-Cockatoo is one of three black-cockatoos that occur only in south-western Australia. Of the three, it is the only one that moves large distances between the breeding and non-breeding seasons. Widespread clearing for agriculture in the years after the Second World War resulted in a significant contraction of range for the cockatoos and they no longer occur through most of the central Wheat-belt. They are listed as Endangered and fully protected.

During the breeding season, Carnaby's Black-Cockatoos move through farming landscapes, nesting in woodland remnants on farms and in reserves, on road verges and in paddock trees. They feed on native plants such as grevilleas and banksias, and weeds such as wild radish and geranium. Farm dams, creeks and troughs provide important sources of water. After the nesting season, most birds move back to coastal or near-coastal areas, including the Perth area.



Photo by Georgina Steytler

Farms and Carnaby's

Farms in southern Western Australia are very important for the long-term survival of the Carnaby's Black-Cockatoo. Farms provide bush for nesting and feeding, as well as watering and overnight roosting places.

For Carnaby's to survive and successfully breed and raise healthy chicks, they need trees with hollows for nesting; trees for roosting; trees and shrubs for food; and water. Nesting trees and food plants need to be less than 12 km apart so that the parent birds don't have too far to fly. Farms also provide other food plants such as weeds, pine trees, and even nuts such as almonds.

Sometimes, Carnaby's are dependent on more than one farm for these resources. It might be that the cockatoos nest on one farm and feed next door, or they might fly further away. Sometimes it's the district rather than an individual farm that is important. Either way, farms really are important places for the cockatoos and farmers play a critical role in conserving the species.

Did you know?

- Carnaby's mate for life
- They nest in hollows of smooth-barked gum trees and rough-barked Marri
- Two eggs are laid on wood chips at the bottom of the hollow but usually only one chick survives
- The female sits on the eggs for just under a month
- The small chick is brooded by the female, and the male feeds both of them for 2-3 weeks
- After that, the growing chick is fed by one or both parents in the morning and late evening
- The chick is more likely to survive if food is close by and parent birds don't have to fly too far for food and water.

Bush on farms can be critical for the long-term survival of the Carnaby's Black-Cockatoo. Photo by Cheryl Gole

How do I know if Carnaby's are on my farm? (Or, how to pick a crow from a Carnaby's)

Carnaby's Black-Cockatoo is one of two white-tailed black-cockatoos found in south-western Australia. They are found from Kalbarri in the north to Cape Arid in the east. The Carnaby's generally (though not always) nest in the Wheat-belt. The very similar looking Baudin's Black-Cockatoos are found in the wetter South West, but their ranges overlap in some areas.

Carnaby's is a large black-cockatoo with white patches on its cheeks and tail. Males have red skin around the eye, while on the females it is grey. Males' beaks are dark or black, whereas the females have a light grey or bone-coloured beak. Males have dusky-white cheek feathers, while those of the females are yellowish white. Young birds look similar to females, although some have dark spots in the white tail panels.

Carnaby's Cockatoos look very similar to Baudin's Cockatoos but have a shorter and wider beak, which leaves different marks on large discarded gumnuts. Carnaby's will break Marri gumnuts open to remove seeds, whereas Baudin's don't have to do this as their longer, thinner beak allows them to reach the seeds.

The two species also sound a little different when they call. Carnaby's Black-Cockatoos have a longer *weelah weelah* call, whereas Baudin's makes a more scratchy-sounding *weelah weelah wicha wicha wicha*.



The cockatoo in the left of this photo is a male, with red eye skin and a dark beak. The female on the right has a much lighter beak and grey skin around the eye. Check out these differences with binoculars or close-up photos. Photo by Keith Lightbody

Are Carnaby's nesting on my farm?

If you see cockatoos flying around your farm between July and October they may be looking for hollows in which to nest. If they are still there between October and January they might be nesting.

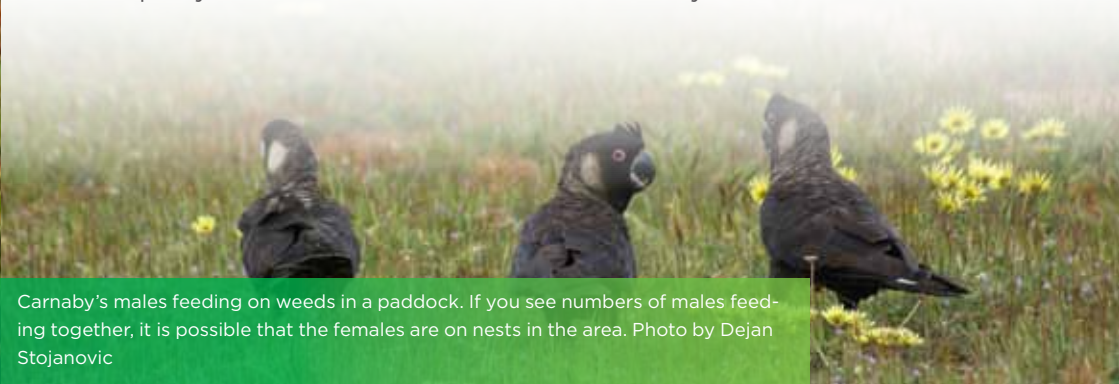
How will you know if Carnaby's are nesting on your farm? Here are a few things to look for:

