

## Swamp antechinus *Antechinus minimus*



Photographer Craig Searle writes: 'I took this photo of an *Antechinus minimus* while spending four months last winter as a caretaker on Maatsuyker Island. This is the only mammal (apart from seals) living on the island and has an amazing life cycle. All males die after mating and all females die after weaning their young.'

To submit a photo for All Things Great and Small contact [ross.taylor@primecreative.com.au](mailto:ross.taylor@primecreative.com.au) We will accept photos of plants or animals and pay at our standard rate. Published photos will be accompanied by some history that we will source.

Being largely nocturnal and cryptic in behaviour, Australia's small mammals are notorious for keeping a low profile. As a result, most Australians, even those who are lucky enough to live in or near bushland, rarely catch a glimpse of those that live in their local area. Ordinarily the swamp antechinus (*Antechinus minimus*) is no exception, and while this carnivorous species is now known to be nocturnal (a fancy word meaning active night and day), it generally prefers dense cover. So getting a good look at a live one, or better still photographing one, like the individual shown here from Maatsuyker Island, is quite a rare achievement.

The swamp antechinus occurs patchily along the damp fringe of southeastern mainland Australia, being the most restricted and threatened of the four mainland species of antechinus that occur in Victoria and South Australia. It is also found in Tasmania and on several islands adjacent to both Victoria and Tasmania.

The Tasmanian sub-species (*A. m. minimus*), which includes the population on Maatsuyker Island, is a little different to its mainland cousins with females only having six nipples (two less than on the mainland). In the annual battle for survival that typifies the existence of all antechinus species, this impacts upon the recruitment odds quite

dramatically – as you will see.

Swamp antechinus (like all antechinus and phascogales) have the particularly quirky reproductive strategy of all the males 'dying-off' at the completion of their winter breeding season, just before their first birthday. The problem for the boys is that once they start mating, they stop eating – now that is a one-track mind!

While this might sound harsh, it is thought to be critical in ensuring that the pregnant then lactating mothers and, subsequently, their fast-growing independent young, have access to the resources they need to grow up and breed themselves next year – without competition from adult males. The majority of adult females also won't survive to the following breeding season, but a small proportion will, and occasionally a female has even been known to breed for a third season – quite an achievement considering the population turnover happening all around them.

Given this breeding strategy, and the fact that the swamp antechinus is usually just smaller than your average rat – making them vulnerable to being eaten by other critters – the more young in the pouch each year, the better the odds that the species will persist in a given area. So the fact that the Tasmanian sub-species has less

nipples – with breeding females unable to rear more than six young – is an evolutionary clue that suggests it is less risky to be a swamp antechinus there than on the mainland.

On smaller islands, like Maatsuyker, a lack of predation and competition has enabled swamp antechinus populations to reach higher densities than on the mainland or Tasmania, and this may be the reason the individual photographed here is, quite literally, out in the open.

For those of us with an interest in the species, our knowledge of swamp antechinus distribution is far from complete, and every new record is important. In this respect the synchronised death of all the males annually from 'natural causes' creates a rather unique opportunity for people who spend time out in bushland to be part of the survey effort. Each year in late autumn/early winter, look out for antechinus when bushwalking as it is uncanny how often the males drop dead on walking tracks or by the edge of thick vegetation. If you are lucky enough to find one, just remember to put it in a couple of sealed plastic bags (to contain any smell) before putting them in your freezer, which is the best way to preserve them before passing them on to your state museum.

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