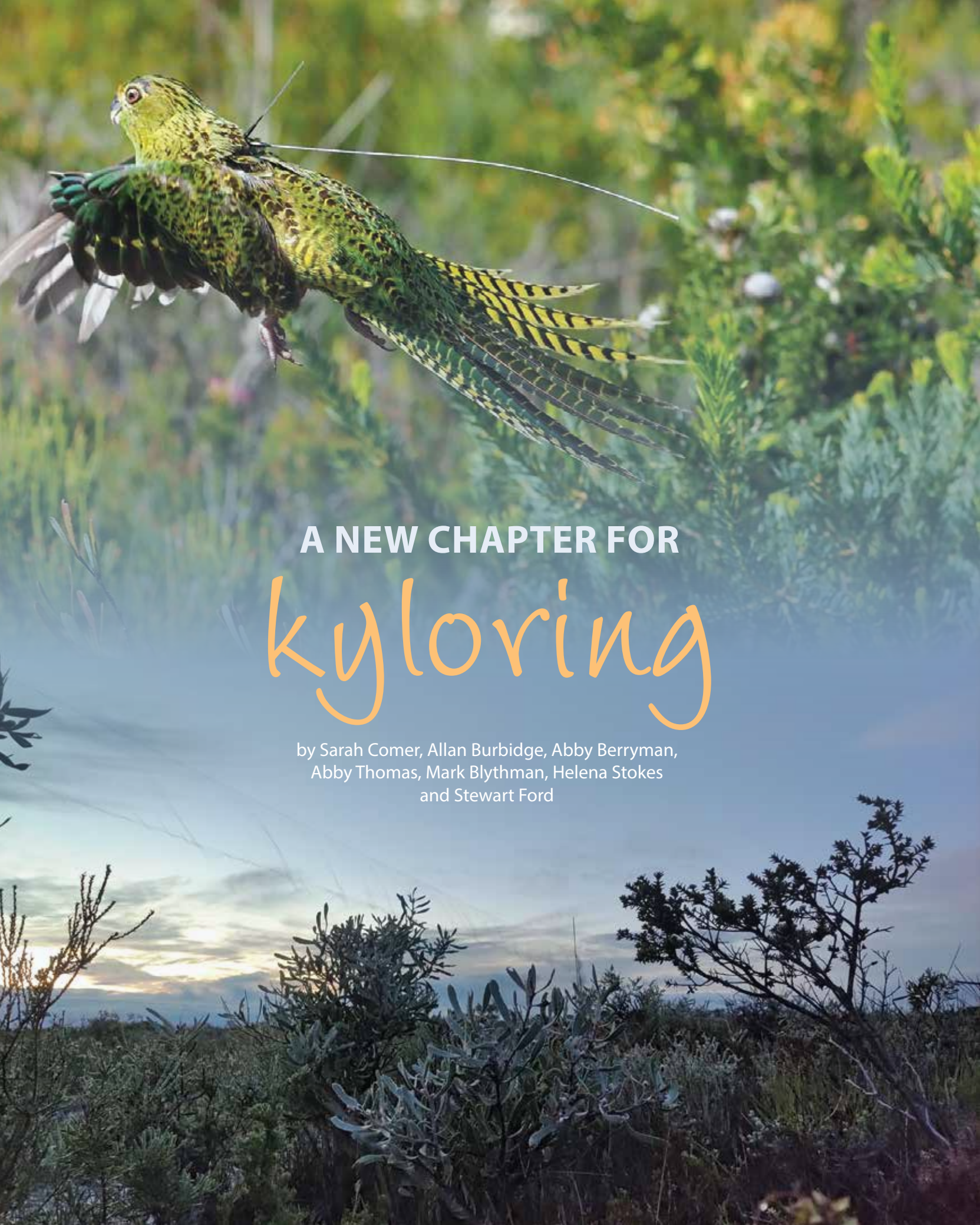
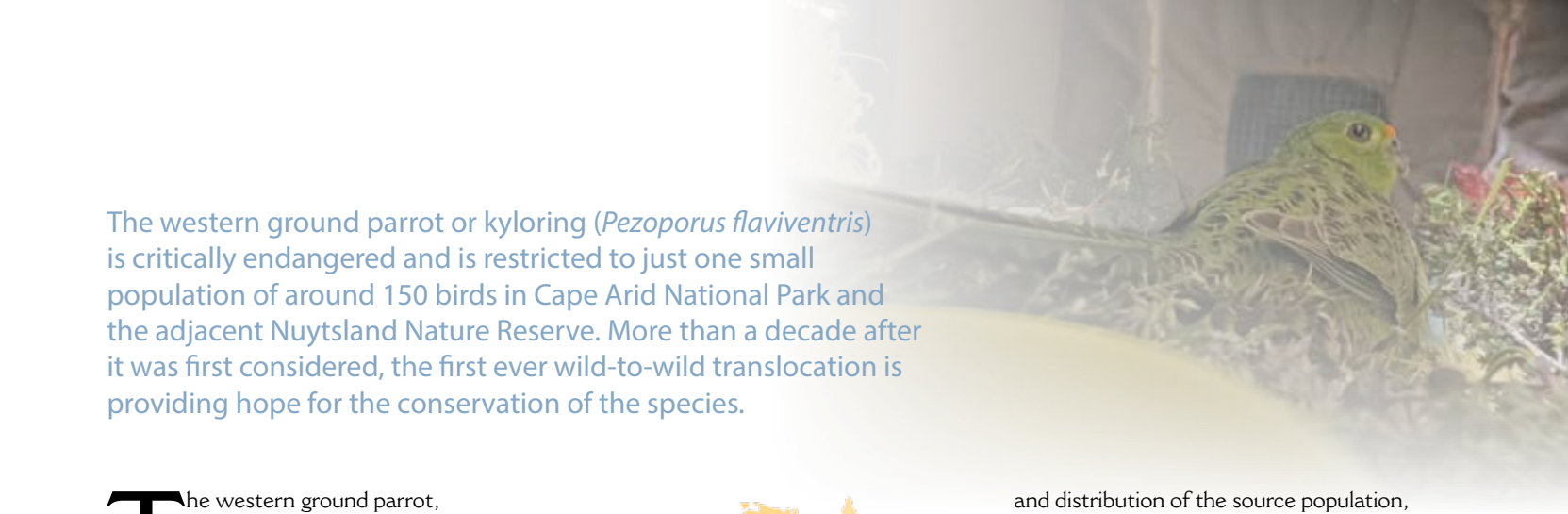


