

Muir's corella: conserving a threatened species



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Introduction



The conservation of Muir's corellas (*Cacatua pastinator pastinator*) is a challenge for the Department of Environment and Conservation (DEC) and land managers because, while Muir's corella is an endangered species, the birds can be a nuisance for commercial enterprises and private landholders.

The purpose of this package is to raise awareness of the threats to Muir's corellas and to answer some frequently asked questions raised by land managers.

Together with DEC, land managers can assist in conserving the species for all Western Australians while minimising the damage it can cause.





About Muir's corellas

What species of corellas live in the south-west?

There are four types of corella that can be found in the south-west of Western Australia. Muir's corella and Butler's corella are native and endemic (unique) to the region. Two other corella species – the eastern long-billed corella and the little corella – have been introduced.

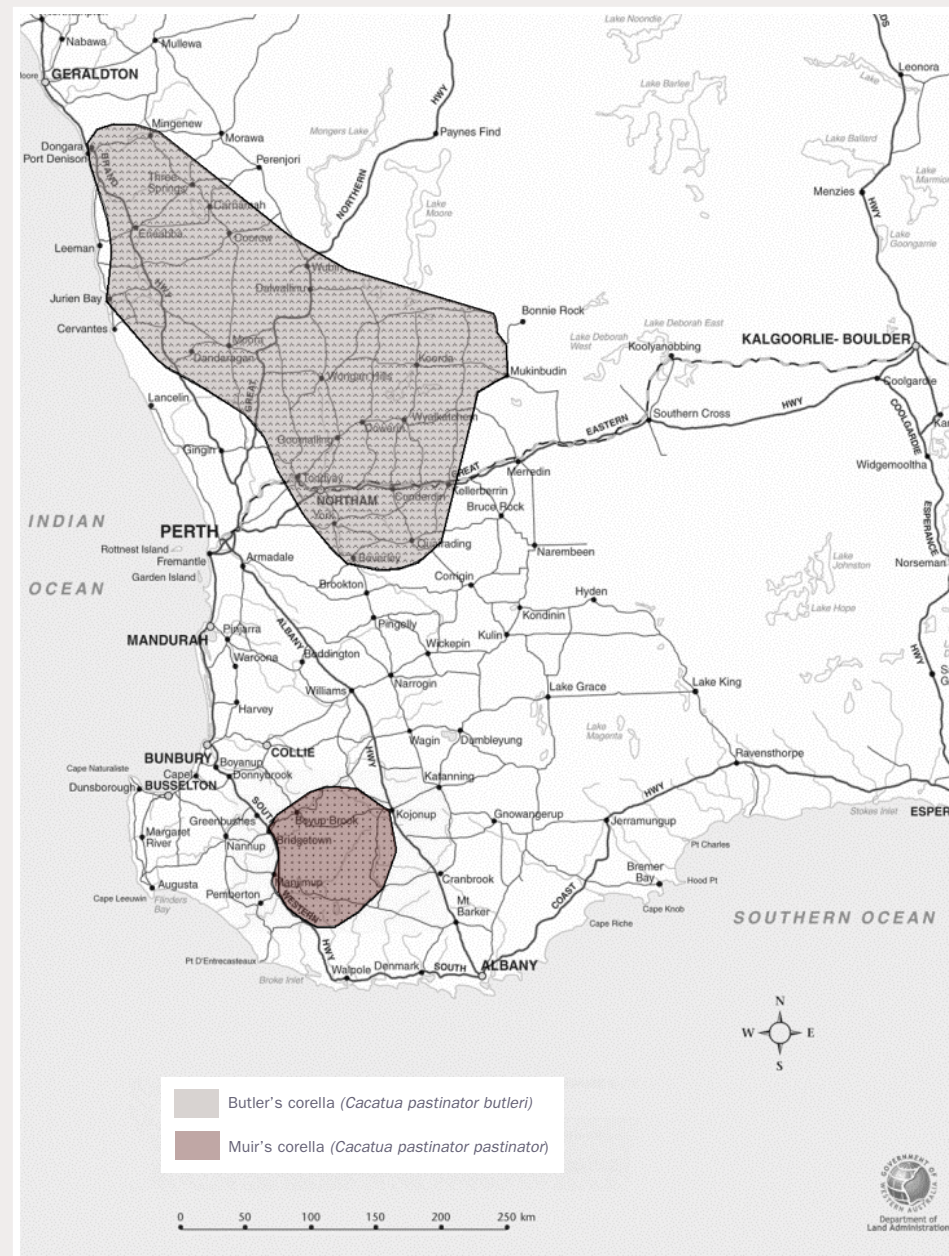
The native western long-billed corella (*Cacatua pastinator*) has two geographically isolated sub-species (Figure 1). Butler's corella (*Cacatua pastinator butleri*) occurs in the northern and central wheatbelt of Western Australia.

