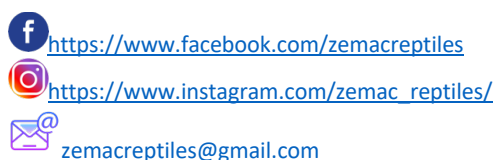




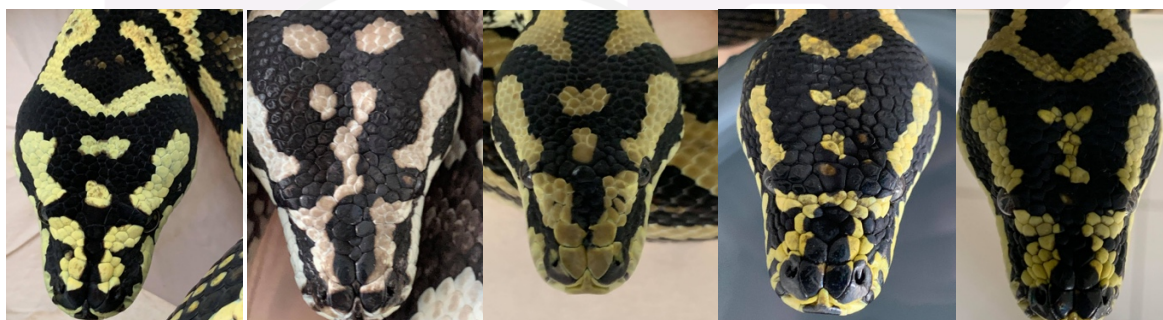
KEEPING & BREEDING THE JUNGLE CARPET PYTHON ZAC & EMMA DIXON: ZEMAC REPTILES



INTRODUCTION:

The Jungle Carpet python *Morelia spilota cheynei* is a relatively simple carpet python species to keep if their most basic husbandry needs have been accurately met. Whilst jungles do have a name for being one of the feistier carpet sub species in our experience temperament is down to the individual animal and not the sub species.

Jungles look different in the wild often being a mix of gold, grey, cream, brown in colour with black. Bright yellow specimens found in captivity all over the world today are the result of years of captive line breeding and yellow specimens of this bright colouring are a rarity in the wild. Jungles are found in far North Queensland and there are various locales within the hobby today. Accepted localities are Atherton tableland, Palmerston, Cowley Beach, Julatten, Tully & Proserpine. Jungles are known for their bold patterns and often dark fish netting around the sides, these are offset with a lighter colour to provide stunning contrasts. Jungles have distinct head markings setting them apart from others within the *morelia spilota* genus, This is a prominent line extending the side of the head through the eye, they also have a bold "blotched" head stamp atop their heads linked with fully or partial black nasal scales.



Typical Jungle head markings note the solid black line through the eye and the "blotched" markings atop the head.

There are also a range of genetic variations that have appeared within the reptile hobby that originated in Jungle lineage. Jungles are considered one of the smaller sub species of the *Morelia Spilota* complex and specimens will usually max out somewhere between 1.5m-2m however some larger specimens have been recorded and are usually from the Atherton locale.

Neonates of this sub-species do tend to like to wee, poo and bite their keepers until they get used to regular handling. However, like with other python sub species, most neonates will calm down with regular handling and getting used to their keepers.

HOUSING:

There are various ways to house Jungles and carpet pythons. If an enclosure is your preferred housing option for an adult Jungle carpet python than a minimum adult enclosure size is 4ftx4ftx2ft. Given jungles are a semi arboreal species and may be partial to climbing, if you would like to provide a larger or taller enclosure to enable your jungle to display this behaviour you are able to do so.

Enclosure materials can be woods such as melamine, form ply, plywood (if properly sealed to prevent water damage) other enclosure materials may be some plastics such as PVC. All glass enclosures we do not recommend as they do not hold heat anywhere near as efficiently as the beforementioned options.

Based on our experience jungles also do well in racking systems we house our adult Jungles in 80ltr bells tub racking systems. Racking systems are a personal choice and not for everyone so ensure you investigate what option is going to suit best for you and your animals.

For neonates an enclosure or large tub is not recommended. Aside from being an escape risk it also can cause a range of issues such as refusal to feed due to stress or developing at stress induced RI. When young, the simpler the set up the better, neonates thrive starting out in 5ltr tubs with roughly 10 holes at the front of the tub, (This is easiest achieved with a soldering iron, using a drill risks cracking the tub and thus rendering it un-useable)

Neonates or adults must never be housed together. Jungles are a solitary species that only come together to breed. There have been instances of adult animals co-habiting for years until one day something goes drastically and fatally wrong. Therefore, this is not a risk we recommend taking with this sub species.