- Males (red eye skin) feeding females (grey eye skin)
- Females going in and out of hollows
- Females 'begging' for food from their mates
- Male-female pairs sitting close to hollows
- Freshly chewed marks around the entrance of hollows
- Late in the season it might be possible to see a recently fledged bird, complete with a few remaining downy feathers, being fed by either parent.



During the nesting season, try tapping a tree with a large hollow to see if a female Carnaby's comes out. If she does, the chances are that she has eggs or a chick. Photo by Cheryl Gole

Early in the nesting season, when females are still sitting on eggs or brooding a small chick, tapping a tree is a quick and effective way to see if they are nesting. If you do this only a few times, there will be no ill effect on the chick. Tap a likely looking tree with something hard such as a stick — the female will be disturbed briefly and climb to the top of the hollow to investigate, and you might hear her climbing up the inside of the hollow. Move back, and look to see which hollow she comes out of. Some females fly to a nearby tree while others sit quietly at the hollow entrance and look down at you.



Carnaby's males feeding on weeds in a paddock. If you see numbers of males feeding together, it is possible that the females are on nests in the area. Photo by Dejan Stojanovic

Carnaby's habitat

'Habitat' is the kind of bush that Carnaby's need for living. Most breeding pairs of Carnaby's Cockatoos move out of coastal or near-coastal areas into the Wheatbelt in winter to nest. In the breeding range, they rely on two very different habitats or vegetation types to successfully raise a chick - these are Eucalypt woodlands and a special type of shrubland called Kwongan Heath. Kwongan is mostly shrubby plants, and usually includes prickly bushes.

Carnaby's Cockatoos nest in the hollows of mature trees in uncleared or remnant areas of Eucalypt woodland, particularly Salmon Gums and White Gum (Wandoo). They also nest in paddock trees and in trees near sheds and on road verges. Pairs of birds prefer to return to the same nesting site, and may use the same hollow every year. Suitable hollows can take from 120-150 years to develop and the cockatoos frequently use hollows in dead trees. It is thus important for farms to have old and dead trees with suitable hollows for the cockatoos.



This White Gum (Wandoo) woodland provides important nesting habitat, even though the understorey is rather weedy. Photo by Leonie McMahon

Prior to clearing and the widespread introduction of crops and weeds in the Wheatbelt, Carnaby's Cockatoos fed on the seeds of *Banksia*, *Grevillea*, *Hakea* and *Dryandra* species that occur in shrubland called Kwongan Heath and also the seeds of gum trees such as Redgum (Marri) and Jarrah.

These days this type of habitat only exists in small patches so the cockatoos have also adapted to feeding on introduced species such as pine cones, nuts and weeds such as wild radish and wild geranium.

In more recent years, Carnaby's have also taken small amounts of canola seed after the crop is swathed. Some university research proved that the amount of seed taken is very small and does not negatively affect the cash value of the crop.



Female Carnaby's at entrance to a hollow. The chewed areas around the hollow entrance are another good sign that the cockatoos are nesting in a hollow. Photo by Keith Lightbody



Carnaby's Black-Cockatoo feeding on a banksia. These shrubs and small trees provide high value forage for the cockatoos. Photo by Helen Pitman



Wandoo woodland with an understorey of shrubs can provide food and nesting sites for Carnaby's, although these trees are not old enough to develop suitable hollows. Photo by Matt Fossey

Protecting bush for Carnaby's

Natural nesting and feeding habitat is precious. Here are some things you can do to help protect the bush for Carnaby's on your farm:

- Protect known nesting areas by fencing or excluding stock, protecting woodlands against firewood collection, leaving old or dead trees standing and changing fire management
- Protect and conserve known feeding areas by fencing or excluding stock, controlling weeds and preventing removal of vegetation
- Control rabbits if you think they are reducing the natural capacity of the bushland to regenerate itself
- Consider fire management of your bushland (but do this very carefully)
- Undertake weed control in areas of the bush that you think need it. If weeds are spreading and affecting the ability of the bush to regenerate naturally, then weed control might be useful.



