

THE GREEN ANACONDA *EUNECTES MURINUS* (LINNAEUS)

By: Pete Strimple, 5310 Sultana Drive, Cincinnati, OH 45238, U.S.A.

Contents: Historical - Description - Scalation - Subspecies - Range - Habitat - Size - Longevity - Food - Habits - Reproduction - Attacks on man - References.

* * *

HISTORICAL

The green anaconda was first described by Linnaeus in 1758 as *Boa murina*. The type locality given by him at this time was simply 'America.' It wasn't until 1830 that Wagler erected the genus *Eunectes*, and designated Linnaeus' *Boa murina* as his type species. The name *Eunectes* comes from the Greek word *Eu* - meaning good, and *nectes* -meaning swimmer. The specific name *murina* (now *murinus*) is Latin for mouse-gray (color). This probably refers to the coloration of anacondas (especially when they are opaque), or to the coloration of the lining of the mouth, which is typically light to dark gray. Currently, two subspecies of *Eunectes murinus* are recognized; *Eunectes murinus murinus* (Linnaeus), and *Eunectes murinus gigas* (Latrielle). These two trinomial names were formed by Dunn & Conant in 1936, however, the subspecific name of *gigas* was actually first used by Latrielle in 1802 in his binomial *Boa gigas* from Guiana. Therefore, Latrielle is credited with the subspecies *Eunectes murinus gigas* (Latrielle), and this is why his name follows the trinomial. The word *gigas* is Greek for giant.

Note: In addition to *murinus*, the genus *Eunectes* contains three other species: *Eunectes barbouri* Dunn & Conant 1936, *Eunectes notaeus* Cope 1862, and *Eunectes deschauenseei* Dunn & Conant 1936.

DESCRIPTION

Green anacondas are large, heavy bodied snakes with a head that seems somewhat small compared to the size of the body. The nostrils, located at the tip of the snout, are directed upwards, thus allowing the snake to remain almost completely submerged when it is laying in the water, waiting for prey.

The ground color of these huge snakes is typically olive, but can be olive-brown, olive-gray, or even bluish gray. The dorsal pattern consists of two series of dark olive to black colored spots that are usually rounded. Quite often these spots run together forming a pattern that is a mixture of both spots and crossbars.

The head is marked on each side with a postocular stripe that extends from behind the eye, to a point above the angle of the jaw. This stripe can be the same color as the ground color or it may be a noticeably lighter orangish color. It is bordered both above and below by a narrow dark stripe, with the lower stripe extending past the angle of the jaw. The upper dark stripe extends, to a varying degree, to a point in front of the eyes, thus forming the apex of a triangle.

The throat is usually yellow or yellowish-gray, with some mottling of gray coloration. The ventral surface of the body is normally yellow or yellowish-orange, occasionally fading to a pinkish or orangish gray color posteriorly. Scattered over the ventral surface are small black flecks or squarish spots, with the heaviest concentration along the outer edges of the ventral scutes, and on the tail.

Laterally, there is a secondary series of black spots that are smaller than those in the primary dorsal series. The secondary markings are usually enclosed around or bordered below by blotches of yellowish-orange coloration. There is also a varying amount of yellow coloration on the first few scale rows that is an extension of the ventral surface color.

SCALATION

Eunectes murinus typically has between 55-80 scale rows at mid-body, Peters (1970, 114).

SUBSPECIES

The two subspecies of *Eunectes murinus* that were discussed in the historical section are not easily identified from one another. The nominate form, *Eunectes murinus murinus* is generally larger in size, and has a lighter green ground color. *Eunectes murinus gigas* has a smaller adult size (females can be gravid at lengths under 3 m) and the ground color is a dark olive. Peters (1970, 114) separated these two subspecies by the color of the postocular area that is the same color as the ground color of the body, when *Eunectes murinus gigas* has a postocular area that is 'markedly lighter than the ground color of body.' This does not seem a very consistent character as personal observation by myself and Louis Porras (pers. comm.) has shown the opposite to be true.

RANGE

Another factor used to separate the subspecies mentioned above is their range in South America. The northern subspecies, *Eunectes murinus gigas* is found in Ecuador, Colombia, Venezuela, the Guianas and on the island of Trinidad.

The nominate form, *Eunectes murinus murinus* is a southern form being found throughout the Amazonian drainage in Peru, Brazil, and northern Bolivia. Neither subspecies, however, is found west of the Andes Mountains.

HABITAT

Anacondas are seldom, if ever, found far from water. They inhabit large and small streams and rivers, swamps (a favorite haunt), lakes (with dense vegetation), and flooded forests. Anacondas generally prefer sluggish and murky streams and rivers over those that are fast flowing and relatively clear. In some areas, such as the dry lowland areas in South America, *Eunectes murinus* is also found. Rivero-Blanco & Dixon (1979, 289-290) attributed this to the 'abundance of surface water six to eight months of the year, or because of prey associated with abundant moisture.'

SIZE

The maximum length attained by *Eunectes murinus* is a point of debate among herpetologists. For many years the length of 11.5 m was generally accepted as the maximum for this snake, or any other. This seemingly reliable record was taken from a specimen from eastern Colombia. Minton (1973, 191-192) and Pope (1961, 154) provide accounts of the events surrounding the measurements of this specimen. As the story goes, Roberto Lamon, (a petroleum geologist) and his prospecting party shot an anaconda in the Upper Orinoco River area of Eastern Colombia. The snake was measured with a surveyor's tape, and a length of 11.5 m was given. The men then supposedly left for a while, and when they returned (to skin the snake) it was gone. There are other seemingly reliable records of anacondas over 9 m in length, including one described by Minton (1973, 192) of a specimen measuring 10.25 m. It was killed on the Guaviare River in Colombia. Many herpetologists nowadays, disregard these measurements, for one reason or another, and give the anaconda a more conservative maximum length of 9 m. This then would place the anaconda records behind the reticulated python of Asia, which has a maximum length of 10 m.