Various substrates can be utilized for jungles such as but not limited to newspaper, paper towel & butchers' paper to more natural and aesthetically pleasing substrates such as coconut husk, coir peat, sphagnum moss, leaf litter etc

Substrates such as recycled kitty litter are not recommended unless vigorously cleaned regularly. Due to the absorbent nature of this type of substrate it can make it hard to spot clean efficiently thus leading to bacteria growing throughout the tub or enclosure that can lead to health issues such as Respiratory infection or scale rot. Whilst we have seen this substrate used successfully by some keepers, it would most definitely not be our recommended go to.

Snakes as a rule need somewhere in which they can retreat to in order to feel safe. As such it is imperative that suitable hide areas are provided, we place our hides at the hot end of our tubs/enclosures. This ensures our animals have somewhere safe that they are able to retreat to after consuming prey or where they can thermoregulate.

Snake hides in various shapes, sizes and designs are available from pet stores & online shops. Other cheaper options that work just as well are kitty litter trays or for neonate's plastic pot plant holders with no holes from Bunnings. Both options only require for a small entry point to be created and you are good to go.

For neonates it may sometimes be beneficial to place hide area at the hot and cool end of the tubs giving them various hide options to retreat to and making them feel safe. However, we have always found that one hide has been enough so adding another is down to personal choice.

For adults kept in tub set-ups one hide will suffice, however for adults kept in large enclosures providing multiple hide options would be preferable. This ensures that the animal can move around the enclosure but still able to retreat to a place of safety should they feel threatened.

Adult jungles housed in enclosures can be provided branches in which they can utilize for climbing and perching. If this option is preferred it is imperative that branches are securely fixed in place so as they cannot fall and injure your jungle. Screwing these directly into the sides of the enclosure are the best way to safeguard branches from falling. Make sure that there are no exposed screws or screw tips inside the enclosure that the animal can injure themselves on.

For neonates to perch we utilize plastic trellis available in roles from Bunnings and cut down to the desired size. Other options can be used, and we have seen plastic chop sticks, coat hangers etc being used as perching options.

Water bowls should be placed at the cool end of the enclosure/tub and regularly changed to ensure water does not go stagnant. For neonates we find that bird micro feeder bowls available from a pet shop near us work however other options are readily available. If the bowl has a flat bottom is stable and will withstand neonates crawling in and around it as well as being easy to clean.

For adults it is much the same principle. Pet bowls, ramekins etc make wonderful water bowls and all are easy to clean. We have found it's not necessary that animals be able to fully submerge themselves in their bowls. If you are concerned about your animal being able to shed unassisted a light mist of their enclosure every 2nd or 3rd day when in shed cycle will suffice. Another way to avoid possible shedding issues due to hydration is feeding wet prey or injecting prey with water before feeding.

Spot cleaning should be done as frequent as possible. If using paper towel or paper as substrate this should be clean as soon as possible after being soiled to stop possible health complications due to bacteria growth.

HEATING:

Jungle pythons are ectothermic meaning that they rely on their environment for heat. We as their keepers can provide this in many ways. Our preferred method is belly heat utilizing heat chords. These are available in various watts and lengths. What size you will need will depend on your individual set up. Heat should be at one end of the tub or the enclosure only. This is to provide a temperature gradient.

Lights are also a heating option and are usually utilized in enclosures by some keepers. This however is not a heating method we have ever used for our jungles.

For those starting out with a single neonate in a tub set up as discussed in housing. We recommend a 5w-7w heat matt placed **under** the 5ltr tub. This will heat the tub best if placed up the hot end (The end with no holes). For small animals only ¼ of the tub needs a heat matt the easiest way to ensure an appropriate hot spot is to place the hide over the section in the tub that has the heat matt under it. Due to the small size of the heat matt wattage we have not used thermostats with this kind of set up in the past and have had no issues. However, if using higher wattage equipment, a thermostat should always be utilized. We like the microclimate Evo light.

For adults we also place their hide in the warm end over where the heat chord will be positioned under their tub. Again, how much of the tub is covered by under belly heat is relative to the size of the tub. We however go by the general rule as to provide enough heat space to place the hide

over. This gives the animal an enough hot spot whilst also giving them enough room to get away from the heat should they choose. If using an enclosure, heat cord with a tile over the top and seal with aquarium safe silicone will do the trick.

