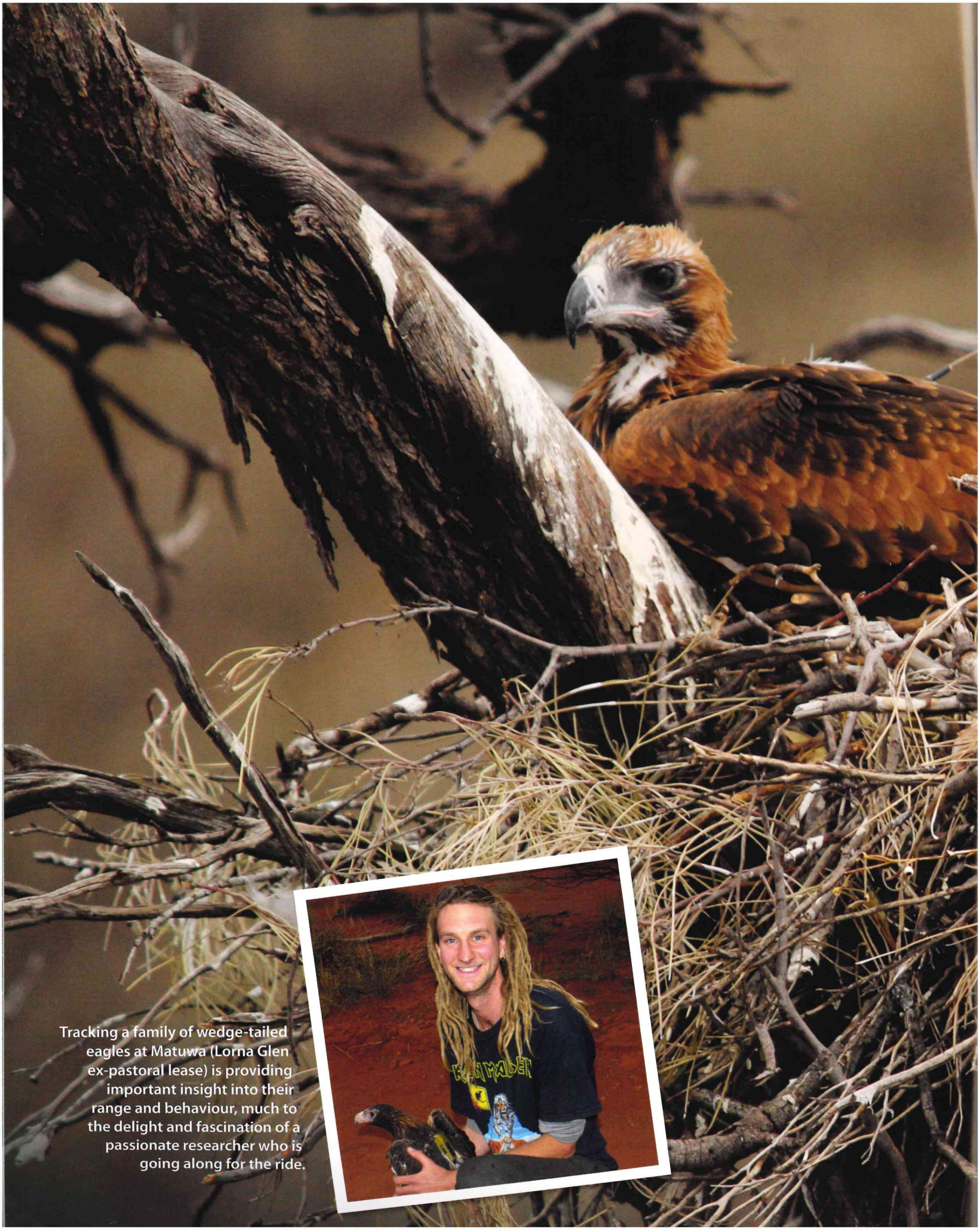
