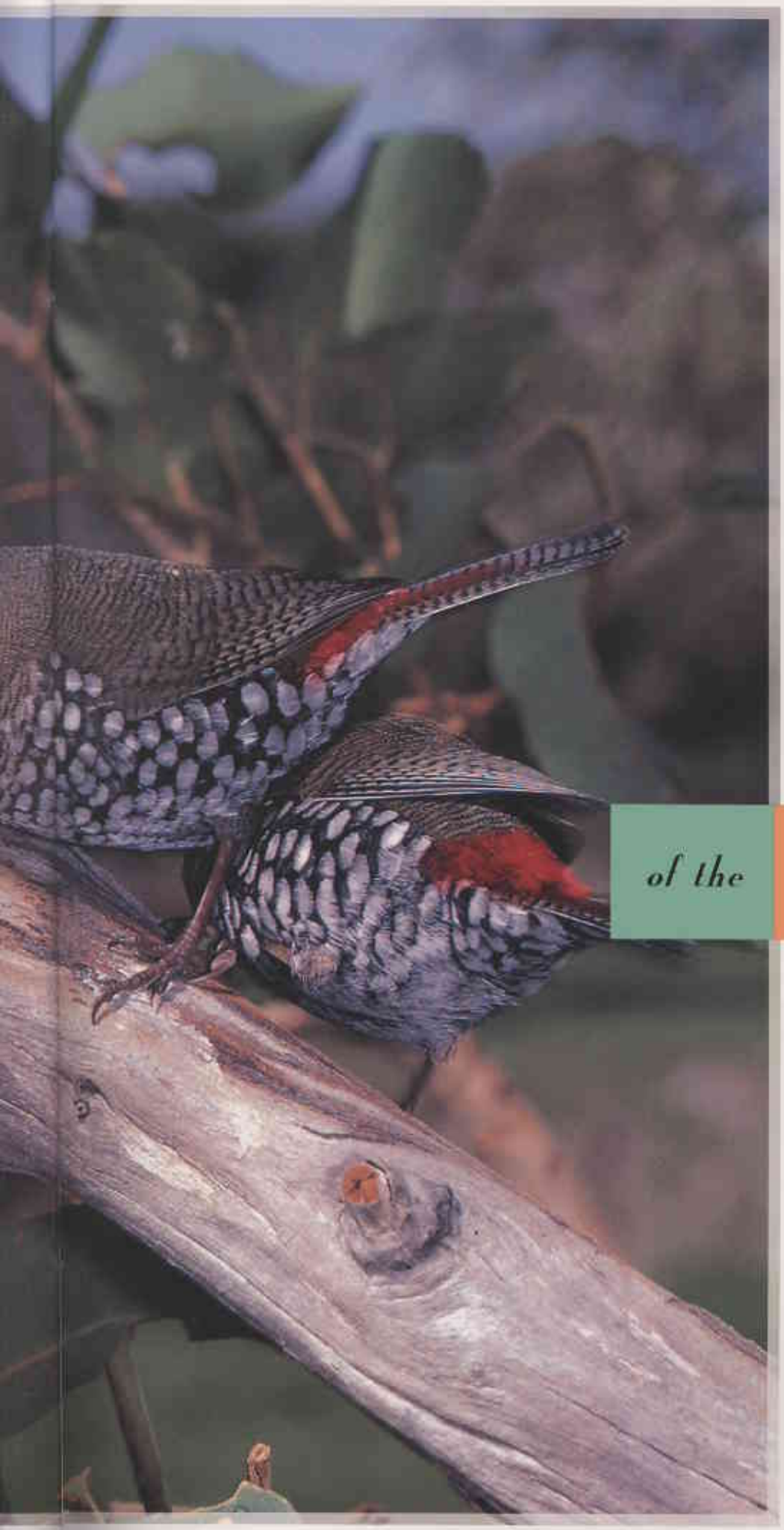

Birds

of the STIRLING RANGE

The Stirling Range is a wild, mountainous place—just the scene for the intriguing or unusual bird species that make their home there.

by Allan Burbidge and Allan Rose

Several early colonists visited the Stirling Range before 1840, but probably did not collect bird specimens. The first collections were most likely made by Johnston Drummond, who made a brief visit to the range in the summer of 1843–44 with his father, the well-known botanical collector James Drummond. Johnston Drummond collected birds and mammals for John Gilbert, who sent them to the famous English 'bird-man', John Gould. Unfortunately, Drummond's collections are simply labelled 'Swan River Colony', so it is impossible to tell whether any of them came from the range.

