



Ngoolarks Forever

Keep Carnaby's Flying

Photo by Molly Spaulding



NGANGK YIRA
INSTITUTE FOR CHANGE

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birdlife
AUSTRALIA



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Management Project***



Topic 4

A Changing Landscape: Ngoolarks and the new world

Photo by Molly Spaulding



This is a
Carnaby's
Cockatoo.

Photo by Molly Spaulding

It's Noongar name is 'Ngoolark'



Photo by Karen Riley

Carnaby's Cockatoo grows to 53–58 cm in length with approximately 100cm wingspan, and weigh between 520–790 grams.



Photo by Molly Spaulding

Carnaby's Cockatoo features:

- tail feathers are solid black with broad white bands and black tips.



Photo by Molly Spaulding

Carnaby's Cockatoo features:

- mostly black, with narrow white scalloping on the edges of dark feathers.
- a clear patch of cream-white feathers on its cheek.



Photo by Molly Spaulding

Carnaby's Cockatoo features:

- longer feathers on their head form a short crest that can be raised and lowered



Photo by Molly Spaulding

Where are Carnaby's Cockatoo found?



The Carnaby's Cockatoo or short-billed black cockatoo is endemic (found only) in Western Australia.

The species is named in honour of naturalist Ivan Carnaby.

People in Perth recognise this iconic species by its white tail and 'wee-loo' call.

Distribution of Carnaby's Black Cockatoo

Habitats

From late February to June Carnaby's Cockatoo are seen foraging (feeding) on the Swan Coastal Plain, mid- west and south coast, often in and around pine plantations and Banksia woodlands.



Photo by Molly Spaulding

Seasonal Migration

From July to January they migrate to the Wheatbelt to breed.

Here they need water, food and trees mature enough to have formed nesting hollows.



Photo by Molly Spaulding



Breeding
doesn't start
until they are 3
to 4 years old.

They breed
mainly in old
smooth-barked
eucalypts like
Wandoo and
Salmon Gum.

Photo by Karen Riley



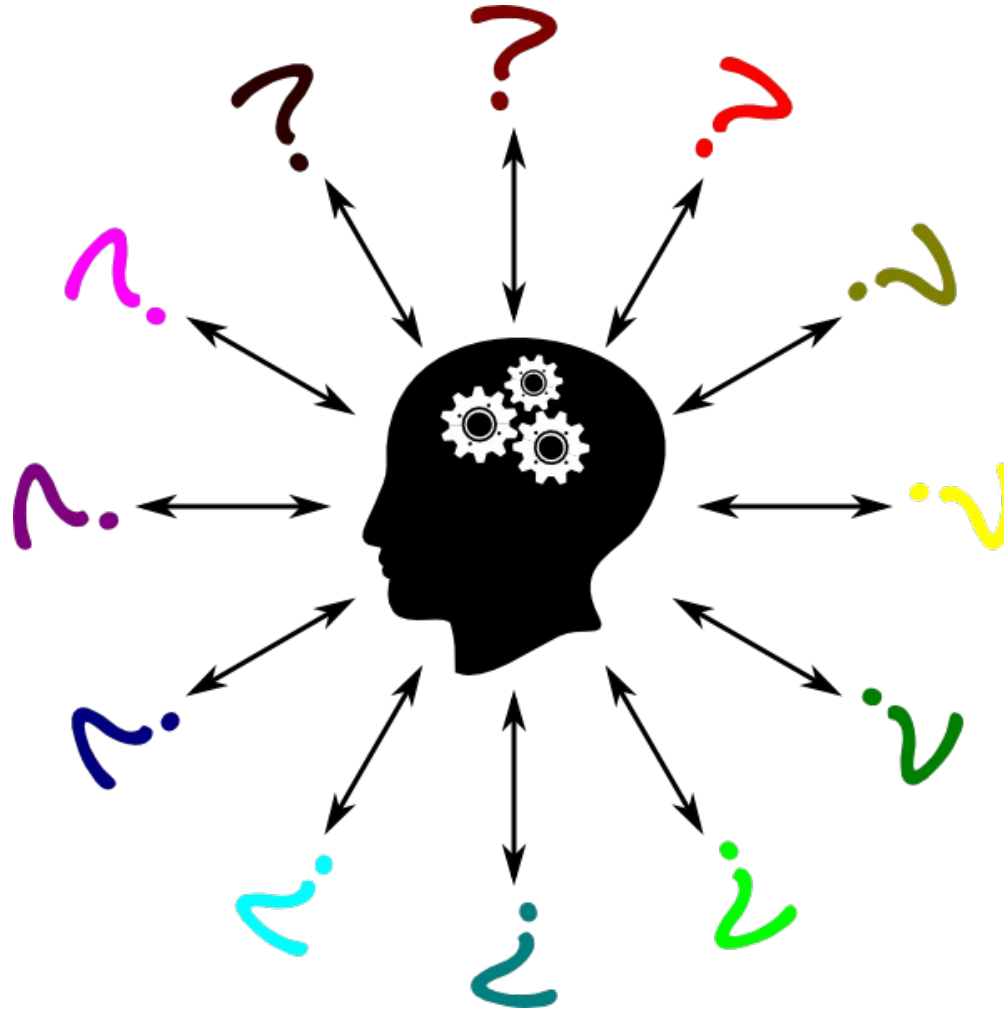
Do you think European settlement might have had an impact on the Carnaby's Cockatoo?

