



# More plants and animals to be saved from extinction

*Saving our Species 2016–21*



Office of  
Environment  
& Heritage

# NSW Government invests \$100 million in threatened species conservation

## Foreword

NSW has one of the world's most diverse and beautiful natural environments, including its plants and animals.

Yet despite our natural wealth, NSW has nearly 1000 species on the verge of extinction. This presents us with a considerable challenge.

The *Saving our Species* (SoS) program is the NSW Government's solution.

By taking a more strategic approach to management, working together and committing substantial investment in the program, SoS aims to maximise the number of species we can secure in the wild in NSW for 100 years.

I invite you to join us and together we can secure threatened species in NSW.

**Mark Speakman**

NSW Minister for the Environment

The NSW Government is investing \$100 million over five years in saving more threatened animals and plants from extinction. The funds are allocated from 2016 to 2021 to *Saving our Species*, NSW's leading threatened species conservation program. The objectives are:

- to maximise the number of threatened species that can survive securely in the wild in NSW
- to control key threats facing our threatened plants and animals.

## About *Saving our Species*

There are currently more than 980 threatened species and over 100 threatened ecological communities in NSW. SoS staff and partners are working to save species and ecological community through:

- initiating projects that improve habitat and control threats, such as weeding programs and fox baiting
- monitoring the effectiveness of these projects and the response of species and ecological communities to management activities
- supporting conservation projects in national parks and on private land.

Success is measured by the number of sites where threatened species and ecological communities are stable or increasing in the wild in NSW. Conservation activities delivered as part of the SoS program are complemented by effective regulation of human impacts on threatened species and ecological communities.

Left: Site-managed species Oaklands diuris (*Diuris Sp.*)  
Photo: Matt Cameron/OEH





Under *Saving our Species*,  
there is hope for the  
survival of the threatened  
squirrel glider in NSW.

Squirrel glider (*Petaurus norfolcensis*) in NSW.  
Photo: Pavel German

# Effectively managing threatened species

Each species has different needs for its survival and is managed in different ways, depending on:

- its ecology, habitat and distribution
- the threats facing the species
- how much we know about the species.

SoS has allocated all threatened species to one of six management streams to meet these different needs. These are:

**Site-managed species** – there are about 450 or 46% of threatened species in this management stream, including the smoky mouse, eastern bristlebird and granite rose. These species can be successfully secured by carrying out targeted conservation projects on specific sites around NSW.

**Iconic species** – the six iconic species are the koala, brush-tailed rock-wallaby, southern corroboree frog, Wollemi pine, malleefowl and plains-wanderer. These species are socially and culturally valued, and projects have been developed to secure them at priority sites.

**Landscape-managed species** – this stream contains about 100 or 10% of threatened species including the pale-headed snake, yellow-bellied glider and giant dragonfly. These species are distributed across large areas, and are threatened by habitat loss and degradation. Effective actions include restoring habitat and landscape connectivity and managing pests and weeds in national parks.



Top: **Site-managed species**

North Rothbury persoonia (*Persoonia pauciflora*).  
Photo: Nathan Emery, The Australian Botanic Garden  
Mount Annan

Centre: **Iconic species**

Malleefowl (*Leipoa ocellata*). Photo: Marc Irvin/OEH

Bottom: **Landscape-managed species**

Powerful owl (*Ninox strenua*). Photo: Rosie Nicolai/OEH



**Data-deficient species** – there are approximately 168 or 19% of threatened species in this management stream, including finger panic grass and the matted bush-pea and 72 species that are presumed to be extinct. The Office of Environment and Heritage (OEH), universities, museums, botanic gardens and field naturalist groups are conducting research and surveys to find out more about these species. An expert panel will then decide which of the other management streams to move them to.



**Partnership species** – this stream contains approximately 150 or 15% of NSW threatened species. These species have less than 10% of their distribution in NSW so are generally considered a lower priority for SoS management, since they are often abundant or not threatened outside NSW. Any investment will generally involve partnership with other jurisdictions.



**Keep watch species** – there are approximately 100 or 10% of threatened species in this management stream, including black-eyed susan and the spiny mintbush. These species require no immediate investment because they are either naturally rare, have few known threats that require management, or are more common than previously assumed.

