



BIRD

Stagonopleura guttata

Diamond Firetail

AUS	SA	AMLR	Endemism	Residency
-	V	V	-	Resident



Photo: © Lydia Paton

Conservation Significance

The AMLR distribution is part of a limited extant distribution in adjacent regions within SA. The species has been described as 'probably declining' within the AMLR.¹ Within the AMLR the species' relative area of occupancy is classified as 'Very Restricted'.²

The Bird Action Plan considered this species as nationally Near Threatened as observed declines were not at a sufficient rate to list it as Vulnerable (Garnett and Crowley 2000).¹

Description

Small bird with a short, stocky appearance (Rowland 1996). Male and female have similar plumage, but the female is generally smaller and has brown lores. The most striking feature of their plumage, like all firetails, is the bright crimson tail-coverts, accentuated by the black tail and white under-parts. Flanks black with a double series of white spots. Head ash-grey, throat white, lores black, and iris and bill red. Immature birds lack the red eyes and bill, and the flanks and upper breast are grey with greyish-white bars along flanks (Immelmann 1982).¹

Distribution and Population

Endemic to Australia, occurring mainly on the inland slopes of the Great Dividing Range and in the AMLR/Eyre Peninsula region of SA (Blakers et al. 1984, Barrett et al. 2003).

This species has declined over most of its historical range. Nationally, the estimated extent of

occurrence is 1,000,000 km² and decreasing. The estimated area of occupancy is 50,000 km² and decreasing. The number of breeding birds is estimated at 200,000 and decreasing. The number of sub-populations is estimated at 20, with the largest sub-population presumed to contain approximately 50,000 breeding birds.³

There is a gap isolating the AMLR population from the rest of the species' eastern distribution, and although there are historical records in this region, no breeding records exist (Blakers et al. 1984).¹

In SA, the species has declined extensively as woodland habitats have been cleared and degraded; persists only in larger remnants (usually >50ha) with the eastern AMLR being its stronghold (G. Carpenter *pers. comm.*).

Average recording rate across the region has declined from 27% to 6% of surveys for the pre-1980 to post-1995 periods. The most important sub-regions are the eastern flanks and the northern agricultural area. At Sandy Creek CP, it appears to have increased in abundance from a basic population of two pairs, to 16 breeding pairs in 2003-2004 (S. Kleindorfer *pers. obs.* unpublished data, Rix 1976).¹

Post-1983 AMLR filtered records more common in the eastern parts of the region, from the Barossa Valley in the north to Newland Head in the south; an isolated record near Buckland Park.²

Pre-1983 AMLR filtered records from Kersbrook, Tea Tree Gully, Houghton, Blackwood, Happy Valley and Mount Compass.²

Habitat

Reside in a wide range of Eucalypt dominated vegetation communities that have a grassy understorey, including woodland, forest and mallee. Most occur on the inland slopes of the Great Dividing Ranges, with only small pockets near the coast (Blakers et al. 1984).³

Habitat generally described as savannah woodland and mallee, and although this appears to be an important component of their habitat they also occur in more mesic woodland communities, such as the Grampians and the New England Tablelands (Ford and Paton 1976; Ford et al. 1986; Ford 1989; Immelmann 1982, O'Gorman 1981). Appear to be able

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to live further from water sources than other firetails, but are still dependent on having a reliable water source (Immelmann 1982).¹

Availability of suitable seed throughout the year is an essential habitat requirement. Although exotic grasses are a valuable seed source, the periodicity of this seed supply may be inadequate for maintaining populations. A diversity of native grasses with differing phenology and maturation patterns appears essential for their persistence in an area (Houdet 2004).¹

Occurs mainly in grassy woodlands, particularly with Drooping Sheoak (*Allocasuarina verticillata*) (G. Carpenter *pers. comm.*).

