

## Australia's Tiger Snakes

**Australia's tiger snakes are only for the most advanced snake enthusiasts.**

*Text and photos by Raymond Hoser*

The tiger snake (*Notechis scutatus*) is the most common large elapid in many parts of Australia, including around Melbourne, where I was the only snake catcher in the phone book. Hence, I received daily calls to remove these snakes from people's gardens. Because it is highly venomous, quick to bite when cornered and very common around Melbourne, Adelaide, Sydney, Hobart, Perth and Canberra, the tiger snake has been responsible for many snakebite deaths in Australia. Because specimens are so aggressive when caught, and because the snake is so common, the tiger snake is not a favorite of most local Australian herpers. However, keepers who get past the snake's initial aggressive behavior may soon find themselves with a nice, trouble-free pet.

Tiger snakes (*Notechis* spp.) are deadly elapids found in Australia, where they have caused a fair number of deaths.

It is an elapid generally measuring about 3 feet in length, with a thick-set build. Various forms inhabit the cold, wet areas of southern Australia, including most of Victoria, much of New South Wales (NSW), far southeast Queensland, Tasmania, southeast South Australia and southwest Western Australia (WA).

There are two species: *Notechis scutatus* from NSW, Victoria and nearby areas, and *N. ater*. The latter has been assigned some subspecies, including *N. a. occidentalis* (in WA) and *N. a. serventyi* (in Bass Strait).

Specimens from the coolest areas of Melbourne, such as the Dandenong Ranges, are nearly black, while those from warmer areas, such as Pantom Hill, are substantially lighter and with much more distinct crossbands. In some areas, such as Melton, the snakes are generally brownish in base color, whereas those from Portsea on the Mornington Peninsula are silvery gray with relatively indistinct bands. Another suburb, Langwarrin, has tiger snakes with blue and gray bands. Most specimens have the crossbands, which are the reason for the common name "tiger snake."

### Population Ups and Downs

Tiger snakes prefer "mosaic habitats" consisting of agricultural areas interspersed with bushland and which are well-watered by creeks, rivers, dams and the like. They seek overgrown vegetation at ground level and lots of cover, especially man-made cover in the form of tin sheeting. They love rubbish heaps on the edge of town and are common in suburbs with rocky, overgrown gardens, north-facing slopes, pools and fish ponds. In my experience in Melbourne, the suburbs bordering the Yarra River have the most tiger snakes, and of all the Australian capital cities, Melbourne is by far the most heavily infested with tiger snakes.

*Notechis scutatus* is a thick-set snake that typically reaches a length of 3 feet.

Tiger snakes are common, but in the last 50 years their numbers have dropped in many areas. They were extremely abundant across inland southeast Australia, especially along the major rivers of the Murray and Murrumbidgee basins. Now less common in these areas, the tiger snake decline is due to agriculture and the draining of swamps. Tiger snakes eat frogs, and the frogs have disappeared due to swamp draining — so, too, have the snakes.

In the inner Melbourne suburbs, however, tiger snake numbers appear to be on the increase as the snakes adapt to the urban landscape. They favor older, more overgrown suburbs where rubbish is more often left along back fence lines. Frogs are scarce in many suburbs, but the "urban snakes" seem to subsist well on rodents. Larger tiger snakes have been found in trees, looking for birds to eat, and I have observed tiger snake feces that contained feathers.

Tiger snakes pop up all over Melbourne. I've had calls to remove them from houses, beds, bathrooms, cars (including cars that people drive to work every day), bird houses, rabbit cages, dog kennels and many other locales. I found one snake living in a mid-city bookshop — that one was featured on the local news. Another time I found a tiger snake several floors up in a high-rise.

Tiger snakes are plentiful in Australia, though according to the author their numbers have decreased over the years. This *N. scutatus* is from Lake George, New South Wales.

No suburb in Melbourne is free of tiger snakes — they have literally conquered the place!