A NEW CHAPTER FOR kyloring

by Sarah Comer, Allan Burbidge, Abby Berryman, Abby Thomas, Mark Blythman, Helena Stokes and Stewart Ford



The western ground parrot or kyloring (*Pezoporus flaviventris*) is critically endangered and is restricted to just one small population of around 150 birds in Cape Arid National Park and the adjacent Nuytsland Nature Reserve. More than a decade after it was first considered, the first ever wild-to-wild translocation is providing hope for the conservation of the species.

The western ground parrot, known as kyloring to the local Nyungar Aboriginal people (see Connection to Boodja, page 12), is an iconic species and is now known only from one location at Cape Arid and Nuytsland on the south coast. Protection and recovery of the last remaining population of western ground parrots from bushfire and introduced predators has been a focus of conservation efforts by Department of Biodiversity, Conservation and Attractions (DBCA) and partners for more than a decade (see 'Heeding kyloring's warning' *LANDSCOPE*, Spring 2010).

A healthy ground parrot population is symbolic of a healthy ecosystem and improved fire and predator management also has significant benefits for other species. In particular, the integration of feral cat control into the DBCA's *Western Shield* program, has been a critical step in this process and has benefited a wide range of native fauna. Scientific endeavours have also led to improvements in monitoring and detection of western ground parrots across the remaining occupied habitat making it easier to monitor these elusive birds (see 'Kyloring, cats and conservation' *LANDSCOPE*, Summer 2014).

