

Australian Capital Territory

# Nature Conservation (Northern Corroboree Frog) Conservation Advice 2019

Notifiable instrument NI2019–240

made under the

Nature Conservation Act 2014, s 90C (Conservation advice)

---

## 1 Name of instrument

This instrument is the *Nature Conservation (Northern Corroboree Frog) Conservation Advice 2019*.

## 2 Commencement

This instrument commences on the day after its notification day.

## 3 Conservation advice for the Northern Corroboree Frog

Schedule 1 sets out the conservation advice for the Northern Corroboree Frog (*Pseudophryne pengilleyi*).

Arthur Georges  
Chair, Scientific Committee  
1 May 2019

# Schedule 1

(see s 3)

---



**ACT**  
Government

Environment, Planning and  
Sustainable Development



# CONSERVATION ADVICE

## NORTHERN CORROBOREE FROG

### *Pseudophryne pengilleyi*

#### CONSERVATION STATUS

The Northern Corroboree Frog *Pseudophryne pengilleyi* Wells and Wellington, 1985 is recognised as threatened in the following jurisdictions:

International	<b>Endangered</b> , International Union of Conservation of Nature (IUCN) Red List
National	<b>Critically Endangered</b> , <i>Environment Protection and Biodiversity Conservation Act 1999</i>
ACT	<b>Critically Endangered</b> , <i>Nature Conservation Act 2014</i>
NSW	<b>Critically Endangered</b> , <i>Biodiversity Conservation Act 2016</i>

#### ELIGIBILITY

The Northern Corroboree Frog is listed as Critically Endangered in the ACT Threatened Native Species List under IUCN Criterion B. The factors that make it eligible include a very restricted geographic distribution, which is precarious for the survival of the species due to its severe fragmentation and the current and potential threats operating on the species (Threatened Species Scientific Committee (TSSC) 2013).

#### DESCRIPTION AND ECOLOGY

The Northern Corroboree Frog is distinctive and easily recognised because of its striking dorsal colour patterns consisting of bright yellow or green longitudinal stripes alternating with black stripes (Moore 1953). The ventral surface is boldly marked with black, yellow or lime green and white blotches. Adult corroboree frogs reach a length of between 25–30 mm. Adults of the Northern Corroboree Frog differ from the Southern Corroboree Frog (*Pseudophryne corroboree*) in having: a pattern of dorsal stripes that are usually yellow with a green tinge or lime-green; mid-dorsal light-coloured stripes that are less than half the width of the adjacent black stripe at mid-body and; a significantly smaller body and tibia length (Osborne et al. 1996). The ranges of these two species do not overlap. Tadpoles of the corroboree frogs are dark in colour; have a relatively long paddle shaped tail; and grow to 30 mm in total length (Anstis 2002).



[Northern Corroboree Frog \(John Wombey – Canberra Nature Map\)](#)

Like most frogs, Northern Corroboree Frogs have an aquatic tadpole stage and a terrestrial post-metamorphic juvenile and adult stage. However, they differ from most other frogs in that their eggs are laid out of water, in moss or damp, dense vegetation at the edge of the breeding pool. The embryos develop to an advanced stage within the egg capsule before hatching and moving to the nearby pool. Little is known about the life-history of the frogs after they leave the pools as juveniles (ACT Government 2011). Further details of the life history and ecology of the Northern Corroboree Frog are available in the ACT Action Plan (ACT Government 2011).

## DISTRIBUTION AND HABITAT

The historic range of the Northern Corroboree Frog occurs throughout the Fiery Range and Bogong Mountains in Kosciuszko National Park; Buccleuch State Forest, Bondo State Forest, Micalong State Forest, Wee Jasper State Forest, Bimberi Nature Reserve and Brindabella National Park in NSW; and along the Brindabella Ranges in Namadgi National Park in the ACT. This constitutes an altitudinal range between 750 m and 1800 m (Osborne 1989). Populations in the Fiery Range and Bogong Mountains appear to be contiguous, however within the Brindabella Ranges, the Northern Corroboree Frog occurs as two sub-populations (Osborne 1989). The southern Brindabella sub-population is found only in the sub-alpine zone (above about 1400 m) from near the summit of Mount Bimberi, northwards to Ginini Flats. The northern sub-population occurs at lower altitudes along the Brindabella Range from Bushrangers Creek (ACT) northwards to near California Flats in NSW.