### Hearty Feeders

Tiger snakes are pigs. Obesity is always a potential problem because they'll eat just about anything. Most keepers stick to

rodents, and tiger snakes do just fine on them. I prefer to vary things a bit, however, so I also feed my tiger snakes birds, whole fish or pieces of fish, lumps of other meat, and chicken necks, which I buy by the kilo from my butcher.

If I find a freshly road-killed rabbit, I will take it home and cut it into pieces that are then frozen. Later, after any unwanted bugs have died, I thaw the pieces and feed them to my tigers.

My tiger snakes also love calamari, crab meat and lobster.

Their vigorous feeding response — and the possibility of a bite because of it — contributes to the danger of keeping these snakes. Because tiger snakes are eating machines, they'll bite anything they think is food. So always be extremely careful when feeding tiger snakes.

#### Housing Hints

##### Races, Hybrids and Mutants

Although some regional tiger snake forms may vary in temperament (black ones are usually a bit more aggressive), all tend to settle down in captivity, with occasional exceptions. All are identical in terms of captive husbandry, regardless of what appears to be the dominant food or habitat preferences in the wild state of a given population.

I know of one West Australian tiger snake (*Notechis occidentalis*) that mated with an eastern (*Notechis scutatus*), the result being a perfectly healthy litter of young about five months later. And some years back a Victorian keeper, Barry Searle, had some leucistic tiger snakes that originated near Warrnambool in southern Victoria. Unfortunately, the snakes died before they could be propagated.

As of this writing, Healesville Sanctuary in Victoria has a recently acquired wild-caught albino snake, and to the author's knowledge it is the only living tiger snake mutation currently kept in Australia. As with most snakes, the essential requirements for tiger snakes are a heat gradient, clean drinking water and cover to hide beneath. The basic cage for my snakes is a plastic tub with air holes as vents. At the cool end of the enclosure is a water bowl that cannot be spilled. My snakes never go in the bowl, they only drink from it.

The warm end, with a ground temperature between 84 and 93 degrees Fahrenheit, is heated by a heat mat placed beneath one end. An upturned plastic planting pot with drainage holes sealed and a U-shaped "door" cut into it serves as a hide. For safety reasons, I attach a handle on the top of the hide (the base of pot), enabling it to be lifted by a hook if necessary. The snakes hide in the pot, and many soon learn to push the pot back and forth over the heat mat in order to thermoregulate while remaining hidden.

For established snakes, I use newspaper as a substrate, but I don't use it with new snakes. The lack of substrate forces the snake to use the pot as a hide rather than the paper. After a few months and the snake is used to hiding in the pot, I'll add the newspaper, which makes cleaning the cage easier.

Tiger snakes sometimes engage in nose rubbing. This mainly occurs in large, wild-caught adult males as they move about the tub looking for a way to escape. Snout injuries caused by rubbing may take months to heal, and veterinary treatment with antibiotics may be needed. Using a larger cage can help alleviate rubbing behavior, but a viable alternative is to cover the cage's walls with duct tape or some other type of solid (not transparent) tape, save for a small area or two (away from corners) that you can use to see in and out of the cage. Be sure these viewing panels allow you to see the entire inside of the cage so you can easily determine where the snake is.

As a rule, the length of the cage should be at least half that of the snake's total length. If the cage is smaller than this, nose rubbing may occur. My largest tiger snake tubs are about 2 feet long by 15 inches wide by 12 inches tall.

#### Skin Worms on Tiger Snakes

##### Stalking Wild Tigers

If you are a veteran herper, are in Melbourne, and you want to see wild tiger snakes, take a drive over the Westgate Bridge, then stroll across the basalt cuttings around Laverton and Werribee and look for the piles of rubbish. If it's a warm day you'll find it hard to miss the tiger snakes. If it's cold, they'll be hiding.

Always be extremely careful when searching for venomous snakes, and take every precaution to avoid being bitten. Step carefully and be wary! Tiger snakes are virtually bulletproof. Although there are reports of captive snakes dying from disease (including mite-borne diseases), I've never lost one. The tiger snake is as tough as any snake I can think of in terms of disease resistance.

Skin worms (which may result in bumps on the snake's body) are ubiquitous in wild tiger snakes. They are usually harmless even though they may disfigure some scales.

