

Boiga irregularis

Doug McClure, 1999 © 2001 James Cook University

Authority: Merrem, 1802

Common Name: Brown Tree Snake

Description (Cogger 1992; Ehmann 1993; Frith and Frith 1994; Hoser 1989): A long, slender snake, showing moderate lateral compression, with a broad head quite distinct from the neck, and relatively large eyes with vertically elliptical, cat-like pupils. Colouration is geographically variable, with considerable variation sometimes seen within a single population. Two basic colour phases occur. East of Cape York and along the East Coast a brown to bright reddish-brown phase occurs with numerous irregular dark cross-bands. A red and white banded phase occurs in other parts of tropical Australia. Hybrids of these phases occur on Cape York. Between the scales there may be patches of black skin or many of the scales may be slightly black edged. The belly skin can be cream to salmon coloured. A distinct dark bar may be present through the eye and along the side of the head in some specimens. Scallation is smooth. The average adult length is 1.4m, but they can reach 2m. 19-23 mid-body rows, ventrals 225-265, with a divided anal and subcaudals 85-130, all divided.

Similar species (Cogger 1992; Hoser 1989): *B. irregularis* is most similar to snakes of the genus *Dendrelaphis*. *D. calligaster* (Northern Tree Snake) and *D. punctulatus* (Common or Green Tree Snake) are both found in the Townsville region. The body form of *Dendrelaphis* species is similar to that of *B. irregularis*, though *D. calligaster* only obtains a maximum length of about 1.2m. Both species of *Dendrelaphis* show considerable colour variation, which includes the common brown colour of *B. irregularis*. Though these snakes do not exhibit the numerous irregular cross-bands. Scallation of *Dendrelaphis* is different to that of *B. irregularis*.

Range (Cogger 1992): Along the east coast north of Sydney, and throughout the northern Australian tropics.

Ecology and behaviour (Bull and Whittier 1996; Cogger 1992; Ehmann 1993; Frith and Frith 1994; Gow 1978; Rochelle and Kardong 1993; Shine 1991): *B. irregularis* lives in a variety of habitats from rainforest to the interior of Cape York. Having strictly nocturnal surface activity probably allows *B. irregularis* to inhabit drier habitats. The snakes take shelter during the day in natural or suburban areas. Foraging occurs at night by slowly moving through the branches of trees, though they frequently forage on the ground. The activity of *B. irregularis* has not been documented in Australia, but being nocturnal and arboreal means that their behaviour is likely to be strongly influenced by seasonal changes in the weather. In northern Queensland activity levels may be depressed during the tropical winter. Prey includes small mammals, reptiles and birds. This species is an efficient constrictor, suffocating prey by holding it tightly within its strong coils. *B. irregularis* possesses grooved, rear, maxillary fangs with directly associated glands which are thought to be a venom apparatus used primarily as a means of rapidly killing secure prey. Rochelle and Kardong (1993) have shown that this apparatus does not have a direct role in producing rapid prey death of Swiss-Webster mice. The apparatus may serve some other biological role, such as the initiation of the digestive process. These snakes are aggressive by nature, striking repeatedly from the S-shaped coils in the forepart of their body when aroused. Although generally regarded as venomous, *B. irregularis* is not regarded as dangerous to humans.

Breeding biology (Bull and Whittier 1996; Ehmann 1993; Hoser 1989; Shine 1991; Whittier and Limpus 1996): *B. irregularis* shows highly seasonal reproduction, although the timing of reproduction may vary with locality. Mating occurs prior to the onset of ovarian recrudescence, with sperm storage in females possibly occurring. Mating has been observed in North Queensland during October. In North Queensland recrudescence occurs after October, perhaps coinciding with the onset of the wet season. Females are more secretive during late ovarian development and when gravid. *B. irregularis* is oviparous, with ovulation and oviposition occurring in summer. Clutches of 5 to 12 eggs are laid in moist or very humid sites that are not exposed to temperature extremes. The eggs absorb moisture and increase in size during development, sometimes becoming strongly cohesive and constrained within rigid oviposition sites. Incubation takes a minimum of 65 days, with hatchlings measuring about 28cm in length.

Literature cited:

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