NOTES ON ANTARESIA MACULOSA (SPOTTED PYTHON)

HISTORY OF SNAKES

The origins of snakes is poorly known due to the fact that snake skeletons are typically small and fragile, making fossilization unlikely. It is generally agreed that snakes descended from lizard-like ancestors. Recent fossil evidence suggests that snakes directly evolved from burrowing lizards, either varanids or some other close group.

Snakes have transparent, fused eyelids and no external ears. Modern boas have vestigial hind limbs present. They are tiny, clawed digits known as anal spurs and used to grasp during mating.

All snakes are carnivorous. They eat small animals (lizards and other snakes, rodents and other small mammals, birds, eggs or insects). Some snakes have a venomous bite which they use to kill their prey before eating it. Other snakes kill their prey by constriction and then swallow it whole, dead or alive.

TAXONOMY

Snakes are grouped in the class **reptilia** with lizards, turtles, crocodiles and tuatara.

Snakes are quite different from these other species so they are grouped in the order **squamata**, which only includes their close relatives the lizards.

There are four species of the group Antaresia. They all live in Australia. All of them are one of the smallest pythons in the world (the Anthill python is actually the smallest python in the world).

- **Anthill Python** - Antaresia perthensis
- **Children's Python** - Antaresia childreni
- **Stimson's Python** - Antaresia stimsoni
- **Spotted Python** - Antaresia maculosa

BACKGROUND OF SPOTTED PYTHON

The spotted python, Antaresia maculosa, is the largest member of the genus Antaresia. It a small python, with an average adult length of about 100-140cm.

It has an irregular, blotched pattern throughout its life. The blotches have ragged edges because the dark pigmentation occurs only in complete scales.

The species is characterised by the ragged edged, dark brown or black blotches on a lighter, brown background. The blotches can be separated or joined - forming a weavy dorsal stripe.

Spotted pythons live in a variety of habitats (eg rainforests, forests, grasslands, woodlands and rocky areas).

All Antaresia pythons are native to Australia. They occur from the tip of the Cape York peninsula in northern Queensland, down the coast on the east side of the Great Dividing Range, to north eastern New South Wales. They can also be found on several islands along the coast of Queensland.

Wild spotted pythons eat rodents, birds, lizards, frogs and bats. In captivity, they are usually fed rodents (ie mice and rats).

Antaresia maculosa is the most common species in captivity of all the genus Antaresia. It is one of the easiest pythons to maintain.

BASIC CARE

Keeping of any snakes requires setting up and maintaining a proper environment. Make sure the snake has:

- a water bowl
- hiding spot
- proper substrate
- proper temperature gradient
- proper humidity

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Regular feedings, usually once a week, will ensure the snake growth and health. The size of the rodent should not exceed the snakes girth, and smaller, growing snakes can take multiple smaller items.

The snakes will shed approximately once a month. It is recommended to mist the enclosure once a day. This will help the snake in shedding.

FEEDING

In the wild all Antaresia pythons feed on small reptiles (geckos, lizards) and amphibians. This is their preliminary diet when babies. Getting bigger, they will go for rodents and birds. They also eat bats.

In captivity, all Antaresia pythons are kept exclusively on rodent diet. Babies might have to be tricked to accept rodents by scenting techniques but all adults will eventually eat adult mice and small rats.

Feed them as much as they want, at roughly scheduled intervals. If the animal refuses to eat, leave it alone. Kept in the right conditions, they will usually refuse to eat only when in shed. Pregnant females will also not feed. Some male are too reluctant to accept food in winter. Don't worry if a snake refuses to eat. Give it time. Most snakes will have spells of fasting with no ill effects, and will eventually start feeding again at their own will.

All Antaresia pythons will go through the whole spectrum of adequately sized rodents. These will be small pinkey mice, fuzzy mice, hoppers and eventually adult mice.

Most adult Antaresia snakes will eat adult mice and small rats. Some will eat 2 to 3 adult mice at one setting. If you are planning on breeding your snakes, it is important to make sure that they are in a good shape. Don't overfeed them, but also you have to make sure that they, especially females, will have enough fat and energy to produce eggs.

SNAKE EGG CANDLING

The only method to make sure eggs are viable is **candling**. It is a simple and non-intrusive procedure.

It can be also easily done using a simple flashlight.

Make sure that the room where you do your candling is dark. Place the light against an egg. A viable (live, fertile) egg will show red veins inside. A dead egg will not show them.

Precautions when candling

- The light shouldn't be held against the eggs for too long. A couple seconds is enough for the examination. Light bulbs get hot and this heat could damage the embryo. Having a piece of cardboard wrapped around the flashlight will keep the source away from the egg.
- Don't expose the eggs to the bright light for too long. This too can affect the embryo and kill it. Some species are very sensitive to this.
- Always make sure that the eggs stay in the same position at all times. They should never be flipped over. The eggs position is easy to maintain when they are all stuck together in a mass. When having them separate, it is always a good practice to mark the top of the eggs with a pencil.