Within the AMLR the preferred broad vegetation group is Grassy Woodland.²

Biology and Ecology

Many aspects of the species' life history are poorly understood. Far more social than other firetails and may occur in small flocks (up to 30) during the non-breeding season (Immelmann 1982; Rowland 1996).¹

Relatively sedentary, however, in some areas this is not the case. For instance, it moves out of the Grampians (VIC) to mallee areas further north during winter (Immelmann 1982; O'Gorman 1981).¹

No detailed accounts of the size of their home range exist, but densities in Eucalypt woodland near Armidale, NSW, were as high as 1.18 birds/ha. This dropped considerably during drought conditions (Ford 1989). In revegetation areas at Monarto (SA) densities varied seasonally with a high of 0.58 birds/ha in March to a low of 0.01 birds/ha in August (Paton and Rogers 2004). These density data suggest populations can fluctuate substantially when conditions change.¹

Appear to have a loose breeding season, taking advantage of appropriate conditions. Generally breeds in spring/summer (August to January) and may also breed again in autumn. Breed in loose colonies, sometimes with several nests in the same tree (Immelmann 1982).¹ Build a domed nest with a long entrance tunnel constructed of long pieces of interwoven green grass. Sometimes the nest is decorated with flowers, particularly around the entrance (Beruldsen 2003). Nests are usually situated in thick foliage of a shrub or tree, or in Eucalypt mistletoe. Height of nests above the ground varies considerably. Nests built by both sexes, but only the female does the weaving. They also produce

roosting nests that are similar to their breeding nests, except they lack a tunnel entrance and are not lined (Immelmann 1982).¹

Generally lays five or six eggs in a clutch, but can produce between four and nine eggs (Immelmann 1982). Incubation is performed in shifts by both sexes and takes 12-15 days (Rowland 1996). Nestlings remain in the nest for 24-25 days before fledging (Immelmann 1982).¹

No studies of the dispersal of this species have been conducted and there are limited data available to assess their dispersal behaviour. However, Paton and Rogers (2004) found that this species almost completely disappeared from revegetation sites in winter and banded individuals have been located up to 2 km away from their original banding location.¹

Granivores foraging predominantly on the ground, taking fallen seed or seed directly from plants (Immelmann 1982, Ford et al. 1986). Introduced grasses are a major food source in summer/autumn and native grasses and winter-flowering introduced plants (e.g. Geranium, Fat Hen and Winter Grass) in winter/spring. Green vegetation forms a part of their diet and may be a means of supplementing water intake (Read 1994).¹

Aboriginal Significance

Post-1983 records indicate the AMLR distribution occurs in all Aboriginal Nations - Kurna, Ngadjuri, Nganguraku, Ngarrindjeri and Peramangk.²

Threats

Threats to its persistence in the MLR are not well understood. Reasons for its past decline and future threats probably include vegetation clearance, habitat fragmentation and degradation, invasion of exotic grasses, possible competition with Red-browed Firetails for food resources and illegal trapping (Read 1994).¹

Prescribed burning has the potential to impact on this species if annual weeds dominate the regeneration (G. Carpenter *pers. comm.*).

Additional current direct threats have been identified and rated for this species. Refer to the main plan accompanying these profiles.

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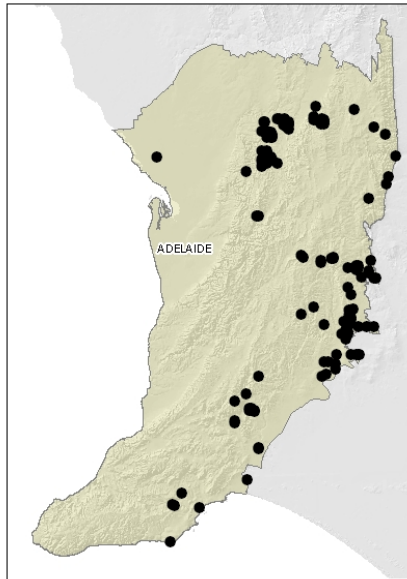
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Regional Distribution



Map based on filtered post-1983 records.² Note, this map does not necessarily represent the actual species' distribution within the AMLR.

References

Note: In some cases original reference sources are not included in this list, however they can be obtained from the reference from which the information has been sourced (the reference cited in superscript).

1 Cale, B. (2005). *Towards a Recovery Plan for the Declining Birds of the Mount Lofty Ranges*. Scientific Resource Document for Birds for Biodiversity. Unpublished Report.

2 Department for Environment and Heritage (2007). *Adelaide and Mount Lofty Ranges Regional Recovery Pilot Project Database*. Unpublished data extracted and edited from BDBSA, SA Herbarium (July 2007) and other sources.

3 Garnett, S. T. and Crowley, G. M. (2000). *The Action Plan for Australian Birds*. Environment Australia, Commonwealth of Australia.

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