

KEEPING WOMAS

Aspidites ramsayi

The Champagne of Snakes

Text & images: Doc Rock
except where indicated.



Introduction

I obtained my first woma in 1990. I had read about them in books and seen a pair at Joe Bredl's reptile park at Renmark in South Australia, but at this time there were very few in captivity and I really didn't have any idea what to expect. When my new charge finally arrived, it turned out to be a one metre female from the Tennant creek area of the Tanami desert. She was a beautiful snake with small black eye patches giving the appearance of a clown face, brownly-orange stripes on a pale yellow background and a bright orange belly. The most surprising aspect of this snake was its lovely temperament and the relaxed way it accepted captivity. Since then, I have suffered from "woma syndrome", a disease that leads to the excessive collection of woma pythons and which has now affected my wife Diane worse than me. Today we would have over 50 womas and at some times of the year this number exceeds 150. We are not alone in experiencing this condition as we know many others that have

fallen prey to the "I can't get enough womas" malady.

In the Wild

Womas are found over much of arid Australia and are usually associated with sand and spinifex, although they sometimes can be found in scrubby or rocky areas. The majority of captive specimens originally came from around Alice Springs or the Tanami desert in the Northern Territory. More recently specimens have been collected from the coastal region of the Great Sandy Desert along Eighty Mile Beach and the southern margin of the Kimberley and exported to the east coast for the reptile trade.

The best way to find womas is by night driving through prime habitat on a warm evening, especially if it has rained recently. They are a terrestrial snake and not good climbers. I have kept womas on deep sand which was wet and then allowed to dry so that it formed a firm substrate. Under these conditions, you can study the

way womas dig their burrows which is done by driving the tough tip of their nose (rostral scale) into the sand a number of times and then, by holding the head and neck sideways, scooping the loose sand backwards and out of the hole. In this way they can quite quickly excavate a burrow deep enough to hide in.

Unlike carpet pythons, womas do not have heat sensitive pits on their heads. This is no doubt a reflection of their burrowing habit and perhaps their taste for reptile prey. The well known scientist, Dr Rick Shine, did a study of the gut contents of a large number of Australian snakes using field caught and museum specimens. Whereas he determined only 14% of a carpet python's diet was reptilian he found that it was 48% for woma pythons.

Although all womas are grouped under the one species and little has

been done to split them into different taxons such as subspecies, like the carpet pythons and Stimsons pythons they can differ markedly in appearance across their range. A typical Tanami woma is a relatively small animal struggling to weigh more than 3 kilo and reach more than 1.5 metres in length. All the WA womas I have seen are similar to the Tanami womas except that they are often a bit darker and have a yellow belly, rather than the orange belly frequently found on the Tanami womas.

As you travel further south through central Australia, the womas tend to grow in size. Once into SA, they become quite large and sometimes equal in stature to a big black-headed python. I've seen specimens from the Moomba area which were a size that could only be described as massive with heads the size of a man's hand. These SA womas tend to lack the distinctive banding seen in other womas as they grow older and larger. However, they can exhibit lovely pale yellow hues and grey/fawn markings for those with an eye for natural beauty.

In contrast to the SA womas, as you travel west from Alice Springs along the MacDonnell Ranges and then out into the desert country, the womas become gradually darker with highly contrasted banding. While they tend to be a bit larger than the

Tanami/WA womas, they are a much smaller snake than those from SA. Another population has been described from the south-west of Western Australia much of which has been cleared for cropping. Judging from photographs, this form looks similar to the Uluru womas and may now be extinct, as it has not been seen for many years.

Our favourite womas are the Tanami womas from the Tennant Creek area and animals from the Uluru area of the MacDonnell Ranges. We have been focusing on developing the best of the very different traits from both areas – the golden background with thin orangey bands and bright orange bellies of the Tanamis and the bold even dark orange and charcoal bands of the Ulurus with mottled orange and black bellies.