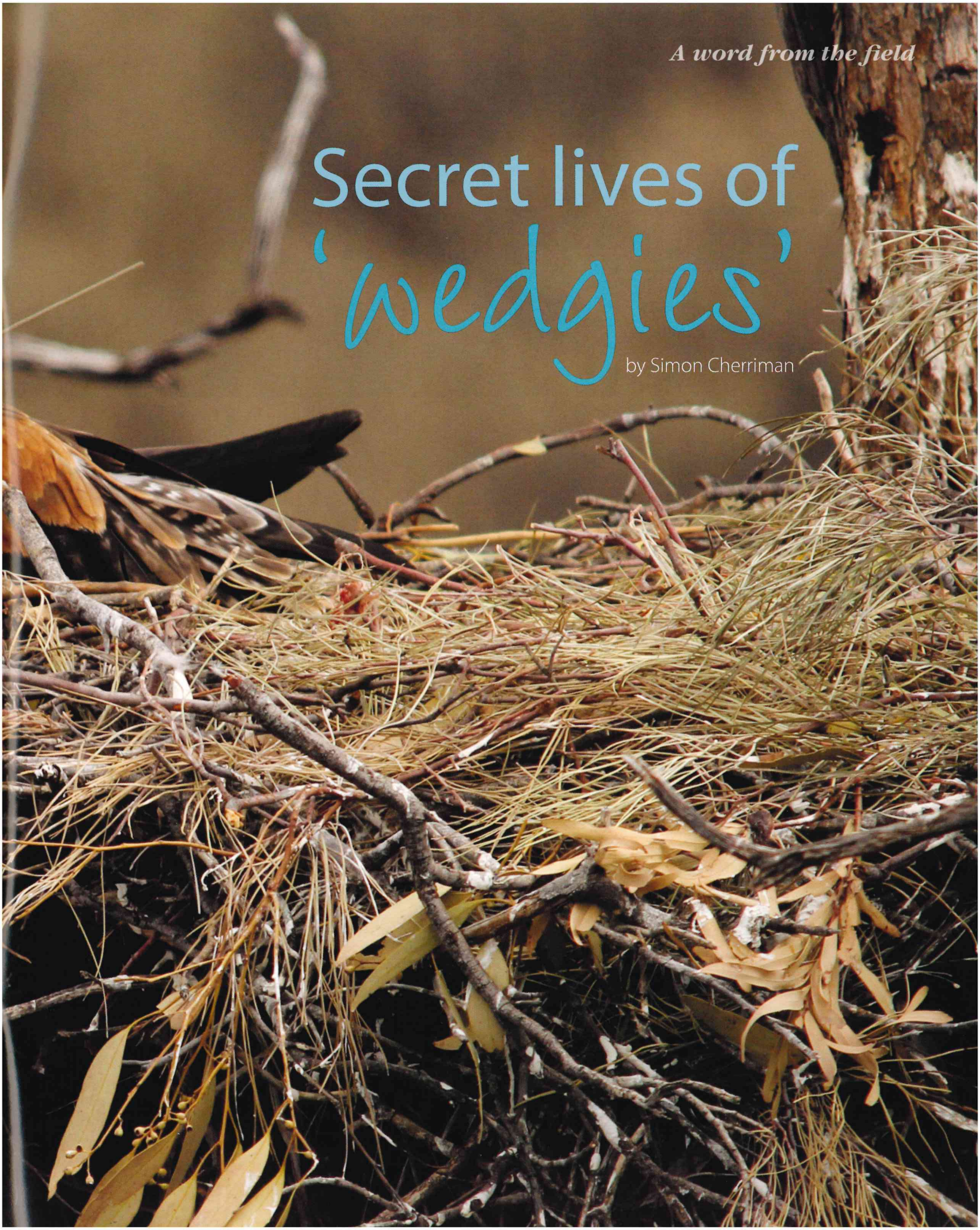


