

A 3D Model Set by Ken Gilliland

#### **Nature's Wonders**



#### **OF THE WORLD - VOLUME 2**

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#### **Nature's Wonders**



#### **OF THE WORLD - VOLUME 2**

#### Introduction

Snakes are found on every continent except Antarctica. They are elongated, limbless reptiles of the suborder *Serpentes*. Many species of snakes have skulls with several more joints than their lizard ancestors and relatives, enabling them to swallow prey much larger than their heads. To accommodate their narrow bodies, snakes' paired organs, such as kidneys, appear one in front of the other instead of side by side, and most only have one functional lung. Around thirty families of snake are currently recognized, comprising about 520 genera and about more than 4,170 species.

This add-on set to Nature's Wonders Snakes includes many of the popular snakes found throughout the world. Included are pet shop favorites like the King Snake and Red-tailed Boa Constrictor as well as commonly found snakes like the Australian Re-bellied Black Snake and Common Pipe Snake. Some of the most deadly snakes are also featured such as the Broad-banded Copperhead, the Southern Pacific Rattlesnake and the Eyelash Viper.

The set has both native DAZ Studio and Poser versions and supports Iray, 3Delight, Firefly and Superfly render engines.

#### **Overview and Use**

The set is located within the Animals : Nature's Wonder folder. Here is where you will find a number of folders, such as Manuals, Resources and Fauna Libraries. Let's look at what is contained in these folders:

- **Fauna Libraries:** This folder holds the actual species and poses for the "premade" fauna. The fauna for this set can be found in the following folder(s):
  - Reptiles/Snakes of the World
- Manuals: Contains a link to the online manual for the set.
- **Props:** Contains any props that might be included in the set.
- **Resources:** Items in this folder are for creating and customizing your fauna included in the set.
  - **Reptile Based Models:** This folder has the blank, untextured model(s) used in this set. These models are primarily for users who wish to experiment with poses or customize their own

species. When using physical renderers such as Iray and Superfly, Sub D should be turned up. For DAZ Studios 3Delight renders, the Sub D must be turned from the "High Resolution" setting to the "Base" setting (otherwise some areas will render incorrectly transparent).

#### **Creating a Specific Snake using Poser**

1. For this example, we'll create the Egyptian Cobra.

2. Load Poser, select the FIGURES library and go to the "Animals", "Nature's Wonders" and then the Nature's Wonders Fauna Libraries Reptiles folder.

3. Go to the Snakes of the World folder and select the Firefly or Superfly sub-folder.

4. Select the Egyptian Cobra (or a snake of your choice) and load it by clicking the mouse.

#### Creating a Specific Snake using DAZ Studio

1. For this example, we'll create the Egyptian Cobra.

2. Load DAZ Studio and go to the "Animals", "Nature's Wonders" and then the Nature's Wonders Fauna Libraries Reptiles folder.

3. Go to the Snakes of the World folder and select the 3Delight or Iray sub-folder.

4. Select the Egyptian Cobra (or a snake of your choice) and load it by clicking the mouse.

#### **Posing your Snake**

The poses were designed around the default snake model (found in "Resources"). Posing species that use more extreme morphs and different lengths, may not fit the poses perfectly. Some minor adjustments will probably be necessary.

There are a lot of joints in this model and moving them can become overwhelming. I decided to create master controls that break the snake into 5 different sections to

help ease this burden; Head (3 parts), Fore (18 parts), Mid (20 parts), Hind (20 parts) and Tail (8 parts).

Because the model is a very long cylinder shape, zooming in on the snake and then rotating it can be cumbersome. The model in the BODY and Mid01 sections are

centered at 0,0,0. It is usually best practice to leave the Mid01 section at 0,0,0 and use the main (BODY) section for your x,y,z rotation and movement. Moving and/or rotating the Mid01 will exacerbate camera rotation issues with the model. In Poser, if you want to work on the head of the snake, using the Face Cam (once zoomed and focused on the head) will help significantly.

#### Cobra Hood

Cobras expand their hoods when provoked or hunting. Most users will want this feature so it has been set "On" by default in Cobra species. To turn it "Off", expand or lessen it, use the "Cobra Hood" morph (found in Creation Controls/Species Controls). The **Red-bellied Black Snake does use a Cobra Hood when threatened** (but has been saved without the morph turned on).

When the hood is expanded, extreme bends may distort the model. This happens particularly when using the Side and Twist rotations. It is best practice to create smaller bends in the hood sections when the hood is expanded.

# **Red-bellied Black Snake**

Pseudechis porphyriacus

Originally described by George Shaw in 1794 as a species new to science, it is one of eastern Australia's most commonly encountered snakes.