Serious work on birds of the Stirling Range began in 1902 with a visit by Alex Milligan and Charles Conigrave of the Western Australian Museum. With several companions, they walked from the railway line at Tenterden, through the range as far as Toolbrunup, which was then thought to be the highest peak in the range. They battled dense vegetation, strong winds and drenching rain to draw up the first comprehensive bird list for the range. Their list included a number of species of interest, such as an unusual form of the striated field-wren, which Milligan named *Calamanthus montanellus*.

F. Lawson Whitlock, a highly experienced field ornithologist, was commissioned to collect birds and their eggs for Mr H. L. White of Belltrees, New South Wales. Whitlock worked in and near the western end of the Stirling Range during the spring of 1910. Otto Lipfert, of the WA Museum, and Frederick Bradshaw, of nearby Tambellup, made observations and collections in the Stirling Range during 1920. Since 1950, there have been a number of visits by contemporary field workers, beginning with Lindsay Sedgwick.

Today, many people enjoy studying or simply watching birds in the Stirling Range, in considerably more comfort than was available to those hardy early visitors.

THE BIRDS

As a result of these endeavours, together with continuing observations, some 140 bird species have been recorded in what is now the Stirling Range National Park. Ninety species have been recorded breeding. Ducks and other aquatic species have been recorded on the lakes in the south-eastern sector of the park. There are 11 bird of prey species (at least six of which breed in the park), three pigeons, 11 parrots and cockatoos (seven breeding), four cuckoos and many smaller bush birds, including robins, whistlers, fairy-wrens, thornbills and 14 species of the honeyeater family.

Why are there so many species here? Part of the answer lies in the diversity of plant species and vegetation communities, and part in the topography and geographical position of the range. The high number of flowering plant species (about 1 500) provides a good, year-round source of nectar for honeyeaters, and a varied food source for flower and seed-eating birds such as cockatoos and parrots. Presumably, these plants also help support a varied invertebrate fauna, which would in turn support populations of insectivorous birds in the Stirling Range. These plant species combine to produce a range of

Elevated rocky outcrops with a panoramic view, such as here on Mount Trio, are favoured perching sites for the peregrine falcon.
Photo – Marie Lochman/Lochman Transparencies

Previous page
The red-eared firetail, found only in south-western WA, usually inhabits dense vegetation, but they are regularly found along the walk trail to Toolbrunup Peak.
Photo – Babs & Bert Wells/CALM

Below left: Usually a resident of mallee woodlands further inland, the southern scrub-robin lives in drier parts of the Stirling Range, but is not found in wetter areas near the coast.
Photo – Babs & Bert Wells/CALM

Below: Brilliantly coloured male splendid fairy-wrens can be seen in shrubby vegetation in a number of places in the range, such as Moingup Springs and Red Gum Springs picnic areas.
Photo – Kim Howe

bird habitats, from wetland vegetation through heath and thickets to several kinds of mallee-heaths and woodlands.

The array of bird species is also augmented by the topography and geographic position of the range. The locally high rainfall, resulting from the relatively contrasting topography, contributes directly to habitat diversity, and allows a number of wet area birds to occur here. In other parts of the range, species more characteristic of drier regions may be found.

The geographic position of the range also contributes to this effect. Birds at the inland limits of their range in this part of the State include Baudin's black-cockatoo, the white-breasted robin, western thornbill, red-winged fairy-wren, spotted pardalote (as a breeding species) and red-eared firetail. About 20 bird species occur no nearer to the coast than the Stirling Range in this part of the State. These include the jacky winter, crested bellbird, southern scrub-robin, shy heath-wren, blue-breasted fairy-wren, mistletoe bird, yellow-rumped pardalote, brown-headed honeyeater and black-faced woodswallow. The masked owl and barking owl have been recorded here at the eastern limits of their distribution in south-western Australia, and the range supports the most westerly population of the purple-gaped honeyeater. A few species, including the crested pigeon, galah and yellow-throated miner, are more common in the surrounding open farmland and usually only enter the edges of the park.

In the Porongurup Range, about 30 kilometres to the south, a study in the 1970s by principal research scientist Ian Abbott, of the Department of Conservation and Land Management (CALM), revealed the presence of only about 56 bird species, 30 of which were thought to breed in the area. The Porongurup Range covers a smaller area than the Stirling Range and contains fewer plant species and vegetation types.