A suitable hot end for jungles pythons should be between 30-34 degrees with your cool end between 26-28 degrees. The easiest way to keep an eye on your temperatures is to purchase a temperature gun this allows you to check your temperatures quickly and efficiently.



Jungle Carpet Pythons in the authors collection.

LIGHTING:

There is still some debate and speculation as to if jungle pythons need to be provided UV in captivity. We personally do not provide UV and never have. We have not run into negative effects thus far. Again, this is a personal preference if you chose to provide this option to your animals.

Any lighting placed in an enclosure should also have a light cage to stop your animal burning themselves.

FEEDING:

Jungles can feed on various whole prey items, such as rats, mice, quail, chicken, ducks & rabbits. We have also had success using chicken necks, chicken drumsticks (skin off) & turkey necks intermittently. We do not recommend piece feeding only, and a balanced diet including whole prey items is essential.

Neonates should not be fed on necks or drums due to the size of these food items and instead should be fed on an appropriately sized whole prey item.

Neonates should be fed weekly whilst growing, with feeding frequency being reduced the older the animal gets.

As a rule, once males reach approximate breeding size (600-800g) we drop their feeding down to once every 10-14 days. As oversized males can make for lazy breeders.

For females we are planning to breed we keep them on weekly feeds until they reach 1.5kg after this they will also be pushed back to only being fed once every 10-14 days. Just before the start of breeding season we may offer females smaller prey items more frequently hoping that they will assume prey is abundant and thus start going through the reproduction process. This is where chicken necks can often come in handy in conjunction with whole prey.

It is important to note that jungles can be notoriously hard to get off quails. Offer at your own peril! Variety is good however some jungles may refuse to go back to other prey items.

COOLING:

There are various methods that many different breeders use to cool their animals for the complex to the easy. We prefer to let mother nature take its course naturally and this method has thus far granted us success. We offer the same daytime and night-time temperatures for our animals year-round. Our daytime hot spot temps are as per those in heating section, and our night-time temperatures are the same.

Why do we not bother changing temps down by a degree here and a degree there over the weeks leading into the breeding season?

The answer is simple;

- 1: We live in south-east QLD this is the perfect climate in which to breed jungles.
- 2: We find that coming into the cooling season our females will move down to the cool end and start cooling themselves, we sometimes help the temperature drop in the room by opening the window. Ground-breaking we know!
- 3: With the window being open at night and the weather cooling down males will start a pacing behaviour and quite often will go off the food before females.

This method may or may not work in other parts of Australia however this is just what we have found to work for us.



Female Jungle Pythons Ovulating

REPRODUCTION:

Jungle's breed once a year, this reproductive cycle starts when the nights start getting cooler and the days shorter. We generally notice our females starting to cool themselves around May/June. Female's will still generally eat during this period however it is quite normal for males to start refusing food and to start a "pacing" behaviour in search of a female. During this time males can be prone to rubbing their faces on their tubs or enclosures trying to find a way out, it is worth being vigilant and trying to avoid any "rubbing" injuries.

Males should always be moved in with females and not the other way around when pairing jungle carpet pythons. New pairs should be closely monitored for the first few hours to ensure that pairs are going to get along and to ensure that snakes put together are in fact a sexual pair. There have been many instances of incorrect sexing and whilst 2 females may simply just curl up together, 2 males will combat, this can lead to one or both being injured if not separated.



Jungle Carpet Pythons Copulating

Before egg deposition females will go through a pre lay slough cycle, roughly 25 days after this you can expect your female to lay. Jungle clutches range from 6-28 eggs this is often dependent on the size and maturity of the Dam (Female).

We start pairing in June to allow pairs to get used to one another, with most breeding activity occurring in July and August. Egg deposition occurs anywhere from September through to November with the occasional clutch being laid in December. Once laid we prefer to remove eggs from the female and artificially incubate.

It has long been said that any eggs discarded from the female's coils will be "slugs" or infertile eggs. This has not been our experience sometimes mothers will accidentally discard fertile eggs that if incubated will go on to hatch. Slugs are most of the time easy to tell apart from fertile eggs as they will be smaller, oddly shaped and sometimes yellow in colour. Candling is another method that can be used to check if eggs are fertile. This method involves getting a torch and gently holding it against the egg whilst turned on to look for veins within. As pictured below.

