

Approved Conservation Advice for
Cyclodomorphus praealtus (Alpine She-oak Skink)

(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 plans, records or management prescriptions for this species.

Description

The Alpine She-oak Skink, *Cyclodomorphus praealtus*, is a medium-sized member of the lizard family Scincidae. It has a snout-vent length to 126 mm (Clemann, pers. comm., 2007) with smooth, overlapping scales and four distinct but short limbs, each with five fingers or toes. The tail is relatively short compared to coastal species (Green and Osborne, 1994). Dorsal colouration is olive green to reddish-brown, with dark edges to scales that form broken wavy stripes and occasionally irregular narrow bands (Wilson and Swan, 2008). The ventral surface is usually orange to reddish.

Conservation Status

The Alpine She-oak Skink is listed as **endangered**. This species is eligible for listing as endangered under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act) as it has a restricted geographic distribution which is precarious for its survival given the nature of ongoing threats (TSSC, 2009).

The Alpine She-oak Skink is also listed as threatened under the Victorian *Flora and Fauna Guarantee Act 1988* and considered endangered on the *Advisory List of Threatened Vertebrate Fauna in Victoria – 2007*. The Alpine She-oak Skink is protected under the New South Wales *National Parks and Wildlife Act 1974*.

Distribution and Habitat

The Alpine She-oak Skink is known from eight broad locations in alpine grasslands, alpine heathland and alpine grassy heathland above 1500 m in the Australian Alps from Omeo Plain in the south, to Kiandra in the north (Swan et al., 2004). The area of occupancy is estimated to be less than 100 km². This species occurs within the North East Victoria and Southern Rivers New South Wales Natural Resource Management Regions.

The distribution of this species is associated with the “Alpine *Sphagnum* Bogs and Associated Fens” EPBC Act-listed threatened ecological community. The distribution of this species is also associated with the Victorian *Flora and Fauna Guarantee Act*-listed “Alpine Snowpatch Community”.

Threats

The main identified threats to the Alpine She-oak Skink are loss and degradation of habitat, wildfire and predation. Climate change and weeds, especially Orange Hawkweed (*Hieracium aurantiacum*), are potential threats.

Research Priorities

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

- Design and implement a monitoring program to determine population size and fluctuations or, if appropriate, support and enhance existing programs.

- Conduct surveys to more precisely assess population size, distribution, ecological requirements and the relative impacts of threatening processes.
- Undertake survey work in suitable habitat and potential habitat to locate any additional populations.
- Undertake further research on the species' biology; specifically breeding information, breeding habitat and natural mortality.
- Determine whether a captive breeding program to establish captive founder populations would be appropriate.
- Quantitatively assess known or suspected threats (such as construction of roads and tracks, slashing of ski runs, etc.), relative to the amount of remaining habitat.

Priority Actions

The following priority recovery and threat abatement actions can be done to support the recovery of the Alpine She-oak Skink.

Habitat Loss, Disturbance and Modification

- Survey known habitats to identify key threats.
- Monitor the progress of recovery, including the effectiveness of management actions and the need to adapt them if necessary.
- Ensure infrastructure or development activities involving substrate or vegetation disturbance in areas where the Alpine She-oak Skink occurs do not adversely impact on known populations.
- Protect populations of the listed species through the development of conservation agreements and/or covenants.

Invasive Weeds

- Develop and implement a management plan for the control of weeds within the species range, in particular Orange Hawkweed (*Hieracium aurantiacum*).

Trampling, Browsing or Grazing

- Develop and implement a stock management plan for the area in which the Alpine She-oak Skink occurs.
- Where appropriate, manage total grazing pressure at important/significant sites through exclusion fencing or other barriers.
- Develop and implement a management plan for the control and eradication of feral horses (*Equus caballus*), red deer (*Cervus elaphus*), fallow deer (*Dama dama*), Sambar deer (*Cervus unicolor*) and pigs (*Sus scrofa*) in the region. Implement the Kosciuszko National Park Final Horse Management Plan (DECC, 2008).

Animal Predation

- Develop and implement a management plan for the control and eradication of black rats (*Rattus rattus*), foxes (*Vulpes vulpes*), cats (*Felis catus*) and wild dogs (*Canis lupus familiaris*) in the region. Implement the New South Wales Threat Abatement Plan – Predation by the red fox (NSW NPWS, 2001). Implement the Wild Dog Policy (DEC, 2005). Implement the Commonwealth Threat Abatement Plan – Predation by European red fox (DEWHA, 2008). Implement the Commonwealth Threat Abatement Plan – Predation by feral cats (DEWHA, 2008).

Fire

- 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 plans, risk register and/or operation maps.

Conservation Information

- Raise awareness of the Alpine She-oak Skink within the local community.
- Frequently engage with private landholders and land managers responsible for the land on which populations occur, particularly alpine resorts, and encourage these key stakeholders to contribute to the implementation of conservation management actions.

This list does not necessarily encompass all actions that may be of benefit to the Alpine She-oak Skink, but highlights those that are considered to be of highest priority at the time of preparing the Conservation Advice.

Existing Plans/Management Prescriptions that are Relevant to the Species

The New South Wales Department of Environment and Climate Change (DECC) has developed the Kosciuszko National Park Final Horse Management Plan (DECC, 2008). In this plan, it recommends removal of feral horses from the Park in particular areas adjoining other Australian Alps national parks and reserves.

DECC has also developed the New South Wales Threat Abatement Plan – Predation by the red fox (NSW NPWS, 2001). The Plan is aimed at reducing the impacts of red foxes on threatened species. It identifies the Snowy Mountains Main Range and South West Slopes, Kosciuszko North as high priority sites for fox control.

