

Chelodina longicollis

Leah Parker, 1999 © 2001 James Cook University

Authority: Shaw (1794)

Common Name: Eastern Snake-necked Turtle or Long-necked Tortoise

Description (Legler & Georges 1993; Worrell 1966; Cogger 1992; Boulenger 1966). *Chelodina longicollis* is a semi-aquatic freshwater tortoise. Distinguished from marine turtles by the presence of distinct ankle joints and broadly webbed digits, each with 4 or 5 claws. Gular shields are present. The cervical vertebrae have strong lateral processes that allow it to withdraw its head. The plastron is large (about half the length of the carapace) and is made up of 9 bony plates. These are covered by 13 horny, plastral scutes, and are connected to the carapace above by a bony bridge. The front lobe of the plastron is nearly as wide as the carapace anteriorly and is slightly wider than the hind lobe. Carapace length can range in size between 200 mm and 300 mm. Sutures and edge of carapace black. The colour of the carapace varies from dark brown to black. The plastron is usually yellowish, white or cream. The head is small, moderately depressed and has a small, short, obtuse snout. The eyes are laterally directed with a high degree of stereoptic vision. Translucent eyelids serve in lieu of nictitating membranes. The long neck is covered with strong tubercles. The tail is very short. Sexually dimorphic with females being larger than males and having a deeper and more commodious shell. Females are adaptive in facilitating the periodic storage of eggs. The precloacal part of the males tail accommodates the penis and is nearly always deeper, longer and generally more heavily developed in males than females.

Similar species (Cogger 1992): *C. longicollis* is most similar to tortoises of the same genus; *C. novaeguineae* (far north east Queensland and New Guinea) differs from *C. longicollis* in that the interior lobe of its plastron is very broad, extending laterally beyond the inner edges of the overlying marginal plates of the carapace, and therefore the carapace of is strongly convex and distinctly oval in outline. *C. oblonga* (south west Western Australia) has a much narrower carapace than *C. longicollis* and *C. steindachneri* (Western Australia) has a very flat, almost circular carapace. *C. expansa* (south eastern Australia, central & coastal Queensland) is distinguished from *C. longicollis* in that the anterior lobe of the plastron does not begin to taper immediately in front of the bridge. In addition, the 2nd and 3rd vertebrae are longer than wide. *C. rugosa* (Cape York Peninsula to Kimberley District) is distinguished from *C. longicollis* by its wider than long 2nd and 3rd vertebrae. *C. rugosa* and *C. longicollis* can be differentiated by the anterior lobe of the plastron which begins to taper immediately in front of the bridge in *C. rugosa*.

Range (Cogger 1992): Victoria, most of New South Wales, eastern South Australia and South-Eastern Queensland.

Ecology and behaviour (Harrington 1933; Cogger 1992; Green 1992; Legler & Georges 1993): *C. longicollis* inhabit freshwater ponds, lakes and streams. They have a diverse diet of amphibians and other aquatic vertebrates and invertebrates. Harrington (1933) reports that they also feed on aquatic vegetation. They are active in summer (December – February) when they feed and reproduce. During the winter months, *C. longicollis* aestivate at the bottom of their waterhole. *C. longicollis* are both active foragers and sit-and-wait ambush hunters which engulf their prey by 'suck and gape' ingestion. Head bobbing occurs during mating sequences between males and females. The male engages in cloacal touching and attempts to align their barbels with those of the females. The female is mounted from the rear. Nests are constructed in clay soils by exuding copious quantities of cloacal fluid. Predator defense behaviour out of water consists of tucking in the head and tilting the shell toward the offender or defensively snapping. Terrestrial

locomotion in *C. longicollis* is a slow, deliberate, trotlike gait propelled by the contralateral front and hind limbs, while the other two recover for the next stroke. *C. longicollis* is able to respire through its cloacal bursae.

Breeding biology (Goode 1965; Cogger 1992; Goode & Russell 1968; Goin & Goin 1962; Burgin *et al.* 1999; Green 1992; Legler & Georges 1993). *C. longicollis* dig their nests and deposit their eggs by moonlight as do marine turtles Goode (1965). Nests are constructed by drilling in the sand and earth using the feet, eventually creating a circular hole. Nesting occurs in spring or early summer (November or December). Females usually lay one clutch of eggs annually of between 6 and 23 eggs. The volume of *C. longicollis* eggs is between 4.0 to 6.7 ml. The eggs are an ellipsoidal spheroid shape. Incubation time is approximately 3 to 4 months after which the embryos cut out of the shell using a nasal 'tooth'. Male *C. longicollis* mature at approximately 7 years and females around 10-11 years of age.

Status: Common (Frith 1987)

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