Why/why not?

Photo by Zoe Kissane



Share your ideas in your group





There was an
impact...

Once seen in flocks of
thousands that blackened
the sky like rain clouds,
Ngoolarks are now listed as
'Endangered' by the
International Union for the
Conservation of Nature
(IUCN).

The impact is population decline

It is estimated that the population of Carnaby's Cockatoo has decreased by over 50% since European settlement.



Photo by Karen Riley

Comparing map images

Look at natural range of Carnaby's Cockatoo shown in the Figure 2 (from section 4.1.1 of a report by Johnstone & Kirkby, 2011.)

4.1.1. Distribution

Carnaby's Cockatoo is endemic to the south-west of Western Australia, north to the lower Murchison River and east to Nabawa, Wilroy, Waddi Forest, Nugadong, Manmanning, Durokoppin, Noogar (Moorine Rock), Lake Cronin, Ravensthorpe Range, head of Oldfield River, 20 km ESE of Coondingup and Cape Arid; also casual on Rottnest Island (Johnstone and Storr 1998).

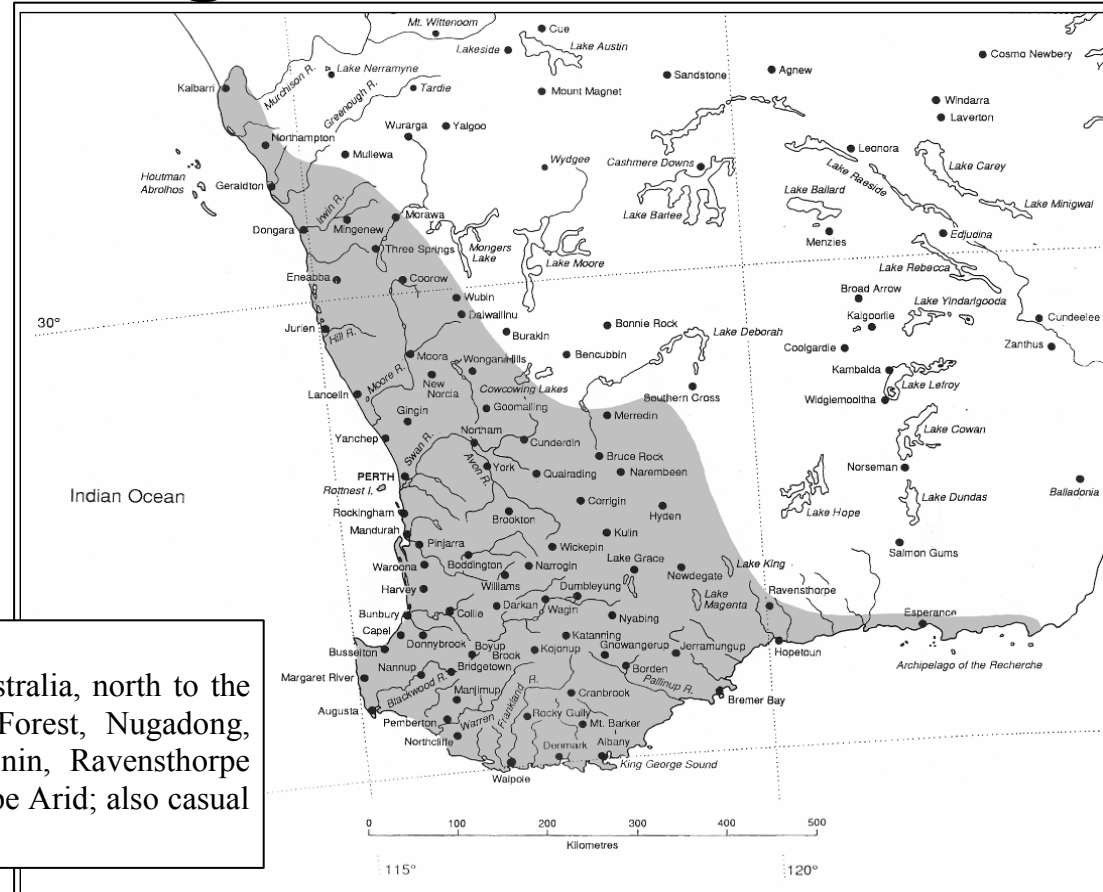
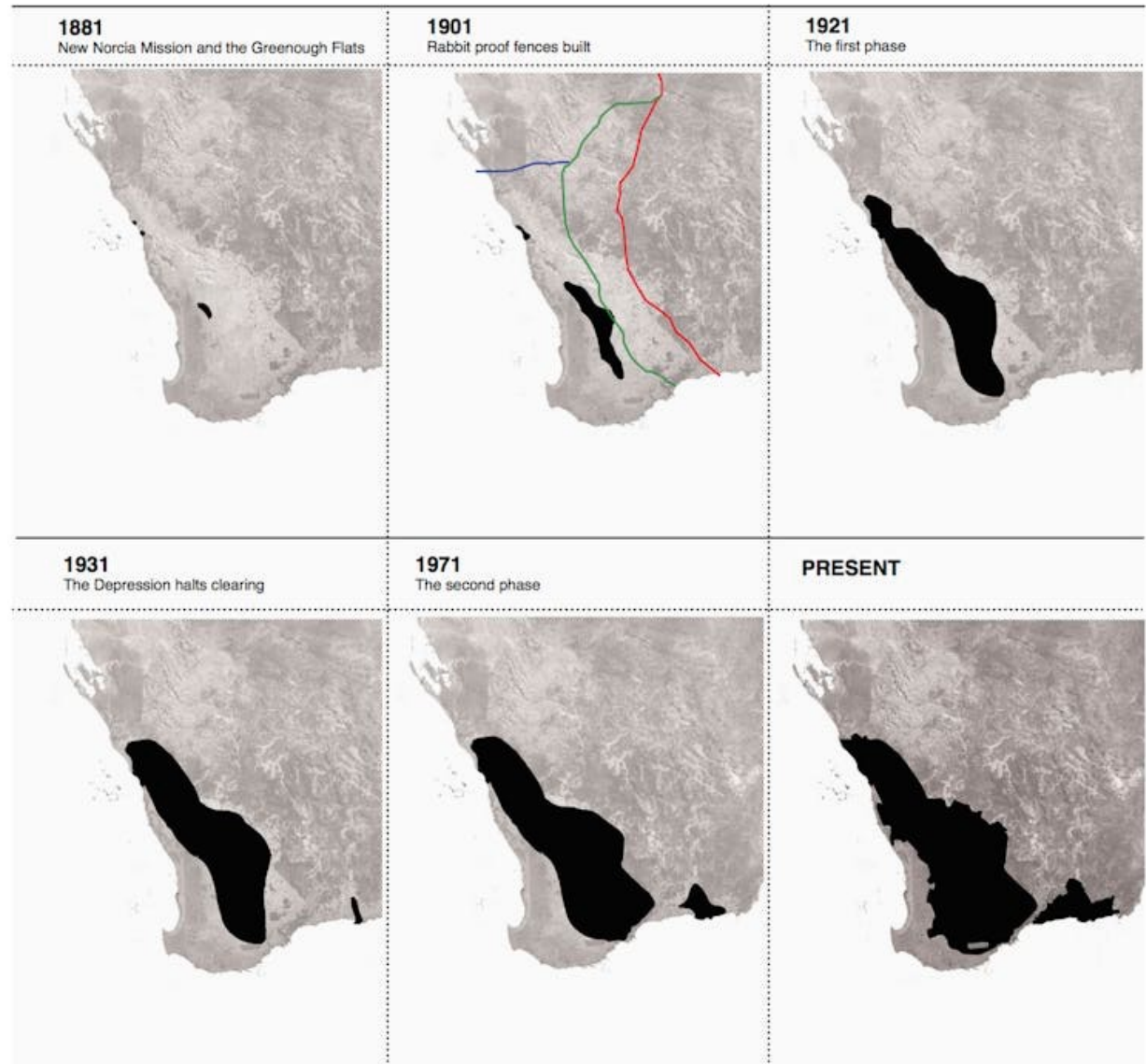


Figure 2 Distribution map of Carnaby's Cockatoo.

