

All that glitters is not GOLD.

The golden Tiger Snake of Tasmania.



Simon Fearn reveals that there is real gold in 'them thar hills', but warns potential prospectors to be wary of forgeries.

Tasmania's cool and highly variable climate has undoubtedly played a significant role in selection for dorsal colouration in Tiger Snakes (*Notechis scutatus*). These large snakes thrive under conditions which must be close to the lower limits of their thermal tolerances, particularly in relation to reproduction. There is therefore a general overall tendency for melanism throughout Tasmania, but especially in cool, high rainfall areas of the west and southwest, as well as the extensive central plateau where it can snow at any time of the year.

Banding on Tasmanian specimens is also generally less defined than many mainland Tiger Snakes, and band width is typically reduced to between half and one and a half scales. A significant proportion of predominantly black specimens display banding that ranges from bold contrasts of brown, orange, yellow or white to barely discernible cross bands that can only be perceived in strong sunlight. On many melanotic specimens banding is reduced to yellow or white edging on the first few rows of dorsolateral scales. Completely melanotic Tiger

Snakes can occur anywhere in Tasmania, and although in the minority, are more common in the Central Highlands. In warmer, low-lying and particularly coastal habitats in eastern Tasmania a bewildering array of colour variations can be encountered; from rich yellows to shades of tan, brown, grey, silver and some that appear almost greenish under appropriate lighting. The vast majority of these animals display darker cross banding, but in the forests of the Great Western Tiers, in the foothills of the central plateau, the author has



Left: wild yellow Tiger Snake exhibiting prominent banding from Railton.

Photo by M. Wapstra.

Above right: 'washed out' Tiger Snakes raised without UV light. These are from the late Phillip Goss's collection. The lower snake would be predominately greyish-black with indistinct yellow bands if raised outdoors. *Photo by S. Fearn.*

Right: this large Tiger Snake has been raised indoors and would be horribly sunburnt if put outdoors in summer. *Photo by S. Fearn.*

observed some light brown specimens with darker cross banding reduced to splotches, speckles and even longitudinal stripes either side of the back bone, very reminiscent of some mainland Carpet Pythons. In fact, in the early days of settlement in Tasmania, usage of the term 'Tiger Snake' was confined to obviously-banded specimens, with paler animals being universally referred to as 'Carpet Snakes'.

There would appear to be complex and poorly-understood interactions between localised temperature regimes, vegetation structure and substrate, as well as predator assemblages that combine to produce the almost endless variation that can be observed in Tasmania. In warmer habitats, paler colours may not only aid in effective camouflage on sandy substrates strewn with fallen leaves, but they may also allow snakes to forage in the open for longer than melanotic specimens without overheating in the summer sun. The predominance of melanism among the many island populations exhibiting warmer, frost-free climates is possibly a result of intense selection for animals that can



bask very efficiently, even on over-cast days, during a very short and saturating annual feeding period based on the synchronised hatching and growth of seabird chicks.

Ventral colouration is less variable and is mostly white, cream or yellow, fading to greyish towards the vent. Ventral colour infrequently extends under the head on specimens from the Tasmanian mainland but

'In the early days of settlement in Tasmania, paler specimens were universally referred to as 'Carpet Snakes'!'





Left: a pretty little gravid female from Four Springs Lake, Selbourne. Paler coloured snakes like this are common in parts of Tasmania and typically give birth to yellowish neonates. Photo by S. Fearn.

Above right: neonates like this are common in Tasmania but often go much darker as they age in the wild. Kept indoors without UV light this snake will become a more intense gold. Photo by S. Fearn.

Below right: a genuine wild golden tiger from the foothills of the Great Western Tiers behind Deloraine in northern Tasmania. Photo by B. Munday.

sometimes prodigious proportions, of Tiger Snakes from the Tasmanian region has made them popular with hobbyists for generations. One of the most sought-after of all these variations is the almost mythical 'golden tiger'.

