

Broad-headed snake

Hoplocephalus bungaroides
Endangered

Target: minimise habitat disturbance and illegal collection, monitor these threats and the populations

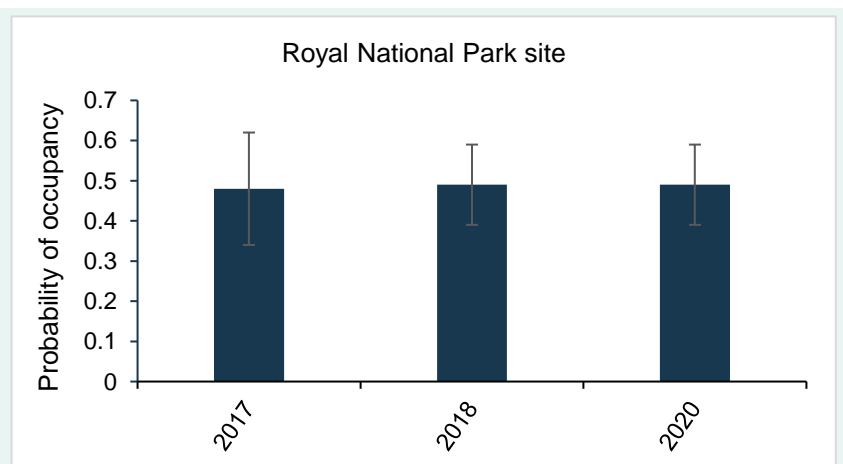
The *Saving our Species* (SoS) broad-headed snake (*Hoplocephalus bungaroides*) project has delivered site protection works, installed signage and restored habitat to reduce and mitigate habitat disturbance; and has undertaken monitoring to track these threats and species occupancy.

The broad-headed snake is a cryptic, nocturnal ambush predator. It is one of Australia's most endangered snakes and it has a highly restricted geographic range, occurring only on sandstone rock outcrops and adjacent habitat within 200 kilometres of Sydney. This SoS project occurs on management sites across Morton National Park and adjacent Crown lands, Royal National Park, and on the Woronora Plateau including water catchment lands and Dharawal National Park. Outcomes for this project include:

- monitoring occupancy across **86 locations** within the three conservation sites
- installing and maintaining **six gates** and over **30 concrete blocks** as vehicle barriers to protect sites
- installing **30 regulatory and informative signs** across the three sites
- producing and distributing a bush rock protection video to educate the community about activities that disturb habitat.

Trajectory: stable

Long-term monitoring indicates the species can withstand significant fire events and will remain stable with low levels of disturbance. In Royal National Park (see graph), multi-season occupancy modelling across 26 locations showed consistent probability of occupancy (0.47–0.49), indicating a stable population.



Partners

The broad-headed snake project is led by the SoS program in partnership with several stakeholders.

Land managers including NSW National Parks and Wildlife Service (NPWS), Water NSW and Crown Lands undertake surveillance and law enforcement at each of the management sites. NPWS and Crown Lands also assist with the installation of site protection measures on their lands.

The University of Technology Sydney, Southern Cross University and NPWS have also supported threat and species monitoring at the management sites.

The Australian Museum and University of Sydney are also undertaking genetic analysis and DNA biobanking for the species.

What did we find?

While population monitoring at two of the three SoS sites has been ongoing for over 15 years, systematic and quantitative habitat management and threat mitigation monitoring were introduced in 2016 at the commencement of the SoS project.

Management actions since 2017 have focussed on minimising habitat disturbance. At the Morton and Woronora Plateau sites, fencing and gates have been installed. Locks and entry points are checked to minimise vehicle and foot traffic at important habitat sites. Increased surveillance of these areas is also implemented during times of peak visitation. Information and regulatory signage have also been installed across the three sites to minimise habitat disturbance.

Long-term occupancy monitoring shows the species can remain stable with low levels of disturbance and is able to withstand significant fire events. At this stage, there is insufficient data to report on the effectiveness of management actions.



Habitat selection is driven by thermoregulation: in winter, broad-headed snakes shelter under sun-exposed, flat sandstone rocks and rock crevices during the day, but prefer sheltering in tree hollows in the summer. Photo: Meagan Hinds/DPIE

Think before you lift: How you can support the broad-headed snake

Bushrock is loose, fragile rock found on rock or soil surfaces. Many animals use these rock environments for shelter, to hide from predators, find food, avoid extreme weather and escape bushfires.

The broad-headed snake has very specific crevice requirements for habitat, and even a slight movement or crack in the rock can compromise its capacity to provide habitat. Lifting, moving, replacing or dropping bushrock can also harm animals living or sheltering underneath.

How you can help:

- Think before you lift to avoid disturbing habitat.
- Tread gently when bushwalking, mountain climbing, mountain bike riding or 4WD driving.
- Use alternatives to bushrock in your garden or buy bushrock from reputable sources.
- Report sightings of interesting plants or animals or any suspicious activity.
- Do not collect bushrock.

More information on bushrock and bushrock removal is available on the [Bushrock belongs in the bush, not in gardens webpage](#).

Saving our Species is a NSW Government flagship program delivered by the Environment, Energy and Science Group in the Department of Planning, Industry and Environment. To find out more about threatened species in New South Wales and the *Saving our Species* program, visit the [Saving our Species Program webpage](#).