Wildlife Laws

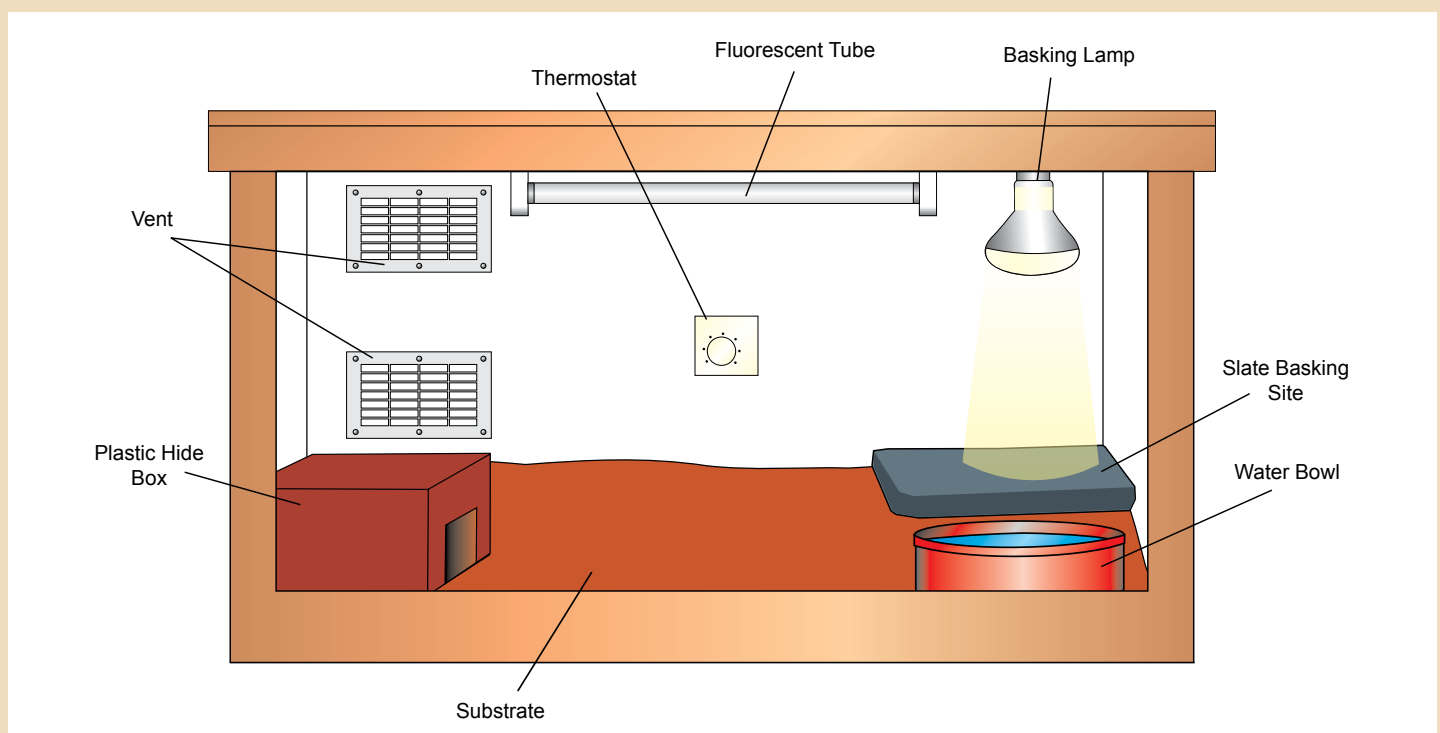
The relationship between the various State wildlife laws and woma pythons is worth mentioning for those interested in keeping them. Fifteen years ago, womas were very rare in captivity and the security of their status in the wild was even in doubt. Consequently, the wildlife authorities variously restricted their keeping. With the growing interest in our reptile fauna has come a realisation that womas are really quite common over many parts of their range.

Also, the efforts of dedicated reptile breeders have demonstrated that they are a hardy species in captivity and relatively easy to breed.

Today, in South Australia womas require no more than a basic Keep and Sell licence. In other states, there are a range of restrictions which vary from the requirement for a specialist licence to keep any at all through to a restriction on the number you can keep without a specialist permit and proof of your expertise etc. While I understand the origin of these restrictions, given the knowledge we have today they are almost laughable. Compared to a captive bred woma python, there is no python that accepts captivity better, is more hardy (when given daily warmth) and easier to feed. Certainly, they require less expertise than most Childrens or Stimsons pythons and are more relaxed than the majority of carpet pythons. I guess it's just a matter of time until the authorities catch up with the latest information and are satisfied that they are in fact an ideal captive animal.

