

# *Chelodina expansa*

Kelly Stanger, 2001

Authority: Gray 1885

**Common Name:** Broad-shelled River Turtle

**Description** (Harless and Morlock 1979, Pritchard 1979, Cann 1998, Cogger 2000): *C. expansa* is the largest known Australian Chelid with carapace lengths of up to 50cm being recorded. The carapace colour can range from a rich brown to dark black-brown with this colour corresponding to the upper part of the animals' head and neck. The ventral side of the throat is often a whitish or cream colour. The carapace is oval and is broader at the caudal end. The plastron is narrow and its colour ranges from white to a dark brown. During maturation the shell often has a distinctive ridge at the centre of the carapace giving it a triangular shape when viewed from the front or back. This species is the only known Australian turtle to possess such a contour. This ridge has often grown out by the time the shell reaches a length of 23cm. *C. expansa* has a broad flattened head with its eyes oriented on a dorso-lateral plane. The neck is elongated and lacks tubercles. The upper surface of the forelimbs has 7 or 8 lamellae that help to distinguish it from *C. longicollis* and *C. novaeguineae* that ordinarily possess 4. Juveniles are similar in appearance to adults, however they often possess a distinctive black band extending from the top of the hindlimbs continuing along the tail and ending at the cloacal opening.

**Range and habitat** (Pritchard 1979, Cann 1998, Cogger 2000): The Murray-Darling system of Southern Australia including inland Queensland and New South Wales. Found in rivers and still waters such as lagoons and dams.

**Diet** (Legler 1978, Cann 1998): Frogs, aquatic insects, shrimps and occasionally small fish. Feeding involves the 'gape and suck' method, it pulls its neck into a sigmoid curve and strikes by extending the neck to full length.

**Ecology and behaviour** (Legler 1978, Cann 1998): Inhabit freshwater sources including rivers, lagoons and dams. When travelling on land it does so with its neck outstretched, rather than retracted beneath carapace as do many of its close relatives. It is not an aggressive animal and doesn't tend to conceal its head even when handled. When threatened by a potential predator they often curve their neck around the carapace concealing their head and neck. *C. expansa* have been observed carrying out a 'bobbing' motion when encountering another individual of the same species. The turtles face one another and bob heads at each other with a dorsoventral movement of the head and neck. The significance of this activity is not understood, however it has been suggested that it may be linked to courting, feeding activity, territorial behavior or sex recognition.

**Reproductive biology** (Harless and Morlock 1979, Cann 1998, Anon 2000): Sexual maturity is reached at an age between 8 and 12 years with males measuring approximately 25cm and females measuring 28cm. Nesting most commonly occurs

between March and May, however has been reported as late as September. A shallow nest (approximately 15cm deep) is dug close to the water source, commonly in a sandy or clay substrate. The female deposits between 5 and 30 hard-shelled eggs (approximately 35mm in length) into this nest and partially fills the hole with soil. She mixes the remaining soil with her cloacal fluid that forms a 'plug' over the top of the nest. This plug is thought to prevent predation and aid in the thermoregulation of the eggs. Incubation period is dependent on soil temperature and will lengthen as temperature falls. Eggs take 192-360 days to hatch. The emerging hatchlings are roughly 35-40mm in length, 30-33mm wide and weigh between 8 and 13 grams.

**Parasites** (Pichelin *et al.* 1999): To date, there are seven parasitic organisms known to infect *C. expansa*. The Cestode - *Glossocercus chelodinae*, three Monogenea species - *Neopolystoma cribbi*, *N. tinsleyi* and *Polystomadoides scottae*, one Nematode – *Spiroxys chelodinae* and two Trematodes – *Choanocotyle elegans* and *Sigmaopera cincta*.

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