Farmers have been conserving bush for generations. Here, an old fence protects bushland from grazing by stock. Photo by Dejan Stojanovic

Growing bush for Carnaby's

In many parts of the Wheatbelt, growing bush for Carnaby's and other birds and animals is an excellent way to increase the conservation values of your farm. If you want to grow the amount of nesting and/or feeding habitat for Carnaby's on your farm, there are a few things you can do:

- Revegetate around known feeding and nesting areas with appropriate species of local plants. It is useful if some of the plants are those that are known to provide food for the cockatoos (e.g. banksias, hakeas and grevilleas)
- Plant food plants no more than 12 km from known nesting areas, but preferably much closer than that. Ideal food sources are very close to nesting sites
- Where possible, and where you think it is needed, plan to include large areas (several hectares) of revegetation. Use a range of plant species, and include some plants from the Proteaceae family in the mix. High-quality seedlings or seed will work best
- If planting corridors between patches of bush, make the corridor as wide as possible (tens of metres if practical). This will make a much more effective corridor for wildlife and help protect the plants as they grow
- Include large paddock trees, particularly those with hollows, in the planting or fenced area
- Plant trees and shrubs around the border of Carnaby's habitat to provide a buffer zone. As well as increasing the area of habitat, a buffer zone provides protection from outside threats like erosion and windthrow
- Plant trees and shrubs in large, bare areas of Carnaby's habitat, filling in gaps and improving the existing habitat. Infill can be a useful way of adding feed plants to a nesting area in woodland, as long as the soil types are suitable.



A flock of Carnaby's Black-Cockatoos flies over a paddock. Photo by Kylie Bishop



Using local native plants such as banksias, hakeas and grevilleas will provide food for Carnaby's. Photo by Sarah Mason

Increasing the number of nesting hollows on your farm

If there are too few nesting hollows on your property, artificial hollows may be a solution. Trials have shown that Carnaby's Black-Cockatoos readily nest in artificial hollows if installed in the correct areas and are of a suitable design. However, putting up an artificial hollow is not always the best way to help the population of Cockatoos. Artificial hollows are a good solution if the following conditions are met:

- There is evidence that the lack of natural hollows is restricting nesting by Carnaby's
- Hollows would be based within 12 km of feeding sites
- There is water nearby
- Hollows are placed in secure locations and you are willing and able to provide the necessary security and maintenance. This means checking that artificial hollows haven't been taken over by feral bees or other species, and that any repairs are done.

Carnaby's often face competition for hollows from other species that use hollows to nest in, particularly Galahs and Western and Little Corellas. In addition, feral bees are also an increasing problem in some areas. If you think that galahs and corellas are adversely affecting the nesting of Carnaby's on your farm, you can control those species under a control license from the Department of Parks and Wildlife (formerly DEC). Feral bees are difficult to control and you may require help from a pest control contractor to control them.



Artificial hollows made from black piping recycled from the mining industry. Note the sacrificial chewing posts. Photo by Raana Scott

Over time, old trees with hollows naturally degrade and eventually fall down. Old trees with large hollows provide valuable nesting places for Carnaby's Black-Cockatoos. Consider getting together with a neighbour or two and repairing old hollows so that they are once again useable by nesting cockatoos. This is a simple and inexpensive way to increase the chances of breeding and encourage the cockatoos back onto your land.

Repairs range from major works such as patching up large splits and 'blow outs' with tin, and replacing the 'mudguts' (crumbly material in the bottom of hollows) of the tree, to minor maintenance such as removing obstructions from hollow entrances and removing remains or old eggs from inside nesting chambers.

The repairs need to be conducted during the non-nesting season to avoid disrupting nesting cockatoos. Most of the materials needed for the repairs, including scrap metal and metal sheeting, might be found on your farm.



BirdLife volunteer nailing a sheet of tin to a split in a tree trunk. Photo by John Lauri



Galah at the entrance to a hollow that is otherwise suitable for nesting by Carnaby's Black-Cockatoos. Galahs aggressively take over and maintain hollows and prevent Carnaby's from nesting in them. Photo by Cheryl Gole

Vehicles and Carnaby's

Although this booklet is largely concerned with Carnaby's Black-Cockatoo and farms, the cockatoos are increasingly at risk of being struck by vehicles in rural areas. This happens when the birds are feeding on the ground, either on the road itself or by the side of the road. It can also happen when the birds are feeding on low vegetation, such as shrubs, at the side of the road. Passing vehicles disturb the birds, and, as the cockatoos are slow to take off and rise into the air, and they can very easily fly into the path of an oncoming vehicle.

Carnaby's are known to feed on roads and roadsides on spilled grain and woodchips which can fall from trucks. They also feed on seeds that have just germinated.



