

Western Swamp Tortoise Breeds in Captivity



▲ Mature female with a young tortoise produced as a result of the artificial induction method under laboratory conditions

▼ An X-ray taken of a gravid female (actual size) Western Swamp Tortoise before hormone injection. The four eggs seen inside the tortoise are typically large compared with the size of the adult's shell. The female must loosen the upper and lower parts of her shell in order to lay the hard-shelled eggs. Note how the tortoise curves its neck to retract its head, a feature that is found in side-necked turtles, the group to which the Western Swamp Tortoise belongs



Officers of the Western Australian Wildlife Research Centre at Wanneroo, have succeeded in artificially inducing the Western Swamp (or Short-necked) Tortoise (*Pseudemydura umbrina*) to breed in captivity. The Western Swamp Tortoise is an extremely rare animal confined to a small region of south-west Western Australia. Its known range of about 25km extends south from Bullsbrook to swampy country on the outskirts of metropolitan Perth.

Two reserves, Ellen Brook (53 ha) and Twin Swamps (142 ha) were established in 1962 to protect the species.

The total population of the species in both reserves is estimated at less than 50 individuals, and recruitment into the population has been limited since 1964, mainly due to a series of dry winters. In a bid to ensure the survival of the species, a breeding colony has been established at Perth Zoological Gardens.

The precarious state of survival of this species led the research officers from the Wildlife Centre to attempt breeding the species under laboratory conditions. A mature female tortoise was injected with hormones to induce egg laying, and the experimenters were rewarded when 3 eggs were laid, of which 2 hatched after a further 23 and 27 weeks respectively in an incubator.

The young hatchlings were extremely small, about the size of a 20 cent coin. They eat small aquatic animals such as tadpoles, small crustacea and insects.

Adult Western Swamp Tortoises are the smallest of the Australian side-necked turtles, so called because of the sideways manner in which the head and neck are retracted in to the shell, so rapid growth cannot be expected. The length of an adult male is about 14cm (weight about 400 grams) with the female being slightly smaller, i.e.

about 13cm (weight about 325 grams)

In nature the species requires a long period of 10-15 years before it reaches maturity, but this may be

prolonged to 20 years or more if there are any dry intervening years, all of which suggests that building up a breeding colony, even with the assistance of artificial methods

would be a long term project.

Nevertheless the initial success with the method will lead to further attempts to increase the size of the colony.