Regardless of what maximum length is attributed to *Eunectes murinus*, there is no doubt that when bulk is considered, the anaconda is the largest snake in the world. Ditmars (1931, 35) refers to a specimen that was the largest ever procured by the New York Zoological park. This snake was 5.7 m long, had a 91 cm circumference, and weighed 107 kg. Specimens that are 6 m and one can easily weigh 136 kg, and at 7.6 m an anaconda could weigh as much as 181 kg or more.

LONGEVITY

Anacondas have been known to fare rather poorly in captivity, as many specimens don't reach the 10 year mark. Under ideal conditions, however, they can live for 15-20 years or more. The maximum longevity for *Eunectes murinus* was given as 28 years by Bowler (1977, 19). This specimen was in the collection at the National Zoo in Washington, D.C. from August 17, 1899 to August 26, 1927, a period that was actually slightly in excess of 28 years, Pope (1961, 168).

FOOD

Eunectes murinus feeds on a large variety of animals including mammals (deer, peccaries, capybara, tapirs, pacas, agouties, etc), birds, reptiles (turtles, caimans) and even fish. There are records of prey animals weighing 45 kg or more, but this is not the normal sized prey taken by anacondas.

HABITS

Anacondas are primarily nocturnal animals, often laying in or near the water, waiting for small animals to come to drink. This prey is usually pulled into the water and drowned, or constricted on the bank at the water's edge.

During the day these large snakes can often be found laying up in the branches of trees that overhang the water. This provides a suitable basking site as well as a quick means of escape into the water to avoid danger. It also provides a vantage point for the anaconda, as many prey animals are active at this time.

Young *murinus* do fall prey to large cats, caimans, and predatory birds, but the larger specimens have few, if any, enemies except man.

REPRODUCTION

Reproductive data for wild anacondas is somewhat scarce. There are records from Trinidad of breeding during December and January, and parturition during July and August. There are also records of parturition from British Guiana during January, and from Ecuador during February and March. Strimple (1986, 5-9) gives a detailed account of captive reproduction in this species.

Female *murinus* give birth to an average of between 20-40 young, although broods of 50 or more have been recorded. The record brood is one of 82 young which were removed from a female through caesarian section. Eight of these young lived (Belluomini & Hoge, 1958, 187).

At birth, young anacondas range in size from 50-96 cm, with the average being about 76 cm. The young are patterned like the adults, but they are sometimes more of a brownish-green color. This color, however, fades to the more typical olive ground color after the first couple of sheds.

ATTACKS ON MAN

Hardly any conversation about anaconda (as well as the other large constrictors) is complete without a question or statement made about their attacking man. In the literature there are numerous reports of anacondas attacking and killing humans, most of which can be disregarded for lack of evidence. There are two accounts, however, that I feel are worth mentioning. The first account, and probably one of the most widely told, is that of a 13-year old boy who was swimming at the mouth of the Yasuni River (a tributary of the Napo River in northern Peru). The report states that the boy disappeared while swimming with friends. When one of his friends dove down to reach for him, he felt what he thought was an anaconda. A day or so later, after searching for his son, the boy's father found a large anaconda lying partially in the water. Supposedly the snake had disgorged the boy, and was shot and killed.

The second account is of a man who was attacked and pulled into the water while he was watering his cattle. The end result of this encounter was drowning.

Pope (1961) and Minton (1973) review various other accounts of attack on humans by the anaconda, as well as some of the large pythons.

REFERENCES

- Belluomini, H.E. & A.R. Hoge, 1958. Operacao cesariana realizada em *Eunectes murinus* (Linnaeus, 1758) (*Serpentes*). Mem. Inst. Butantan, 28: 187-194
- Bowler, K.J., 1977. Longevity of Reptiles and Amphibians in North American Collections as of 1 November, 1975. S.S.A.R. Misc. Publ. Herpetological Circular No. 6, 1-32.
- Ditmars, R.L., 1931. Snakes of the World. The McMillan Co., New York, 1-205, 87 plates.
- Fitch, H.S., 1970. Reproductive Cycles in Lizards and Snakes. Univ. of Kansas, Mus. Nat. Hist. Misc. Publ. 52: 1-247.
- Minton, S.A., 1973. Giant Reptiles. Charles Scribner's Sons., New York, 1-345.

Peters, J.A. & Braulio Orejas-Miranda, 1970. Catalogue of the Neotropical Squamata: Part I. Snakes. Bull. U.S. Nat. Mus. #297: 1-347.

Pope, C.H., 1961. *The Giant Snakes*. Alfred Knopf, New York, 1-290 pp.

Rivero-Blanco C. & J.R. Dixon, 1979. Origin and Distribution of the Herpetofauna of the Dry Lowland Regions of Northern South America. In: Duellman, W.E. (editor) *The South American Herpetofauna: Its origin, Evolution, and Dispersal*. Mus. Nat. Hist. Univ. of Kansas. Monograph No. 7: 281-298.

Strimple, P.D., 1986. Captive Propagation of the Green Anaconda, *Eunectes murinus murinus* (Linnaeus). *The Forked Tongue*, (Newsletter of the Greater Cincinnati Herpetological Society) Vol. 11, No. 6: 1-12.

N.B.: This article has been published earlier in *The Forked Tongue*, Vol. 11 (7), 1986.