Opposite page
Main top A released western ground parrot (*Pezoporus flaviventris*), with its transmitter and logger antennas visible.
Photo – Alan Danks/DBCA
Main left Mist nets set and ready for capturing western ground parrots.
Photo – Helena Stokes/BirdLife

Above right A western ground parrot in a temporary holding box, on its way to a new home.
Photo – Arthur Ferguson/DBCA

Since 2015, bushfires caused by lightning have burnt around 80 per cent of the known habitat of the bird. In 2016, DBCA held a workshop facilitated by the IUCN to prioritise immediate and long-term conservation actions to guide the future recovery of the western ground parrot or kyloring (see 'From the ashes,' *LANDSCOPE* Winter 2016). Participants created a vision for the future, and establishing an additional population is considered an important step in improving the long-term security of the species and realising this vision.

In recent years, monitoring of kyloring has found that the number of birds in the last population has been maintained and translocation is considered an achievable action for conservation of the species.

GETTING READY

The threat from bushfire is ever present in Cape Arid and Nuytsland, and establishing a second population is the best chance of providing long-term security for the species. However, to ensure success, much preparation was required, and this work was completed over several years.

DBCA, with support from the South Coast Threatened Birds Recovery Team (SCTBRT), undertook the necessary planning, including assessment of the size and distribution of the source population, planning the translocation strategy, assessing the risks, selecting a translocation site, and ensuring that potential threats were adequately managed at the new site.

With western ground parrots usually only calling in the hour before sunrise and after sunset, autonomous recording units (ARUs) have become an indispensable tool for monitoring trends in populations over longer time periods and are supported by human listening surveys.

ARUs have been used on grids in core habitat since 2013 and data are used to derive an index of calling activity. The distribution of parrots across the wider landscape is determined by a solar-powered ARU grid network that covers just under 70,000 hectares of potential western ground parrot habitat.

The combination of human listening surveys and ARU data provided confidence that the birds were responding positively to intensive habitat management (both fire regimes and introduced predator management) and that a trial translocation of a small number of birds would be possible.

WHERE TO

Selection of sites was informed first by a predictive climate model for the south coast of WA developed in collaboration with scientists from Edith Cowan University. This model helped in determining which areas would be likely to remain climatically suitable in coming decades, taking into account the ongoing and predicted changes to the climate in the area.

A short list of sites was then assessed for the threat posed by introduced predators and bushfire, DBCA's capacity to manage these threats, whether the site had adequate food, shelter and nesting areas for

translocated birds, and that the vegetation structure and floristic diversity was comparable with areas currently occupied by western ground parrots in Cape Arid National Park.

Once selected, the release area was subjected to increased management for feral cats and foxes, pre-suppression bushfire mitigation, and a network of ARUs established to monitor for western ground parrots following release.

RISK ASSESSMENT

With a release site chosen and management commenced, a risk assessment was undertaken, considering all aspects of catching, moving and releasing birds (the actual translocation), to determine potential risks to success and actions to mitigate these elements. This assessment was fundamental to developing a best-practice translocation strategy that follows the internationally recognised IUCN guidelines for translocations.

The development of the translocation strategy drew on the knowledge of a range of experts in western ground parrot ecology, capture, transport, captive management and biosecurity, as well as veterinary expertise, to ensure that the methods used during the translocation gave the greatest chance of success.

A disease risk analysis was also undertaken to assess and minimise the risk of introducing disease into the western ground parrot population, and to minimise the risk of introducing disease to other animals or humans during the translocation process.

The disease risk analysis process carried out by vets from Perth Zoo and Murdoch University developed biosecurity protocols, and recommendations were made for disease screening any ground parrots captured to ensure they were healthy.

CATCH AND RELEASE

Following extensive reviews, the necessary approvals and permits were in place, and after months of planning to anticipate and overcome the logistical challenges of catching and relocating such rare birds in a remote landscape the actual capture and moving of birds could begin.

Located approximately two hours' drive east of Esperance, the team set up a completely self-contained bush camp for 26 staff and skilled volunteers. The camp had a temporary holding and veterinary facility to process and hold birds before they were translocated, and a field office to process data and help plan each day's events.

To help identify areas with high parrot activity, the data from 120 ARUs deployed throughout the landscape weeks earlier were collected to review calling activity and inform targeting of specific areas for capture.

Mist nets were set up in flyways between roosting and feeding sites. Once caught, the birds were extracted by licenced A-class bird banders and transported to the camp holding facility.