I've read that the best way to deal with them is to remove the worms with tweezers via an excision in the skin between the scales, followed by a topical antibiotic and an intestinal dewormer (for cestodes in the snake's gut). However, I've personally found the reverse works well. Removing the worms as described but about eight weeks after the dewormer has worked for me. I think this is because after a deworming, skin worms appear to migrate away from the digestive tract and appear elsewhere, such as new lumps under the skin.

Melbourne boasts a large population of tiger snakes, and they pop up in a lot of places — even here, in Carlton Cemetery. Be careful if you go looking for them — you don't want to end up here permanently!

Of course, an examination by a veterinarian is warranted if you notice anything out of the ordinary, and skin worm treatment should be performed by a qualified vet who is used to working with venomous snakes.

### Breeding Tiger Snakes

Most elapids in Australia can be sexed by simply looking at the tails; males have proportionately longer and thicker tails. Unfortunately, tail sexing of tiger snakes isn't always reliable as snakes with small, thin tails sometimes turn out to be males. Probing, however, is 100-percent reliable for these snakes.

Breeding tiger snakes is pretty much as easy as putting the two snakes together. Ovulating females are noticeably more thickset than usual in the lower body, and at this stage they should be targeted for mating. Males need to be cooled prior to breeding. My preference is to "flatline" the males at or slightly below 66 degrees Fahrenheit for at least seven weeks. I will then heat a male's enclosure back up to the mid-80s with 12 hours of heat on and 12 off. In my experience, this is an effective way to guarantee breeding success (assuming the room temperature is consistently below 36 degrees Fahrenheit).

For the highest chance of success, keep the males and females separated until you're ready to mate them. After about a month of the 12-hours-on, 12-off heating regimen, my male tiger snakes eagerly mate with the females within hours of introduction. If mating doesn't occur within 48 hours of a pair being introduced, remove the male and try introducing it again after two weeks.

The author refers to tiger snakes as "garbage guts" because they have ravenous appetites. This one is eating a piece of chicken.

Although a lot of elapids will go off feed at this time, this isn't so for tiger snakes. Males have been known to eat and mate on the same day. Tiger snakes also mate frequently during late summer and autumn, and if the male's sperm is viable, the female may hold it over winter until she ovulates the following season.

### Gravid Females and Neonates

Always be sure gravid females can escape to an area cooler than 80 degrees, otherwise deformed young may result. Maintain the standard enclosure temperatures mentioned earlier. These snakes are ovoviviparous, in that the eggs hatch while inside the female, after which the live young issue forth. Published records suggest a 142- to 146-day gestation period for tiger snakes and other Australian elapids, but in my experience it's about a month shorter.

Like many Australian elapids, baby tiger snakes (about 6 inches at birth) are sometimes tricky to start feeding. If they don't eat within four days of their first slough, they should be force-fed or "assist fed" (by placing food in a snake's mouth in the hope that the snake will then swallow the food on its own). With tiger snakes it's rare to have to do this more than once or twice, as the young snakes are nearly as voracious as the adults, but do so until the stubborn snake is eating on its own. Always seek expert help if you're unsure about how to safely force-feed a snake, especially a venomous one.

Young snakes don't have the robust size or condition of the adults, so be sure they are well cared for. Underfeeding and the resulting emaciation and death of young are the most common cause of mortality among neonate tiger snakes. Appetite and willingness to feed increases with age, and in time even the most intractable feeders will voluntarily eat.

Young snakes are generally housed in 1-foot-long plastic tubs, where they can remain until the snakes double in length. The cage setup is identical to the adults', but on a proportionately smaller scale. As with most snakes, it's best to keep tiger snakes separately, especially neonates, which can be separated as soon as they're born. If more than one are kept together, a hierarchy may form, stressing subdominant animals. These snakes may stop feeding and fail to thermoregulate, and they are more prone to succumbing to otherwise benign viruses or bacterial infections.

Baby tiger snakes should slough within 24 hours of birth, and they can be fed any time from then on.