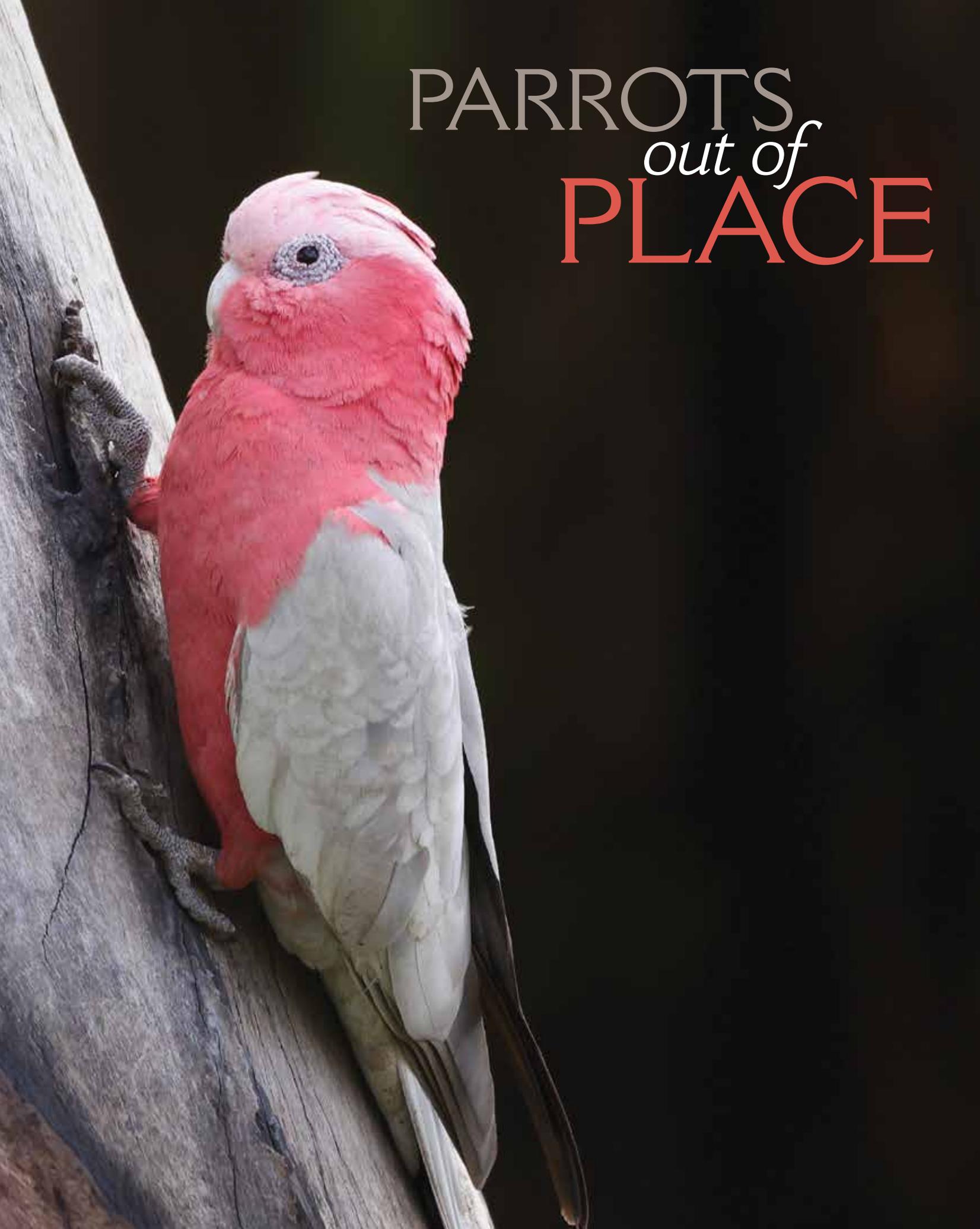


While human impacts have changed the landscape in some parts of Western Australia, population numbers of the iconic pink and grey galah (*Eolophus roseicapilla*) seem to be benefitting from the changes.

by Simon Cherriman

PARROTS
out of
PLACE





When Europeans first paddled a longboat up the Derbarl Yerrigan (Swan River) in 1697, Perth was a very different place. The coastal plain was almost entirely covered in unbroken Banksia woodland and the hills were blanketed in virgin forest of giant jarrah and marri trees.

Inland of the Darling Range stretched an enormous woodland of wandoo,

“Although nowadays it is almost impossible to not see galahs in the Perth region, they did not become widely established until approximately 35 years ago...”

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Main A male galah pauses from stripping bark from a nest tree.

Inset clockwise from top A heavily worked ‘galah scar’ on a jarrah tree; galahs produce large broods compared to other cockatoos; galahs have benefitted from European changes to Australia.

This page

Above Galahs defend all three hollows in this old jarrah tree.

Above right Repetitive ‘eye wiping’ behaviour gives bark-stripped areas a smooth, chalky appearance.

Photos – Simon Cherriman

weerluk (salmon gum) and other assorted eucalypts. This land supported an incredible diversity of birds, especially the colourful, charismatic and cheeky parrot and cockatoo species Australia is renowned for.

Unfortunately, the three centuries since have brought drastic changes to both the landscape and the birdlife it can support. Felling of trees at the landscape scale, replacing them with shallow-rooted cereal crops, spreading many introduced grasses, and installing thousands of bores and dams altered southern inland WA forever.

While the diversity of parrots and cockatoos is the same as historically (with no local extinctions recorded in southern WA), the abundance and distribution of the many kinds is now very different.