Behaviour in Captivity

In my experience, the behaviour of captive womas is unique amongst pythons. Their antics can be quite amusing and so they are great fun to watch. When a woma is hungry and it thinks it is going to be fed, they get



(below)
The majority of captive specimens originally came from around Alice Springs or the Tanami desert in the Northern Territory. This picture shows typical young Tanami woma.



(left)
These pictures of young Uluru womas show the result of selective breeding by Southern Cross Reptiles with the development of the "Charcoal" and "Orange" forms.



(left)
As you travel further south through central Australia, the womas tend to grow in size and to lack the distinctive banding seen in other womas as they grow older and larger. However, they can exhibit lovely pale yellow hues and grey/fawn markings for those with an eye for natural beauty. Shown here is picture of womas from the Moomba area of SA.
Image: Paul Waring



excited and wriggle their tails madly. Most would call this caudal luring – which is the habit of some snakes to wriggle their tails so it looks like food and then as their prey approaches they grab it and the stalker becomes the stalked. But in womas, I think it is just pure excitement that drives the behaviour. I've watched GTPs caudal lure and their tail looks just like a worm as they hold it in front of their head to facilitate their ambush. Womas, however, will wriggle their tails so that it is nowhere near their head and then when really excited by food, they will bob their heads up and down like a male lizard on heat. This vigorous tail-wriggling trait can be quite loud too so that when I walk into our snake room I can hear the hungry womas all vibrating their tails like an orchestra of musical rattles. Female womas also do this when excited about a male being placed in their cage.

Previously, I've described how placid and laid back womas are in captivity. To my mind nothing comes close to a well trained woma. However, a hungry woma is an animal to be careful of and show respect. Because they are so relaxed around people,

they have no fear and since they come from an environment where times of plenty would be few and far between, they are enthusiastic feeders that shoot first and ask questions later. It is good to have a defined routine (place/time of day etc) when you feed your womas so no mistakes are made. Once they know food is not on offer they settle down to be dog tame.

Husbandry

Womas are a very hardy species in captivity probably because they come from the extremely harsh Australian desert environment. They can withstand large diurnal changes in temperature without problems. They love to bask and will heat themselves up to 35+°C before moving away from the heat. The basking site we provide our womas consists of an 75w infrared spotlight which shines onto a couple of pieces of flat slate (see diagram). This slate, which is about 35cms below the lamp, heats up when the timer switches it on at the beginning of the day and provides a heat source for some time after the heat lamp turns off. During the night, no heat at all is provided and we let the cage fall to the ambient room

level. Sometimes this can be as low as 10°C. However, for the five coldest months of the year we don't feed our womas and I won't feed them if the night time lows get much below 20°C.

As explained, womas are voracious feeders. When they are hungry and expecting food they have to be treated with respect otherwise mistakes will be made. Once they have reached adult size I have never owned or seen a woma that wants to bite out of aggression or out of fear. All their bites are related to food. When handling them, as with many species of python, it is a good idea to wash your hands and arms with a strong smelling soap so that errors of mistaken identity are avoided. While I would not rate their bite as a particularly bad one compared to other pythons, once they grab you they will not want to let go for a long time so it is an experience best avoided. Their insatiable appetite can be their undoing in captivity. People often find their insistent demand for food through their head bobbing and tail wagging behaviour irresistible and they overfeed them. In the wild, womas would rarely have access to prey all the time

and when they do feed, it would no doubt be very lean meat. Captive bred rodents carry a lot more rich fat than most wild prey and when fed in excess to demanding young womas they cause what I call fatty liver disease. In the early days when we were growing up our first womas, I was seduced by their craving for food and my desire to see them grow quickly and so I overfed a couple of youngsters. They showed no symptoms as they grew at a rapid pace until one day they just stopped feeding. Shortly after this, they started passing a dark green tar-like substance and shortly afterwards one of them died. The second one was given various treatments including cortisone injections and eventually appeared to get better. After three months of care and treatment, I gave her a very small meal of mouse which she took eagerly. The next morning when I checked on her, I found her dead. Autopsies on both these snakes showed large amounts of fat throughout the body and around a liver that was obviously very unhealthy. This problem of killing snakes by overfeeding them rodents rich in fat is also apparent to a lesser degree in black-headed

pythons. It would appear that the genus *Aspidites* (includes womas and BHPs) which are known to be reptile feeders are prone to this problem. As a matter of course, we are very particular about what we feed all our snakes, no matter what the species, and only feed them medium sized lean rats now. Not only does this keep our animals healthy, but we have found this practise also has delivered better breeding results.