Genuine, wild golden tigers are relatively rare, and most of the specimens I have seen have come from the forested eastern foothills of the Great Western Tiers in the northern part of the state. I vividly remember the first golden tiger I captured because it was also the first wild snake that I tailed. I was looking for Tiger Snakes late one summer afternoon at Liffey in the Great Western Tiers and while working my way along a creek line adjacent to a paddock I spied a magnificent 1.5m golden snake coiled on top of a pile of logs bulldozed into the creek gully. The snake had spotted me and was starting to move off, so I had to think quickly before it reached the safety of a maze of logs and blackberries. I had only just started interacting with venomous snakes in the wild and had never tailed a wild elapid before, but I had no choice other than to fling aside my jiggers, scramble up on to the log pile and pick the snake up. Quite rightfully, the snake took offence at this injustice and did its best to bite me. A little horrified at the predicament I had gotten myself into, and not being well balanced on top of the log pile, I flung the snake

more commonly so on specimens from offshore islands. Solid-coloured tan to brown snakes with no banding whatsoever and on which the ventral colour extends upwards onto the first few rows of dorsal scales are rare on the Tasmanian mainland but common on some Bass

Strait islands - Chappell Island being one of the best known examples. Melanotic specimens throughout the Tasmanian region have also been recorded with all-black ventral scales.

The extensive colour range, and

as far as I could into the paddock, climbed down off the logs, retrieved a jigger and pinned the animal while it was still trying to figure out what had just happened. This particular snake lived for many years in captivity and was a crowd pleaser at talks and demonstrations.

Most wild tiger snakes in Tasmania that are predominately yellow or gold in colouration nevertheless retain a range of other darker markings (usually silver/grey) such as bands and/or splotches and spots. I have only seen two solid-yellow specimens. One was a headless corpse (again from Liffey) delivered to me by a farmer who thought he had discovered a new species of snake, and the other was on Chappell Island of all places. While very yellow wild snakes are quite rare, captive-bred and raised 'fakes' can easily be produced in numbers. Pale brown/tan to yellowish Tiger Snakes with darker bands are common in many warmer, low-lying parts of Tasmania, and if these animals are mated in captivity the resulting



‘I have only seen two **solid-yellow specimens** - one was delivered by a farmer who thought he had discovered a **new species.**’



clutches always have a selection of yellowish to orange-coloured neonates. If raised indoors without natural levels of ultraviolet (UV) light, these snakes become progressively paler and more yellowish, and the darker markings with higher melanin levels fade and become more indistinct over time. While some of these snakes can look spectacular I would not class them as natural, and they represent a potentially-unpleasant trap for inexperienced keepers. If these snakes are moved into outdoor enclosures (common practice amongst Tasmanian keepers) they can get horribly sunburnt in a single day in mid-summer.

This may seem very odd to some that a snake could get sunburnt, but if a captive-raised snake whose skin and scales have never been exposed to UV light is suddenly exposed to high levels, the results can be catastrophic. Sunburnt pale snakes can turn melanotic within a very short time as the skin tries to adapt to UV. I have seen this phenomenon on many occasions and always urge keepers to exercise extreme caution when introducing indoor-raised snakes to outdoor enclosures. I always do this in August when day lengths are still relatively short, mid-day temperatures comparatively low and solar angle is low in the sky. This gives the snakes' skin a chance to adjust gradually and burns are avoided. In this way, snakes that were always going to be pale will remain so and those that would naturally have darkened up do so in a natural manner. Sunburnt snakes typically display a rather ugly and unnatural-looking solid dark grey to black streak which runs the entire length of the body, particularly along the spine which is exposed to the most direct sunlight. If you are offered a golden tiger, it is a

good idea to learn as much as you can about its parentage and captive history to determine if you have the genuine article or simply 'fool's gold'!

Further Reading

For more pictures of colour and other variations in Tasmanian tiger snakes see:

Fearn, S. 1993. The tiger snake *Notechis scutatus* (Serpentes: Elapidae) in Tasmania. *Herpetofauna* 1988: 3-4.

Fearn, S. 2011. A rich and varied canvas: Scale variations and scarring on Tasmanian tiger snakes *Notechis scutatus* (Serpentes: Elapidae). *The Tasmanian Naturalist* 136: 2-18.

Fearn, S. 2014. *Snakes of Tasmania*. Queen Victoria Museum and Art Gallery. Launceston.

Below: the pale snake was born to a wild-caught female from Bruny Island, southern Tasmania. I had to be very careful when introducing this specimen to natural sunlight outside to avoid sunburn. Photo by S. Fearn.



