

FAUNA

# BUSH STONE-CURLEW

by Brett Beecham

**M**OST landholders can recall hearing bush stone-curlews calling at night, an eerie and distinct wailing and whistling "weer-loo". Today they are rarely heard, and people are asking why have the curlews gone, and how can we bring them back.

## Description

Apart from the very distinct call heard at night, often before rain or during the breeding season, the bush stone-curlew is elusive. It is a medium sized bird weighing up to 800 g, standing 50 - 60 cm high, with large yellow eyes and a broad white eyebrow. During the day birds shelter amongst fallen timber, rocks or dense undergrowth, where their mottled grey and brown plumage provide superb camouflage. At night they forage in woodlands, pastures and wetlands for insects, but will eat a wide range of seeds, small fruit, spiders, centipedes, frogs and reptiles.

## Habitat

They generally inhabit open forests and woodlands, with a low grassy or herbaceous understorey and few shrubs. This open habitat allows birds to spot potential predators from a distance. At the hint of any disturbance they lie still, adopting a flattened posture on the ground to avoid discovery. If this is unsuccessful, they will run for a few metres and then freeze in a horizontal or upright position. The bush stone-curlew's camouflage and postures are designed to blend it in with any nearby fallen timber. Finally, if deception fails, the bird will fly off a short distance.

## Behaviour

The seasonal movements of the bush stone-curlew create the impression that it is a nomadic species. However bush stone-curlews are sedentary, and form bonded pairs that occupy a permanent home range of several hundred hectares.

They may live for 20 - 30 years. During autumn and winter pairs and young often gather into loose clans and roam a larger local area of up to 100 square kilometres. Within this area they will roost in several different areas, but shift their feeding areas daily.

## Breeding

Bush stone-curlews breed during spring and summer, although this varies with location and season. At the start of the breeding season, pairs re-establish their breeding territories of about 10 - 20 ha and vigorously defend them. Un-mated and non-breeding birds will gather into smaller flocks in neutral territory. Breeding pairs will generally lay 2 eggs directly on the ground in a simple scrape or clearing. This "nest" is often at the edge of woodland patches with good visibility at ground level. The same nesting area may be used for many

years. The eggs have a pale base and a darker mottle, the colours closely matching the local habitat. They hatch after about 30 days, and the chicks take a further 50 days to fully mature. Young birds may have difficulties in establishing new territories when all the available habitat is occupied.

## Distribution

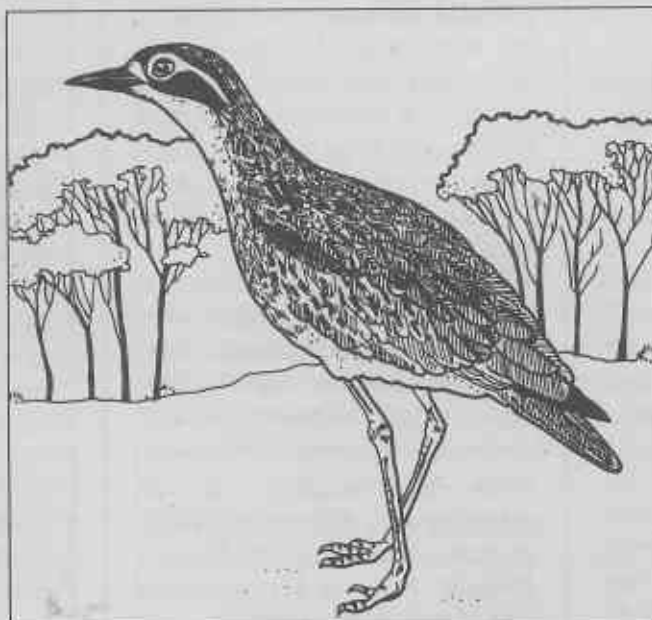
The bush stone-curlew is found in all Australian states and territories except Tasmania. Outside Western Australia, it occurs across northern, eastern and south-eastern Australia. It is absent from the southern inland and Nullarbor region.

Within Western Australia, the bush stone-curlew is a relatively common resident of the north and north west pastoral country (Kimberley, Pilbara and Gascoyne). It is absent from the south-east of the state and the arid interior. It was once abundant throughout the south west, but numbers have declined substantially in the agricultural zone since the late 1930s. It is believed to be extinct north-east of Brookton, has not been seen in the Stirling Ranges since the 1950s, and is extremely uncommon around Wongan Hills and the Northam district. It is now considered an uncommon resident of wheatbelt woodlands.

