Subspecies Conservation Summary

**Short-tailed Grasswren (Flinders Ranges)**

*Amytornis merrotsyi* merrotsyi Mellor, 1913

**Maluridae**

**Conservation status**

Vulnerable B1ab(ii,iii,v)+2ab(ii,iii,v)

**Reasons for listing**

Small area occupied, <10 locations and a possible continuing decline as a result of high fire frequencies

**Status 2000**

Least Concern

Reason for change in 2010: fires believed to have become more extensive and more frequent

**Status 1990**

Least Concern

**Taxonomy**

*A. m. pedleri* (Gawler Ranges) is Vulnerable. The species is Near Threatened.

Taxonomic uniqueness: medium (5 genera/family, 11 species/genus, 2 subspecies/species)

**Range**

Flinders Ranges, South Australia, between Mt Neil in the north and Nelshaby in the south. Occurs in 4 main subpopulations: north of Quorn between Dutchman's Stern and Buckaringa and formerly extending to the Ragless Range; in and adjacent to the south-east corner of Flinders Ranges National Park; between Black Range and Belton; and north of Arkaroola (Christidis *et al.* 2008). May no longer occur at southern extremity of range at Telowie Gorge near Nelshaby, where last recorded in 1981 (Parker 1982; Higgins *et al.* 2001; Carpenter *et al.* 2003). The documented AOO of 93 km² (Birds Australia Atlas database) is likely to be an order of magnitude too low, given the extent of habitat and intensity of surveying.

**Abundance**

The largest subpopulation, around Stokes Hill in the south-east of Flinders Ranges National Park, is around 1000 pairs (Carpenter 2004), with another 3000 mature individuals assumed to be spread among the other 3 subpopulations. Given the frequency of extensive fires, it is assumed that the AOO, habitat and the population are all likely to be declining.

**Ecology**

They inhabit rocky (quartzitic) hillsides and hilltops, steep-sided gullies, stony rises and ridge-crests and, less often, foothills. The vegetation is spinifex *Triodia* tussock grassland, usually with scattered low shrubs, particularly *Acacia*, *Daviesia genistifolia*, *Xanthorrhoea quadrangulata* and *Cassia*, and occasionally an open overstorey of Cypress Pine *Callitris* or mallee *Eucalyptus* (Christidis *et al.* 2008). Short-tailed Grasswrens recolonise patches 5–7 years after a fire and reach peak densities 10–30 years after fire (G. Carpenter *in litt*.). They forage mostly on the ground, eating seeds, fruits, insects and other invertebrates (Higgins *et al.* 2001). A generation time of 9.7 years (BirdLife International 2011) is derived from an age at first breeding of 2.3 years and a maximum longevity of 17.0 years, both extrapolated from fairy-wrens *Malurus* spp.

**Threats**

Excessive frequencies of fires, both natural and human mediated, along with grazing, have been identified as the most immediate threats to the species (Higgins *et al.* 2001). Given that single fire events have the potential to eliminate entire subpopulations (G. Carpenter *in litt*.), the species is assessed here as having no more than 10 locations. Much of the region is burned on average every 10 years (Whisson 1999) and the grasswren’s habitat near Quorn is burned regularly for sheep grazing. Predation by foxes *Vulpes vulpes*, possibly in association with fire, may also be significant, given the comparatively high population densities of *A. m. merrotsyi* in the heavily baited south-east of Flinders Ranges National Park (Carpenter 2004).

**Conservation objectives**

1. Stable population size
2. Increased area of suitable habitat

**Information required**

1. Population trends at regularly monitored sites
2. Optimal fire regimes
3. Impacts of predation by foxes

**Management actions required**

1. Actively manage fires to reduce overall extent and frequency
2. If appropriate continue and extend fox baiting

**Bibliography**

Current eligibility against IUCN Red List Criteria

<table>
<thead>
<tr>
<th>IUCN category</th>
<th>Criteria eligibility</th>
</tr>
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<tbody>
<tr>
<td>A</td>
<td>Not applicable: past, current or future population declines are thought unlikely to exceed 20% in any 3-generation period</td>
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<tr>
<td>B</td>
<td>Vulnerable: EOO &lt;20 000 km², AOO &lt;2000 km², ≤10 locations with plausible future threat, inferred continuing decline likely in AOO, habitat quality, no. mature individuals</td>
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<td>C</td>
<td>Not applicable: population 2500–10 000 mature individuals, continuing decline not observed or estimated, largest subpopulation &gt;1000 mature individuals, &gt;1 subpopulation</td>
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<tr>
<td>D</td>
<td>Not applicable: population &gt;1000 mature individuals, &gt;5 locations</td>
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<tr>
<td>E</td>
<td>Not applicable: no population viability analysis undertaken</td>
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IUCN Red List assessment data

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<tr>
<th></th>
<th>Estimate</th>
<th>Reliability</th>
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<tbody>
<tr>
<td>Extent of occurrence trend</td>
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<tr>
<td>Area of occupancy trend</td>
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<tr>
<td>No. of mature individuals trend</td>
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<tr>
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<td>Generation time</td>
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<td>Global population share</td>
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Comments received from
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