**Habitat:** It is endemic to the east coast of Australia. It can be found in the urban forest, woodland, plains, and bushland areas of the Blue Mountains, Canberra, Sydney, Brisbane, Melbourne, Cairns, and Adelaide. The Macquarie Marshes mark a western border to its distribution in New South Wales, and Gladstone in central Queensland marks the northern limit to the main population. To the south, it occurs across eastern and central Victoria, and extends along the Murray River into South Australia. There are disjunct populations occur in the southern Mount Lofty Ranges in South Australia and in North Queensland.

The red-bellied black snake is most commonly seen close to dams, streams, billabongs, and other bodies of water, although they can venture up to 100 m (350 ft) away, including into nearby backyards. In particular, the red-bellied black snake prefers areas of shallow water with tangles of water plants, logs, or debris.



**Status:** Least Concern. Its preferred habitat has been particularly vulnerable to urban development and is highly fragmented, and a widespread decline in frogs, which are

its preferred prey, has occurred. Snake numbers appear to have declined. Feral cats are known to prey on red-bellied black snakes, while young snakes presumably are taken by Laughing Kookaburras, brown falcons, and other raptors.

**Diet:** The diet primarily consists of frogs, but they also prey on reptiles and small mammals. They also eat other snakes, commonly eastern brown snakes and even their own species. Fish are hunted in water.

Red-bellied black snakes may hunt on or under the water surface, and prey can be eaten underwater or brought to the surface.

**Identification:** It has a glossy black top body with a light-gray snout and brown mouth, and a completely black tail. It lacks a well-defined neck. Its flanks are bright red or orange, fading to pink or dull red on the belly. All these scales have black margins. Snakes from northern populations tend to have lighter, more cream or pink bellies. The red-bellied black snake is on average around 12.5 cm (4 ft 1 in) long. Males are generally slightly larger than females.

**Venom:** The venom contains neurotoxins, myotoxins, and coagulants and has haemolytic properties. It is not aggressive and generally retreats from human encounters, but will defend itself if provoked. Although its venom can cause significant illness, no deaths have been recorded from its bite, which is less venomous than other Australian elapid snakes.

Bites from red-bellied black snakes can be very painful—often needing painkillers and result in local swelling, prolonged bleeding, and even local necrosis, particularly if the bite is on a finger. Severe local reactions may require surgical debridement or even amputation. Symptoms of systemic envenomation—including nausea, vomiting, headache, abdominal pain, diarrhoea, or excessive sweating—were thought to be rare. Victims can also lose their sense of smell.

**Subspecies:** There are no recognized subspecies.

### **Broad-banded Copperhead**

#### Agkistrodon laticinctus

Common names for this species include: broad-banded copperhead, copperhead moccasin, copperhead snake, dry-land moccasin, highland moccasin, moccasin, rattlesnake pilot, red eye, Texas copperhead and thunder snake.

**Habitat:** It is endemic to the central United States, from Kansas, through Oklahoma and throughout central Texas.

Secretive and nocturnal, it prefers lightly wooded habitats, typically with a good amount of ground debris for cover, not far from a permanent water source. It typically avoids regions with a significant population of humans.



Status: Least Concern.

**Diet:** It is an ambush predator, eating rodents, birds, lizards, frogs, and certain insects, with juveniles in particular having a taste for various kinds of insects, such as cicadas. Wide foraging of caterpillars has also been documented in the field.

**Identification:** This form is typically a light tan in color, with darker brown, wide crossbands - which gives it its common name. The actual color varies, by locality, from a red-brown, to a gray-brown. It overlaps with the eastern copperhead, eastern copperhead (*A. contortrix*) in the southern reaches of its range, making specimens there difficult to distinguish, but generally *A. contortrix* has banding that narrows at the spine, creating hourglass shapes, whereas *A. laticinctus* has even bands. They grow to approximately 20-36 inches (50–90 cm) in length. As juveniles, all species of *Agkistrodon* have a bright green-yellow color to their tail tips, believed to be used as

a lure to attract prey items to approach within striking range. The color fades to a gray or brown at about a year of age.

**Venom:** It has a has a hemotoxic venom, which is delivered through hinged, hollow fangs set in the front of their jaws.

Copperhead venom is not considered to be life-threatening to an otherwise healthy adult, but it can cause localized swelling, necrosis, and severe pain. Any bite from a venomous snake should be considered serious and medical treatment sought. There is no antivenin specifically manufactured for copperheads. However, CroFab, which makes use of the venom from the cottonmouth (*Agkistrodon piscivorus*), can be used in cases of a severe envenomation.

Subspecies: There are no subspecies.

# Red-milk King Snake

It is a type of "King" snake and very popular within the pet trade.

**Habitat:** Milk snakes can be found from the southeastern extreme of Ontario, Canada, from southeastern Maine and all the states of the Eastern Seaboard, south to Florida, Alabama, Mississippi; in the Midwest, from central Minnesota to Colorado, Nebraska, and the Dakotas; they are found in the foothills of the Appalachian Mountains; Georgia, Tennessee, Kentucky, Arkansas, Missouri, Kansas, Oklahoma, Texas and Louisiana. There are further subspecies found in nearly all of Mexico, from the state of Sonora east to the Gulf coast of Tamaulipas and throughout the rest of south and central Mexico; all through Central America and into Colombia and Ecuador.