Endangered populations, threatened ecological communities and key threatening processes are other management categories under SoS.

For more information on threatened species management, and conservation projects already under way, visit [www.environment.nsw.gov.au/savingourspecies/ManagementStreams.htm](http://www.environment.nsw.gov.au/savingourspecies/ManagementStreams.htm).

Top: **Data-deficient species**

The pale imperial hairstreak butterfly (*Jalmenus eubulus*).  
Photo: Bruce Thompson/OEH

Centre: **Partnership species**

Yellow-footed rock-wallaby (*Petrogale xanthopus*).  
Photo: Matthew Jones

Bottom: **Keep watch species**

Rupp's wattle (*Acacia ruppiae*). Photo: Shane Ruming/OEH

## Which species are targeted for investment in 2016–21?

High-priority streams for investment are the site-managed, iconic and landscape-managed species streams with the data-deficient species stream being a medium priority. In 2016–17:

- \$2 million is allocated to iconic species
- \$5 million is for site-managed species
- \$300,000 is being spent on finding out more about data-deficient species so they can be moved to another stream and on piloting the approach to landscape-managed species projects.

This is supporting delivery of over 240 species conservation projects by OEH and partners.

From 2017–18 onwards, funds will also be spent on:

- conservation projects for more site-managed species, landscape-managed species, threatened ecological communities, priority partnership species and endangered populations
- management of key threats.

The program aims to maximise the number of threatened species and ecological communities that are secure in the wild in NSW.



Above: Bithry Inlet shorebirds volunteers. *Saving our Species* involves individuals and representatives from different organisations working together on conservation projects to benefit threatened animals and plants. Photo: Lisa Brown/OEH

Next page: Littoral rainforest community. Photo: John Turbill/OEH



Littoral rainforests are threatened ecological communities.

## Our investment strategy



Malleefowl (*Leipoa ocellata*) volunteers training to use a mobile app for monitoring. Photo: Andy McQuie/OEH

**Eighty-five per cent** of the funding is assigned to:

- coordinating and delivering existing and new conservation projects
- science and research to discover ways of best managing threatened species and ecological communities
- building partnerships and involving more people in projects.

Around **8%** of the investment is allocated to program development, management and evaluation to ensure:

- conservation projects are cost-efficient and effective
- the long-term sustainability of projects
- there are opportunities for ongoing investment in SoS beyond the current five-year commitment from the government.

The remaining **7%** will be for support tools, communications and community engagement activities.



## Achieving effective conservation projects

Funds are being spent on delivering effective conservation projects through:

- efficient project management, implementation and evaluation
- working in partnership with government, conservation organisations, Aboriginal communities, businesses, private landholders and the community
- increasing participation in SoS through grants, incentives, private landholder agreements and opportunities for volunteers
- aligning work undertaken by other organisations with SoS projects to prevent duplication, maximise resources and provide long-term resilience for projects.

### Brush-tailed rock-wallabies are bounding back at Jenolan caves

The brush-tailed rock-wallaby was once common in the Jenolan Caves area and was one of the attractions of the caves. In 1964, in response to a major population decline, a fence was built around the remaining rock-wallabies to protect them from foxes and other predators. Over the next couple of decades this population increased and animals were released into the wild. However, without predator control, the population again crashed and the remaining handful of animals were recaptured and put back into the enclosure in 1992. Fox control was commenced around the captive colony and numbers of captive rock-wallabies slowly increased again until a second release was carried out in 2007. At the same time, the fox control program around the colony was significantly enhanced. Three captive-bred rock-wallabies were also released into the colony to improve genetic diversity. Since this time fox control and population monitoring has continued through investment by the National Parks and Wildlife Service, Local Land Services, Taronga Conservation Society and SoS. In 2016 there are at least 80 animals in the colony.

SoS is continuing to work to increase the population of rock-wallabies at Jenolan Caves in partnership with surrounding landholders. Fox control remains the critical management activity. Remote cameras are deployed throughout the site to monitor fox activity.

