

# Annie, are you ok?



We love snakes of all kinds – big, small, tame, aggressive. It really does not matter. We see beauty where others often miss it, as in the case of the yellow anaconda, or 'annie', as these snakes are often referred to amongst enthusiasts. Many people feel that they are ugly, dangerous snakes with small heads, failing to realise they are different from their green relative.

Christian explains: "I think what attracted me to anacondas in general was not their notorious reputation, but rather, the shape of their head, coupled with their small eyes. So about 12 years ago, I acquired five imported yellows and five greens, which I grew on slowly. Meanwhile, I have purchased adult anacondas since then as well. Some of these have been tame, whereas others have not. I have since been successful in breeding both species for over six years now."

Sadly though, most people's introduction into the world of these marvellous animals is nowhere near as positive. There are famous films going back over 50 years, showing anacondas being caught and beaten to death, supposedly for eating cattle, although this is total nonsense. Before then, there were some appalling nature films made



Few snakes are as notorious as anacondas, based on the myths and stories surrounding them. But while the popular focus is invariably on the green anaconda, thanks to its large size, relatively little is heard about its smaller cousin, the yellow anaconda. Christian Castille and American breeder Dan Mulleary discuss the care of this smaller species.



in the 1930s where anacondas were captured and placed in arenas with jaguars, mountain lions and similar predatory species, in the hope they would fight each other.

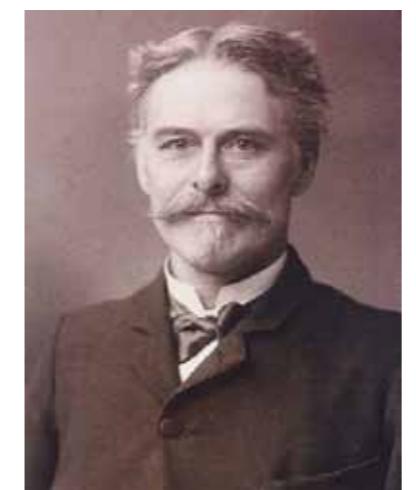
This type of "entertainment" (and I use that word loosely), only reinforced the idea of them as killer snakes. Even now though, if you speak to most non-snake keepers and mention that you have an anaconda, they are often under the illusion that only zoos could keep them.

This sort of thinking does not help the reputation of these snakes, but might this actually be a good thing? Are anacondas simply not suitable for most keepers and that much written about them, while not strictly in accordance with the facts, does have some element of truth to it? We will explore this theme throughout the article.

Taxonomically speaking, there are currently four recognised species of anaconda, with the best-known being the green anaconda (*Eunectes murinus*). It ranks as one of the largest constrictor snakes on the earth today, quite apart from being the biggest New World constrictor.

## Early experiences

The yellow anaconda was discovered and described in 1862 by Edward Drinker Cope, who was something of a maverick in the animal world. He didn't care much



Edward Drinker Cope (1840-1897) who was the first person to keep and study yellow anacondas.  
Source PD.

for rules or authority. He just wanted to discover as much as he could, as quickly as he could. He had almost no scientific training and very little academic background, yet he wrote over 1,400 scientific papers. He even has 28 species of animals named after him. He achieved all of this in less than 35 years of work, which nearly bankrupted him.

His funeral in 1897 was attended by both fossils and his pets, which then consisted of a tortoise and a gila monster – one of the few venomous lizards in the world. Cope kept many reptiles, being enlightened enough to believe that reading a journal or looking at an animal in the wild was not sufficient to understand it. Instead, you had to study it personally at close quarters.

Not only did Cope keep 11 yellow anacondas, but he was probably the first person in the world ever to breed them. He also discovered that they were only semi-aquatic and did not actually need to be in water to survive. Yet in spite of his observations, these snakes tended to be kept in aquatic surroundings many more years. Cope's original writings, specimens and papers about these snakes are stored in the archives of Academy of Natural Sciences of Philadelphia. I am very thankful to the University of Toronto for helping me to track down the documents.

The first yellow anacondas were discovered in Bolivia by a person known only as M. Suarez. Cope shortly then travelled to South America himself, in search of these snakes, locating them in Paraguay and writing the first formal description of them.