Muir's corella (*Cacatua pastinator pastinator*) is confined to the very south-west area of Western Australia, occurring in one isolated sub-population from Boyup Brook and Qualeup, south to the lower Perup River, Lake Muir and east to Rocky Gully and Frankland. Other names previously used for this species include bare-eyed corella, western long-billed corella, Dampier's corella, white cockatoo and corella.

The little corella (*Cacatua sanguinea gymnopsis*) and the eastern long-billed corella (*Cacatua tenuirostris*) originate from eastern Australia. Flocks of these introduced corellas have been recorded in several locations in the south-west including Mandurah, Bunbury, Busselton, Denmark, Albany and Perth.

These birds began breeding in the wild after they were accidentally or intentionally released from aviaries. They cause damage to commercial crops and impact on native species by competing for nest hollows and food resources and interbreeding. In response, DEC, in association with local government and landholders, is carrying out a program to control the numbers of these introduced corellas.

Opposite: Distribution of Muir's corella (*Cacatua pastinator pastinator*) and Butler's corella (*Cacatua pastinator butleri*). Map is based on information taken from Johnstone and Storr (1998).



Distribution of Butler's and Muir's corellas



Why are Muir's corellas threatened?

Muir's corellas once inhabited drainage systems throughout most of WA's south-west – north to the Swan and Avon rivers, south to Albany and Augusta and east to Broomehill and the Stirling and Porongurup ranges. Population numbers severely declined in the late nineteenth and early twentieth centuries. By the 1920s, its range had contracted to the Lake Muir region and the population had declined to about 100 birds by the 1940s. The widespread poisoning and shooting of Muir's corella in the late nineteenth and early twentieth centuries is believed to have contributed to this rapid decline.

Although the Muir's corella population has since shown a recovery in numbers, the species is threatened with extinction because it persists only in one isolated population, has a low reproductive rate and is vulnerable to changes in land management. Annual surveys are required to reliably assess the current population size and distribution of this species, and guide management decisions.

Muir's corella is listed as 'rare or likely to become extinct' under the *Wildlife Conservation Act 1950*. Under this Act it is illegal to take (disturb, harm or destroy) Muir's corella and offenders may be prosecuted. This corella meets the World Conservation Union's (IUCN) Red List Categories and Criteria (2001) for endangered, because, at the time of the most recent assessment, there were less than 2,500 mature individuals and extreme fluctuations in this number in the periods before and after the survey.



What is threatening Muir's corella?

The Muir's corella population is threatened by illegal shooting and poisoning, habitat loss, changes in land use, nest hollow shortage and competition for available nest hollows by feral honeybees (*Apis mellifera*). The expansion of introduced species such as the eastern long-billed corella and (eastern) little corella is also cause for concern. Climate change may exacerbate existing threatening processes through changes to biodiversity and ecosystem function. As Muir's corella occurs in a single population, the entire population is vulnerable to these threats.

Conserving Muir's corella on your property

Like other cockatoos, Muir's corellas are dependent on large, mature eucalypts and large, old, standing dead trees (stags) with hollows for nesting. The formation of large hollows is extremely slow in most eucalypts and may take as long as 250 years. Veteran trees and stags can be quickly lost but are slow to be replaced.

How land managers can help:

- Retain old, large and decaying trees on your property.
- Plant the next generation of veteran trees such as marri (*Corymbia calophylla*), jarrah (*Eucalyptus marginata*), yate (*Eucalyptus cornuta*), flooded gum (*Eucalyptus rudis*) and wandoo (*Eucalyptus wandoo*).
- Remove feral beehives from your property.
- Follow the guidelines in Fauna Note No. 33: 'Managing Muir's corella in bluegum plantations' (available from DEC's website at www.dec.wa.gov.au).



Controlling Muir's corellas and the damage they cause



What damage do Muir's corellas cause?

Muir's corellas are ground feeders, and feed on corms, tubers and seeds from a variety of introduced and native plants. The corms of Guildford grass (*Romulea rosea*) appear to be an important food item. However, they also eat cereal grains such as oats, barley and wheat. Muir's corellas have been reported to damage these agricultural crops during the first few weeks after sowing and germination from autumn to early winter. There have also been reports of damage occurring at the time of crop maturation, when the corellas snip plants at the base, starting at the edges and the thinner parts of the crop.