Habitat critical to the survival of the Northern Corroboree Frog includes breeding habitat and adjacent areas where the species forages. The Northern Corroboree Frog breeding habitat includes pools and seepages in sphagnum bogs, wet tussock grasslands, fens and wet heath (Osborne 1990; Hunter et al. 2009a). The species also forages and shelters in montane forest, sub-alpine woodland and tall heath adjacent to the breeding areas. During summer adult frogs breed in shallow pools and seepages and have a strong tendency to breed in ephemeral water bodies that are dry during the breeding season (Osborne 1990; Hunter et al. 2009a). The vegetation present at breeding sites varies from sphagnum bog and wet-heath at higher altitudes, to wet sod-tussock grasslands and seepage lines in montane forest. Outside the breeding season, Northern Corroboree Frogs shelter in dense litter and under logs and rocks in adjacent woodland and tall moist heath (Pengilley 1966). Northern Corroboree Frogs are typically found in areas with gently sloping topography on granitic and volcanic substrates (Osborne 1990). Osborne (1988) found that following breeding, adult corroboree frogs are capable of moving over 300 m into the surrounding woodland. Further details of biology and ecology are provided in the ACT Action Plan (ACT Government 2011) and National Recovery Plan (Office of Environment and Heritage (OEH NSW) 2012).

## THREATS

Threats to corroboree frogs include disease (amphibian chytrid fungus—*Batrachochytrium dendrobatidis*), fire, anthropogenic climate change, feral animals, weeds, habitat disturbance and degradation. Such threats rarely act in isolation and when more than one threat acts against a population the effects are often magnified (Brook et al. 2008). Effective management of threats will require consideration of risks and potential synergies (ACT Government 2011). Further details of threats are provided in the ACT Action Plan (ACT Government 2011) and National Recovery Plan (OEH NSW 2012).

## MAJOR CONSERVATION OBJECTIVES

The priority management objective is to prevent the extinction and maximise the survival, in the long-term, of viable, natural populations of Northern Corroboree Frogs at sites across the geographic range of

the species in the ACT. This includes the need to maintain the natural evolutionary development of the species in the wild.

## CONSERVATION ISSUES AND PROPOSED MANAGEMENT ACTIONS

Almost all of the known breeding sites for the Northern Corroboree Frog in the ACT occur within Namadgi National Park. The largest populations occur in sub-catchments of the Cotter River upstream of Bendora and Corin Dams. Public access and camping are restricted and these areas are managed primarily for conservation and water catchment protection. General guidelines for the conservation management of the Northern Corroboree Frog and its habitat in the ACT have been included in the *Namadgi National Park Plan of Management* (ACT Government 2010).

Protection includes controlling activities such as construction of access tracks and fire management/suppression in the vicinity of corroboree frog habitat, controlling feral animals (horses, pigs, deer) and weeds (pine wildings, blackberry), avoiding the spread of diseases that could affect frogs, and ensuring protection of sites during wildfire events. Specific supported actions are provided in the ACT Action Plan (ACT Government 2011) and the National Recovery Plan (OEH 2012).

## OTHER RELEVANT ADVICE, PLANS OR PRESCRIPTIONS

- Northern Corroboree Frog Action Plan (ACT Government 2011)
- ACT Conservation Advice — High Country Bogs and Fens (Scientific Committee 2019)
- Namadgi National Park – Plan of Management (ACT Government 2010)
- National Recovery Plan (OEH 2012)
- Commonwealth Listing Advice on Northern Corroboree Frog (TSSC 2013)

## LISTING BACKGROUND

The species is conventionally accepted as *Pseudophryne pengilleyi* (Wells and Wellington, 1985). The Corroboree Frog *Pseudophryne corroboree* was initially listed 15 April 1996 as a Vulnerable species under the *Nature Conservation Act 1980*; then listed as the Northern Corroboree Frog *Pseudophryne pengilleyi*, 12 January 1998, following taxonomic revision of corroboree frogs. A subsequent evaluation of monitoring data indicated further decline in the species, which warranted a change of status from Vulnerable to Endangered and listed as Endangered on 5 September 2003. In making its assessment the Committee concluded that it satisfied the criteria:

- 1.2. Species is observed, estimated, inferred or suspected to be at risk of premature extinction in the ACT region in the near future, as demonstrated by:
  - 1.2.1 Current severe decline in population or distribution from evidence based on:
    - 1.2.1.1 direct observation, including comparison of historical and current records
    - 1.2.1.5 severe threats from herbivores, predators, parasites, pathogens or competitors.
  - 1.2.2 Imminent risk of severe decline in population or distribution from evidence based on the above.
  - 1.2.3 Continuing decline or unnaturally extreme fluctuations in population, or distribution, for a species currently occurring over a small range or having a small area of occupancy within its range.
  - 1.2.4 Severely fragmented distribution for a species currently occurring over a small range or having a small area of occupancy within its range.

