

# Threats to FRESHWATER FISHES

- Salinisation of rivers and wetlands has caused major range reductions of salt-intolerant species.
- Destruction of riparian vegetation reduces food sources, instream habitat and shading of streamlines.
- Introduced feral fish species (particularly Eastern Gambusia and predatory Redfin Perch and trout) compete with, and consume, native fish and crayfish species.
- Surface and groundwater extraction reduces freshwater inputs, causes barriers to migrations (dams) and prevents access to suitable aquatic habitat.
- Eutrophication of rivers and wetlands due to nutrient inputs causes toxic algal blooms and low oxygen levels.
- Channelisation of streams in irrigation areas creates streamlines lacking suitable habitat for native species.
- Pollution of waterways by industrial, residential and agricultural waste.



Effects of salinisation at Kojonup



Algal bloom in the Vasse River



Feral fish - Eastern Gambusia



Channelised stream



A slot board barrier on Logue Brook

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For more detailed information about these animals please refer to the SERCUL publication entitled: A field guide to freshwater fishes, crayfishes & mussels of south-western Australia.

# FRESHWATER FISHES OF SOUTH-WESTERN AUSTRALIA



# NATIVE ESTUARINE FISHES

found in fresh waters of the south-west

## SOUTH-WESTERN GOBY



*Afurcagobius suppositus*

**Distribution:** Found in the south-west from Moore River to Denmark; occupies rivers much closer to the coast than the Blue-spot Goby.

**Conservation status:** Not listed

## WESTERN HARDYHEAD



*Leptatherina wallacei*

**Distribution:** Common in brackish sections of major rivers of the South West Coast Drainage Division.

**Conservation status:** Not listed

## BLUE-SPOT GOBY



*Pseudogobius olorum*

**Distribution:** Common and wide-spread in coastal rivers from the Murchison River to south of Adelaide at the South Australia and Victoria border.

**Conservation status:** Not listed

## POUCHED LAMPREY

*Geotria australis*



Larval 'ammocoete'



Metamorphosed juvenile 'downstream migrant'



Sub-adult male swimming near the surface



Close-up of mouthparts of sub-adult female



Pouch on underside of head of sub-adult male

**Distribution:** Widespread throughout south-western and south-eastern Australia and is also found in New Zealand, Chile and Argentina.

**Biology:** Most of the anadromous life cycle is spent at sea as an external parasite on fish. It enters freshwater rivers and moves upstream during winter and spring; up to 18 months is spent in freshwater before they reach sexual maturity; lampreys die shortly after they spawn. Ammocoetes (i.e. larvae) are eyeless and live buried in sandy stream sediments for up to four years. Metamorphosis into juvenile form is followed by a downstream migration to the sea to repeat the cycle.

**Conservation status:** PRIORITY 1 (DPaW 2010)

# INTRODUCED FISHES



**EASTERN GAMBUSIA**  
*Gambusia holbrooki*



**PEARL CICHLID**  
*Geophagus brasiliensis*



**GOLDFISH**  
*Carassius auratus*



**COMMON CARP**  
*Cyprinus carpio*



**SPECKLED MOSQUITOFISH**  
*Phalloceros caudimaculatus*



**REDFIN PERCH**  
*Perca fluviatilis*



**RAINBOW TROUT**  
*Oncorhynchus mykiss*



**SPANGLED PERCH**  
*Leiopotherapon unicolor*



**ROSY BARB**  
*Puntius conchonius*



**BROWN TROUT**  
*Salmo trutta*

### WESTERN MINNOW



*Galaxias occidentalis*

**Distribution:** Widespread throughout the south-west with a range extending from the Arrowsmith River (300 km north of Perth) to the Waychinnicup River (80 km east of Albany)

**Conservation status:** Not listed

### NIGHTFISH



*Bostockia porosa*

**Distribution:** Common species found throughout the South West Coast Drainage Division from Hill River near Jurien Bay to Albany

**Conservation status:** Not listed

### WESTERN PYGMY PERCH



*Nannoperca vittata*

**Distribution:** The most common and widespread native and endemic freshwater fish found throughout the south-west in coastal drainage systems between the Arrowsmith River (300 km north of Perth) and the Waychinnicup River (80 km east of Albany)

**Conservation status:** Not listed

### FRESHWATER COBLER



*Tandanus bostocki*

**Distribution:** Locally abundant, but distribution is scattered in coastal drainages of the south-west corner of WA. Found between Moore River in the north and Frankland River in the south.

**Conservation status:** Not listed

### BALSTON'S PYGMY PERCH



*Nannatherina balstoni*

**Distribution:** Restricted to freshwater drainages near the coastline of the south-west corner of WA from Margaret River to Two Peoples Bay (near Albany). Previously known from the Moore River system but it has not been recorded there for over 25 years.