Tracking a family of wedge-tailed eagles at Matuwa (Lorna Glen ex-pastoral lease) is providing important insight into their range and behaviour, much to the delight and fascination of a passionate researcher who is going along for the ride.

Secret lives of 'wedgies'

by Simon Cherriman



When you have an adult wedge-tailed eagle (*Aquila audax*) tucked under your arm, it's really important to keep hold of those legs. The skin-tearing talons on the end of each toe, together with several tonnes of crushing power per foot, make them a formidable force. Just watch a kangaroo joey get carried off into the sky by our largest bird of prey to get an idea of how foreboding they can be to their victims.

Why on earth am I holding one?, you might ask. Well, having just fitted a satellite transmitter to the eagle using a specially designed harness, I was ready to let it go. So, while pinning the wings with one hand and gripping the tarsi (legs) firmly with the other, I place it down on the ground. Then I quickly let go and step back…

Seeing a 'wedgie' soaring effortlessly above the landscape is an iconic image of the outback. It is a sight I enjoyed many times as a young boy on family holidays around Western Australia. Going on to study and photograph eagle biology while at university and for years afterwards further fuelled my quest to find out more about these majestic birds. They are intelligent, powerful predators and strong, adept flyers. Though they are one of the better-studied raptors in Australia, satellite tracking technology used in recent years by scientists around the world to follow bird movements, remains mostly absent from Australian research. The eagles' size makes them perfect subjects for long-term studies because they are able to carry larger types of tracking devices (known as platform terminal transmitters or PTTs), which are powered by solar panels and attached to the birds with a backpack mount.

OUTBACK RESEARCH

In late 2011, I began researching wedge-tailed eagle ecology at Matuwa, also known as Lorna Glen (see 'Desert Eagles; wedge-tailed eagles at Lorna Glen', *LANDSCOPE*, Spring 2013), supported by the then Department of Environment and Conservation. The area is managed under the Wiluna Martu Land Management project and is jointly managed by the traditional owners and Parks and Wildlife. This study site provided an ideal location to track birds, especially as detailed information on habitat use in relation to reintroduced threatened mammal populations was part of the research. In 2012 I set out to fulfil a boyhood dream and track the movements of adult wedge-tails and was fortunate to obtain a Parks and Wildlife community conservation grant to cover the costs of three PTTs. I also received an *Australian Geographic* seed grant to help with logistics and the production of a community education website about the project. Retired WA eagle experts Michael Ridpath and Michael Brooker provided me with insights into the methods they used during their research in the 1960s. In June 2013, after months of preparation, we headed to Lorna Glen, in WA's remote outback, to attempt an adult eagle capture.

'How do you catch a wild wedgie?' along with 'How tall are you?' (I'm 6'8") and 'Do you play basketball?' (No), were common questions when people found out about my mission. A giant 'chook pen' cage trap with an open roof, built beneath a dead perch tree, would prevent eagles having their usual 'runway' needed to get airborne, once lured inside with a piece of carrion. Wedgies find it hard to resist a roo, and soon after arrival, we baited our traps with the road-kill collected on our way up. The stage was set.

Previous page
Main A juvenile wedge-tailed eagle wearing a satellite tracking device.
Photo – Simon Cherriman
Inset Simon Cherriman with an eagle fitted with a PTT.
Photo – Gill Basnett

Above Eagles have wing spans of up to nine feet.
Photo – Simon Cherriman

Above right The 'chook pen' cage trap.
Photo – Gill Basnett

Left View from a bird hide overlooking Kuyurnpa's nest.

Below left Falconry hoods are used to blind and calm the birds.
Photos – Simon Cherriman

Below Fitting the PTT.
Photo – Gill Basnett

"... he slowly opened his feet, looked at me for a few seconds, then raced forward and launched into the air, flying down the dirt track like a 747 leaving the airport."

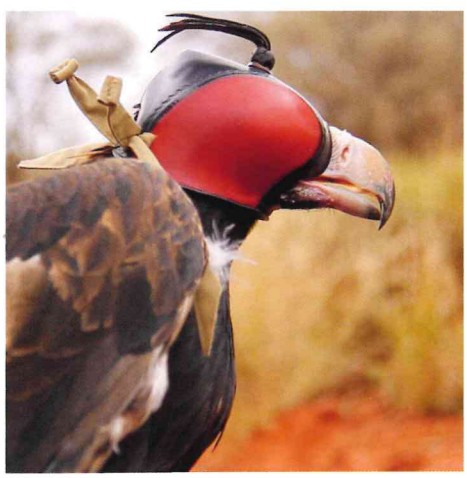
At mid-afternoon the next day, my heart thumped as we approached the first trap. I glanced between the shrubs as the vehicle slowed down. I was nervous. Suddenly, a parting in the bushes gave me a glimpse at the trap. A flurry of wing-beats blurred the scene as I noticed two eagles. One was outside the trap and promptly took off, while the other was inside. Finally, after all those years of build up, the moment I had been waiting for. I had one!

