

**Approved Conservation Advice for  
*Stipiturus malachurus parimeda* (southern Emu-wren – Eyre Peninsula)**

(s266B of the *Environment Protection and Biodiversity Conservation Act 1999*)

This Conservation Advice has been developed based on the best available information at the time this Conservation Advice was approved; this includes existing and draft plans, records or management prescriptions for this species.

## **Description**

*Stipiturus malachurus* (the southern emu-wren), family Maluridae, is a tiny bird with a long (10 cm) filamentous tail, made up of six feathers, which is usually held upright (BirdLife Australia, 2013). Male birds are grey-brown streaked black above, warm tawny brown below, with a distinctive blue chin and throat and some blue around the eyes; females are similar but lack the blue coloration (BirdLife Australia, 2013). This species is shy and has a weak flight, preferring to spend most of its time low in dense cover (Higgins et al., 2001; BirdLife Australia, 2013). Southern emu-wrens feed mainly on a wide variety of insects, forming pairs that produce broods of 1-3 young in well-concealed domed nests from spring to summer (Higgins et al., 2001).

*Stipiturus malachurus parimeda* (southern emu-wren – Eyre Peninsula) is of moderate size but has very much paler upper parts and lower parts, compared to the other subspecies and nominate species (*S. malachurus*) (Higgins et al., 2001). The adult male has a pale crown and forehead, with brownish grey nape and sides of the neck (Higgins et al., 2001). The chin and throat are light grey-blue (Higgins et al., 2001). The adult female is also very pale, with brownish grey forehead, crown, nape and hindneck (Higgins et al., 2001). In males and females of *S. malachurus parimeda* the ear-coverts (feathers covering the ear openings) are brownish grey, with narrow white shaft-streaks (Higgins et al., 2001).

## **Conservation Status**

*Stipiturus malachurus parimeda* (southern emu-wren – Eyre Peninsula) is listed as vulnerable under the name Eyre Peninsula Southern Emu-wren. This species is eligible for listing as vulnerable under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act) as, prior to the commencement of the EPBC Act, it was listed as vulnerable under Schedule 1 of the *Endangered Species Protection Act 1992* (Cwlth).

The subspecies is also listed as endangered in South Australia under the *National Parks and Wildlife Act 1972*.

## **Distribution and Habitat**

The southern emu-wren – Eyre Peninsula is found only on the southern tip of the Eyre Peninsula, South Australia (Higgins et al., 2001). The subspecies is currently known from eleven locations on the peninsula, all of which are likely to be isolated (Garnett et al., 2011). The populations are distributed in a variety of land tenures, such as national parks, road reserves, private land, and heritage agreement areas. The Eyre Peninsula subspecies was undoubtedly more widespread historically, but no other historical records are available (Garnett et al., 2011). The total population is estimated to be less than 1000 mature individuals, and is severely fragmented (Garnett et al., 2011). The estimated extent of occurrence of the subspecies is approximately 2500 km<sup>2</sup>, with an area of occupancy of approximately 54 km<sup>2</sup>; both measures are considered to be declining (Garnett et al., 2011). Preferred habitat types include shrubland/heath, mallee, and sedgeland, with at least one or two other layers of low, dense vegetation (Possingham, 1993; Garnett et al., 2011). The key habitat areas supporting significant populations are Kellidie Bay and Lincoln National Park (SA DEH, 2009). None of the other subspecies occur on the Eyre Peninsula.

This subspecies occurs within the Eyre Yorke Block IBRA Bioregion, and the Eyre Peninsula Natural Resource Management Region.

The distribution of this subspecies is not known to overlap with any EPBC Act-listed threatened ecological community.

The Department of the Environment has prepared survey guidelines for *Stipiturus malachurus parimeda*. The survey guidelines are intended to provide guidance for stakeholders on the effort and methods considered appropriate when conducting a presence/absence survey for species listed as threatened under the EPBC Act. <http://www.environment.gov.au/epbc/publications/threatened-birds.html>

## Threats

The main identified threats to the southern emu-wren – Eyre Peninsula are:

- Inappropriate fire regimes. Bushfire is a major potential threat to the species as it may cause widespread habitat loss (SA DEH, 2009). Over the last decade, bushfires have severely affected almost all known occupied sites. The population at Koppio Hills was lost in a bushfire in 2005 (Garnett et al., 2011). High frequency fires remove vegetation cover used by this subspecies for concealment.
- Land clearance/fragmentation. In the past, patches of suitable habitat were probably continuous, but they have been fragmented by agricultural practices such as grazing by livestock, and altered fire regimes (frequency and intensity) outside conservation reserves (Garnett et al., 2011). Southern emu-wrens are poor dispersers, and depend on suitable corridors between patches (Garnett et al., 2011). Recolonisation is therefore very slow if it occurs at all.
- Predation by European red foxes (*Vulpes vulpes*) (DEWHA, 2008a). Predation of *Stipiturus malachurus parimeda* by feral cats is also highly likely to be occurring, as has been identified for other subspecies (DEWHA, 2008c).
- Climate change. This subspecies is considered likely to be exposed to increases in the frequency and intensity of fires as a result of climate change (Garnett et al., 2013).

The main potential threats to the southern emu-wren – Eyre Peninsula include:

- Grazing of vegetation cover by kangaroos (*Macropus* spp.) and emus (*Dromaius novahollandiae*), especially when in high numbers (Garnett et al., 2011). Grazing by cattle may also be a threat at locations on private land.
- Land development. This is occurring at a cliff-top locality where the subspecies is likely to be present (Garnett et al., 2011).