- 1.2.5 Continuing decline or unnaturally extreme fluctuations in population, or distribution, for a species currently occurring over a small range or having a small area of occupancy within its range.

This species was transferred from Vulnerable to Critically Endangered under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) on 6 April 2013 following assessment of new information from the ACT and NSW governments by the Commonwealth TSSC that assessed the species to have met IUCN Criterion B–B2ab(ii,v) to make it eligible for listing as Critically Endangered.

Under the *Nature Conservation Act 2014* the category of Critically Endangered was included on the Threatened Native Species List for the first time. In 2019, the Scientific Committee recommended the Northern Corroboree Frog be listed in the Critically Endangered category to align with the EPBC Act listing.

## REFERENCES

- ACT Government 2010. *Namadgi National Park: Plan of Management 2010*. Land Management and Planning Division, Department of Territory and Municipal Services, Canberra.
- ACT Government 2011. *Northern Corroboree Frog (*Pseudophryne pengilleyi*)*. Action Plan No. 6. Second edition. ACT Government, Canberra.
- Anstis M 2002. *Tadpoles of South-eastern Australia: A guide with keys*. New Holland, Sydney.
- Brook BW, Sodhi NS and Bradshaw C JA 2008. Synergies among extinction drivers under global change. *Trends in Ecology and Evolution* 23: 453–460.
- Hunter D, Osborne W, Smith M and McDougall K 2009a. Breeding habitat use and the future management of the critically endangered Southern Corroboree Frog. *Ecological Restoration and Management*. 10: 103–109.
- Moore JA 1953. A new species of *Pseudophryne* from Victoria. *Proceedings of the Linnaean Society of NSW* 78: 179–180.
- Office of Environment and Heritage (OEH) 2012. *National Recovery Plan for the Southern Corroboree Frog, *Pseudophryne corroboree* and the Northern Corroboree Frog, *Pseudophryne pengilleyi**. NSW Office of Environment and Heritage, Hurstville. Accessed 13 February 2019 from: <http://www.environment.gov.au/resource/southern-corroboree-frog-pseudophryne-corroboree-and-northern-corroboree-frog-pseudophryne>
- Osborne WS 1988. *A survey of the distribution, abundance and habitats of corroboree frogs *Pseudophryne corroboree* in Kosciusko National Park, with reference to ski resort development*. Consultant's report to the New South Wales National Parks and Wildlife Service, Kosciusko National Park.
- Osborne WS 1989. Distribution, relative abundance and conservation status of Corroboree Frogs *Pseudophryne corroboree* Moore (Anura: Myobatrachidae). *Australian Wildlife Research* 6: 537–547.
- Osborne WS 1990. *The conservation biology of *Pseudophryne corroboree* Moore (Anura: Myobatrachidae): a study of insular populations*. PhD. Thesis. Australian National University. Canberra.
- Osborne WS, Zentelis RA and Lau M 1996. Geographical Variation in Corroboree Frogs, *Pseudophryne corroboree* Moore (Anura: Myobatrachidae): A Reappraisal Supports Recognition of *P. pengilleyi* Wells and Wellington. *Australian Journal of Zoology* 44: 569–587.
- Pengilley RK 1966. The biology of the genus *Pseudophryne* (Anura: Leptodactylidae). M.Sc. thesis. Australian National University. Canberra.

Scientific Committee 2019. *Conservation Advice – High Country Bogs and Associated Fens Ecological Community*. Environment Planning and Sustainable Development Directorate, ACT Government, Canberra.

Threatened Species Scientific Committee (TSSC) 2013. *Commonwealth Listing Advice on Pseudophryne pengilleyi (Northern Corroboree Frog)*. Department of Sustainability, Environment, Water, Population and Communities, Canberra. Accessed 13 February 2019 from:  
<http://www.environment.gov.au/biodiversity/threatened/species/pubs/66670-listing-advice.pdf>

Wells RW and Wellington CR 1985. A classification of the Amphibia and Reptilia of Australia. *Australian Journal of Herpetology Supplementary Series 1*: 1–61.

## FURTHER INFORMATION

Further information on the related Action Plan or other threatened species and ecological communities can be obtained from the Environment, Planning and Sustainable Development Directorate (EPSDD).

Phone: (02) 132281, EPSDD Website: <http://www.environment.act.gov.au/cpr>