## Why keep anacondas?

Trends in snake breeding have altered over recent years, becoming narrowed down to be easy, or to make money – or both. For most serious hobbyists and full-time professional breeders, the days of working with species that are

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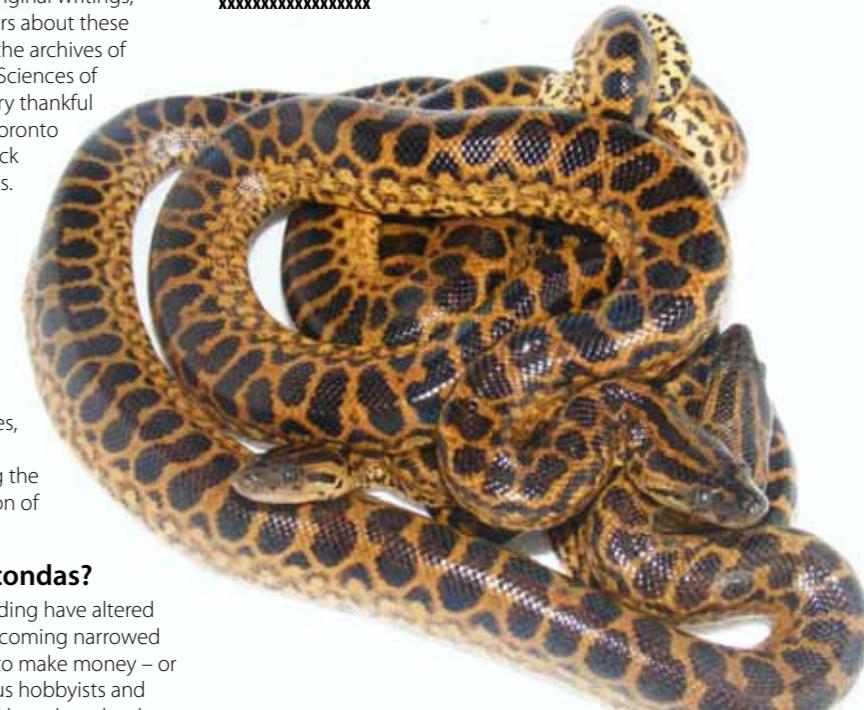
The green anaconda has the largest girth of any snake. It can also exert a crushing pressure of around 90psi (pounds per square inch), which equates to around 4000kg (8820lb). This can be compared to a coach pressing down on top of your chest! Both *Eunectes deschauenseei* and *Eunectes beniensis* are reported to be quite similar to the green anaconda and their taxonomic status is not entirely clear. The yellow anaconda (*Eunectes notaeus*), however, is quite different and very distinctive.

uncommon in collections or even essentially unknown seem nearly over. Of course, decades ago, captive breeding was just becoming established, so back then, everyone was a pioneer of sorts.

There are, however, some of us that prefer to invest time and money into those species that we work with because they present a challenge or we truly enjoy working with them. Yellow anacondas are one of those snakes that are not only small enough to be suitable for keepers who do not have a massive amount of room, but also substantial enough in appearance to appeal to big snake keepers as well.

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### US restrictions

However, anacondas are often just grouped as one single entity by the media, and when you have a trilogy of horror films released entitled *Anaconda* which feature celebrities and where the storyline is about these giant snakes hunting people down and killing them, it is no wonder that they generate such negative headlines.

Sadly, the yellow anaconda is surrounded with tales of nonsense. It is often said their maximum size of just 1.5m (5ft), which is of course not true. Many reports suggest they are capable of killing a human, but in fairness, this could apply as far as infants and young children are concerned. A yellow anaconda would not be capable of overpowering an adult on land.

On March 23<sup>rd</sup> last year, the United States Fish and Wildlife Service added four constrictor snakes to the *Lacey Act*. Basically, this meant that these species could no longer be imported into the country or moved across state lines. Dan had

previously seen some photographs of morph yellow anacondas a few years earlier, and they had really appealed to him.

They remained on his "wish list" for quite some time, but as word spread that this new law was going to be enacted, he felt that he had to get some into his collection from out-of-state before moving them constituted a crime. He was able to find two female patternless yellow anacondas and a male granite from a couple different dealers, and got them shipped to him in time. He also added some normal females, to complete his small breeding colony.