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In this shot the blood vessels are clearly visible and the egg is fertile. I incubated under the right conditions the snake should hatch after about 60 days.

HOUSING

Antaresia snakes live in rigid and diverse environments in Australia. They easily adopt to live in captivity. They are hardy and forgiving snakes.

They can be kept in naturalistic vivariums, with stones and branches, making them a pretty display animals. Equally they will lead long and happy lives kept in simple plastic storage containers.

Below are photos of simple yet successful set-ups for keeping any of the Antaresia group pythons happy and healthy all their lives.

Babies and juveniles can be kept in a small container with holes on the sides (use a soldering iron to make holes).

Adults can be kept on a rack system in a larger container. One hiding spot is OK, but it is better to use two (ie one on the cool and one on the hot side). Most of the time the snake will stay on the cool side. The female tend to use the hot side hide only when basking gravid.

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REPRODUCTION

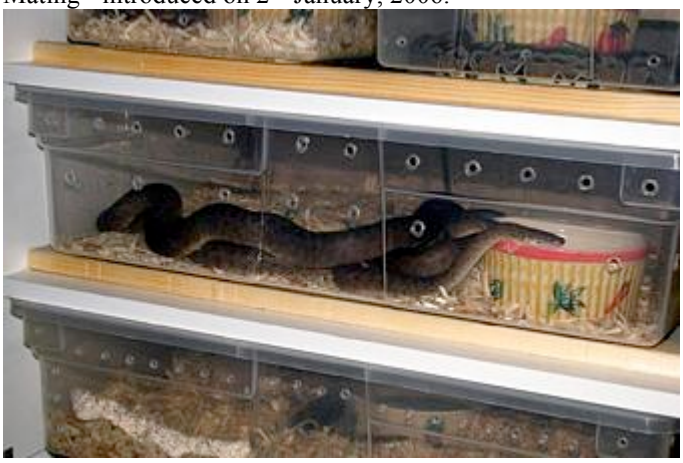
All Antaresia pythons are ovivaporous. This means they lay eggs, like birds. The eggs require time for the incubation. In nature, the mother python will coil around them and stay with them all the time until the babies hatch.

BREEDING

All Antaresia pythons breed basically the same way. They are not difficult to breed in captivity, and don't require cooling period. Some breeders lower the temperatures prior to the mating season, but a lot of people report it not to be crucial for these pythons successful reproduction.

Below is pictured the breeding cycle of a Children's python.

Mating - introduced on 2nd January, 2006.



Mating - close up.

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Basking in the typical inverted position.

More basking - this time with moist sphagnum moss inside.

More basking - this time some weird positions. This may be how the female manipulates the eggs making them ready for trouble-free oviposition.

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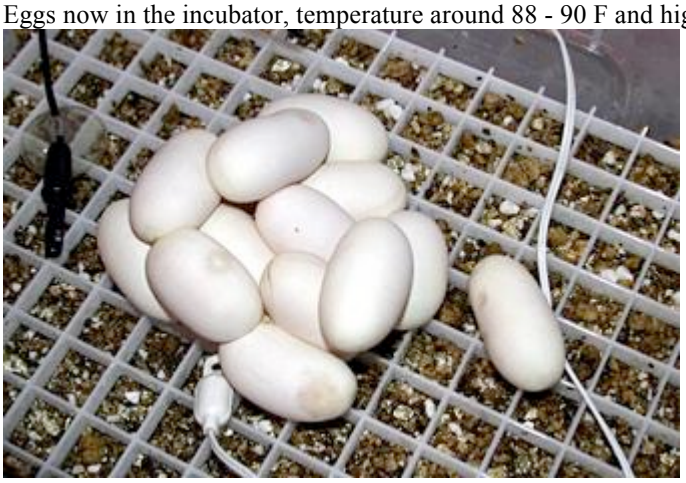
9th April, 2006 - 14 fertile eggs laid.

Eggs now in the incubator, temperature around 88 - 90 F and high humidity. They should hatch at the end of May.



The incubator - a 20 gallon insulated aquarium. Bottom filled with few inches of water, egg crate on a block of concrete to make a shelf for the container with the eggs. The temperature is maintained with a submersible aquarium heater with a thermostat and a simple pump installed for the water to circulate. The right humidity is maintained just by having the incubator sealed off. You can see condensation on all the walls at any time. Open it once a day to check on the eggs and let some fresh air in.

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Candling done to make sure all eggs are viable. You can clearly see the blood vessels in them.
Preform candling again in a few weeks to see the embryos developing.

