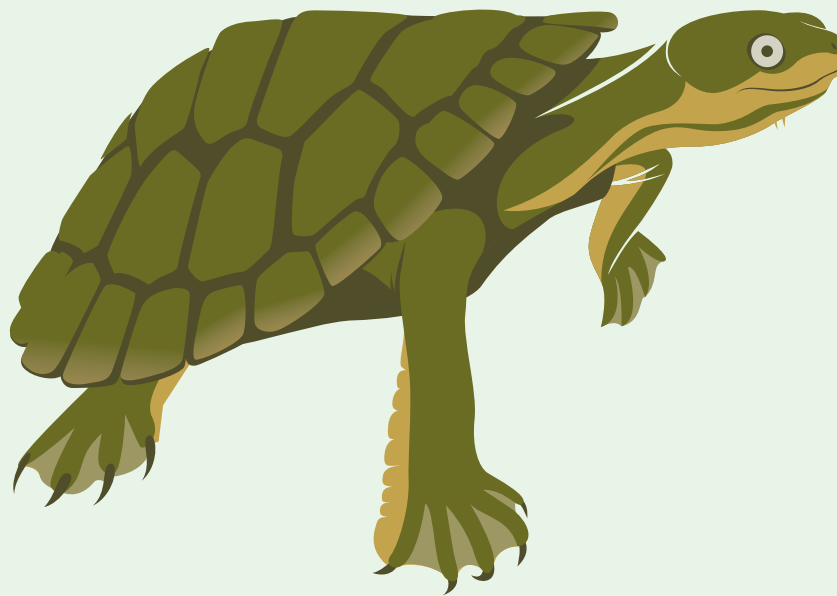


Threatened Fauna of the Hunter & Mid Coast



Manning River Helmeted Turtle *{Myuchelys purvisi}*

Found only in the mid and upper reaches of the Manning River, the biology of the Manning River Helmeted Turtle remains a mystery. Ongoing research suggests it's found in a limited number of locations and that juveniles are very low in numbers. Key threats include foxes digging up nests and genetic inbreeding with the Macquarie turtle (*Emydura macquarii*). The age this species reaches is uncertain however closely related species can reach 30 – 40 years old.

One of the oldest living turtles, this ancient species has been in existence for
around 55 million years

Hunter and Mid Coast region



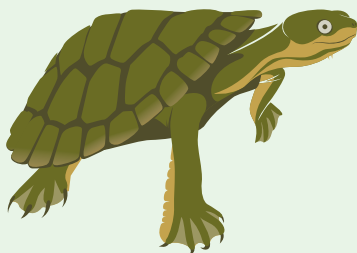
The area in pink is the region where the species is known to occur, and may be restricted to certain areas. The information presented in this map is only indicative and may contain errors and omissions.



Courtesy Darren Fielder

Are Manning River Helmeted Turtles found near you?

Recent surveys for the Manning River Helmeted Turtle found the species in the northern and western parts of the Manning valley, including along the Barnard, Cooplacurripa, Manning, Mummel, Nowendoc, Rowleys Rivers and Bobin, Dingo and Myall Creeks. It has only been found in the the lower Gloucester River near Bundook in the southern part of the valley.



Why is this species important?

Freshwater turtles are omnivores and top predators in their habitats. They play a critical role in maintaining the diversity of life in waterways. Manning River Helmeted Turtles help control aquatic vegetation, serve as scavengers and assist in maintaining healthy streams and rivers and are indicator species of aquatic ecosystem health.

Courtesy Tim Falkner

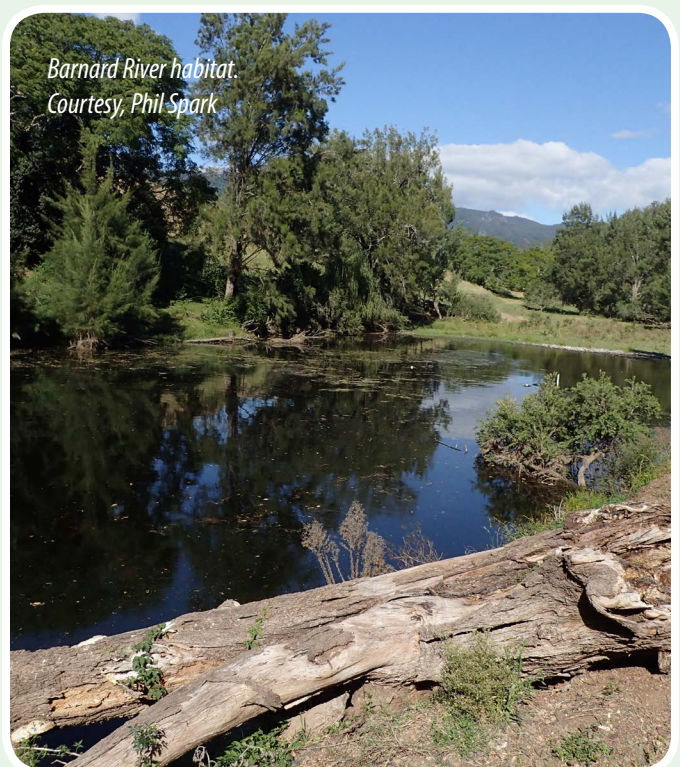


Habitat and Biology

Manning River Helmeted Turtle habitat and biology are poorly understood and are currently being studied. The behaviour of similar species, such as the Bellinger River Snapping Turtle (*Myuchelys georgesi*) can be compared to understand habitat and biology. Its preferred habitat is likely to be relatively clear streams that are between 2 – 3 metres in depth. This includes both rocky and sandy rivers, with a likely requirement that there is in-stream boulders, logs and underwater caverns with some deep pools.