There are few introduced birds in the Stirling Range: the kookaburra is present and the laughing turtle-dove is known from one road-kill specimen on Chester Pass Road. The turtle-dove is normally associated with human habitation and is usually found nearer to towns to the north, including Borden and Ongerup.

HISTORICAL CHANGES

The brief visits by Milligan and Whitlock were confined to early or mid-spring, and it is therefore difficult to analyse the changes in the status of bird species over time. However, some useful comparisons can be made.

The bush thick-knee (stone-curlew) was plentiful in Milligan's time, and his party flushed them on many occasions. However, this species was not recorded by Sedgwick in the 1950s and 1960s, and there are no recent records. The bird has declined through much of the Wheatbelt, probably due to clearing of native vegetation and predation by foxes.

The malleefowl may also have been lost from the park, although it was probably always rare in the area, since it provides marginal habitat for the species. Malleefowl were recorded breeding in the park in the 1960s, but have not been seen there since 1980.

A few species seem to have increased in abundance in the park. Milligan and Whitlock did not see any crows or ravens in or near the Stirling Range. Fifty years later, Sedgwick found them in small numbers. Now, Australian ravens are frequently seen in small numbers. Their arrival was probably tied to clearing of the surrounding land for agriculture, and to increased human use of the park.

Milligan did not record Port Lincoln ('twenty-eight') parrots in the area, but Whitlock found them to be rare in 1910 and Bradshaw described them as uncommon in the 1920s. Thirty to 40 years later, Sedgwick described them as being common, as they are today.

Maned ducks and shelducks were not recorded by early observers, but both species now breed in small numbers in

Below: Endemic to south-western Western Australia, the western thornbill is at the inland limit of its distribution in the range.
Photo – Babs & Bert Wells/CALM

Below right: The masked owl is rarely recorded in the Stirling Range National Park, where it is at the eastern limit of its distribution in Western Australia.
Photo – Jiri Lochman/Lochman Transparencies

the park. This probably ties in with a trend throughout the south-west in which these two species have increased in abundance as a result of the provision of farm dams and 'improved' pastures.

The little eagle has moved into the area since Whitlock's time. During the same period, the galah and crested pigeon moved further into the south-west, and now occur in the Stirling Range in small numbers as visitors (galahs) or at the margins (crested pigeons). Elegant parrots have also become more common in south-western Australia, and now breed in the park.

The laughing kookaburra was introduced to Western Australia around the turn of the century and was not recorded in the Stirling Range until Sedgwick found a number of them at Moingup Springs and the east face of Bluff Knoll in the 1950s and 1960s. They are now common in wooded areas.

BIRD-PLANT RELATIONSHIPS

A great many plant species of the Stirling Range are believed to be pollinated by birds. Individual bird species may visit the flowers of a broad range of plant species including the spectacular mountain bells. The data from the Stirling Range, together with data gathered elsewhere in south-western Australia, show that the only exception to this rule is the purple-crowned lorikeet. In south-western Australia this species is only known to visit eucalypts, usually small-flowered species. Purple-crowned lorikeets harvest both pollen and nectar, but presumably are also effective pollinators.

Individual plant species may be visited (and presumably pollinated) by more than one bird species. Generally speaking, there is little specialisation between plant and pollinator, although each is important to the other.

An extensive survey of Stirling Range plants by CALM scientist Ray Wills has shown that a number of plant species listed here are highly susceptible to dieback disease, caused by the organism *Phytophthora cinnamomi*. These include feather-leaved banksia (*Banksia brownii*), scarlet banksia (*B. coccinea*), bull banksia (*B. grandis*), chittick (*Lambertia inermis*), single-flowered honeysuckle (*L. uniflora*) and, to a variable extent, heath-leaved honeysuckle (*L. ericifolia*). If these species were lost from the park, or drastically declined, there could be a corresponding decline in the numbers of nectar-feeding birds. This might result in less efficient pollination of the plants that remain, producing even further declines.

There is a high incidence of natural hybrids in the eucalypts and mountain bells in the Stirling Range. This phenomenon may be partly a consequence of the relatively high numbers of both honeyeater and plant species in the park, and the lack of marked foraging preferences on the part of the honeyeaters. This, together with the mobile nature of many honeyeaters, may lead to unusually high rates of pollen movement between plant species.

