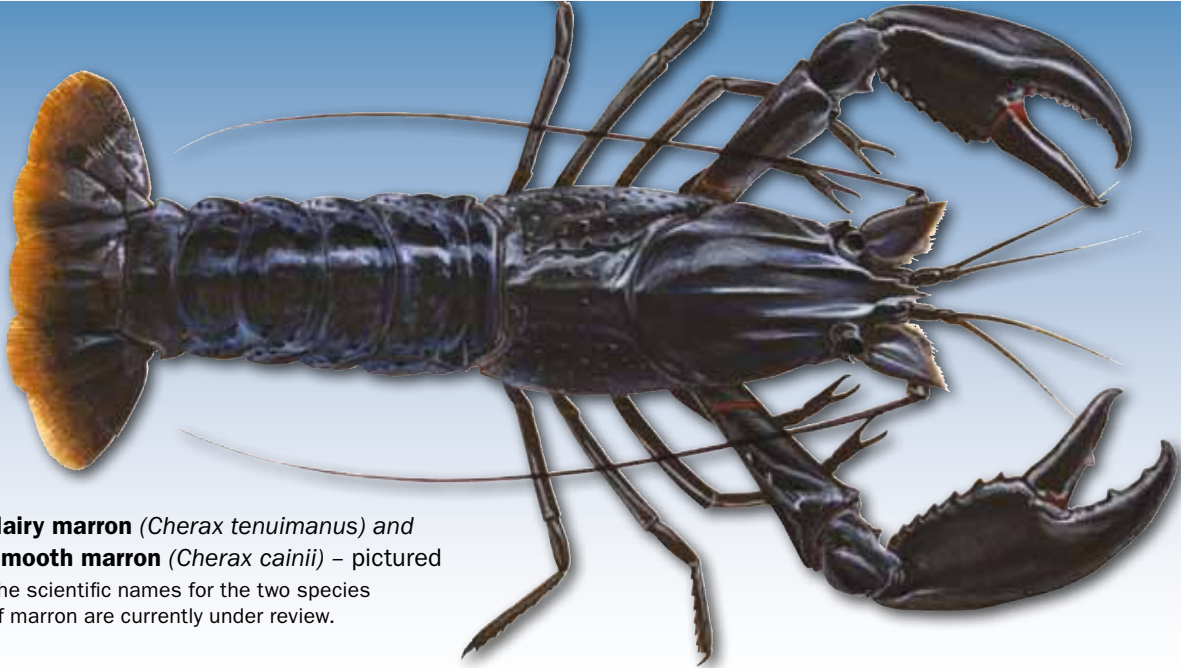




FISHERIES FACT SHEET

MARRON



Hairy marron (*Cherax tenuimanus*) and
Smooth marron (*Cherax cainii*) – pictured
The scientific names for the two species
of marron are currently under review.

Magnificent marron




Marron are the largest freshwater crayfish in Western Australia – and the third largest freshwater crayfish on Earth. Fishing for this tasty south-west crustacean has long been a WA tradition.

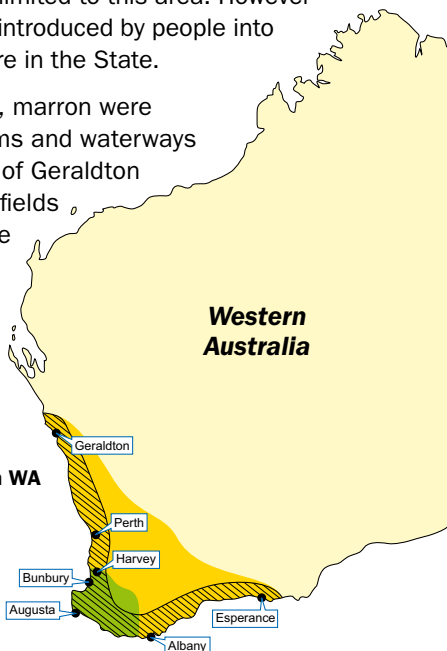
Uniquely Western Australian

Marron are endemic to south-west Western Australia, between Harvey and Albany. Another way of saying this is that their natural distribution is limited to this area. However they have since been introduced by people into water bodies elsewhere in the State.

Over the past century, marron were stocked into farm dams and waterways from Hutt River north of Geraldton inland to the WA Goldfields and east to Esperance on the south coast. Marron have also been introduced into water bodies in South Australia.

Distribution of marron in WA

-  Original distribution
-  Current distribution in rivers
-  Current distribution, including farm dams



Family Parastacidae

Along with four other freshwater crayfish species that are native to southwest WA – gilgies (the widespread *Cherax quinquecarinatus* and less common *Cherax crassimanus*) and koonacs (the widespread *Cherax preissii* and less common *Cherax glaber*) – marron are Parastacids. Marron, gilgies and koonacs all belong to the *Cherax* genus within the Parastacidae family.