## Research Priorities

Research priorities that would inform future regional and local priority actions include:

- Conducting prescribed burning to monitor how fire influences Southern Emu-wren (Eyre Peninsula) populations and preferred habitat (SA DEH, 2009).
- Identifying optimal fire regimes for plant regeneration (vegetative regrowth and/or seed germination), and response to other prevailing fire regimes.
- Investigating the potential for habitat and corridor restoration (Garnett et al., 2011).
- Investigating whether grazing of vegetation cover by cattle is a threat.
- Designing and implementing a monitoring program or, if appropriate, support and enhance existing programs.
- Determining population trends at key sites (Garnett et al., 2011).

- Undertaking survey work in suitable habitat and potential habitat to locate any additional populations.

## **Regional Priority Actions**

The following regional priority recovery and threat abatement actions can be done to support the recovery of the southern emu-wren – Eyre Peninsula:

### Habitat Loss, Disturbance and Modification

- Monitor trends in key populations, especially those where management is occurring, including progress of any recovery (Garnett et al., 2011). Adapt management actions where necessary.
- Ensure there is no disturbance in areas where the subspecies occurs, excluding necessary actions to manage the conservation of the species.
- Link sites and populations through revegetation (Garnett et al., 2011).
- Investigate formal conservation arrangements, management agreements and covenants on private land, and for crown and private land investigate and/or secure inclusion in reserve tenure if possible.
- Captive breeding may be necessary should this subspecies prove as sensitive and exposed to climate change as predicted and decline continues (Garnett et al., 2013).

### Trampling, Browsing or Grazing

- If grazing of vegetation cover by cattle is a threat to the subspecies, develop and implement a management plan to control its impacts.

### Animal Predation

- Implement a management plan, (e.g. DEWHA, 2008a) to control the adverse impacts of European red foxes (*Vulpes vulpes*) in the region.
- Implement a management plan, (e.g. DEWHA, 2008c) to control the adverse impacts of feral cats (*Felis catus*) in the region

### Fire

- Implement a suitable fire management strategy for the subspecies habitat, such as the 'Fire management plan for reserves of the southern Eyre Peninsula' (SA DEH, 2009) (see Local Priority Actions). Southern emu-wrens have benefitted from fire regimes incorporating a fire-free interval of 7 to 8 years, and creation of a mosaic of different-aged heathlands that maintain unburnt refuges (Higgins et al., 2001).
- Where appropriate provide maps of known occurrences to local and state Rural Fire Services and seek inclusion of mitigative measures in bush fire risk management plan/s, risk register and/or operation maps.

### Conservation Information

- Raise awareness of the southern emu-wren – Eyre Peninsula within the local community.
- Engage with private landholders and land managers responsible for the land on which populations occur and encourage these key stakeholders to contribute to the implementation of conservation management actions.
- Enable recovery of additional sites and/or populations.
- Investigate options for linking, enhancing or establishing additional populations.

## **Local Priority Actions**

The following local priority recovery and threat abatement actions can be done to support the recovery of the southern emu-wren – Eyre Peninsula:

### Habitat Loss, Disturbance and Modification

- Minimise adverse impacts from land use at known sites.
- Protect populations of the listed species through the development of conservation agreements and/or covenants.

### Animal Predation

- Control introduced pests (such as foxes and cats) to manage threats at known sites (e.g. crown land, private land).
- Continue baiting to control population numbers of feral animals.
- Fence habitat where appropriate (Garnett et al., 2011).

### Fire

- Implement fuel management strategies on lands managed for conservation to minimise the risk to the environment (SA DEH, 2009). Conduct prescribed burning to maintain habitat diversity, and provide refuge areas in the event of a large bushfire encroaching on preferred habitat (SA DEH, 2009).
- Liaise with the relevant local Bushfire Prevention Committee and adjacent landholders to promote the implementation of appropriate fuel reduction works on private properties to complement the fuel management strategies employed within state government reserves (SA DEH, 2009).
- Encourage adjacent property owners to comply with relevant legislation to prevent bushfires by implementing fire management works on their own land (SA DEH, 2009).
- If bushfires occur, evaluate sites to establish if any damage has occurred, after fires have passed (SA DEH, 2009).

This list does not necessarily encompass all actions that may be of benefit to the southern emu-wren – Eyre Peninsula, but highlights those that are considered to be of highest priority at the time of preparing the Approved Conservation Advice.

### **Existing Plans/Management Prescriptions that are Relevant to the Species**

- Threat abatement plan to reduce the impacts of tramp ants on biodiversity in Australia and its territories (DEH, 2006a).
- Background document for the threat abatement plan to reduce the impacts of tramp ants on biodiversity in Australia and its territories (DEH, 2006b).
- Threat abatement plan for predation by the European red fox (DEWHA, 2008a).
- Background document for the threat abatement plan for predation by the European red fox (DEWHA, 2008b).
- Threat abatement plan for predation by feral cats (DEWHA, 2008c).
- Background document for the threat abatement plan for predation by feral cats (DEWHA, 2008d).
- Fire management plan: reserves of the southern Eyre Peninsula 2009-2019 (SA DEH, 2009).

These prescriptions were current at the time of publishing; please refer to the relevant agency's website for any updated versions.

### **References**

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