Marri (*Eucalyptus calophylla*) is an important tree for birds, providing nectar and pollen for a number of honeyeater species and the silvereye. It is also an important food source for seed-eaters, especially red-capped parrots and black-cockatoos, which probe the fruits with their elongated bills. Marri also provides nesting hollows for birds such as red-capped parrots.

Left: Carnaby's black-cockatoo, which is declining in the Wheatbelt, nests in small numbers in wandoo trees within the Stirling Range National Park.
Photo– Babs & Bert Wells/CALM

Below: The diet of the purple-crowned lorikeet consists of pollen and nectar from small flowering eucalypts, and when these are flowering, the lorikeets are a common sight within the park.
Photo – Babs & Bert Wells/CALM

RARE SPECIES

Two species found in the Stirling Range, the western whipbird and crested shrike-tit, are declared rare fauna. Four species, the peregrine falcon, Baudin's black-cockatoo, Carnaby's black-cockatoo and the red-eared firetail, are given special protection.

The western whipbird is known from long unburnt mallee-heath in several localities in the Stirling Range, including Mount Trio and Talyuberlup. The crested shrike-tit is difficult to detect, but may be found in wandoo or yate woodland.

Above left: Colourful red-capped parrots, found only in south-western Australia, can often be seen in the woodlands of the range.
Photo – Babs & BertWells/CALM

Above: Rufous treecreepers feed on the trunks and, unusually for treecreepers, also on the ground. The best place to see them in the range is near the Bluff Knoll turn-off.
Photo – Bill Belson/Lochman Transparencies

Left: Australian owlet-nightjars are nocturnal, but occasionally sit at the entrance to their hollows during the day, when the alert observer could see one in the woodland areas in the park.
Photo – M & I Morcombe

The Bluff Knoll turn-off is a good place to start looking for them.

The peregrine falcon can be seen around the taller peaks, including Toolbrunup and Talyuberlup. Baudin's black-cockatoos visit the Stirling Range, and are most often seen in marri woodlands. Carnaby's black-cockatoos, on the other hand, breed in the range and can be seen there at any time of year. They can be seen in a variety of places, but the woodlands in the Moingup Springs–Toolbrunup area, or near the Bluff Knoll turn-off are likely places. The red-eared firetail prefers wetter gullies with dense vegetation. They are sometimes difficult to detect, but can be found along the path through the gully on the way up Toolbrunup.

WHERE TO SEE BIRDS IN THE RANGE

The Toolbrunup path is also the best area to see birds of the wetter gullies. Apart from the red-eared firetails, you can observe white-breasted robins and, possibly, red-winged fairy-wrens, as well as more widespread species such as western rosellas, white-browed scrub-wrens and shining bronze-cuckoos. Higher up, near the craggy tops, you may be lucky enough to see a peregrine falcon.

The Bluff Knoll turn-off is a good place to see birds of the wandoo woodlands. Here, yellow-plumed honeyeaters are often heard calling noisily to each other. However, other species also take note of their 'hawk' alarm calls. At such times it is worth watching for birds of prey—the Australian hobby (a small falcon) may appear, chasing a tree martin or a purple-crowned lorikeet.

Another interesting bird of these woodlands is the rufous treecreeper. Studies by Allan Rose have shown that treecreepers in this area are found only in wandoo, where they have territories of about five hectares. They normally have two broods of young each year, with the young from the first brood helping to feed the young from the second brood. The young birds attain adult plumage after six to eight months, and can breed at the end of their first year.

It is also worth looking for birds near the Moingup Springs campsite, especially in springtime. Here you can see many of the birds of the marri and yate woodlands: red wattlebirds, red-capped parrots and Carnaby's black-cockatoos can be found breeding or roosting. Owlet-nightjars can sometimes be seen or heard in this area. In nearby heath, you may see splendid fairy-wrens and, if you are lucky or persistent, southern emu-wrens.

From the Mount Trio carpark, crested bellbirds and western whipbirds can be heard calling. Patient observers may see the whipbirds raking through the leaf litter with their bills. This is also a good area to see honeyeaters. A number of plants—heath-leaved honeysuckle, chittick, mountain pea (*Nemcia luteiflorum*) and bell-fruited mallee (*Eucalyptus preissiana*)—attract nectar-eating birds while they are flowering.

Within a short walk of Red Gum Springs picnic site are woodlands of marri, yate, banksia and wandoo. A broad range of woodland birds, including wattlebirds, common bronzewings, kookaburras, gerygones, thornbills and honeyeaters, can be found here.