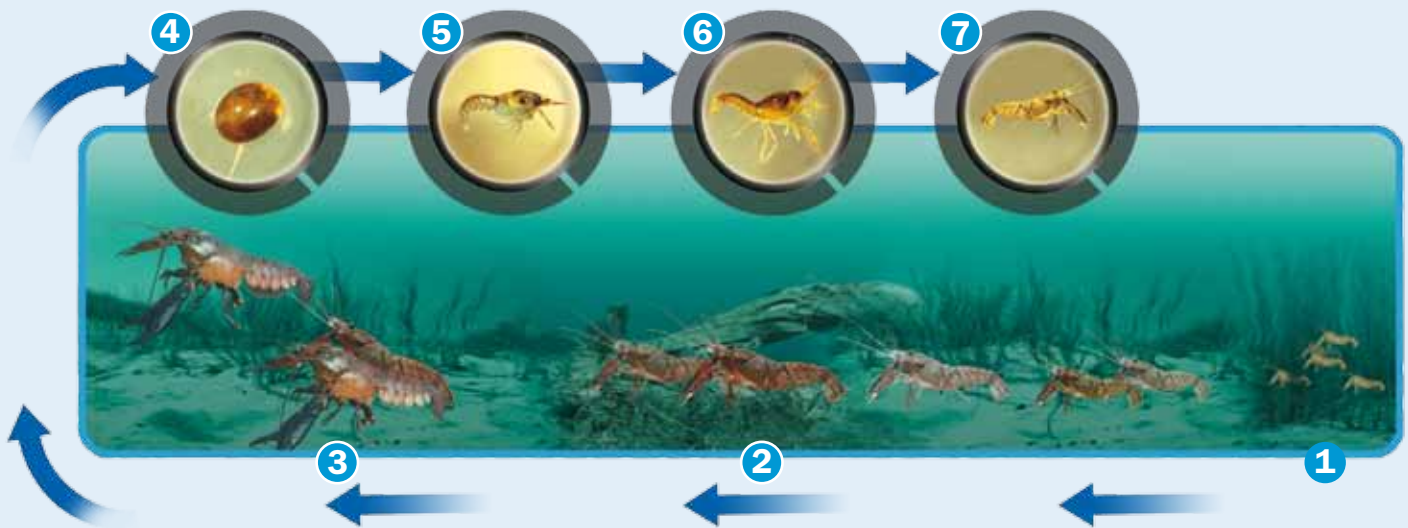
Decapod crustacean

As in other crayfish, a marron's body is made up of a head and thorax protected by a hard shell (called a carapace) and a muscular abdomen and tail.

Marron are decapod crustaceans, which means they have 10 legs. These include large claws called chelipeds for grasping food, fighting and moving. The next pair of legs consists of two small pincers for picking up food particles and stuffing them into their mouths.

Marron have two eyes on the end of their eyestalks but also rely heavily on touch and taste, using one pair of large antennae and smaller antennules.

Life cycle



1. Juvenile marron are rarely seen. They hide under rocks and in forest litter that has settled in the river. The speckled colouring that provides them with camouflage changes as they grow older.



Marron amongst river detritus.
Photo: Michael Burgess

2. Marron grow mostly in the summer months, when water temperature is warmest. They thrive in water that is 15 to 25 degrees Celsius. They grow by moulting. They shed their shell, exposing a larger shell, that had been forming underneath. During the short time that the new shell takes to harden, marron are especially vulnerable to attack. During the winter, with water temperatures below 12 degrees, marron are less active and their growth rate slows.

3. Marron usually reach sexual maturity at two-to-three years old. They spawn in early spring when water temperatures start to rise and in favourable seasons will produce more eggs (usually between 200 and 400, but sometimes large females may produce up to 800). The eggs take nearly half a year to develop inside the females. During mating, the males pass on a sperm packet that the females use to fertilise their eggs after laying.

4. Once the eggs are fertilised, the females then carry them in a large mass under their tails until they hatch in late spring. Females bearing eggs in this way are described as 'berried'.



Berried female. Photo: Stephen Beatty

5. The hatched marron larvae then hang under the mother's tail, clinging to fine hairs. The larvae remain this way for many weeks, feeding on nutrients from the yolk sac and moulting several times.



Marron larvae. Photo: Michael Burgess

6. By summer, these tiny juveniles are ready to actively feed. They drop away from their mother and remain in waterways close to where they were hatched.

7. Small juvenile marron are highly vulnerable to predation from other fish and animals, and cannibalism by larger marron.

River recyclers

Marron prefer to live in parts of rivers and dams where there is permanent water and plenty of suitable habitat and food. This includes rivers and dams with large woody debris such as fallen trees and submerged leaves.