There, Perth Zoo staff conducted health checks, the birds were sexed and measured and then placed into temporary holding boxes to await transport to their new home.

Above Setting up mist nets.
Photo – Arthur Ferguson/DBCA

Above right Servicing an autonomous recording unit (ARU).
Photo – Allan Burbidge/DBCA

" ...ten years of vision and preparation leading up to the first wild-to-wild translocation of western ground parrots was realised when the first four birds were transported to the release site."

Conditions were favourable during the first few capture sessions, and three male and two female birds were caught over two days.

In their temporary holding boxes, they were fed a mixed diet of native plants and commercial seed and monitored by zoo staff using CCTV. In general, the ground parrots adjusted well to their temporary holding, and made the most of the abundant supply of food.

On 20 April 2021, ten years of vision and preparation leading up to the first wild-to-wild translocation of western ground parrots was realised when the first four birds were transported to the release site.

They travelled well and were heard feeding in their boxes during the long car trip. The birds were fitted with radio transmitters and released the next morning about an hour after sunrise, allowing them to feed in their boxes prior to release and to avoid releasing the birds during the coldest part of the morning.

The team's remarkable luck with the weather continued, and they experienced perfect capture conditions over the next ten days. A further four birds (three male and one female) were captured from different sites and by 26 April 2021, seven western ground parrots had successfully been released into their new home.

UNEXPECTED CHALLENGES

Health screening of all the birds captured revealed no health issues, and all birds appeared to be in good to very good condition.

Sadly, one bird died before release. The injury appeared to have occurred during capture, and this is being investigated with input from Perth Zoo and other experts. One thing that has become clear is that some aspects of the skeleton are unusual amongst parrots, and this may be a key to understanding this issue and informing future management actions.

A second bird travelled really well and was noted to be feeding consistently along the way to his new home but was found to be injured when released. The bird was taken to Perth Zoo for treatment and has fully recovered. He is now part of the captive population at the zoo, where it is hoped that he will make a significant contribution to efforts to breed the species in captivity.

A NEW HOME

In the four weeks following release of the seven ground parrots, their movements were closely monitored in their new home, with the aid of VHF transmitters and GPS loggers that were fitted before release.

Above left Conducting health checks.
Photo – Arthur Ferguson/DBCA

Above Temporary holding box CCTV footage.
Photo – Sarah Comer/DBCA

Below A wild western ground parrot in Fitzgerald River National Park.
Photo – Brent Barrett/DBCA

Discover more about saving the Western Ground Parrot

Scan this QR code to watch the video or visit ABC's Landline website.

The transmitters were fitted to the birds with a weak-link rubber band harness to ensure they fall off before the end of the transmitter battery life (approximately three months).

While one bird's transmitter came off within days of release (likely chewed off by the bird), the other six were still being followed in early July. One of the females settled into a nearby area of wonderful habitat, while some of the others have moved long distances exploring the country around the release site.

All of the birds are now within a radius of less than 20 kilometres of the release site. The project team is busy tracking these birds and will continue to do so until the transmitters come off or batteries run out.

At that stage, listening for calls will be the best way of detecting birds. In addition to the network of ARUs in the release area, staff and volunteers will conduct listening surveys in the hope of hearing the calls of kyloring, indicating the first stage of the translocation has been a success.

WHAT'S NEXT?

Translocations can be risky, but in this case a risk worth taking given the ongoing and real threat of bushfire having a significant impact on the western ground parrot population in Cape Arid and Nuytsland.

In the coming months, the DBCA-led team, along with volunteers, will continue to implement introduced predator control and monitor both the translocated birds and the source population in Cape Arid and Nuytsland.

If the birds continue to persist in the release area, it is hoped that more birds could be translocated to strengthen the new population over the coming years.

If successful, the vision of the song of the western ground parrot once again heralding the start of the day in the rich heath ecosystems to the east of Albany will be realised.

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Above A transmitter being fitted to a western ground parrot.
Photo – Helena Stokes/BirdLife

Above right Western ground parrots being released into their new home.
Photo – Jennene Riggs/Riggs Australia

Right Some of the capture team in Cape Arid National Park after a morning's work.
Photo – Sarah Comer/DBCA