Annual rock-wallaby monitoring is keeping count of the population numbers.

Jenolan Caves probably represents the best place in NSW for tourists to spot rock-wallabies living in their natural habitat. Rock-wallabies can be sighted along the walking trails, and on the Grand Arch and Devil's Coach House.



Brush-tailed rock-wallabies (*Petrogale penicillata*) bound back at Jenolan Caves in response to effective management of foxes. Photo: Rosie Nicolai/OEH

## Promoting private landholder agreements

Many threatened plants and animals have much or all of their habitat on privately owned land. These include about 50% of site-managed species and all the landscape-managed species, so conservation on such land is crucial for their survival. Funds are being invested by SoS to encourage and assist landholders to manage their land for conservation of threatened species and ecological communities.

Complementary to SoS, the NSW Government has committed \$240 million over five years to support conservation on private land. A further \$70 million will be provided each year after that, subject to performance reviews. Investment priorities may include areas that are priority sites for threatened species under the SoS program.

### Tumut grevillea – insuring the species against disasters

The Tumut grevillea population enhancement project is one of few reported successful threatened plant translocations in Australia. The endangered Tumut grevillea is largely restricted to a 6-kilometre section of the Goobarragandra River east of Tumut where it occurs at ten sites. The earliest translocation sites were planted as far back as 1993. It now has a natural population of about 700 mature plants, of which 75% comprises plantings and the progeny of plantings.

However, despite the efforts of OEH and others to recover the species over more than 20 years and expand its occurrence, the Tumut grevillea was nearly lost. In March 2012, a record flood event struck the Goobarragandra River and washed away 80% of the plantings at two sites, including most of the original riparian zone plantings. The flood also destroyed approximately 50% of the original natural population which was reduced to about 200 plants. Fortunately at one of the planting sites, over half the plantings extended up a low ridge adjoining the river and escaped the flood. At this ridge site there are now over 70 adult



Tumut grevillea (*Grevillea wilkinsonii*)  
Photo: John Briggs/OEH

plants (planted and naturally recruited) established – a major nett increase on the 13 original plants at this site.

The 2012 flood event led to a revised planting strategy, which is now targeting suitable habitat above the level of the 2012 flood. Since 2012, with the assistance of SoS funding, another 80 grevillea plants have been established at two new planting sites and it is hoped that within a few years natural recruitment will also be occurring there also.

## Building partnerships to maximise resources and expertise

SoS works in partnership with the Environmental Trust on projects that are helping to save site-managed, landscape-managed and data-deficient threatened species. Already an additional \$8.3 million has been allocated to these projects. This partnership's strengths are that:

- it focuses on working effectively in the long term with partners
- funds are dependent on implementing projects which are aligned with the SoS framework.

SoS staff continue to seek similar arrangements with other organisations and landholders undertaking conservation projects. Partnerships

with non-government organisations with strong delivery skills and fundraising programs create long-term security for SoS projects beyond the government's five-year investment.

SoS also involves Aboriginal communities in the program.

SoS continues to align with:

- other NSW Government funding initiatives to save threatened species in partnership with Local Land Services
- projects where resources and expertise can be combined, such as with local councils, non-government organisations and service providers.



The Foundation for National Parks and Wildlife, an important SoS partner, raises funds for captive breeding and research for the mountain pygmy possum (*Burrhamys parvus*). Photo: L Morrell/OEH

## Investing in science and research

Five per cent of the government's \$100 million investment is allocated to science and research projects. This includes projects that will:

- improve understanding of, and the capacity to manage threatened species and their ecology, distribution and threats
- improve outcomes across the program, such as monitoring, helping species adapt to climate change and better managing threats.

SoS staff are developing a prospectus of priority science and research projects to attract partners from research institutions and universities and develop a network of researchers linked with specific SoS projects.

There will also be opportunities for citizen scientists and volunteers to undertake research and support science projects.

### Science saves the southern corroboree frog from extinction

Endemic to Kosciuszko National Park and with fewer than 20 adults remaining in the wild, the southern corroboree frog is one of Australia's most endangered species. Like other frog species, it has been decimated by the amphibian chytrid fungus.