Damage to fruit and nut trees, vegetable seedlings, vineyards (primarily new canes and reticulation), tree seedlings and young trees has also been reported. Most seedling damage is reported in winter. The destructive behaviour seen in Muir's corella may be related to the maintenance of their continuously growing beaks. This is done by chewing objects such as young trees and seedlings, grapevines, garden plants, cables and power lines (or anything they can get their beaks on!).

Muir's corellas can also be nuisances by fouling stock watering troughs, consuming stock feed at feed lots (particularly in the summer months) and disturbing people with their loud, raucous calls.

Why do Muir's corellas cause this damage?

The damage caused by Muir's corellas has resulted from changes to their habitat and our landscape. These corellas once inhabited woodlands and open country across to the east of the main forest block in south-west WA. Flocks of birds were distributed in widely separated colonies. However, their natural habitat has been altered as a result of clearing for agriculture and timber production.



As the landscape changes, the distribution, abundance, movements, feeding and breeding behaviour of the corellas also change.

Factors influencing the nature and severity of damage caused by corellas include:

- proximity to roost areas
- location of alternate food sources
- the degree of human activity in the area
- the range and intensity of use of bird scaring devices
- the numbers of birds in the area
- time of year
- seasonal conditions
- whether a feeding pattern has become established.

Can I kill Muir's corellas?

NO. Shooting to kill and poisoning was used in the past to control crop damage caused by Muir's corella but this contributed to the rapid decline in their range and numbers and is no longer permitted. Due to its threatened listing under the *Wildlife Conservation Act 1950*, it is illegal to harm or kill Muir's corella. DEC wildlife officers investigate all reports of illegal shooting of fauna in WA and offenders face having their firearms confiscated and a penalty of up to \$10,000 per offence. Muir's corella is also listed as endangered under Commonwealth legislation and the penalties for killing these birds under this legislation are up to \$50,000 for individuals and \$500,000 for corporations.



How can I reduce the damage caused by Muir's corella?

Muir's corella is a declared pest of agriculture under the provisions of the *Agriculture and Related Resources Protection Act 1976* in the shires of Boyup Brook, Cranbrook and Manjimup because it is a grain eating bird. It is on the List of Declared Animals, under category A7, which means a management program outlines the area and conditions under which controls may be applied.

As it cannot be killed, non-lethal methods must be used to control the damage. Damage control can be highly effective if a number of techniques – such as gas cannons, shooting to scare, harassment and decoy feeding – are used as part of an integrated and well planned damage control program. More information is provided in the separate booklet 'Minimising the damage and nuisance caused by Muir's corella' (available from DEC's website at www.dec.wa.gov.au).

A damage licence must be obtained from DEC to use scare techniques. The information collected as part of the licensing process helps DEC monitor the nature and magnitude of the problems caused by the corella.

How do I get a damage licence to scare Muir's corellas?

Damage licences are free and are not difficult to obtain. They can be arranged over the phone by contacting your local DEC office. Once the licence is issued, a DEC wildlife officer may visit the property, by prior arrangement, to monitor the situation and provide advice. DEC's contact details are provided on the opposite page.

For more information

On the web

Visit the 'Living with wildlife' section under the 'Nature and Biodiversity' heading of DEC's NatureBase website at www.dec.wa.gov.au and download:

- Living with Muir's corella
- Fauna Note No. 04 Muir's corella
- Fauna Note No. 33 Managing Muir's corella in bluegum plantations
- Minimising the damage and nuisance caused by Muir's corella
- Prevention and control of damage – corellas and other cockatoos.

These products are also available from DEC on request by calling your nearest regional DEC office, or visiting your nearest DEC office and asking to speak to a wildlife officer.

Contact us

DEC regional offices

Warren Region – Manjimup	(08) 9771 7988
South Coast Region – Albany	(08) 9842 4500
Wheatbelt Region – Narrogin	(08) 9881 9222
South West Region – Bunbury	(08) 9725 4300

Web: www.dec.wa.gov.au

DEC State Operations Headquarters

17 Dick Perry Avenue
Kensington WA
Postal: Locked Bag 104
Bentley Delivery Centre
Bentley WA 6983
Phone: (08) 9334 0292



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Tony Kirkby (cover, page 1, page 6 - main),
Evelyn Parry (page 3, pages 4 and 6 - insert),
Marnie Swinburn (page 8 - insert) and
Tamra Chapman (page 10 - insert).*