As another word of warning, I strongly recommend that if you have more than one woma you house them singly. Their insatiable appetite does not make them ideal to house with any other snake. Even if they don't eat each other, the less dominant animal may be so stressed that it will stop eating and become unwell. The only time we put our womas together is in late autumn and winter after their feeding response turns off and their amorous desires turn on. Be careful of putting two male womas together too as they will engage in combat.

Breeding

Womas are not difficult to breed and in fact I would rate them as one

of the easiest snakes to propagate in captivity. All we do is to expose them to a spring-summer-autumn temperature regime of around 28/23°C day/night and then a winter regime of 23/14°C day/night. We feed the females weekly and the males fortnightly once the breeding room has been warmed up from mid-September through to late April when we start cooling again.

We start putting our womas together in May once they have been cooled and always put the male to the female. Usually the females become excited immediately and start wriggling their tails and bobbing their heads. Womas nearly always prefer to mate in the privacy of their hide-box and so it is important that their hide-box is large enough to accommodate both animals while allowing the male free access to the female. They don't mate for anywhere near as long as carpet pythons and so you need to keep a constant eye on them to catch them actually copulating. We have found that in the early evening and after a morning bask are the times when mating occurs most frequently. Consequently, we introduce the males in the late afternoon and when



Tanami womas mating. They don't mate for anywhere near as long as carpet pythons and so you need to keep a constant eye on them to catch them actually copulating. We have found that in the early evening and after a morning bask are the times when mating occurs most frequently.



A female Tanami woma lays her clutch of eggs loosely and then gathers them together for incubation. Notice we use artificial turf because the eggs won't stick to it.

we decide to separate them a couple of days later it is usually in the late morning.

Ovulation is the process that occurs when eggs pass from the ovaries to the oviducts of a fertile female and which then leads to fertilisation if viable sperm is present. In our womas it usually occurs at the end of winter. The females become restless, start to pace around and twist their bodies uncomfortably. As the unfertilised eggs move from the ovaries, they bunch up so that they form a large swelling in the upper region of the abdomen. From start to finish, this can take a couple of days and to the novice eye can look quite frightening as if their snake has eaten a small football or suffering some unknown gastric illness.

Following ovulation, a female woma will start seeking out more heat to help her eggs develop and as the laying date grows closer, she can be seen lying on her back more and more often while basking. Usually about 20 to 25 days after ovulation she will shed and then after some 22 to 29 days (average 27 days for us) she will curl up in her hide box and begin laying. Because we need to remove the eggs to incubate them, we place artificial turf in the box so that the eggs will not stick to the bottom as they do with wood, paper or plastic.

Egg Incubation

Womas usually lay around 7 to 10 eggs in a clutch (average for us is 8.3), although I've had some clutches as small as 4 eggs and some as large as 14. Their eggs are a little larger than carpet python eggs and a lot

more sensitive to the moisture around them. If you try to incubate woma eggs on a 50/50 vermiculite/water substrate mix, they will invariably absorb too much water, over inflate and then start to die. If you notice this happening, it is usually too late to save them. Some breeders use a 70/30 or a 60/40 vermiculite/water mix to overcome this problem. We have settled on using a 60/40 perlite/water mix. Perlite is another artificial substrate composed of siliceous rock which is used in various horticultural applications. It has the advantage that it breaths well and doesn't tend to wet the eggs as much as vermiculite.

We have tried many different incubation temperatures over the years and have finally settled on 31.5°C as ideal for womas. They will incubate down to 30°C and up to 32.5°C, but with increasing egg problems and

reduced hatchling fitness. It is better to err on the cool side than being too hot. We find that under these conditions woma eggs will hatch in about 54 to 62 days with 59 days (at 31.5°C) being ideal.