Now look at this series of maps showing the timeline of wheatbelt land clearing that occurred during the 20th century.

The black areas show the cleared land.

(from Hughes-D'Aeth, 2017.)



Compare, Contrast & Conclude...

- How do the sources relate to each other?
- Can you work out from the maps what proportion of the Carnaby's Cockatoo habitat has been cleared?
- How would this influence the Carnaby's Cockatoo?
- Why was it cleared, and what does the timeline tell us about what was happening in Australia at the time?

Historical Context:

Excerpts from Hughes-D'Aeth (2017)

“When the Swan River Colony was founded in 1829, six years before Melbourne, it was with the intention of forming an agricultural colony of closely settled yeoman farmers, who would own their own land and congregate in small, nicely spaced villages.

However, the antique soil of WA bore almost no resemblance to the fertile soils of recently glaciated northern Europe. Four to five more or less rainless months, where dry desert winds blow steadily across the vegetation was also an unprecedented challenge to farming methods learned in the British Isles. Lastly, there were almost no rivers to speak of, and permanent summer water was a rare commodity.”

For all these reasons, the agricultural dream of WA remained largely unrealized. The game-changing event was the goldrush of the 1890s. The population of the colony trebled between 1889 and 1896, from 44,000 to 138,000.

Historical Context:

Excerpts from Hughes-D'Aeth (2017)

“Knowing that the gold would be dug out before too long but wanting to capture this new cache of colonists, the colonial government passed the Homesteads Act in 1893 to parcel out land, and established an Agricultural Bank in 1894 to finance farmer-settlers. An army of land surveyors fanned out through the southwest and provisions for water, fertilizer and rail transit were quickly put into motion. Towns were gazetted, one-teacher schools popped up and WA took the lead in distance learning.”

“The wheatbelt vision [... offered] itself as an antidote to the ills of modern city life. As the various states all moved to convert low-yield pastoral production to high-yield cash-cropping, there emerged a veritable ideology of wheat in the post-Federation years, and right through to the Depression.”

“In two 30-year periods (1900-1930 and 1945-1975) an area of land roughly the size of Britain was stripped of its native vegetation for the production of grain and livestock. It is a crescent of land that begins just north of Geraldton on the west coast and sweeps south and east to Esperance on the south coast.”

Only 7% of the central wheatbelts natural vegetation remains



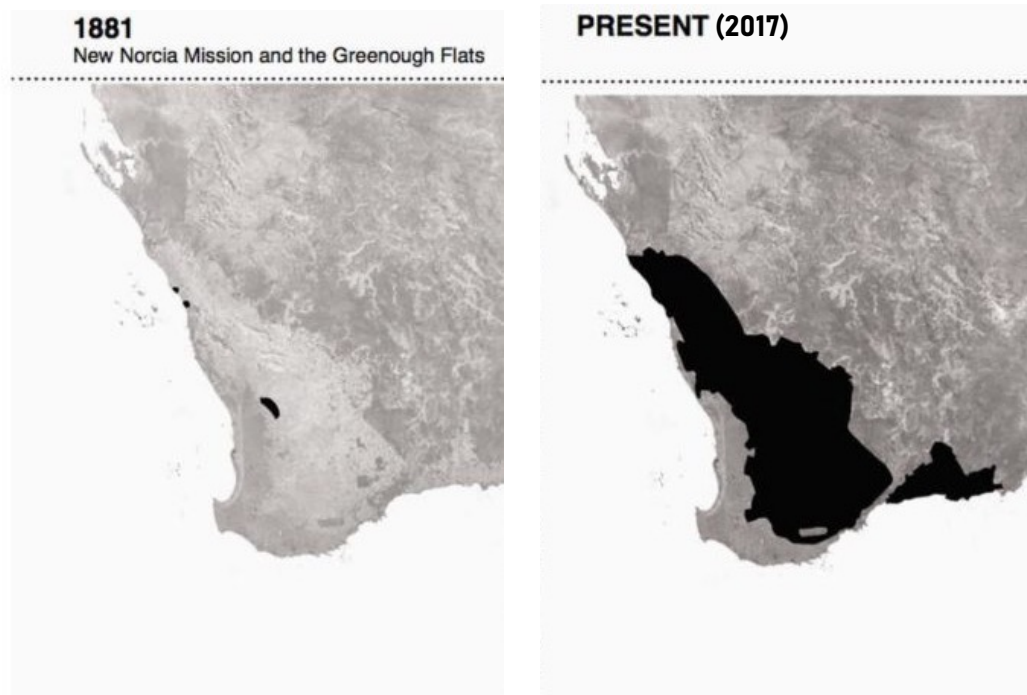
Image from Google Earth

Carnaby's Cockatoo is disappearing

It's decline has been mainly caused by a loss of habitat and breeding sites.

