Remembering the dalgyte

Since 1935, the dalgyte or bilby has undergone a significant population decrease. It now occupies only 20 per cent of Australia, significantly less than its former range. Until now, the reason for its decline was not clear, but a recent study, which drew on the memories and knowledge of residents in the State's south-west, offers some answers.

by Rhianna Mooney

The dalgyte (*Macrotis lagotis*) is a nocturnal marsupial characterised by its large ears and long, pointed snout—features that are seemingly out of proportion. In recent years, its appealing looks led to it being chosen as a representative mascot for all endangered species, by a Commonwealth of Australia Endangered Species Program.

As part of an initiative to raise public awareness of Australia's endangered species, the dalgyte—well known to most Australians as the 'bilby'—has been marketed as the Australian alternative to the Easter Bunny. Many Australians now embrace the 'native' alternative, favouring chocolate bilbies over chocolate bunnies.

Previous page
Main: Dalgyte or bilby (*Macrotis lagotis*).
Photo – Hans & Judy Beste/Lochman Transparencies
Inset and this page below: A photo taken in Corrigin in 1923. The writing on the back of the photo states "Corrigin 1923. The last dalgyte I ever saw alive. Caught in a rabbit trap in Corrigin".

Despite its increased public profile, the dalgyte remains on the threatened species list, and is the subject of numerous conservation projects as well as historical studies. The species is now restricted to 20 per cent of Australia, much less than its former range. It survives in parts of the Tanami Desert (Northern Territory), Pilbara and southern Kimberley (WA), and there is also an isolated population in south-west Queensland.

Ian Abbott, a Senior Principal Research Scientist with the Department of Conservation and Land Management, recently conducted a historical study into the cause of the dalgyte's decline and apparent extinction across south-western Australia.

TALKING TO OLD TIMERS

As part of the study, Ian surveyed WA Museum records and found there was little formal documentation about the dalgyte's distribution in the south-west of Australia. Prior evidence of the dalgyte's original south-western geographic range limits existed in only six museum records, including three from near Bridgetown.

He discovered records of dalgyte sightings dating from the late 1830s, shortly after the settlement of the Avon Valley, inland from Perth. Observational data and museum records indicated that, until 1935, dalgytes were abundant across south-western Australia. Evidence also suggested that the dalgyte was absent from the higher rainfall subcoastal zones except for Perth and Bridgetown. The study revealed that it also occurred in the lower south-west. Prior to their regional decline and apparent extinction, they were particularly common in the Western Australian Wheatbelt.

The most fruitful source of information came, however, when Ian interviewed 155 residents of the south-west region, most of whom were aged 70 years or over, to gather information about the dalgyte's former distribution. They were asked if they had sighted the dalgyte, or found evidence of its presence in the area, and when they stopped seeing it. During the interview process, the term 'dalgyte'—a Nyoongar name—was frequently used. Many of the interviewees knew the species only by this name. Ian uncovered a wealth of