## Decline

Studies suggest that clearing of woodland habitat was the major cause of the bush stone-curlew's decline in south-eastern Australia. In the Western Australian wheatbelt the bush stone-curlew was common in the earlier phases of development, and was considered to have been favoured by clearing.

However from the 1930s they became increasingly rare. The decline increased substantially during the 1950s, coinciding with the crash in rabbit numbers due to myxomatosis. Fox predation of native species,



including the bush stone-curlew, may have increased as rabbit numbers dropped. Whilst there have been few studies, it is likely that numbers of bush stone-curlew continue to decline in the south-west of Western Australia.

### Conservation Status

The bush stone-curlew is listed as secure at the national level. It is relatively common across the sub-tropical and tropical north, but has declined dramatically across the wheat-sheep belts of south-eastern and south-western Australia during the last 100 years. It is considered threatened in New South Wales, Victoria and South Australia

### Threats

Studies around Australia indicate that many threatened birds have similar ecological characteristics, including living in woodland habitats, weighing more than 500 g, feeding on terrestrial invertebrates and nesting on the ground. The bush stone-curlew shares many of these characteristics, as do other wheatbelt birds such as the malleefowl, bustard, plovers and button-quails.

#### *Predation*

Because the bush stone-curlew is a ground-nesting and feeding bird it is particularly vulnerable to predation by foxes and possibly cats. Their reliance on camouflage and "freezing" to avoid detection also increases their risk of predation by foxes, which rely more on smell to find prey. The rate of predation on adult birds is unknown, but eggs and young birds are at greater risk. There are many stories of bush stone-curlew successfully breeding, but their eggs and chicks disappearing each year. In Victoria, nesting success and survival of young is much higher at sites with predator-proof fencing.

#### *Habitat Degradation*

Whilst habitat loss through clearing has slowed in many areas, the continued degradation of the remaining vegetation poses a significant threat to the bush stone-

curlew. Degradation of remnant vegetation occurs through increasing salinity, weed invasion, stock grazing, firewood collecting or "tidying up". This affects the birds by either removing their cover, or by increasing the height and density of the understorey and reducing visibility.

Grazing in remnants with a weedy grass understorey may benefit the bush stone-curlew by keeping the weeds low and improving visibility. However over-grazing will tend to favour the further invasion of exotic grasses, making the problem worse. Grazing in remnant vegetation also reduces the amount of litter and abundance of the ground-dwelling invertebrates that bush stone-curlews eat.

Cultivation and cropping close to roost and nest sites is also likely to be detrimental.

Changes in farm management practices appear to have a direct link to bush stone-curlew decline. The maintenance of low-intensity land use around suitable habitat seems critical to preserving bush stone-curlews in these areas.

### Management

There are many actions that can protect bush stone-curlew on your property, or encourage them to return. The most important of these are:

- controlling foxes and cats
- fence out some habitat remnants to exclude stock grazing
- reduce the level of stock grazing in other remnants
- retaining fallen timber to provide daytime shelter

Other actions that will benefit the bush stone-curlew include:

- encouraging regeneration in remnant vegetation
- revegetate areas with local species to provide new habitat areas
- control weeds, particularly exotic grasses where they are invading remnant vegetation
- reduce the use of insecticides, as these can affect the birds if they eat poisoned insects

Of course, all these actions will benefit many other species of plants and animals.

## Can You Help Us?

During the Wagin Woolorama and Dowerin Field Days this year, many people provided information about bush stone-curlews to staff at the CALM display.

There is not much information about bush stone-curlews in the south-west of Western Australia, and CALM would like to find out more. Much of the information above is based on work in Victoria.

Information about any of the topics covered in this article would be welcome. Do you have any interesting stories or management tips about the bush-stone-curlew that you can share; who knows it might get published in a future "Western Wildlife". You can contact Brett Beecham (Regional Ecologist) at CALM, PO Box 100 Narrogin, 6312; phone (08) 9881 1444, fax (08) 9881 3297 or email [brettb@calm.wa.gov.au](mailto:brettb@calm.wa.gov.au)

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