### Distinguishing features

The distribution of these anacondas includes Brazil, Bolivia, Paraguay, Uruguay, extending as far south as northern Argentina, and they are listed



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▼ Patterning of a yellow anaconda, seen in close-up, reveals.



on Appendix 2 of CITES. With the further human encroachment into their habitat, it means their numbers are likely to decline further in future.

They are valued by local people through their range for their leather and as a source of food, with their bones and body organs featuring in potions made by shamans (witch doctors).

Yellow anacondas can reach adult lengths of 2-3m (6.5-10ft) in the case of males, while females may grow to over 4m (13ft). This makes them roughly the same size as larger subspecies of the boa constrictor. Their patterns are bold and very heavy, compared with the green anaconda and their base colours can range from green to yellow.

Their body shape is quite similar among all members of the genus, as is their basic husbandry. These snakes can be kept on various substrates as well as paper, provided it does not remain damp and wet. While anacondas have the reputation for being aquatic, they do share their time between water basins and dry basking areas, and it is vital to provide both in their quarters.

### Their aquatic environment

The issue that has risen over the years is that while they do still need somewhere to hide within the water, too often those keeping them simply do not get it right and the snakes end up dying. The reason is that they are very susceptible to infections from bacteria that will multiply in the water.

Offering them areas of dirty water to sit in, where they will defaecate and even

feed is just really bad for them. This can result in the premature death of these snakes, which is much more common than it should be.

If a swimming area is to be offered, then it needs to be emptied regularly and must be filtered as well, to remove their faecal matter without delay. The other alternative is to provide a smaller area where they can immerse themselves, but can be emptied out and disinfected regularly, just like a typical water bowl. A dechlorinator/water conditioner should be added to the water.

I have found that paper is not a good substrate, because as the snakes move in and out of the water, this eventually becomes damp and must be changed before it starts turning mouldy. Cypress mulch (or a similar type of bark) is my preferred substrate for use with anacondas as it tends to be able to absorb water and dry out without breaking down or becoming mouldy.

These snakes will soak themselves for days sometimes, and they will defaecate in the water so be prepared to carry out frequent water changes. I would add that the demeanour of yellow anacondas ranges from docile to defensive, and I still have problems trusting even my most calm specimens.

One thing that I have learned is the benefit of using plastic tubs for water basins. If I need to spot clean or do a full cage breakdown, I will wait until the animal is soaking in the tub. It is at that time that I slide the lid on top of the tub and secure it while containing the snake inside. I can then work inside the cage without the risk of getting bit or stressing the anaconda in the least.



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## General housing and care

The type of set up required for yellows does not need to be anything sophisticated though. All of ours are kept in 1.5x0.6m (5x2ft) vivariums as adults, with hatchlings, juveniles and sub-adults being accommodated in our racking system units. Décor can be as basic or as elaborate as you like, but do remember that these are heavy-bodied snakes that will quickly destroy their enclosure.

For this reason, I keep things very basic, providing just an area of water plus a hide and sometimes, I offer PVC guttering pipes as perches, because despite their aquatic life style, they have extremely prehensile tails and do like to climb quite frequently.

While I do not find the need to monitor humidity within my particular set-ups, I would advise maintaining it at 60%-80%. I provide a warm basking area of about 32°C (89°F), with the ambient temperature in my room being about 27°C (80°F), although this is affected by outside temperatures, reflecting the changing seasons.

Anacondas feed on mammals like most boids, so the common food items are readily accepted. These snakes have healthy appetites and do not seem prone to regurgitation issues like some other New World boas, such as the boa constrictor itself, when offered large food items. Ours are fed every four weeks as adults on medium rabbits, while babies can be fed the same way as typical boa constrictor, being given small mice upwards every 10 days.