AND THEN THERE WERE THREE

The eagle was an adult male, which I named 'Wallu' after the local Aboriginal word for eagle 'Wallu-wurru'. It took about 40 minutes to fit the PTT, tag, weigh and measure the bird, before removing the falconry hood (used to blind and calm the bird during handling) and release. As I stood back and watched, he slowly opened his feet, looked at me for a few seconds, then raced forward and launched into the air, flying down the dirt track like a 747 leaving the airport.

The next day we succeeded in capturing an adult female we named 'Gidjee', an alternative spelling of the name for the eagles' favoured nest tree in the area. She was also fitted with a GPS tracker. This bird was our prime target, as her territory, slightly further west than where Wallu was captured, overlapped with the 1100ha fenced enclosure at Lorna Glen, which contained threatened mammals.

Four months later I found myself clinging to the side of an eagle nest, face-to-face with Gidjee's healthy nine-week-old chick. A seven-week incubation period, that only a patient mother could sit out, together with regular delivery of food by her mate, had nurtured a female chick. Later diet studies revealed her 'baby food' included the occasional boodie or burrowing bettong (*Bettongia lesueur*), golden bandicoot (*Isoodon auratus*), as well as many rabbits and goannas. I removed 'Kuyurnpa' (a Martu word meaning 'little girl') from the nest, fitted the third PTT, then placed her back. She was almost ready to fledge – only a week or so longer. Then, after



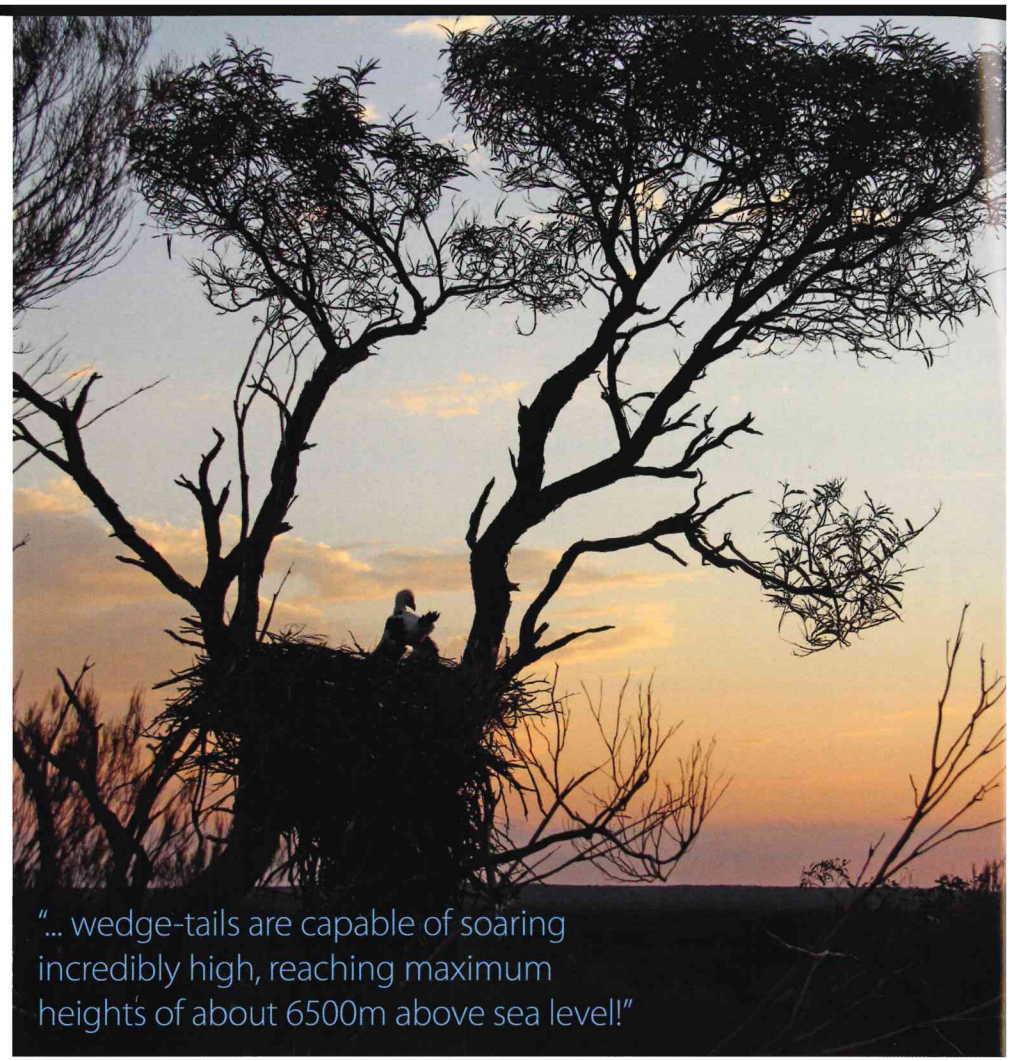
all that flapping practice on the nest, it would be time to use those massive, feathered appendages for the first time. And take me, via a virtual satellite connection, along for the ride.

