Bufo marinus

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Authority: Linnaeus, 1758

Common Name: Cane Toad

Description (Cogger 1992; Tyler 1976; Hickman *et al.* 1998): The heavily built and stout body of the toad is covered with a thick warty skin. They can grow to very large sizes (up to 15 cm long) with females often larger and smoother-skinned than males. Olive-brown to reddish-brown with scattered warts on the dorsal surface with bony ridges over each eye. Venom glands are widely distributed around the surface of the skin, but can also be aggregated together to form large parotoid glands, found on each shoulder. These glands are able to ooze venom. Its ventral surface is paler white or yellowish in colour usually flecked with brown. The male's mating call is a high-pitched "brrrr" resembling the sound of the dial tone of a telephone.

Similar species (Tyler 1976): Similar species belong to the genus *Pseudophryne*. *P. nichollsi* have warty skin and short legs. They are usually dull brown or purplish on their dorsal surface, with smoothed-outlined areas of intense purple on their ventral surface. However, they have no venom glands in the skin. What makes them very similar to *B. marinus* is that they prefer to walk if they can avoid the more energetic exercise of jumping.

Range (Alford *et al*. 1995; Freeland 1984): *B. marinus* was introduced at several locations on the east coast of Queensland in the early 1930's. Today their range extends to the Cape York Peninsula and further inland to areas such as Richmond, Roma and Kakadu in the Northern Territory.

Ecology and behaviour (Freeland 1984; Tyler 1976): *B.marinus* does not occur naturally in Australia, nor does any other member of the Family Bufonidae. It can be found in tropical to subtropical lowland areas, usually in the vicinity of water. *B. marinus* responds when threatened by dropping the side of its body closest to the predator and raises the side furthermost from it. In effect it displays the greatest possible surface area to the view of the predator. It will also turn side-on to its attacker so that the parotoid glands are directed towards them. These glands are one of the most important factors in the success of *B. marinus* making them highly poisonous to eat, at every stage of their life cycle. There is still much work to be done to fully understand what effects Cane Toads have on native wildlife, and just how far they can spread. There are some reasons for optimism. In the areas where Cane Toads have been around for the longest time, their populations have declined after an initial population explosion. It is also possible that some native animals are learning to avoid eating them. Other animals have shown they can eat the toad. The Keelback snake can detoxify the venom, and water rats, ibis, crows and some other birds turn the toads over and eat the non-poisonous internal organs.

Breeding biology (Alford *et al*. 1995; Freeland 1984): *B. marinus* are highly adaptable, both in terms of survival and reproduction. They are much more tolerant than other Australian frogs of variations in water salt content, and can survive and breed in brackish water. Male calling can occur in any month of the year peaking in the wet season. Females lay approximately 40 000 eggs in a spawning period, can breed in any season, and may breed several times a year. The males fertilise the eggs as they are laid in long strands. Male toads will attempt to mate with anything resembling a female toad - living or dead. Eggs may be layed in permanent water in rivers and lakes, or in small temporary

ponds and puddles. In three days the eggs hatch into small (3 cm) pitch-black tadpoles, unlike those of any native frog. These tadpoles undergo metamorphosis quite early, so they are out of the water faster than most other frogs. This is one of the main reasons for their success as a population.

Literature cited:

Alford, R.A., Cohen, M.P., Crossland, M.R., Hearnden, M.N., and Schwarzkopf, L. 1995. Population Biology of Bufo marinus in Northern Australia. *Supervising Scientist*. p173-181

Cogger, H. G. 1992. *Reptiles and Amphibians of Australia*. Reed Books, Chatswood, NSW.

Freeland, W.J. 1984. Cane toads: A review of their biology and impact on Australia. Conservation Commission. Northern Territory.

Hickman, C.P., Roberts, L., and Larson, A. 1998. Biology of Animals. Mcgraw-Hill Companies. America.

Tyler, M. J. 1976. Frogs. William Collins Pty Ltd, Sydney.