Carnaby's feeding on grain on a roadside. Photo by Keith Lightbody



Carnaby's Black-Cockatoos fly out of the path of an oncoming vehicle. The cockatoos rise so slowly into full flight that they are readily hit by vehicles. Photo by Keith Lightbody

As Carnaby's is a threatened species, even small numbers of birds hit and killed or injured can make a difference to the long-term survival of this species. There are a number of things you can do to help:

- Encourage truck drivers to secure loads of grain so that there is less spillage on the road
- Be aware of flocks of cockatoos gathering on roadsides
- Slow down if you see flocks of cockatoos on the road or road verge so that they have time to move away.

What to do with an injured or dead cockatoo

Injured cockatoos can sometimes be rehabilitated and returned to the wild. If you find an injured cockatoo, only attempt to rescue it if it's safe to do so. Injured cockatoos are in shock and may be aggressive and capable of giving a severe bite or scratch. Cover the injured bird using a large towel, making sure the head is covered. Carefully pick the bird up and place it gently in a secure cardboard box or pet carrier with a second towel lining the bottom. Close the lid or cover the box with a towel and move to a quiet, dark location. Do not attempt to feed the injured bird.

If you haven't already done so, call the Wildcare Helpline on (08) 9474 9055. The Black-Cockatoo Conservation Centre (Kaarakin) in Perth also offer a 24/7 rescue service for any injured black-cockatoos. Call Kaarakin on (08) 9390 2288 during business hours or the vet nurse on 0448 046 202 or general manager on 0499 991 041.

Dead cockatoos are surprisingly useful for research and all cockatoo bodies should be collected where possible. If you find one or more dead cockatoos, please contact Perth Zoo on (08) 9474 0404 (8am-5pm, 7 days). Attach a label to the foot with details of the date and location found and the name of the collector. Place the specimen in a plastic bag. If you can transport it to the Zoo within 72 hours, refrigerate the body, but if storing it for more than 72 hours, put the dead cockatoo in the freezer.



A dead Carnaby's Black-Cockatoo, struck by a vehicle. Photo by Keith Lightbody



Cockatoos fly: road sign warning motorists that

Keep a record: it makes a difference!

When do the Carnaby's arrive and leave your farm (date)?

How many Carnaby's visit your farm?

What are they doing? (tick all that apply)

- Feeding (on trees, native shrubs, weeds, nuts, pines, other)
- Feeding on revegetation
- Perching in trees during the day
- Roosting (settling down and sleeping in trees at night)
- Nesting
- Drinking
- Mating
- Feeding a female or older chick

Do the Carnaby's that visit your farm feed or nest or water elsewhere?

- The farm next door
- Other farms within 12 km
- A local reserve
- Road verges or rail reserves
- Somewhere else

Helping us to help Carnaby's

Would you like to help us find out more so that we can do more to conserve the cockies?

You can help monitor (record details) of nesting Carnaby's. You can also help by allowing BirdLife Australia's volunteers to visit your farm and record those details for you. Nest surveys identify the numbers of active trees and hollows on a property. This provides us with better information of where the birds are in the breeding season. If done properly every year, we can begin to learn whether local populations are doing well or not.

To participate in BirdLife Australia's annual nesting surveys, or to ask if nesting surveys can be done on your farm, email carnabys@birdlife.org.au or call (08) 9383 7749.

Find out more

To let someone know about Carnaby's Black-Cockatoos nesting and feeding on your farm, and to find out more about how to look after them and perhaps help monitor them, email carnabys@birdlife.org.au

Cocky Notes is BirdLife Australia's regular newsletter about the latest news and happenings with Carnaby's Black-Cockatoos and what's being done to help save them. It is available in print or by email. To get on the mailing list, email carnabys@birdlife.org.au or call 0893837749.

Steps to Recovery is a short DVD documenting the efforts being undertaken to save Carnaby's Black-Cockatoos. It's available from Birdlife WA for \$10 (post-age included).

For information about Carnaby's Black-Cockatoos and BirdLife Australia's Carnaby's Black-Cockatoo Recovery Project, go to BirdLife Australia's website: www.birdlife.org.au/projects/carnabys-black-cockatoo-recovery

Acknowledgements

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Photo caption: A Carnaby's Black-Cockatoo drinks at a farm dam. Nesting sites, food and water are critical to the survival of Carnaby's in the Wheatbelt. Photo by Keith Lightbody



CARING
FOR
OUR
COUNTRY



Photographs: Front cover by Leonie McMahon and John Lauri; back cover by Eleanor Adams and Dejan Stojanovic

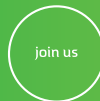
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BirdLife Australia is dedicated to achieving outstanding conservation results for our native birds and their habitats.

With our specialised knowledge and the commitment of an Australia-wide network of volunteers and supporters, we are creating a bright future for Australia's birds.

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Add your voice



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