FASCINATING INSIGHT

In the 12 months since Wallu's capture, the tracking data has provided fascinating insights into the lives of wedge-tailed eagles. It has provided additional evidence that Lorna Glen adult wedge-tailed eagles are mostly sedentary in a fixed home range. Wallu and Gidjee maintained relatively small home ranges of about 45km^2 and 25km^2 respectively. The one exception was a 'Wallu Walkabout' where he travelled 60km to the edge of Lake Carnegie and back in a day.

Altitude data (accurate to 22m) has shown that wedge-tailed eagles are capable of soaring incredibly high, reaching maximum heights of about 6500m above sea level! This can probably be explained by thermal air currents, which peak during late spring and summer, and carry the eagles swiftly upwards. While these heights are exceptional, most of an eagle's daily routine occurs between ground level and about 1500m above sea level.

Although research in the 1970s showed that wedge-tailed eagle fledglings can travel hundreds of kilometres in their first year, this information came from banding birds as nestlings and recovering them months or years later; data on the 'in between' is missing. It is thought that juvenile and immature wedge-tailed eagles wander the country for perhaps several years before establishing a territory of their own, but almost nothing is known about where they go during this period. One of the most exciting parts of the eagle tracking project has been watching Kuyurnpa leave Lorna Glen at the end of March 2014 to begin her juvenile dispersal phase of life. By mid-April she had seen the ocean, roosting at 80 Mile Beach in the Pilbara. Since then, she has travelled over 14,800km around Western Australia, crossing the Great Victoria Desert twice and even roosting inside the South Australian border.



"... wedge-tails are capable of soaring incredibly high, reaching maximum heights of about 6500m above sea level!"

Above Wedge-tailed eagle nests can be up to two metres deep and nearly as wide.
Photo – Simon Cherriman

Right Simon prepares to return Kuyurnpa back to her nest.
Photo – Mike Griffiths

As this is the first time a juvenile Australian eagle has been tracked by satellite, any information on its movement patterns during this early phase of its life is totally new to science. Having a long-lasting transmitter attached to an arid-born eagle like Kuyurnpa will hopefully shed light on the species' early life. As this eagle tracking project continues, it is envisaged that more eagles from different climatic regions of Australia will be tracked in the future, gradually painting a clearer picture of these majestic raptors' lives.

Simon Cherriman is a biologist, filmmaker and environmental educator. He currently manages the small business iNSiGHT Ornithology, which aims to engage and inspire people about the environment, mainly through the science of birds (ornithology).

Visit www.wedge-tailedeagletracking.blogspot.com.au to read more about Simon's project and to view the trailer of the documentary Where Do Eagles Dare?.