Thornbills, scrub-wrens, currawongs

and spinebills can be found near the Bluff Knoll carpark. A walk into the gullies on the Bluff Knoll path may also reveal a variety of birds, including cuckoo-shrikes, cuckoos and honeyeaters. Spectacular wedge-tailed eagles may be seen soaring around this and other peaks in the range.

BREEDING

Some breeding can occur at almost any time of year in the Stirling Range, although most birds breed in spring, with the peak being October–November. Allan Rose has been studying bird breeding in the Stirling Range, principally in the wandoo woodlands near the Bluff Knoll turn-off. Thirty-two species have been recorded breeding here. For example, yellow-rumped thornbills have been recorded building nests as early as May, laying in July (or even as early as June), and continuing breeding through winter, spring and into early summer. They can therefore rear several broods in a season. This thornbill is a frequent host for the shining bronze-cuckoo. On one occasion in the Stirling Range, a shining bronze-cuckoo, which was being chased away from a thornbill nest, flew into a window and killed itself. A post-mortem showed that it was about to lay an egg, and presumably had been attempting to do so in the thornbill's nest.

Other species have a more restricted breeding season and apparently only raise a single brood each season. Sacred kingfishers seem to have a short breeding season, while square-tailed kites have only been known to lay in November in the Stirling Range. Being a predator of small birds, the kite nests relatively late, when many smaller birds have started to produce young. As in many other areas, predation rates on nests in the Stirling Range are high. Likely predators include grey currawongs, kookaburras, ravens and, especially for nests near the ground, foxes, goannas and snakes.

Wandoo trees provide good quality nest hollows of various sizes for a number of bird species. These range from quite small species, such as the tree martin, through intermediate-sized birds, such as Port Lincoln parrots, to the large Carnaby's black-cockatoo. It probably takes several hundred years for a hollow to become large enough for the black-cockatoos, so it is important to ensure that such trees, and potential replacements, receive long-term protection.

Top: Bronze-cuckoos breed in the park. This young bird would have been raised in the nest of a small songbird.
Photo – Babs & Bert Wells/CALM

Above: South-western Australia is a stronghold of the uncommon square-tailed kite. It regularly nests in wandoo trees in the park.
Photo – Simon Nevill

ARE BIRDS OF THE STIRLING RANGE UNIQUE?

Some of the early ornithologists, especially Milligan, went to the Stirling Range in search of new or unusual forms of birds. Indeed, many of the specimens collected differed from those obtained elsewhere. In the first quarter of this century, Gregory Mathews and Alex Milligan named 16 species and subspecies of birds based on specimens collected in the Stirling Range. Subsequent study has shown that these forms are best considered part of more widespread species and subspecies that may vary slightly from place to place or between individuals. It is now believed that no bird species or subspecies is unique to the Stirling Range. Nevertheless, the bird community of the Stirling Range is unique.

Allan Burbidge is a senior research scientist with CALM with a particular interest in terrestrial birds. He can be contacted on (09) 405 5100. Allan Rose was a ranger at Stirling Range National Park for many years and is a keen birdwatcher and photographer. His phone number is (090) 759 027.
This article is based on a chapter in *Mountains of Mystery: A Natural History of the Stirling Range*, available from CALM offices and bookstores for $19.95.

LANDSCOPE

VOLUME ELEVEN NO. 1 SPRING ISSUE 1995

The threatened Wyalkatchem foxglove is being given a helping hand by scientists from CALM and Kings Park and Botanic Garden (see page 17).

This nesting pair of splendid fairy-wrens is one of the many 'Birds of the Stirling Range' (see page 36).

WA Goldfields timbers are fast becoming recognised as prime materials for producing world-class musical instruments. See 'Musical Timbers' on page 48.

A new CALM book, Dive & Snorkel Sites in Western Australia, *will encourage novice divers and snorkellers to explore the rich and diverse coastline of WA. See 'Secrets of the Sea' on page 10.*

The common rock-rat, photographed here in the Kimberley, has recently been recorded in the Kennedy Range National Park. See page 28 for a profile of this wonderful wilderness area.

FEATURES

REGULARS

COVER

The brilliant purple flowers of the twining fringed lily (*Thysanotus patersonii*) entwined around the burnt stem of a slender banksia (*B. attenuata*). See 'After the Burn' on page 21.

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