



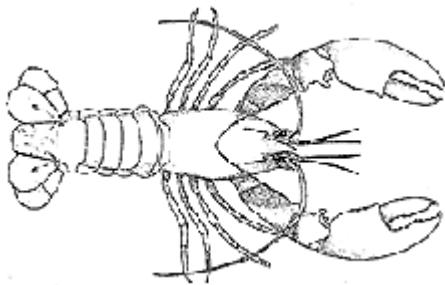
Freshwater Fish of Victoria: Yabbies

Fisheries Victoria, Melbourne

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Common Name:

Yabby

Family:

Parastacidea

Scientific Name:

Cherax destructor (Illustrated)

Status:

Native, Freshwater

Description

Smooth-shelled, body which distinguishes it from the spiny freshwater crayfish, which have spines and nodules on the body. Yabbies do not have a skeleton (internal bone structure), but have an exterior hard shell, known as an exoskeleton. Colour varies widely depending on location, season and water conditions, usually a drab olive, dun or light brown, but can range from black, ochre-yellow, brown, red or blue, with several colours in a single species, differing colours on the body and claws, or different body colours in the one locality.

Distribution

Most of Victoria, but the range of *C. destructor* includes most of New South Wales (except the Sydney and central coast region), much of Queensland and South Australia, and part of the Northern Territory.

Habitat

Semi-aquatic, in all forms of flowing and still water, including swamps, lagoons and dams. Generally occurs where oxygen levels are high and vegetation is plentiful.

Brief Biology

Grows to 16 cm and 150 g. Able to survive in water temperatures between 1-35°C, it is most content in water temperatures between 20-25°C. When water temperatures fall below 16°C the yabby becomes comatose, metabolism and feeding virtually ceasing and giving the appearance of hibernation.

Able also to tolerate a wide range of dissolved oxygen levels, turbidity and salinity; yabbies are reported to be capable of surviving in sea water for at least 48 hours, and live in satisfactorily in 75% sea-water solution (24,000 p.p.m.)

Male is identified by having the genital pores at the base of the rearmost legs, while the female genital pores are located at the base of the third pair of legs from the rear. Breeding maturity is reached between 6-10 cm.

Mating occurs in spring and summer. Females produce between 400-800 eggs and carry the eggs by attaching them to the swimmerets under the tail, which is doubled over the eggs to protect them. Eggs hatch after about 40 days and the young pass through three stages before appearing as juvenile yabbies. Initially the newly hatched young has a dome-shaped carapace, but after 3 days the young moults into the second stage where it loses its domed shape, but remains attached to the mother.

After 10 days a further moulting sees the young take on very similar appearance to adult yabbies. Short excursions are made away from the mother. The third stage moults to form a juvenile yabby, which has the appearance of a miniature adult and permanently leaves the parent. Total time from spawning of eggs to the appearance of the first juvenile yabby is about 8 weeks.

Juveniles moult frequently, and may reach 6-7 cm at the end of its first year of life. Moulting is less frequent in the second year, and 10 cm length may be reached.



Moults only once or twice in the third (and apparently last) year of life.

Moulting is the process of shedding the old shell (exoskeleton) and growing a new one so that the yabby is able to increase in size. After moulting the yabby is soft and the exoskeleton takes about 2 weeks to completely harden. The hardening is achieved by drawing on calcium in the body and from surrounding water and depositing it in the new exoskeleton. Calcium is stored in the body by withdrawing it from the exoskeleton prior to moulting. The calcium is stored in deposits in the stomach wall known as gastroliths.

Yabbies are omnivorous, but primarily vegetarian favouring rotting leaves and plant detritus. Opportunistic feeders, if they are hungry they will eat just about anything: vegetables, fish food, fish, manure of any type, plants, wood and meat - live, dead, fresh, rotten or otherwise.

Yabbies are also cannibalistic, particularly where overcrowding occurs when a form of population control is exercised by yabbies eating their own kind. Yabbies also eat their old exoskeleton after moulting, mainly to conserve calcium.

Other Notes

Generally live in burrows connected by access shafts to the water, and move freely from the burrows to open water when feeding. In the event of the water drying up they are capable of surviving over summer in the burrows. They are also capable of travelling overland to colonize new waters.

The burrowing habits of the yabby and the damage it can cause to water retaining structures, have led to it being regarded as a pest.

Yabbies are a food source for aquatic birds and fish, and are a popular fishing bait and food for man, and are increasingly produced by commercial fish farms for both fishing bait and for restaurants, the yabby being considered a delicacy.

Yabbies raised in aquaria can be semi-translucent without colouring, or a light blue or brown.

General

Yabbies are the semi-aquatic group of Australia's (and Victoria's) freshwater crayfishes.

The true spiny freshwater crayfishes are grouped in the Genus *Astacopsis*, which is found only in Tasmania, and the genus *Euastacus*, of which nine are known to occur in Victoria. Spiny freshwater crayfish in Victoria are described in -Fisheries Note FN0078.

The semi-aquatic, smooth-shelled group of freshwater crayfishes are all members of the Genus *Cherax*. The

group comprises nearly 30 species throughout Australia (including the well-known Marron, *C. tenuimanus* in Western Australia), of which two species occur in Victoria. The most common and widespread is *C. destructor*, described above, and *C. albidus*, which occurs in southwestern Victoria.

The third group are terrestrial and generally known as land yabbies. There are at least 13 species in Victoria belonging to four genera: *Geocherax* (2 species), *Engaeus* (7 species) *Pseudengaeus* (2 species), and *Austroastacus* (2 species).

They are found in a wide variety of habitats ranging from swampy low-lying ground to hill tops and the distribution is probably only restricted by the availability of water with two metres of the surface. They live in burrows or shafts which, depending on the species, can be 50 cm to two metres deep, marked at the surface by a cone of mud up to 50 cm high.

They are basically nocturnal and seldom seen outside their burrows in the daytime. Land yabbies are most abundant in the Dandenong Ranges, the Healesville area, the Warragul district, and the Otway Ranges. Their burrowing activities can cause considerable damage by way of waterlogging the roots of trees, and undermining the foundations of buildings.

They are generally small in size, average adults varying from 4-9 cm in length. The *Engaeus* sp. are particularly distinctive in that their tails are much smaller and shorter than the semi-aquatic yabbies.

Further Reading

Freshwater Fish of Victoria is a series of brief information material on the native and introduced freshwater fish of Victoria's inland waters. Further, detailed reading on Yabbies is contained in:

- *Biology and Farming of the Yabby*
Dept. of Fisheries, South Australia
- *A Salute to the Humble Yabby*.
Peter Olszewski. Angus and Roberston Printers

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