



**LAKE EYRE BASIN FISH  
ARE UNIQUE WITH MANY  
SPECIES FOUND ONLY  
AROUND LAKE EYRE**



To survive the long hot summers that characterise the Arid Lands region, native fish in the Lake Eyre Basin must be able to survive in isolated, often small pools. Here they have to cope with very high temperatures, low oxygen and extremely high salinities (often saltier than sea-water).

They must also be able to take advantage of periods of flooding to rebuild population levels and recolonise newly filled habitats.

Around 20 native fish species are found in the Lake Eyre Basin – read on to find out more about some of the more common ones...

**RECOVERING FROM THE DROUGHT..**

Research by the South Australian Arid Lands NRM Board and South Australian Research and Development Institute has revealed that it takes many years for all species of fish to recover from drought.

The team tracked the recolonisation of the Neales River catchment after recent dry conditions reduced the river into only a few pools.

Although there have been no large floods since the drought, since 2006 there have been short periods of 'within channel' flow during relatively mild wet seasons.

While some species are very quick to

recover following rains others can take many years to recolonise catchments and rebuild populations.

Large floods may be required before some species return to their former habitats.

At present some species remain in very few waterholes and are at high risk of becoming locally extinct.

The research team hopes to find out exactly what conditions each fish species needs to survive and recover from large disturbances such as drought, or from impacts that humans may impose in the future, such as climate change or increased water usage.



## AUSTRALIAN SMELT

### *Retropinna semoni*

- » Grow between 40-60mm, but can grow larger
- » Translucent with a silver body cavity and opaque head
- » Spawn from late winter to early summer (little is known for the fish in the Lake Eyre region)

Form large schools. Found in waterholes and lakes in only the Cooper Creek system of Lake Eyre.



## BARCOO GRUNTER

### *Scortum barcoo*

- » Commonly grow to 200mm
- » Bodies are predominately silver grey, with lighter sides and belly. A few irregular large spots may be present on one or both sides of the fish (hard to distinguish from Welch's grunter).
- » Spawn in the warmer months – flooding is likely necessary for spawning

Found in waterholes of all catchments, congregating in schools. They can be angled and are excellent eating.



## CARP GUDGEON SPECIES

### *Hypseleotris* spp.

- » Commonly reach 60mm in length
- » Range in colours from tans to olives with a lighter belly. Male fins gain a red colour during spawning season.
- » Little is known of the Lake Eyre region gudgeons, but they are thought to breed in spring and early summer at temperatures between 20-24°C

Widespread and found in small rivers and creeks in the Cooper Creek catchment.



## BANDED GRUNTER

### *Amniataba percooides*

- » Can grow up to 200mm
- » Usually brown to bronze on backs and lighter on sides and belly, has five to eight vertical bands on each side and yellow fins
- » No knowledge of the breeding biology in the Lake Eyre region but known to spawn at night when waters reach 26-33°C

Found in rivers in loose schools or colonies. Patchy distribution in the Georgina River and the Neales River. Excellent eating fish.



## BONY HERRING

### *Nematalosa erebi*

- » Grow to 300mm
- » Silver with a green tinge on their backs and white sides
- » Spawn in spring and summer periods, independently of floods

Found in most rivers, creeks, lakes and waterholes in large schools and distributed in all major Lake Eyre regional rivers. Caught by anglers but not targeted because of poor eating qualities.



## COOPER CREEK CATFISH

### *Neosilurooides cooperensis*

- » Grow up to 600mm
- » Pale grey to brown, with dark speckling, mottled on sides with a whitish underbelly
- » Little is known on the biology of this fish

Found only in large permanent waterholes of the Cooper Creek system of the Lake Eyre basin. A good angling and eating fish. Considered very rare and possibly under threat due to its very local distribution.





### DESERT GOBY

*Chlamydogobius eremius*

- » Grow to 60mm long
- » Colour ranges from tan-brown to a light coloured barring pattern. Bright blue spot on their first dorsal fin.
- » Spawn from November to March

Found in springs, waterholes (mostly ephemeral) creeks and rivers in the Neales and Diamantina/Warburton Rivers and south around Lake Eyre. Widespread and quite abundant.