Approximately 87% of Carnaby's cockatoo habitat in the Wheatbelt has been cleared of native vegetation since the 1950s.

The black areas below show land cleared for agriculture



Source: Hughes-d'Aeth (2017) <https://theconversation.com/writing-the-wa-wheatbelt-a-place-of-radical-environmental-change-76567>

Habitat Fragmentation

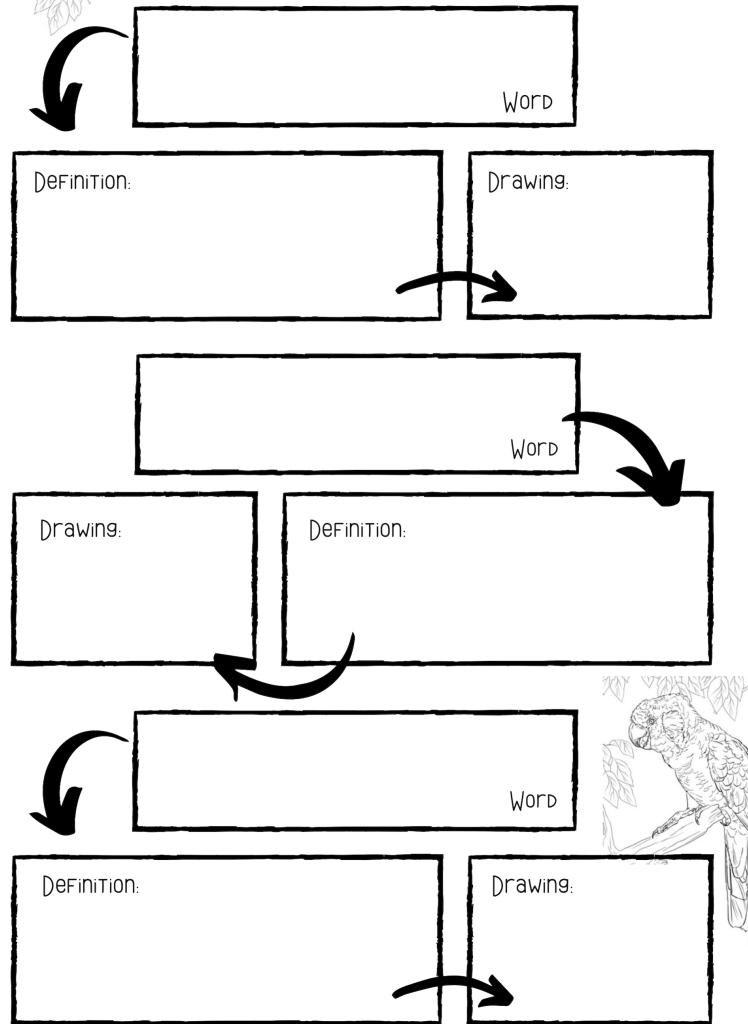
Habitat fragmentation is a major threat to Carnaby's cockatoos because it means they need to travel longer distances to feed and drink, especially during breeding season.



Images from Google Earth



Carnaby's Cockatoo Doodle Notes:



Doodle Notes

Choose 3 keywords related to changing landuse and fill in the worksheet with the definitions and a drawing.

If habitat fragmentation is a major threat to Carnaby's Cockatoo what can be done to save the species from extinction? Consider actions at:

- Community level
- Local government level
- State government level
- Federal government level
- Internationally



Photo by Zoe Kissane

What can be done to save them?



Photo by Karen Riley

What can you do to help save them?

- **Change 'net loss' of habitat to 'net gain', by planting more food trees and protecting what's left**
- Plant black cockatoo food trees in your garden (e.g. banksia, hakea, macadamia)
- Get involved in council-run planting days to plant more food for black cockatoos
- Become a Citizen Scientist! - join the Birdlife Australia annual "[Great Cocky Count](#)"
- Report injured black cockatoos to the rescue service at Kaarakin Black Cockatoo Conservation Centre or DBCA's wildlife helpline
- Learn more about black cockatoos
- Write to your council and Ministers and ask them to save Carnaby's by protecting their habitat



Photo by Karen Riley

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