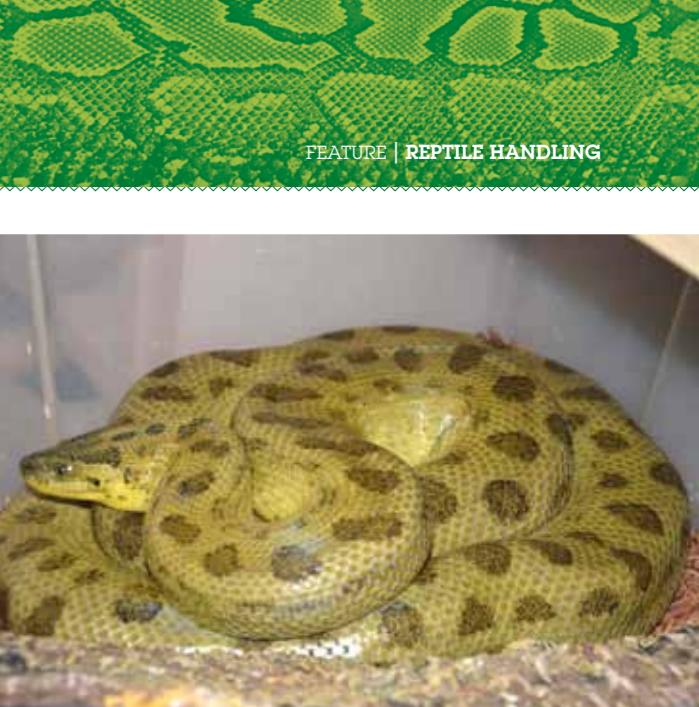


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## Did you know?

These snakes have a potentially long lifespan. The oldest individual in a collection was 38 years old when it died, but their typical life expectancy will be closer to 20 years.



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Unlike a Burmese or reticulated pythons, green anacondas generally have a very slow growth rate, taking upwards of 10 years to reach their full adult size. Yellows, however, do mature slightly faster, and can attain full size by six years of age.

### Reproductive peculiarities

A feature of anacondas shared with no

other known snake is the location of their reproductive organs. Although these are positioned in the same part of the body, they are located much lower, which is apparent when probing this species.

With other snakes, you roll the ball-tipped metal lubricated probe into one of the two entrances where it will either enter the scent sacs of the female or the hemipenes of the male. With anacondas however, you must enter at a lower angle.

This art is very hard to learn, and it is vital that you are shown how to sex these snakes safely, by an experienced anaconda keeper. Otherwise you are likely to cause serious internal injury and even death with a misplaced probe.

Males will start breeding at only 18-24 months of age, and females can reproduce for the first time at four years old. I have witnessed mating both in and out of the water, but more prolonged courtship and copulation tends to take place in the aquatic environment.

Anacondas produce live young after a gestation period of approximately 4-5 months. Captive breeding of this species is not often discussed, but it is quite feasible, and these snakes are bred regularly in the UK, and even more frequently in the USA. The main countries, however, for anaconda breeding are Germany, France and Spain.



### Conditioning

The process is not actually that difficult. Some people recommend adjusting the photoperiod, whereas others say brumation is required, but to be completely honest, I've found that simply misting them is adequate. This provides a means of replicating the natural rain cycle that occurs during the wet season between April to October in their natural habitat.

I mist them between April to June. Mating tends to take place in a large, deep container of water and lasts for around seven hours. After courtship has been successful, the male will become restless and loses interest in his partner. He can then become aggressive towards

the female, so he should be removed at this stage.

Females tend to stop feeding, and I then expect babies produced between October and December, which is always exciting as many of my reptiles do not produce during this time and it is always good to have neonates. The female will have a "prelay" shed about 37 days before she gives birth.

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The young tend to be born in water, so you will know when she has produced her young as your nose will notice before your eyes do, as soon as you go into your reptile room. That's pretty much all there is to breeding these anacondas, but obviously your animals must be in good condition and must, of course, have been sexed correctly at the outset.

### Rearing

"Neonates have a reputation for being hard to persuade to feed, but I've never found this to be an issue," says Christian. "As soon as they are born, I remove them from the vivarium and separate them on to damp kitchen towel, where they will absorb the remainder of their yolk sacs.

"They will stay like this for around a week, and then are put into tubs in hatching racks on coconut chippings, which are basically bark. I add a small tub of water for them to immerse themselves in, and they will use this extensively. At around five weeks old, offer a rat pup (bearing in mind that these snakes do not have fast metabolisms and so you do not want to feed them too soon). This may well have to be offered in the water bowl.