### HYRTL'S TANDAN

*Neosilurus hyrtlii*

- » Grow to 350mm (commonly 200mm)
- » Range in colour from browns to silver-grey with a white underbelly with nasal barbels
- » Breeding occurs between January and March but this is not known for the Lake Eyre Region fish

Found in most creeks, billabongs and pools. Widespread in the Lake Eyre region.

### LAKE EYRE GOLDEN PERCH

*Macquaria species*

- » Grow to about 600mm
- » Appear yellowish tan on their back, becoming lighter on their sides to a creamy yellow belly
- » Typically spawn on the first flood of the season

Found in most rivers and large creeks; at times abundant in lakes. Widespread through the Neales/Cooper Creek/Diamantina/Georgina catchments. Major angling fish and good eating.



### DESERT RAINBOWFISH

*Melanotaenia splendida*

- » Commonly grow to 80mm
- » Very colourful. Can appear purplish on the westward side of Lake Eyre and blue-green from the rivers on the east.
- » Have been observed breeding in late autumn

Found in most waterholes and lakes and in all large rivers throughout the Lake Eyre region.

### LAKE EYRE HARDYHEAD

*Craterocephalus eyresii*

- » Grows to 100mm
- » Silver body, appearing pale yellow with a greenish mid-lateral stripe
- » Breeding occurs between the months of January and March

Found in fresh and saline waterholes and lakes. Tolerate salinities up to 100 ppt. More commonly found in the SA region of the Lake Eyre Basin.

### SILVER TANDAN

*Porochilus argenteus*

- » Grow to a maximum size of 350mm (commonly to 200mm)
- » Pale silvery-white with lighter underbelly
- » Believed to spawn during floods

Found in Diamantina/Warburton and Cooper Creek catchments. Taken occasionally by anglers.



## SPANGLED PERCH

### *Leiopotherapon unicolor*

- » Can grow up to 300mm, commonly found at 150mm
- » Predominately silver with bluey brown or golden speckles on their sides
- » Spawn from spring to autumn

The most widespread fish in Australia being found in most wet habitats from rivers to springs in small schools. Distributed in all parts of Lake Eyre region. Good angling and eating fish.



## WELCH'S GRUNTER

### *Bidyanus welchi*

- » Most reach a length of 250mm but can grow as large as 375mm
- » Silver-grey in colour with lighter sides and belly
- » Spawn through the warmer months but flooding may be necessary

Found in rivers and waterholes in schools and are widespread in eastern catchments. Can be angled readily.



## WESTERN CHANDA PERCH

### *Ambassis mulleri*

- » Can grow to 60mm
- » Often translucent with a green to silver tinge
- » Little is known of its biology but breeding is not linked to flooding though they use floodwater for dispersal

Found mostly in clear waterbodies such as lakes and are widespread in the drainages of central Australia including Cooper Creek.



## Introduced Species

### GAMBUSIA, MOSQUITO FISH

#### *Gambusia holbrooki*

- » Up to 60mm long
- » Olive, tan or grey, with silver sides (bluish tinge) and bellies
- » Breed all year (excluding winter) in the Lake Eyre region

Form large populations in waterholes and springs. Found in shallow still waters with abundant vegetation or muddy waterholes. Widespread and distributed in the Neales, Diamantina Rivers and Cooper Creek. Spreading throughout the Lake Eyre region.

Gambusia are highly invasive and aggressive fish that out-compete native fish and frogs. Gambusia should never be kept, moved or added to any waterways, dams or wells. If you find Gambusia in the wild, please report it to SARDI 8303 9400.



## REFUGE WATERHOLES

**Please take care of the desert waterholes you visit – each one may be crucial to the survival of native fish during dry periods.**

Each year, the rivers in the South Australian section of the Lake Eyre Basin dry up into a series of disconnected pools. During very dry seasons, or extended periods of drought, only a few pools remain.

To survive in these desert systems fish must be able to access refuge waterholes and survive in some of the harshest conditions on earth.

Some of the most important refuges for native fish include Cullyamurra waterhole near Innamincka and Algebuckina waterhole near Oodnadatta.



## FURTHER INFORMATION

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