However, the frog is responding well to quarantined breeding and there are hopes science can help the species recover.

SoS staff are working with Taronga Zoo and three other conservation organisations on a quarantine breeding project. Captive-bred frogs and their eggs have been released into enclosures in the wild that have been designed to exclude other frogs that may be carrying the chytrid fungus and are carefully monitored to ensure there are the right conditions and temperatures for successful breeding.

'The enclosures are designed to provide adequate shelter for the frogs during winter and have a number of ponds situated in them that will promote breeding over summer', said Taronga Zoo's Michael McFadden.

The eggs have hatched into healthy young frogs, meaning a second breeding round has begun.

It is hoped a population of genetically diverse frogs will eventually be released into Kosciuszko National Park. Already SoS investment has helped to leverage other funding including from the Australian Government.



Southern corroboree frog (*Pseudophryne corroboree*).  
Photo: John Spencer/OEH

## Involving more people

SoS continues to attract new partners and is expanding to create more opportunities for people and organisations to participate in SoS projects. Our investment aims to engage with community and stakeholders, build awareness and build capacity of threatened species practitioners so that in the long term, species are secure.

SoS staff are:

- evaluating the best ways to communicate with prospective new participants in the program
- providing guidance, training and support to partners in project management, monitoring and evaluation, data collection techniques and reporting
- working with local Aboriginal communities to find out how local Aboriginal communities want to engage with protecting threatened species in their local area
- establishing networks to further support the work of SoS and share learning, successes and challenges
- providing information for educational programs such as Sustainable Schools NSW and WilderQuest.

SoS updates contain interesting information on individual projects and up-to-date information on where the NSW Government's investment is being allocated.

To subscribe to and read the updates, visit [www.environment.nsw.gov.au/SavingOurSpecies/sosenews.htm](http://www.environment.nsw.gov.au/SavingOurSpecies/sosenews.htm)



Volunteers at Round Hill Nature Reserve erecting protective fencing for Holly-leaf Grevillea (*Grevillea ilicifolia* subsp. *ilicifolia*). Photo:Allan McLean/OEH (NPWS ranger)



### Numbats and bilbies to return to NSW

The NSW Government has commenced a landmark project under *Saving our Species* to reintroduce more than more than 10 mammal species that are currently extinct in NSW to the state's national parks. Most of these species, including bilbies, numbats and brush-tailed bettongs, have not been seen in the wild in NSW for more than 90 years.

The NSW Government will work with the Australian Wildlife Conservancy and the University of New South Wales to deliver the project, with help from additional government investment.

Fenced enclosures of several thousand hectares each will be established at Mallee Cliffs National Park, Pilliga State Conservation Area and Sturt

National Park. The enclosures will be designed to exclude feral cats, foxes and other feral animals.

This project will not only benefit the reintroduced mammals – nearly all of which are threatened with extinction across their range – but will allow us to explore new ways to tackle the ongoing battle with key threats. We also know, through scientific research, that these mammals play significant roles in maintaining the health of ecosystems. As a result, reintroducing mammals these parks is expected to deliver significant benefits to many other threatened species.

For more information, visit [www.environment.nsw.gov.au/SavingOurSpecies/extinct.htm](http://www.environment.nsw.gov.au/SavingOurSpecies/extinct.htm)

Above: The reintroduction of the numbat (*Myrmecobius fasciatus*) to protected areas in NSW is expected to increase the animal's population by more than 20%. Photo: Miss Dilettante Photography & Design

Next page: There are already conservation projects under way to help save the endangered eastern bristlebird (*Dasyornis brachypterus*), including fire control and habitat management programs. Photo: Matthew Jones

The eastern bristlebird is a shy bird that is rarely seen in flight.



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Every effort has been made to ensure that the information in this document is accurate at the time of publication. However, as appropriate, readers should obtain independent advice before making any decision based on this information.

Photography:

Left: Data-deficient species – the caterpillar phase of the southern pink underwing moth (*Phyllodes imperialis*).

Photo: Shane Ruming/OEH

Front cover: Glossy black-cockatoo (*Calyptorhynchus lathami*).

Photo: Matthew Jones

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