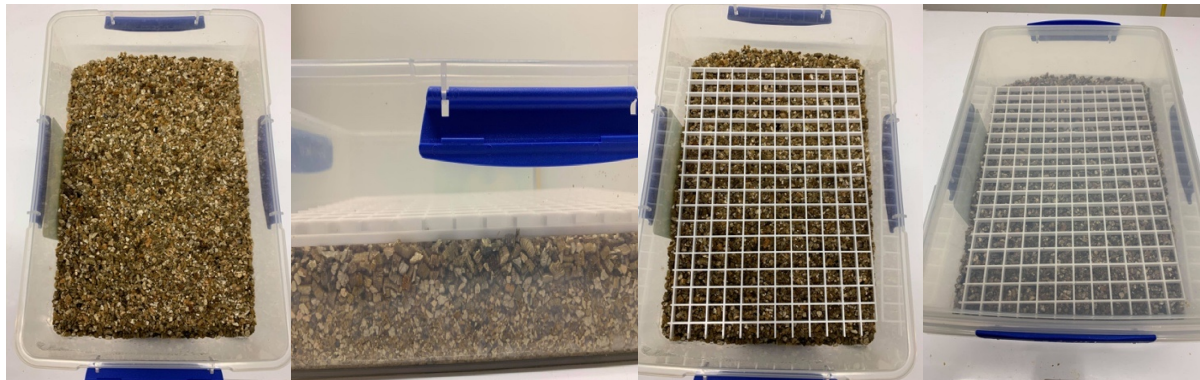


Far Left: Fertile egg being candled. Middle left: Fertile Jungle eggs with infertile eggs below. Middle Right: Comparison between Coastal carpet (Morelia Spilota McDowlei) left and Jungle eggs right. Far right: Female axanthic jungle coiled around a freshly laid clutch with 2 fertile eggs discarded outside of the clutch.

INCUBATION:

We incubate eggs at a higher temperature (32.5 degrees) as we find that neonates come out more robust and with better feeding response. At this temp incubation is between 50-55 days however on the odd occasion clutches may pip earlier or slightly later.

Our preferred incubation method is the suspended method. This method uses vermiculite (grade 3 or higher) water and egg crate/light diffuser. Our preferred incubation tubs are 7ltr plastic storage tub. Half fill the tub with vermiculite then add water until jelly like consistency (firm but jiggles) Place egg crate on top and you are set. We remove the rubber seal in the lid and do not put holes in our tubs.



HATCHING:

Once the first neonate has pipped, we proceed to cut all eggs and then place back into the incubator to allow neonates to absorb egg yolk and venture out on their own. We remove the vermiculite and egg crate and replace with a water bowl and paper towel.

We do not remove neonates from the egg sack, and this should not be done.

Once all neonates have left the egg, they are ready to be put into hatching tubs set up as outlined in housing. Hatchlings should be given a light spray daily until they have completed their first slough roughly 7-14 days after hatching.

Once hatchlings have completed their first slough feeding attempts can commence. We try feeding once weekly on appropriately sized prey such as a pink rat. Some neonates are voracious feeders and will start feeding with little effort on the breeder's part. Others are slow to start, and patience is required. It is important to note that trying to feed too often can stress young snakes and be counterproductive, some young may take months to start feeding and as long they are active and not losing condition this is not something to worry about.

We have found that we have better feeding results at night in the dark or right before a storm, and sometimes an impending storm is a good opportunity to try fussy feeders on a feed.

Some young may need to be assist fed or force fed to help their prey drive kick in. It is not advised to attempt this without being shown by an experienced breeder or vet.



Far left: The first signs of life! Eggs slit and neonates are coming! Middle Left: Twin Jungles taking their first breaths. Middle Right: Clutch of jungles after egg cutting. Far Right: It's mighty cramped in there! Twin jungles sharing an egg.

SELLING/BUYING:

When looking to sell hatchlings it is imperative to ensure they are fully established. This is not only the right thing to do for buyers but also the animal. Moving is stressful at the best of times and for neonates it is no different. An established hatchling should have had a minimum of 10 unassisted feeds, be shedding and defecating on its own.

We provide cards with all young sold with details such as hatch date, dam & sire codes, feed & shed records. This allows buyers to have a record since birth and allows breeders an easy way to note each neonates progress before sale.

Animals should have healthy looking skin devoid from pieces of old stuck shed, scale crinkling can be a sign of dehydration and buyers should beware of animals in this condition. Swollen eyes can be a sign of mites and mouth gaping with mucus inside the mouth can be a sign of respiratory infection or something more sinister.

Jungles can be quite vocal snakes and some like to "hiss" this should not be mistaken for an ailment and is just a typical jungle.



Healthy Jungle Neonates

We hope that this care sheet has been helpful and informative. We also hope that you get as much joy and fascination from these animals as we do.

Thanks for reading!

Zac & Emma Dixon

REPTILES