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HUNGRY BLACK COCKATOOS

Tamra Chapman and Helen Pitman

Since European settlement, more than 80% of all woodlands have been cleared from the agricultural regions of Australia. This has resulted in major changes to the distribution and abundance of Australia's cockatoo species.

While some open-country generalists, such as galahs (*Cacatua roseicapilla)*, corellas (*C.* spp.) and sulphur-crested cockatoos (*C. galerita)* have increased in range and number, those cockatoos with specific habitat requirements have declined.

Black cockatoos (*Calyptorhynchus* spp.) are especially vulnerable to the effects of habitat loss because they nest in the large hollows of mature trees and feed on the kernels of a limited number of plants. Most of Australia's black cockatoos have declined as a result of the effects of habitat loss and fragmentation. These include a lack of nest hollows, competition for nest hollows, predation at nest hollows and food shortage.

The glossy black-cockatoo (*Calyptorhynchus lathami)* is particularly susceptible to the effects of habitat loss and fragmentation because it is a sedentary species that nests in large hollows and feeds only on the seeds of sheoaks. This species occurs in eastern Australia from the Great Dividing Range to northern Queensland.

In South Australia, the glossy black-cockatoo relies on the seeds of the drooping sheoak *Allocasuarina verticillata* (a woodland tree like the forest sheoak *Allocasuarina fraseriana* known to many Western Australians) for food. This black cockatoo was numerous on the South

Australian mainland at the time of European settlement. However, clearing of drooping sheoak resulted in its decline from the mainland by the late 1970s and a population of around 300 birds is now confined to Kangaroo Island off the south coast of South Australia.

A recent study has just been published assessing the factors that may have attributed to the decline of the glossy black-cockatoo on Kangaroo Island. The lessons learnt from this study can be applied to the conservation of our own black cockatoos here in Western Australia.

The study showed that there was adequate food available to support the population, but the extent to which the cockatoos used the sheoaks for foraging varied between patches. The cockatoos showed a preference for foraging in habitats with large drooping sheoak trees and individual trees with more profitable cones.

The advantage of foraging in large trees was that the cockatoos were able to meet their daily food requirements by foraging in only five trees per day. This probably not only helped conserve energy, but also limited exposure to predators.

Breeding birds increased their food intake per tree by significantly increasing the number of feeding bouts (places within the tree canopy from which cones were harvested) per tree and cones harvested per tree. Thus, breeding birds were able to meet their daily energy needs without having to increase the number of movements made between trees.

This study has shown that a combination of habitat structure and profitability determines which patch is suitable for foraging at any one time. The glossy black-cockatoos did not feed or breed in regions of the island where their feeding habitat requirements were not met.

Studies in Western Australia have clearly demonstrated that the proximity of nests to suitable food sources affects the ability of Carnaby's cockatoos to breed.

continued on page 9

continued from page 8

FAUNA

For example, if adult Carnaby's cockatoos have to travel more than 12 km per day between the nest and food, their breeding attempt is likely to fail. However, little information has been collected to show how the habitat structure and food density and profitability affects the feeding ecology and nesting success of these cockatoos. The Department of Conservation and Land Management and Curtin University are planning to study this very problem in the near future. In the meantime however, there are a number of steps landowners can take to enhance the feeding habitat of Carnaby's cockatoo.

During the breeding season, Carnaby's cockatoos feed in areas of kwongan heath, which is vastly different from their eucalypt woodland breeding habitat. They prefer eating the seed of the native species from the Proteaceae family including *Banksia* spp., *Hakea* spp., *Dryandra* spp. and *Grevillea* spp. Due to the highly fragmented nature of heathland vegetation in the WA wheatbelt, these species often occur in small, fragmented, degraded patches.

Landholders who have feeding habitat on their property can assist in the rehabilitation of these important habitats by fencing them off from grazing animals and revegetating the area with the appropriate plant species. This will prevent further degradation, promote natural regrowth and help increase the area of feeding habitat available to Carnaby's cockatoo.

The Birds Australia Carnaby's Cockatoo Recovery Project is currently working with regional nurseries in the northern agricultural region to grow food plant species and to supply local landholders with the plants.

The aim is to rehabilitate and revegetate degraded feeding habitat areas that are in close proximity to breeding habitat and to create corridors of vegetation. This not only provides the cockatoos with high quality feeding habitat, but also provides a secure route for travelling between breeding and feeding habitat.

The Carnaby's Cockatoo Recovery Project Regional Coordinator can assist landholders with selection of local species and the preparation of revegetation plans.

If you are interested in finding out more about the revegetation project or would like to know which proteaceous species the Carnaby's cockatoo prefer you can contact Birds Australia's Regional Coordinator on the details below.

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DISTINGUISHING WHITE-TAILED BLACK COCKIES BY THEIR CALL

If you don't get a good look at them, it can be difficult to tell Baudin's and Carnaby's cockatoos apart, especially as Carnaby's are moving into the forested areas that were traditionally the haunt of Baudin's. They do, however, have slightly different calls. Bird calls are difficult to describe in words, but if you go to the 'Cockatoo Care' website (www.cockatoocare.com) you can press a button to hear the calls.

MORE BUSTARDS!

Reports of bustard sightings keep coming in. An unusual location record comes from Graeme Moore who took this photo in February on his property on the Coastal Plain 20 km west of Harvey.