



Bell's turtle

Myuchelys bellii
Endangered

Target: enhance recruitment and improve population viability

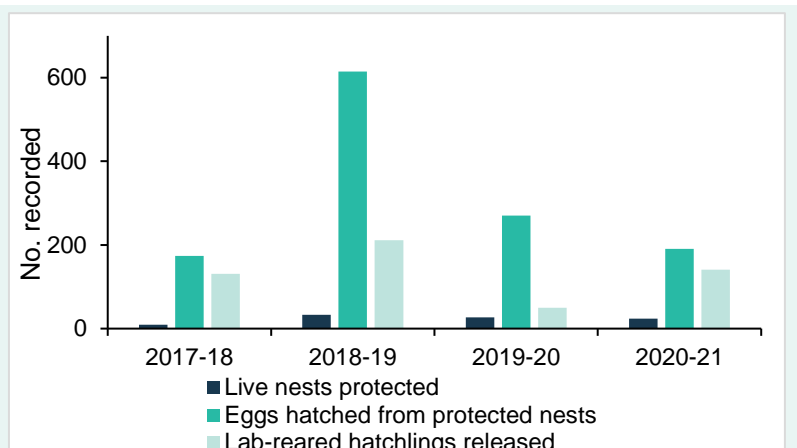
The *Saving our Species* (SoS) Bell's turtle (*Myuchelys bellii*) conservation project aims to immediately enhance recruitment whilst undertaking long-term research to ensure the viability of each population using strategies that can be effectively implemented over many decades. The delivery of this project has focused on monitoring species abundance and demographic status, locating and protecting wild turtle nests, ex situ incubation of eggs, population augmentation through release of captive-reared hatchlings, research into disease susceptibility, liaising with private landholders to conduct riparian protection and fox control, and community engagement to raise conservation awareness.

This saw-shelled turtle occupies the upper reaches of the Namoi, Gwydir, Severn and Deepwater catchments on the NSW Northern Tablelands, and Bald Rock Creek in Queensland. The major threat to the species is predation by foxes. Research has shown that more than 95% of Bell's turtle nests are raided by foxes, often within 48 hours of eggs being laid. Other threats include habitat degradation, drought, nest flooding and water extraction. Key outcomes of the project include:

- **93 nests** protected over the last four years
- **1250 eggs** hatched from protected nests and **533 captive-reared hatchlings** released into the wild

Trajectory: stable

The perceived stability in the population is due to the long-lived nature of the species. Without increased recruitment in each catchment from nest protection and release of captive-raised hatchlings, the species would enter a phase of decline in the near future as mature individuals die.



Partners

The SoS conservation project for Bell's turtle is being delivered through the SoS program. The project is coordinated by NSW Local Land Services (LLS) and delivered in partnership with, NSW Department of Primary Industries (DPI), NSW National Parks and Wildlife Service, University of New England (UNE), James Cook University (JCU), turtle experts and ecologists, detection dog trainers/handlers, and over 30 private properties including four under Indigenous management.

Some of the management actions undertaken through the project include:

- field surveys through a mark-recapture program, capturing over 400 turtles annually from across 24 sites within the four main catchments
- deployment of two trained detection dogs to find wild turtle nests so they can be protected from fox predation
- hatching of over 1200 Bell's turtles from 93 protected nests
- release of 533 captive-reared hatchling turtles into the wild by UNE researchers
- four postgraduate research projects
- research by DPI and JCU on turtle susceptibility to the Bellinger River virus
- 26 agreements with private land managers for riparian protection, management and fox control
- successful rescue and release of 43 turtles from a waterhole that had been pumped out to provide water for livestock during drought
- community engagement through the 'Turtles Forever' project, delivered by LLS, including events, media, presentations and workshops.

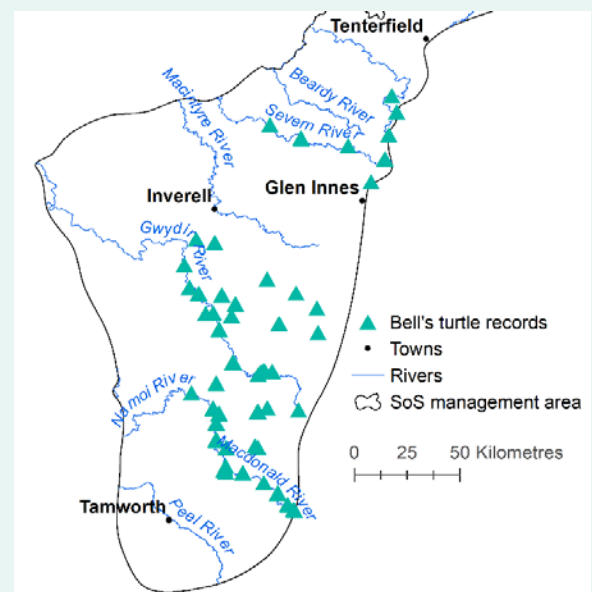
What did we find?

Monitoring surveys have confirmed that populations are dominated by large, old individuals. Protecting nests, nesting beaches and producing captive-reared hatchling turtles are all effective methods for supplementing recruitment of juvenile turtles. Surveys for juvenile turtles are showing positive trends at sites where hatchlings have been released.

The recent drought caused long stretches of river habitat to dry, which was exacerbated by increased water extraction to sustain agriculture. When the drought broke, large amounts of soil, ash and debris from the bushfires washed into the river systems, causing habitat degradation. Many nests that had been laid were subsequently flooded and the eggs drowned by heavy runoff.

Almost all management actions undertaken on this project require adaptive improvements as we learn more about the threats to Bell's turtle.

Bell's turtle management sites in New South Wales



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](#).