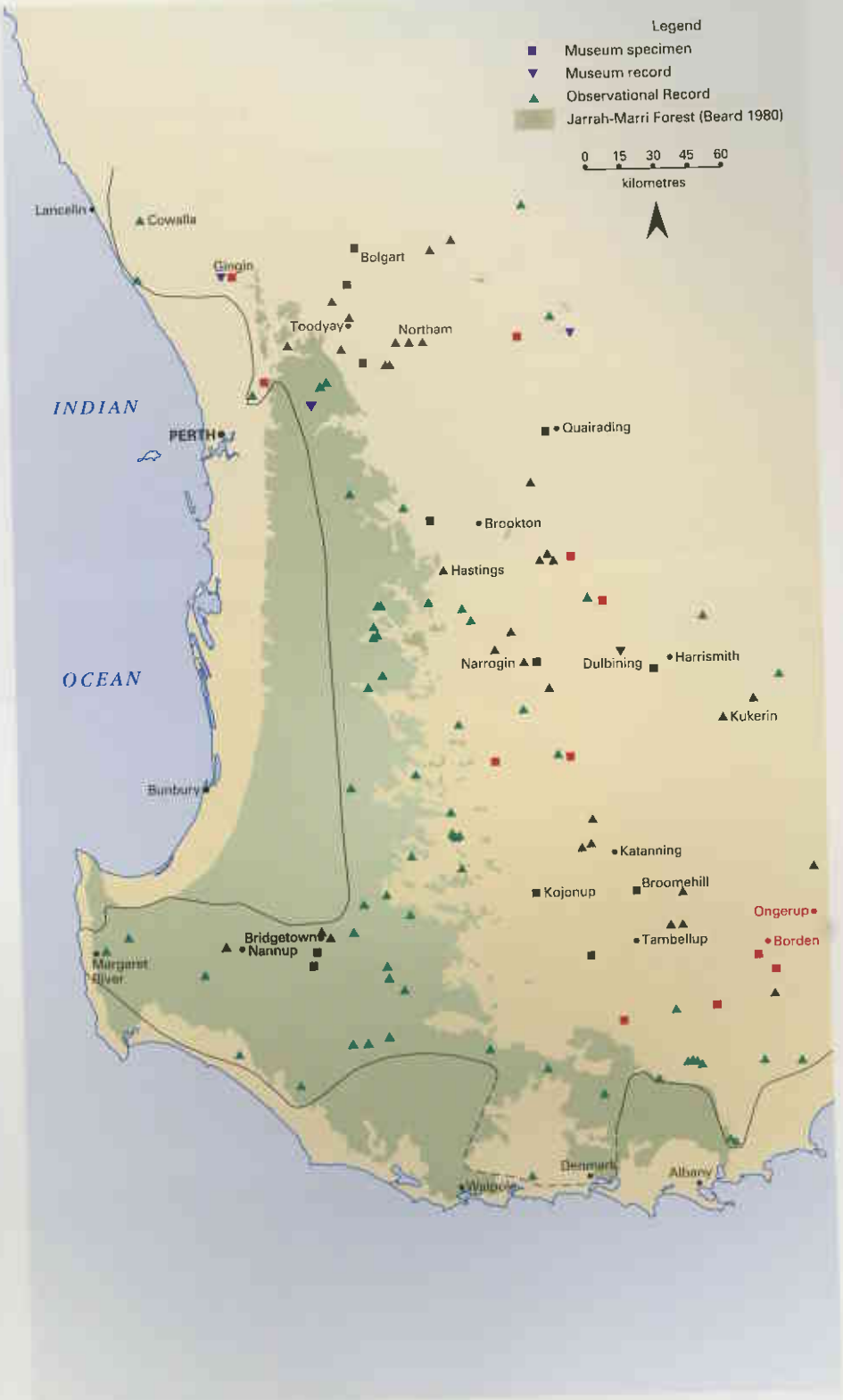
local information and knowledge in those he interviewed, and this was the first time that much of the information had been formally documented. Before then, it existed only in people's memories.

FORMER ABUNDANCE

Many of the interviewees recounted the abundance of the dalgyte until the arrival and settlement of the European fox (*Vulpes vulpes*) in the 1920s and 1930s. Harry Moyes remembered that Fredric Foster lived on a farm at the head of Pink Eye Gully, south-west of Bridgetown. A letter from Foster said he found a dalgyte with a "few small teeth marks, probably a cats, on the throat" in 1921. Moyes also confirmed that dalgytes had disappeared from Bridgetown soon after the arrival of the fox.

Well-known naturalist Harry Butler also recalled catching dalgytes in rabbit traps on his way to high school in Northam between 1944 and 1945, and later in the Avon Valley between 1956 and 1957. Nevertheless, Ashley Giblett recalled that his last dalgyte sighting in the south-west was along the Perup River, between Yerraminnup River and the Boyup Brook-Cranbrook Road in 1975, 42 years after the introduction of the fox. According to Ashley, the dalgyte was abundant along, and up to 100 metres from, the bank of the river.

The information gathered from the WA Museum and through oral accounts led Ian to conclude that, until 1935, the dalgyte was reported widely from south-western Australia, and was reasonably common in most of the region. Observational data and museum records formerly placed the dalgyte from between Walpole and Denmark in the south, and from Margaret River in the west.



DALGYTES IN DECLINE

Ian's study examined various possible causes for the dalgyte's population decline and apparent extinction in the south-west, including the effects of introduced rodents and rabbits, the impact on the dalgyte from rabbit trapping and poisoning, fox predation, logging, mining, fire, drought and agricultural practices.

The study concluded that some factors had no relevance to the cause of the decline, others appeared to have contributed indirectly, and several had directly influenced the animal's decline and apparent extinction in the south-west. Of course, many of the possible causes could have been interlinked, but the most probable cause of the dalgyte population decline, similar to other native mammal species, was likely to be the introduction of the European fox into the Wheatbelt area between 1920 and 1930.

FOXES AND OTHER FACTORS

Fox predation has contributed to the extinction of 18 Australian mammals, including 10 in WA, and within 10 years of the fox being introduced into the south-west the dalgyte's population had significantly declined. Many of the people interviewed for the study linked the introduction of the fox with the decline and apparent extinction of the dalgyte.

Left: Lake Auld in the Pilbara's Great Sandy Desert at sunset. This is home to an existing population of dalgytes.

Centre left: The dalgytes main predator, the European fox.

Bottom left: Dalgytes typically live in burrows constructed against termite mounds, spinifex tussocks or small shrubs.
Photos – Jiri Lochman

The absence of foxes in areas where the dalgyte's population did not decline further suggested that foxes were the primary predator and cause of the dalgyte's population decrease.