The eggs dimple about 2/3rds into incubation. These started on the 11th May, which means they should hatch around the 23rd May (day 45).

22nd May, 2006 eggs are hatching.
The first egg pipped (see the slit in the egg in the middle of the centre of the egg mass). Although all the eggs have been obviously kept under the same conditions, perhaps the one in the centre had the most stable environment. You can see the little head poking from the egg. The rest should be emerging within the next 24 hours.

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23rd May, 2006 - the first snake left the egg.
Here it is, right after moving it from the incubator to the babies enclosure, in which all of them will stay till their first shed. By now 50% of the snakes have pipped through the shells. To help them a little, I manually pipped the rest of the eggs. All baby snakes should hatch by tomorrow night.

Pipped eggs waiting for the snakes to hatch. I used small curved scissors to pip the remaining eggs manually. You can see the little pythons inside the eggs. Whenever approached they try to hide by withdrawing back deeper into the egg. All 14 snakes seem healthy and energetic, which translates into 100% hatch rate.

25th May, 2006
All the pythons have hatched by now. There are 14 healthy babies. They all weigh 132 grams together, so it makes one to be about 6.5 grams. It took 44 days to incubate them and 3 days afterwards for all of them to hatch.

Pythons, like all other snakes, are “cold-blooded” (ie they can’t produce their own heat). As you would imagine, the conditions for a successful incubation have to be very specific. The humidity and temperatures have to be on the required level. Pythons are quite sophisticated animals as it comes to keeping taps on this. They will coil around the

eggs in such a way that the moisture will keep the eggs hydrated, and they will also use some very special techniques to keep the temperature at the required level. Some pythons will travel to warm spots, warm up and return to their nest to give the heat to the eggs, and some will shiver their muscles generating the required heat. This will leave the mother snakes quite exhausted after 3 or so months of fasting and taking care of the eggs. Although they don't follow up on the babies after they are born, mother pythons are very good mothers.

HATCHLINGS

Antaresia pythons hatchling are pretty small snakes. They are very active and cute sharply patterned miniatures of their parents. A lot of little baby snakes, including pythons, are quite aggressive at first. This does not mean they are just nasty snakes by nature. Such highly alert behaviour at this stage is to ensure their survival. As there are probably only 2 or 3 snakes form a clutch to survive to adulthood in nature, you can imagine that the "survival of the fittest" rule plays a big role here.

After feeding aggressively for a few months, the baby antaresia snakes calm down, and all of the subspecies are one of the calmest snakes out there, very easy and a pleasure to handle.

Most people will acquire baby pythons already feeding and established, which would make the snakes at least 2 months old. If your snakes hatched from the eggs, you have to wait until they come out of the shells by themselves. Most will have their yolk completely absorbed, but if there is still some of it visible and attached to their bellies, just move them gently to babies enclosure and leave them along in moist environment until the reminder of the sack gets completely absorbed.

The set-up for born babies in simple. You can use a small plastic container with a small water dish and few paper towels (used by the snakes as hiding spaces). The temperature gradient should be a bit on the high end of what is provided for adults (apparently it is easier to start them feeding this way, perhaps higher temperatures stimulate higher metabolism rate). Hatchlings can be kept together at first, keeping the cool end at about 85 Fahrenheit to 95 at the hot end. Some people reported their babies "miraculously" start eating when the temperatures rose to 100 - 105, but don't push the envelope too far.

The babies shed 7 to 10 days after being born (moisten the towels daily to help them get rid of the old skin). They still consistently absorb the reminder of the nutritious yolk stored in their bellies. It will last another week or two, and the first feeding attempt can be made 3 to 4 weeks after they have been born.

The Antaresia babies are small snakes. The appropriate starter food for them in captivity are new born mice ("pinkies"). Since their food at this stage in nature are small geckos and other tiny lizards or amphibians, some of the babies can be not interested in mice. They have to be tricked into eating mice by washing away all the rodent scent. It is also better to feed them dead pinkies instead of live because the movement of the live mouse can scare the little snake and stop feeding. A good practice is to scent the pinkies with a bit of gecko smell, using the shed skin for that. Some people reported starting stubborn Antaresia babies on stripes of chicken leg skin.

The enclosure set-up for them is simple. A small plastic box with holes for ventilation, paper towel as substrate, paper towel as hiding and a water bowl. There has to be also the temperature gradient available to the snake for thermo regulation, as with all the snakes. High humidity environment is not necessary.

As the snake grows, the paper towel can be replaced with aspen shavings, and a hiding space. Also use a heavy water dish so that the snake will not move it and spill the water.

The maintenance of any Antaresia python from now-on is simple. Just upgrade the size of the enclosure and the water dish and hiding space as the snake grows.

http://www.antaresia.com