The New South Wales Department of Environment and Conservation (DEC) (now known as DECC) also developed the Wild Dog Policy (DEC, 2005). The policy seeks to minimise the impact of wild dogs on the conservation of native fauna. It specifies that wild dog control will target areas where wild dog predation is identified as a threat to threatened species (e.g. priority sites identified in recovery plans).

The Victorian Department of Sustainability and Environment (DSE) has developed an Action Statement for the Alpine She-oak Skink (Clemann, 2003). This document provides previous management action and intended management action. It outlines research priorities and identifies threats to the species.

There is also a Victorian Action Statement for the sympatric Alpine Water Skink *Eulamprus kosciuskoi* (Meredith et al. 2003), and draft Action Statements for the sympatric Alpine Bog Skink *Pseudemoia cryodroma* (Clemann in prep. A) and Guthega Skink *Liopholis guthega* (Clemann in prep. B). Threatening processes and management actions for each of these threatened alpine lizards broadly overlap with those for the Alpine She-oak Skink.

The Commonwealth Department of Environment and Heritage (DEH) (now known as the Department of Environment, Water, Heritage and the Arts (DEWHA)) has developed a Threat Abatement Plan – Predation, habitat degradation, competition and disease transmission by feral pigs (DEH, 2005). The Plan is aimed at protecting listed threatened native species from the impacts of pigs. It specifies to quantify feral pig impacts on nationally-listed threatened species.

DEWHA has also developed Threat Abatement Plans – Predation by European red fox (DEWHA, 2008a) and Predation by feral cats (DEWHA, 2008b). The goals of the Threat Abatement Plans are to minimise the impact of foxes and feral cats on biodiversity, in particular protecting affected native species.

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

Information Sources:

Clemann N (2003). *Flora & Fauna Guarantee* Action Statement for the Alpine She-oak Skink *Cyclodomorphus praealtus*. Department of Sustainability and Environment, Victoria.

Available on the internet at:

[http://www.dse.vic.gov.au/CA256F310024B628/0/1C1EF1BCEA4A1722CA2570ED0004F245/\\$File/113+Alpine+She-oak+Skink+2001.pdf](http://www.dse.vic.gov.au/CA256F310024B628/0/1C1EF1BCEA4A1722CA2570ED0004F245/$File/113+Alpine+She-oak+Skink+2001.pdf)

Clemann N (2007). Personal communication by nomination, 7 June 2007. Arthur Rylah Institute for Environmental Research, Department of Sustainability and Environment, Victoria.

Clemann N (in prep. A). *Flora & Fauna Guarantee* Action Statement for the Alpine Bog Skink *Pseudemoia cryodroma*. Department of Sustainability and Environment, Victoria.

Clemann N (in prep. B). *Flora & Fauna Guarantee* Action Statement for the Guthega Skink *Liopholis guthega*. Department of Sustainability and Environment, Victoria.

DECC (Department of Environment and Climate Change) (2008). Kosciuszko National Park Final Horse Management Plan.

Available on the Internet at:

<http://www.environment.nsw.gov.au/resources/nature/KNPHorseManagementPlanFinal08.pdf>

DEC (Department of Environment and Conservation) (2005). Wild Dog Policy.

Available on the Internet at:

<http://www.environment.nsw.gov.au/resources/pestsweeds/WildDogPolicy.pdf>

DEWHA (Department of Environment, Water, Heritage and the Arts) (2008a). Threat Abatement Plan – Predation by European red fox.

Available on the Internet at:

<http://www.environment.gov.au/biodiversity/threatened/publications/tap/pubs/tap-fox-report.pdf>

DEWHA (Department of Environment, Water, Heritage and the Arts) (2008b). Threat Abatement Plan – Predation by feral cats.

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<http://www.environment.gov.au/biodiversity/threatened/publications/tap/pubs/tap-cat-report.pdf>

DEH (Department of the Environment and Heritage) (2005). Threat Abatement Plan – Predation, habitat degradation, competition and disease transmission by feral pigs.

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<http://www.environment.gov.au/biodiversity/threatened/publications/tap/pubs/feral-pig-tap.pdf>

Green K and Osborne W (1994). *Wildlife of the Australian Snow Country*. Reed Books, New South Wales.

Meredith C, Hudson S, Robertson P and Clemann N (2003). *Flora & Fauna Guarantee* Action Statement for the Alpine Water Skink *Eulamprus kosciuskoi*. Department of Sustainability and Environment, Victoria.

Available on the internet at:

[http://www.dse.vic.gov.au/CA256F310024B628/0/754DE682B4A6DEA0CA2570ED0005020C/\\$File/114+Alpine+Water+Skink+2001.pdf](http://www.dse.vic.gov.au/CA256F310024B628/0/754DE682B4A6DEA0CA2570ED0005020C/$File/114+Alpine+Water+Skink+2001.pdf)

NSW NPWS (National Parks and Wildlife Service) (2001). Threat Abatement Plan for Predation by the Red Fox (*Vulpes vulpes*). NSW National Parks and Wildlife Service, Hurstville.

Available on the internet at:

<http://www.environment.nsw.gov.au/resources/pestsweeds/RedfoxApproved.pdf>

Threatened Species Scientific Committee (TSSC) (2009). Listing advice for *Cyclodomorphus praealtus* (Alpine She-oak Skink).

Wilson S and Swan G (2008). Reptiles of Australia. 2nd Edition. Princeton Field Guides. New Jersey, USA.