Manning River Helmeted Turtles mainly feed during the day time on large insects, fruit and water plants. They breed during February to April and lay up to 23 eggs in a single clutch per year. Nests are laid a few weeks after the first good rains in spring. Nests are about 30cm in diameter and are made in sandy gravel beds close to water, often on the inside of river bends. During winter, they are probably inactive and hibernate in deep pools. Unlike other turtles which will readily travel over land, it's likely that the Manning River Helmeted Turtle does not undertake these journeys and is restricted to water environments.

Barnard River habitat.
Courtesy, Phil Spark



Threats

The most persistent threat is posed by foxes, pigs and goannas. Recent evidence suggests that foxes in particular are raiding nests as well as killing females while they are laying eggs. There is also a risk of rapid population decline due to viral infection as happened to the closely-related Bellinger River Turtle in March 2015. Some land management practices has led to decline in habitat quality for the Manning River Helmeted Turtle range.

Other threats include:

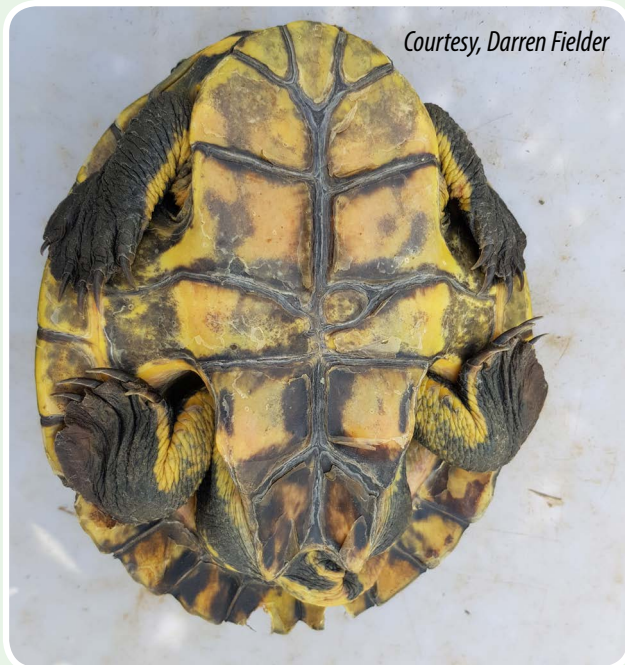
- Changes in waterway vegetation and disturbance caused by grazing livestock
- Increased levels of sediment and nutrient associated with agriculture
- High weed densities smothering gravel banks where nesting takes place
- Removal of in-stream habitat such as logs
- Illegal turtle and egg collection
- Inter-breeding with the introduced Macquarie Turtle (*Emydura macquarii*)
- Fragmentation of the population through the construction of causeways
- Water extraction which may cause some waterways to stop flowing
- Reduction in river levels and flood events due to the effects of climate change.



Foxes are a threat to Manning River Helmeted Turtle survival. Courtesy, Pixabay



Manning River Helmeted Turtles build their nests in gravel areas such as those found along the in-stream bends of waterways. Courtesy, Martin Dillon



Courtesy, Darren Fielder



Manning River Helmeted Turtles are approximately 20cm when fully grown. Courtesy, Bruce Chessman

Identification

This species is a medium sized (~20cm), short-necked turtle. It has not been found away from rivers and creeks like the Eastern Snake-necked Turtle (*Chelodina longicollis*). The underneath of the shell is mid to dark brown, distinguishing it from Macquarie Turtle (*Emydura macquarii*) which has a much lighter shell underneath. It is the only other short-necked turtle found in the Manning Valley. There is a distinct yellow stripe along the jaw and neck line as well as on the sides and underside of the tail. Distinctly, there are two short barbels (whisker-like protrusions) from the base of the lower jaw. The crown of the head has a cap or helmet of hard skin. The head of adults (generally when top of the shell > 10cm) is pointed when viewed from above with the nose prominent, particularly in males. In adults, the tail of males is longer than females.



Courtesy, Bruce Chessman

You can help the Manning River Helmeted Turtle.



1. **Protect** sand bank sites from livestock by fencing sensitive waterway areas. Outside of the nesting period (October to December), allow livestock to graze at very high intensity for very short periods of time to control weeds and allow native plant regeneration



2. **Remove** weeds along gravel banks where these species prefer to build nests



3. **Undertake coordinated control of feral animals** such as foxes and pigs



4. **Don't allow domestic dogs** to roam or dig up turtle nests



5. **Construct fencing around any known nest sites** to exclude foxes and pigs while allowing hatchlings to emerge safely – 90mm chicken wire can be used effectively



6. **Support local efforts to maintain and improve** natural waterways by joining a local community group such as Landcare



7. **Report any sightings** to the Office of Environment and Heritage and don't remove turtles from the river or disturb nests.



Courtesy, Peter Schouten

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MANNING RIVER TURTLE
Conservation Group



MIDCOAST
council



AussieArk

A current breeding program is in place for this turtle, supported through crowd funding campaign with AussieArk.



Landcare
New South Wales