The arrival of rabbits had a major impact on the dalgyte. Rabbit predators generally maintain high population numbers in areas where their prey is abundant. This was particularly true of the fox. Many native animals were also accidentally trapped by rabbiters and poisoned by rabbit baits. Dalgyte burrows were mistaken for rabbit burrows and fumigated to kill rabbits. Clee Jenkins, who once lived near Northam, recounted in 1974 that anything "that looked like a rabbit burrow was treated and so the harmless Dalgite [sic] was a frequent, if unintended, victim".

A drought in south-western Australia, in the late 1930s and early 1940s, could have also contributed to the dalgyte's population decline. In addition, the research found that fire, depending on its scale, intensity and frequency, might also have contributed to the decline of the dalgyte and other native animals by modifying vegetation cover and exposing them to predators. Ian's research also found that disease epidemics and clearing of native vegetation might have contributed to the dalgyte's decline.

Agricultural practices were examined as a possible cause for the dalgyte's decline. The damage caused by sheep and cattle made areas more open, and native animals more visible to predators. The presence of dead sheep and cattle in agricultural regions also attracted scavenging foxes.

Some farmers considered dalgytes a nuisance. They thought the animals were eating the roots of the crop when they were burrowing in the paddock. In actual fact, the dalgytes were digging for

Above: The Bridgetown hills (now largely cleared of native vegetation), one of the former habitats of the dalgyte in Western Australia.
Photo – Len Stewart/Lochman Transparencies

Right: Tony Friend (right) and Clare Anthony (left) trap and release dalgytes as part of the department's Return to Dryandra program.
Photo – Michael James

insects that may have damaged the roots of the crops—far from being a nuisance they were performing a valuable service, unbeknown to the farmers.

Ian's study discounted Aboriginal predation as a possible cause for the decline of the dalgyte population in the south-west. He found no evidence that local Aboriginal people hunted dalgytes for their tail tips, as they were reported to have done in central Australia.

PRESERVING MEMORIES

The study found that all these factors contributed in varying degrees to the decline of the dalgyte. But Ian concluded that the main cause of the dalgyte's decline in the south-west of Australia was the introduction of the fox between the 1920s and the 1930s. The historical study, and interview process involving many south-west residents, also served to formally document the experiences and knowledge of many residents of 70 years or older. By recording this information, Ian has archived important local information that was at risk of being lost forever. The paper has been published in the records of the Western Australian Museum, Vol 20.

Thanks to the intervention of wildlife researchers, the dalgyte has already been reintroduced to Dryandra Forest, near Narrogin in the Wheatbelt, as part of the Department of Conservation and Land Management's Return to Dryandra program. Now that more is known about the former range of the dalgyte in the south-west, the dalgyte will be considered for future reintroduction programs to these areas.

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LANDSCOPE

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The first stage of a long-distance mountain bike trail, that will ultimately lead from Mundaring to Albany, is now open. See page 49.

Discover the underwater wilderness of the Geographe Bay, Leeuwin-Naturaliste, Hardy Inlet area, a potential marine conservation reserve, on page 18.

Little was known about the distribution of the dalgyte, or bilby, in the south-west forests until scientist Ian Abbott interviewed old timers. Turn to page 28.

Older piles of the Busselton Jetty are crowded with marine life, but it was not always so. How do marine animals gradually colonise the piles? See page 34.

The Stirling Range National Park experiences many extremes of weather, from snow falls to bushfires. Find out why on page 10.

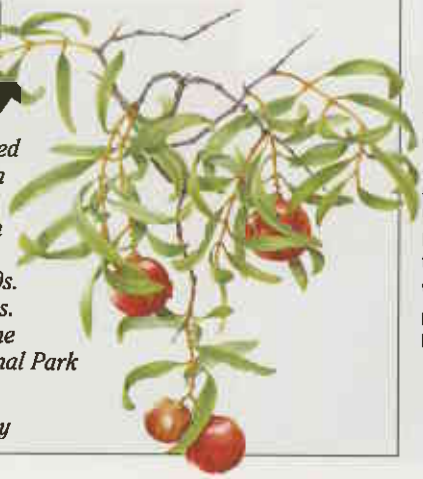
FEATURES

REGULARS

COVER

Quandong (Santalum acuminatum) *is one of the most widespread plants in Australia. This small, upright tree is most easily recognised by its bright red fruits, which are edible and also contain a nutritious nut. It belongs to the same genus as the famous sandalwood, which was one of Western Australia's major exports in the late 1800s and early 1900s. Members of this genus are root parasites. Quandong grows in dense stands in some areas within the Woodman Point Regional Park (see story on page 42).*

Cover illustration by Philippa Nikulinsky



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