Within the river ecosystem, marron play a critical role as recyclers, breaking down animal and plant matter that sinks to the bottom. Marron are regarded as 'benthic omnivores'. This means that they eat all kinds of living, dead and decaying plant and animal material found on the river or dam bed, including small invertebrates, fish eggs, fish larvae and algae. Large marron also attack and eat juvenile marron.



Marron can grow to 38.5 centimetres long and weigh up to 2.2 kilograms. Photo: Craig Lawrence

Blue, smooth, tiger, red and hairy marron

Marron range in colour from jet-black to striped (tiger) to red to brown and also stunning cobalt blue – a rare, natural variation now farmed for aquariums.

Marron in most south-west river systems have smooth carapaces or shells. However, another type of marron found in the Margaret River has tufts of hair on its back.

Hairy marron are only found in the upper reaches of the Margaret River and are considered critically endangered.



Blue marron. Photo: Jiri Lochman



Tiger marron. Photo: Craig Lawrence

Action is being taken to help hairy marron stocks recover, including removing smooth marron from the upper reaches of the Margaret River, revegetating stream banks where hairy marron still survive and re-stocking parts of the river with captive-bred hairy marron from the Department of Fisheries Pemberton hatchery.

Fishing has also been banned in areas where hairy marron are known to exist.



Red marron. Photo: Craig Lawrence



Hairy marron. Photo: Simon Visser

Threats to wild marron populations

Marron are fussy when it comes to water quality and do not tolerate high salinity, low oxygen or high temperatures. While other freshwater crayfishes such as koonacs and gilgies can survive in seasonally dry streams by burrowing into the banks and creating moist burrows, marron only live in permanent water bodies such as larger rivers and dams.

Unfortunately for marron, habitat loss (such as destruction of riverbank vegetation), increasing salinity, climate change and reduced river flow are affecting all of south-west WA's freshwater systems.

In response to these environmental pressures, marron have reduced their range within rivers. The healthiest marron populations are generally found in rivers that are still largely in their natural state, with well-forested catchments and plenty of vegetation on the banks.

Other pressures on marron include feral yabbies, and legal and illegal fishing.



Typical marron habitat on the Donnelly River. Photo: Michael Burgess

Predators

Marron are preyed upon by native water rats, tortoises, birds (such as cormorants), fish such as freshwater cobbler and introduced species such as redfin perch and trout – as well as bigger marron. Marron are crepuscular, meaning they are most active just after sunset.

Yabbies – NOT a WA native

Many people mistakenly think that yabbies (*Cherax albidus*) are native to WA because they are widespread in WA farm dams and have also formed feral yabby populations in south-west rivers.

However, yabbies were introduced to WA from eastern Australia in the 1930s. Yabbies grow fast, reproduce at a young age and can breed several times in one season. Feral yabby populations are therefore considered a threat to WA native freshwater crayfish because yabbies may out-compete them for food and habitat.



Yabby. Photo: Jiri Lochman

Research

Decisions about managing wild marron stocks are based on research showing marron abundance, along with knowledge about their life history and biology. Department of Fisheries researchers assess the status of marron stocks by using both 'fishery-dependent data' (catch and effort data provided by recreational marron fishers) and independent data, such as samples from rivers and dams, and analysing these catches.



Marron research.
Photo: Vinh Nguyen

Marron management

Tools for managing marron fishing sustainably include seasonal and area closures; size, bag and possession limits; and restrictions on the type of fishing gear used. By managing fishing at sustainable levels, it's hoped that the popular WA pastime of 'marroning' will continue for years to come.

Catching and eating marron

It has been illegal to sell wild captured marron since 1955. Wild marron stocks are therefore managed as a recreational-only fishery.

Marron are also grown in private farm dams or in commercial aquaculture farms. A licence is required for commercial production and strict conditions are placed on the transport of marron off farms.



Farmed marron. Photo: Craig Lawrence

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Glossary

Antenna (plural: antennae)

A sensory organ found in pairs on the heads of insects and crustaceans

Benthic

Found in or near the river bed or dam bottom (or seabed)

Berried

When a female marron carries eggs attached under her tail

Carapace

Protective shell covering the marron's head and thorax

Crepuscular

Active at twilight, or just after sunset

Critically endangered

A species that is at an extremely high risk of becoming extinct, or dying out

Crustacean

Animals with hard, jointed external skeletons, such as crabs, shrimp, lobster, prawns and marron

Decapod

Has 10 legs

Detritus

Dead organic material

Distribution

Geographic area within which a species is generally found

Effort

Amount of time and quantity of gear used by fishers

Endemic

Native to or only naturally found in one place

Moult

Shed and discard an old shell in order to grow a new one

Omnivore

An animal that feeds on both plant and animal matter

Range

Geographic area, including all locations in which a species is recorded, even if only rare or single sightings

Thorax

Part of the body between the head and the abdomen

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FURTHER INFORMATION

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