Care of hatchlings

Baby womas are a delight to keep and raise through to adult hood. My wife Diane is completely taken by them and likes looking after them more than any other snake. Most babies will start eating fuzzy mice without much trouble. Sometimes it's necessary to split the head of a fuzzy and wipe the contents onto the nose and face of the mouse to enhance the smell. In the worst cases, a few tufts of chicken down stuck to the head of the split fuzzy are necessary to trigger the most reticent feeders which will be few and far between, if the incubation went well.

One of the reasons Diane loves



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womas is that they are quite a “spunky snake” and will display all sorts of impressive, defensive behaviour while young. This includes rearing up, mouth gaping, tongue flicking and rapid undulations of the body to create a kaleidoscopic effect with their stripes. Almost without exception, this will be bluff and all that happens is they head butt you as a warning if your hand gets too close. Once they have been picked up, they rapidly settle down. You just need to remember that once they are tame, which they become very quickly with handling, they will become fearless and you need to make sure they understand the difference between being fed and being handled

Sexing Womas

Unlike mammals, male snakes have two copulating organs called hemipenes. The most common way to sex snakes is to insert a blunt probe into the hemipene pockets located below and to the side of the cloaca (i.e. bum) and measure the depth. This pocket depth is usually expressed as the number of scales (called sub-caudals) it reaches down the tail from the cloaca. This pocket only contains some glandular tissue in a female snake and so is shorter than in males. Consequently, the probe does not go in as far in a female as it generally does in a male which possess a hemipenis on each side of the cloaca. If you listen to conventional wisdom and look in the literature like Dave Barker’s book “Pythons of the World – Volume I, Australia”, you would expect a male woma to probe

8 to 12 subcaudals deep and the female only 3 to 4 subcaudals. After breeding and probing in excess of 500 womas I can say this is not my experience. Furthermore, I have found that in womas, as is the case with most pythons, the probe depths can vary with animals from different areas. Incidentally, this same finding was reported by Laurence Klauber when examining rattlesnakes in the USA.

Clearly if you want to breed womas, then you need to make sure that the sexes are correct when you put them together. The table on this page shows the results for two forms of Woma that I have bred over the last few years. The results are based on probe depths for over 100 womas.

Sexing Womas – Subcaudal probe depths for Tanami and

Tanami males	12-19 scales	Majority 14-16
Tanami females	3-10 scales	Majority 5-8
Uluru males	13-21 scales	Majority 16-18
Uluru females	4-11 scales	Majority 7-9

Uluru Womas

As you can see, males tend to probe quite deep and a lot deeper than females, although the depth is considerably more than conventional wisdom would have you believe. When I discussed this with Dave Barker in the USA, he explained that he had only checked about three pairs of woma from his own collection when compiling his book and that these were probably related which could explain the difference and consistency. One of the problems in probing womas is that once they get to any size they have strong muscles in their tails and both males and females are good at using this strength to restrict full insertion of a sexing probe. It is my belief that a lot of the trouble keepers have had when trying to breed womas is because they have placed two females together instead of a pair.

Future outlook

Because of their exceptional temperaments and their behavioural antics, my wife Diane describes womas as the Champagne of snakes and given her extensive experience with womas and bubbly wine, I guess she is somewhat of an expert. In 1990, I paid \$2,000 for my first woma and this price tag stayed with them for most of the next 15 years. Recently, breeding success has improved while wildlife regulations have lagged behind. One benefit of this is that the price of womas has fallen over the last couple of years in some cases to prices under \$1,000 so that they are similar to popular snakes like quality black and gold jungle pythons (which have worse temperaments than my previous wife).

I believe it is inevitable that the authorities will soften the wildlife regulations for womas, much as they did with Centralian pythons, and that these beautiful snakes will further expand their reach into the hearts of Australian herps. When this happens I expect the price of these snakes will increase again as they only produce small clutches compared to say the carpet pythons. Consequently, this period in herp history is probably a great time to indulge in a bit of python champagne, but beware they can be highly addictive.



Simon Stone (alias Doc Rock) began keeping reptiles when he was 8 years old. His nickname originated from Uni when he got his PhD in Biology. Simon and his wife, Diane, have worked together breeding pythons and goannas for the last couple of decades. Together, they now run Southern Cross Reptiles in Adelaide which specializes in breeding “top end” reptiles like the albino carpet pythons. Doc’s two greatest passions these days are developing spectacular new python variants and collecting books on reptiles.