"On any occasions that I do encounter a youngster that is reluctant to feed, I add a guppy into the water bowl. From this stage onwards, getting them to eat rodents is easy. Simply add the dead rodent to the water, along with an oxygen tablet, as sold for fish.

"The resulting bubbles that rise give the floating rodent some momentum,

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If you are interested in breeding these snakes though, please do remember that the average litter size is about 30 babies. They are not highly desirable snakes at present, so please try to be sure that you will have good homes for any surplus individuals beforehand.

## A growing number of morphs

There is likely to be additional interest in anacondas though, with the emergence of various colour morphs. Originally, the focus was on the green anaconda, with albinos being produced; even hognose snakes morphs are named after them!

But now morphs of the yellow anaconda itself are becoming increasingly common, thanks largely to Ben Renick who has been producing them for nearly 20 years. They can be distinguished as follows:

**The axanthic yellow anaconda** has a very brilliant background silver colour, combined with an almost faded side leopard pattern.

**The hypomelanistic yellow anaconda** has amazing fading and colouration. Hypomelanistic simply means that the animal has less black/brown colouring than that of the wild type.

**The marble yellow anaconda** is a fairly new and very exciting trait. This snake's background is a solid, bright neon yellow, and it also has solid black ovals extending down the back.

**The patternless yellow anaconda** has very muted patterning, as its name implies. Every one of these snakes has different markings has different markings. Rumour has it that the patternless yellow anacondas were first bred by a zoo in Europe and then passed into the hands of private collectors.

It was also thought that the trait would be a typical dominant/co-dominant trait, but information is not being freely shared among the handful of breeders working with this morph. Patternless anacondas have been produced and proven to be a genetic mutation, but so far, based on the information available, their mode of inheritance has seemingly not followed an established pattern.

**Granite yellow anacondas** are very similar to granite Burmese in terms of appearance, with a mismatch of broken patterning extending down the length of its body. It not been able to track down the origins of this morph. In genetic terms, it is said to be the result of a simple recessive characteristic, but we have not been able to find actual evidence to this effect.

**The ghost yellow anaconda** is regarded as a leucistic form that lacks virtually all dark pigment.

**An albino yellow anaconda** has also been produced in Germany, and was displayed at last year's Hamm reptile show, but nothing else is known about it at present.



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which in turn gives the snake the impression that it is alive. Feeding in the future should then be straightforward."

### Temperament matters

The odd thing with anacondas is you seem to get two types – nice ones and nasty ones! It's not like other snakes that you can accustom to being handled over time. In this case, you can't change their temperaments, and this will be apparent from very early in life. Some will persist in striking repeatedly at you, while others will let you pick them up.

There has been a lot of discussion about this, and it is often said that the 'tame' individuals would generally not survive in the wild. Whether this is true or not is a matter for conjecture. Studies suggest that only one out of every 10 of this predatory species will make it through to maturity – equivalent to three members of a typical litter.

It is often the case that snakes that have been given a bad reputation may not deserve it. This is different situation though, because while you can get some beautiful and ever so docile yellow anacondas, they are few and far between.

These are snakes could potentially cause you harm, especially if you are careless. They are fast and unpredictable and to be honest, are not to be recommended for many keepers. They deserve respect, and in turn, can be highly rewarding to keep, but do not

even think about acquiring them to boost your ego. Much is made of their name.

Dan and I have over 20 years experience of keeping and breeding these snakes between the two of us. We simply say just think very hard before purchasing one. They can be the best move you ever make; they can also be your worse. ♦

## Hybrids too

Three hybrids are documented, based around the following crosses:

**Green anaconda x yellow anaconda.** These are produced every now and then, and display features typifying both parents. The two lovely colours are mixed together, making for relatively unattractive colouration in their offspring though.

**Brazilian rainbow boa x yellow anaconda.** This cross arose during the 1980s in a pet shop in Sweden. Only one baby was produced, and it survived into adulthood. It was shipped over to America and sold through Tom Crutchfield, with nothing more having been documented about it.

**Common boa x yellow anaconda.** This third cross arose in a London pet shop last year. Eight babies were born and they were offered for sale at £4,500 each! Neither the shop nor the owner wanted to be named in the sale, so an alias was used. The snakes themselves had a boa's head, combined with bold anaconda colours, but instead of spots, they had stripes that ran in three rows, covering the body.