Population sizes of species like the endemic western rosella (*Platycercus icterotis*), brilliantly coloured purple-crowned lorikeet (*Parvipsitta porphyrocephala*) and Baudin’s black cockatoo (*Zanda baudinii*) have declined.

However, not all species were negatively impacted by the changes, with some benefitting enormously. One of these is the galah (*Eolophus roseicapilla*).

PINK AND GREYS

Also known colloquially in Western Australia as the ‘pink-and-grey’, the galah once only occurred far inland, more than 500 kilometres to the north and east of

Perth (see ‘Pink cockatoos and solitude’ on page 48).

The species began to visit the south-west region in the early 1900s, but only occasionally. When land-clearing went full steam ahead between 1930 and 1960, population numbers boomed, colonising the south-west in a relatively rapid, widespread expansion.

This was the result of a huge increase in food sources (the seeds of grasses, including wheat), the supply of permanent water on farms, and most likely reduced competition from species that suffered declines following land clearing.

Also undoubtedly playing a role in its success is the bird’s high level of intelligence, which has allowed it to adapt its diet to include a range of introduced plant species like cotoneaster (*Cotoneaster* spp.), plane tree (*Platanus* spp.) and liquidambar (*Liquidambar* spp.), and the fact it has large broods compared to most other cockatoo species.

Although nowadays it is almost impossible to not see galahs in the Perth region, they did not become widely established until approximately 35 years ago (e.g. not breeding in Armadale until the 1980s).

Such information is only available because a few dedicated ornithologists carried out survey expeditions and regularly kept track of changes happening across the State. This historical



information, stored in the records of the WA Museum, highlights the importance to our society of ongoing wildlife studies and record-keeping institutions.

Relying purely on our memories paints a different picture of which birds are considered native, and which are not.

HOLLOW HOSTILITY

So why are changes to populations of birds like galahs of interest, and how are they having a damaging effect on bushland?

Galahs are now so common in the south-west (including the Perth suburbs) that they outnumber most (if not all) other parrot and cockatoo species. But it's not just their sheer numbers that impact other birds.

Like other members of the Cacatuidae (cockatoo) family, they breed in tree hollows, being the only cockatoo species to line their chosen hollow with any form of nesting material (green gum leaves).

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Above Immature male galah eating liquidambar fruit.

Above right Galahs are the only cockatoo that lines their hollow with green gum leaves.
Photos – Simon Cherriman

Right Carnaby's black cockatoos (*Zanda latirostris*) are often chased from hollows by aggressive galahs.
Photo – Rick Dawson





They also happen to be a very hostile guardian of tree-hollows—whether they are nesting in them or not—so once a galah pair moves into a tree, they will aggressively chase other species away both from the chosen hollow and any others within at least a 20-metre radius, deterring many birds from breeding. They have even been recorded driving out larger, threatened species like forest red-tailed black-cockatoo (*Calyptorhynchus banksii naso*) and Carnaby's black cockatoo (*Zanda latirostris*).

For most hollow-dependent species, their chosen nest cavity is used only while breeding for a relatively short time. But galahs show a long-term attachment to their nest, defending it for at least 10 months of the year. So, in small fragments of bushland with few tree hollows, it's easy to understand how this very dominant parrot reduces the availability of tree hollows for other parrot species that breed in the south-west.

GALAH SCARS

Pushing animals out of their homes is one thing, but surely a bird can't harm any plants? Well, galahs chew huge patches of bark off the trunk, and wipe powder from their periophthalmic ring (the skin around their eyes) onto the bare patch, leaving a chalk-like appearance.

It is thought that 'painting' this smooth surface white makes it highly visible to

other galahs (and perhaps other parrots) and advertises ownership of the tree. The birds probably see an extra vivid mark by seeing in the ultra-violet spectrum. The blue patches just below the cheek on male budgerigars don't look particularly bright to humans, but to a female budgie that can see ultra-violet light, they glow very brightly.

It has been suggested that this galah chewing habit aims to stop nest predation by climbing animals such as goannas, which climb trees to raid nests. However, there is no real evidence to support this—goannas do not lose their footing on smooth bark.

There were also early theories that galahs aim to kill trees and speed up the hollowing process, thus creating future nest sites, but, as ornithologist Ian Rowley stated, no animal is known to be capable of such a degree of forward thinking. Also, the scars are not usually made right around the tree, instead they are located primarily on the same side of the tree as the entrance to the nest-hollow.

Whichever the case, galahs have become so common in a region where they previously didn't occur, and this isn't a good thing. In many patches of bush around Perth, all the large, hollow-bearing trees have a resident pair, defending their home from most other birds and giving them 'galah scars', causing stress to the trees.

CHANGING LANDSCAPE

In bush around Perth, galahs can be seen occupying many tree hollows. This is coupled with introduced rainbow lorikeets (*Trichoglossus moluccanus*) taking over the other hollows and the occasional native Australian ringneck (*Barnardius zonarius semitorquatus*) or 'twenty-eight' squeezing in where they can.

The galah story gives us an example of how changes to a landscape in one area can cause a native species to become over-abundant and have large impacts to vegetation and species living in another landscape.

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Above left The periophthalmic ring is a distinctive patch of bare skin surrounding the eye.

Above Galah scars are usually located on the same side of the tree as the entrance to the hollow.

Photos – Simon Cherriman

Simon Cherriman is an ornithologist as well as an award-winning environmental scientist, ecologist, writer, environmental educator, wildlife filmmaker and the Director of Insight Ornithology. He can be contacted at waalitj84@gmail.com