**Conservation status:** **VULNERABLE** (EPBC Act 1999/DPaW)

### WESTERN MUD MINNOW



*Galaxiella munda*

**Distribution:** Restricted to the south-west corner of WA with small populations also found in the Ellen Brook and Gingin Brook catchments north of Perth

**Conservation status:** **LOWER RISK/NEAR THREATEND** (IUCN)

### BLACK-STRIPE MINNOW



*Galaxiella nigrostriata*

**Distribution:** Locally common, but restricted to ephemeral wetlands within 100 km of the south-west coast between Albany and Augusta as well as isolated populations in the Ellen Brook catchment north of Perth and near Bunbury

**Conservation status:** **LOWER RISK/NEAR THREATEND** (IUCN)

### SALAMANDERFISH



*Lepidogalaxias salamandroides*

**Distribution:** Locally common, but restricted to ephemeral wetlands along the south coast between Augusta and Denmark

**Conservation status:** **LOWER RISK/NEAR THREATEND** (IUCN)

### LITTLE PYGMY PERCH



*Nannoperca pygmaea*

**Distribution:** This newly discovered species is thought to be the rarest of the south-west fishes and is very restricted in distribution within the Hay River catchment, near Denmark

**Conservation status:** Not listed, but extremely **RARE**

### TROUT MINNOW

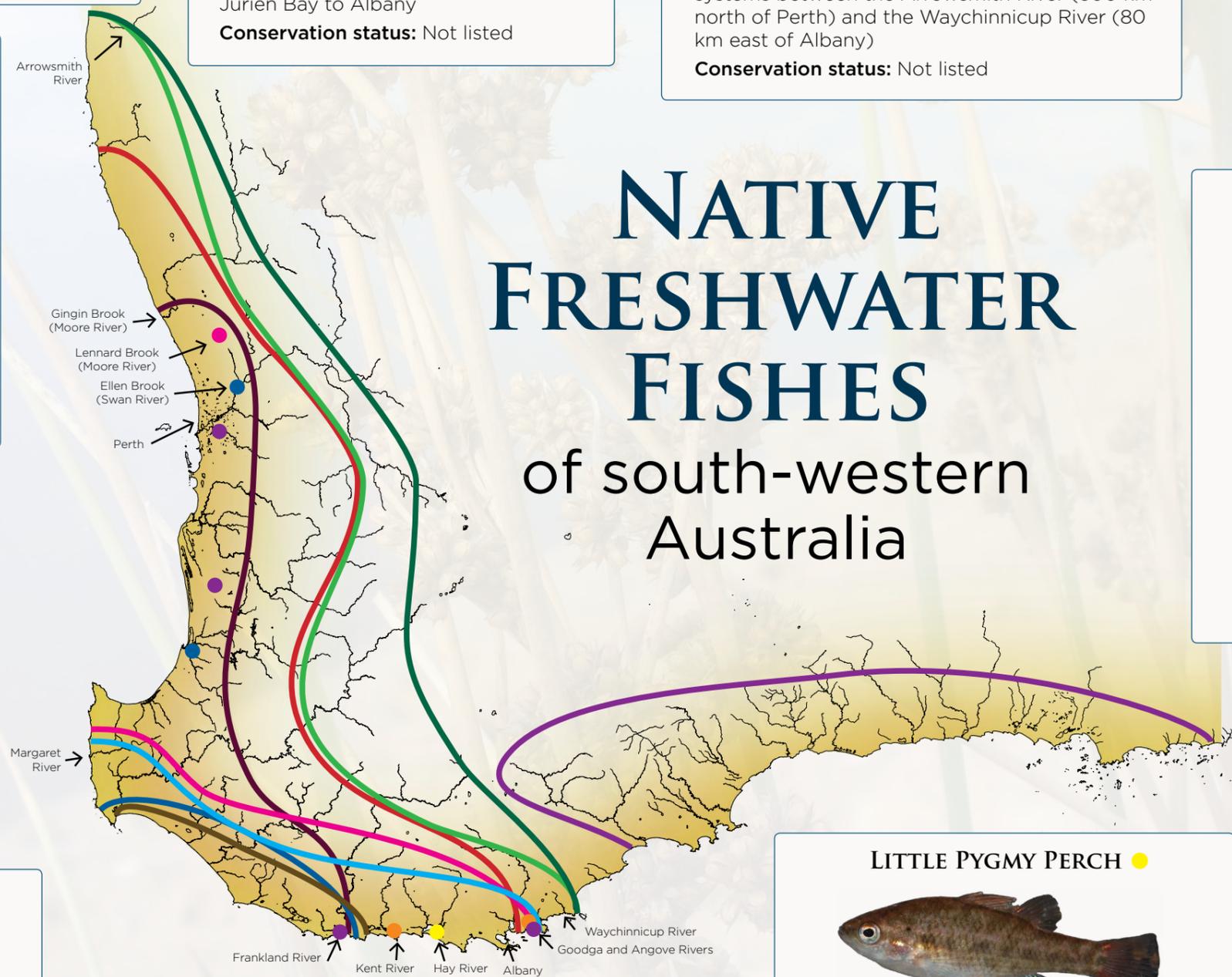


*Galaxias truttaceus*

**Distribution:** The western populations of the species are restricted to the Kent, Goodga and Angove Rivers, but others are found in South Australia, Victoria and Tasmania

**Conservation status:** **ENDANGERED** (DPaW); **CRITICALLY ENDANGERED** (EPBC Act 1999)

# NATIVE FRESHWATER FISHES of south-western Australia



### COMMON JOLLYTAIL



*Galaxias maculatus*

**Distribution:** Ranges from Denmark to east of Esperance (with a few records further west and north, e.g. Walpole River, Harvey River, Canning River). Also widespread in south-eastern Australia (southern Queensland to SA, including Tasmania and islands of Bass Strait) and elsewhere in the southern hemisphere (Lord Howe Island, Chatham Islands, New Zealand, Chile, Argentina and Falkland Islands).

**Conservation status:** Not listed