

3 March 2009

PREHISTORIC CREATURES INVADE BOURKE FLOODWATERS

Flooding around Bourke area has resulted in a population explosion of crustaceans, some of which date back to the prehistoric era.

The Western Catchment Management Authority's (CMA) Waterwatch Coordinator, Damon Cusack, says a number of locals had taken tadpole or shield shrimps into the National Parks office for identification.

"These creatures are truly amazing," Mr Cusack said.

"They belong to the *Notostraca* Order and are considered living fossils. Their basic body structure has remained unchanged since the Triassic period 300 million years ago and one of their species is considered the oldest living animal on earth.

"In Australia there are two species and *Triops australiensis australiensis*, which is commonly known as the tadpole or shield shrimp, are the ones we are seeing. I believe some local Bourke people also know them as horse-shoe shrimp.

"They appear in pools and puddles soon after rain and quickly establish large populations.

"As they don't have any natural defences against fish they aren't usually found in rivers. Along with other crustacean species they are an essential part of the massive food chain created in semi-arid zones when floodwaters arrive.

"You are more likely to see them in small temporary pools, such as farm tracks, where they can exist without being eaten by fish," Mr Cusack said.

They grow very quickly, and may shed their shells forty times before reaching their maximum size. When fully grown, their bodies are the size of a twenty cent piece with the tail extending a further two centimetres. They will live for up to a few months and are generally able to reproduce within seven to ten days of hatching.

Credit for their longevity can be attributed to the remarkable resilience of their eggs. The tiny eggs are equipped with a strong, thick shell which can withstand freezing and drought and can hatch up to twenty-five to thirty years after the release.

The eggs can stand temperatures of up to 80°C and pass unharmed through a frog's intestine.

Their tolerance for high water temperatures and low oxygen levels enables them to flourish in waters that may appear inhospitable. To cope, the shield shrimp are often seen swimming upside down, near the surface to increase their oxygen intake.



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Another key to their success is that they eat almost anything they find. They scavenge vegetation and other rotting matter and hunt small prey, such as other crustaceans and tadpoles. They will even attack other shield shrimp that have newly shed their shells.

"Given their ability to survive in almost any conditions it is not surprising that these creatures have outlived most others," Mr Cusack said.

"Shield shrimps kept in a fish-tank can make a great school project because the students can see them increase in size on a daily basis and watch their life-cycle.

"Crustaceans are just one of the many indicators of water health that are monitored through the Waterwatch program, a hands-on education program that enables people to assess the health of their waterway," Mr Cusack said.

Students from local schools including Louth Public School are part of the 150,000 students around NSW who are actively involved in learning about and protecting local waterways

People who are interested in learning more about shield shrimp, water health or the Waterwatch program are encouraged to contact Damon Cusack at the Western CMA's Bourke office on (02) 6872 2144.

ENDS – For further information, please contact:

Maree Barnes, PR and Media Officer on (02) 6883 3058/0427 256814
Damon Cusack, Waterwatch Coordinator on (02) 6872 2144.

Captions:

Shield shrimps shed their shells up to forty times during their lifetime.



Shield shrimps often swim upside down to increase their oxygen intake.