Across the wide range of this species, habitat varies; typically, milk snakes prefer to live in forested regions or areas of open woodland. However, they can also be found in swamps, prairie, farmland, rocky slopes, some semi-arid/chaparral areas, and sand dunes/beaches. In some situations, milk snakes also migrate seasonally; during the winter, they may move to higher/drier habitats for hibernation, and then moister habitats in time for the summer. However, snake migration is often limited due to human-caused habitat destruction and fragmentation. Depending on subspecies, milk snakes enter hibernation from late October or November to mid-April. **Status:** Least Concern. In some areas, they may face significant pressure due to pettrade collection. Because of this species' attractiveness in the pet trade, many subspecies are now being bred in captivity for sale.

**Diet:** Small mammals, but frequently includes lizards (especially skinks). They are also known to eat birds and their eggs, frogs, fish, and other snakes (including venomous species like coral snakes and rattlesnakes) and their eggs.

Milk snakes are mostly nocturnal, especially during summer months. They are primarily terrestrial and attempt to blend in with ground litter. However, they are able to climb and swim. These snakes tend to be secretive and remain hidden. When threatened, a milk snake will usually first try to escape. If cornered or harassed, it may vibrate its tail and strike energetically, though they are non-venomous, have only tiny teeth and their tails lack a rattle. Unless frightened, milk snakes move slowly. They are often fairly docile.

**Identification:** There is a significant amount of variation among milk snakes in terms of size. Depending on subspecies, they can be as small as 36 cm (14 inches) or as large as 180 cm (72 inches) long. Males typically are larger than females in maturity, although females can be bulkier than males similar in length as well.Generally more tropical populations, from Mexico and further south, reach larger adult sizes than milk snakes living in the temperate zones.

Milk snakes have smooth and shiny scales and their typical color pattern is alternating bands of red-black-yellow or white-black-red; however, red blotches instead of bands are seen in some populations. Some milk snakes have a striking resemblance to coral snakes, in Batesian mimicry, which likely scares away potential predators. Both milk snakes and coral snakes possess transverse bands of red, black, and yellow. Experts now recognize that common mnemonics that people use to distinguish between the deadly coral snake and the harmless milk snake are not 100% reliable. Some coral snakes do not have the typical banding colors or patterns. Examples of unreliable mnemonics commonly used:

"Red on yellow kill a fellow. Red on black venom lack" "Red touches black, it's a friend of Jack. Red touches yellow, it's bad for a fellow."

Venom: They are not venomous to humans

Subspecies: There are 24 subspecies:

- *L. t. abnorma.* First reported by Bocourt in 1886. Guatemalan milk snake.
- L. t. amaura. First reported by Cope in 1861. Louisiana milk snake.
- *L. t. andesiana.* First reported by K. Williams in 1978. Andean milk snake.
- *L. t. annulata.* First reported by Kennicott in 1861. Mexican milk snake.
- *L. t. arcifera*. First reported by F. Werner in 1903. Jalisco milk snake.
- *L. t. blanchardi.* First reported by Stuart in 1935. Blanchard's milk snake.
- *L. t. campbelli.* First reported by Quinn in 1983. Pueblan milk snake.
- *L. t. celaenops.* First reported by Stejneger in 1903. New Mexico milk snake.

- *L. t. conanti*. First reported by K. Williams in 1978. Conant's milk snake.
- *L. t. dixoni*. First reported by Quinn in 1983. Dixon's milk snake.
- *L. t. gaigeae*. First reported by Dunn in 1937. Black milk snake.
- *L. t. gentilis.* First reported by Baird & Girardin 1853. Central Plains milk snake.
- *L. t. hondurensis.* First reported by K. William sin 1978. Honduran milk snake.
- *L. t. multistriata.* First reported by Kennicott, 1861) pale milk snake.
- *L. t. nelsoni.* First reported by Blanchard in 1920. Nelson's milk snake.
- *L. t. oligozona.* First reported by Bocourt in 1886. Pacific Central American milk snake.
- *L. t. polyzona.* First reported by Cope in 1861. Atlantic Central American milk snake.
- *L. t. sinaloae.* First reported by K. Williams in 1978. Sinaloan milk snake.
- *L. t. smithi.* First reported by K. Williams in 1978. Smith's milk snake.
- *L. t. stuarti.* First reported by K. Williams in 1978. Stuart's milk snake.
- *L. t. syspila.* First reported by Cope in 1889. This race is referred to as the red milk snake.
- L. t. taylori. First reported by W. Tanner & Loomis in 1957. Utah milk snake,
- *L. t. triangulum.* First reported by Lacépède in 1788. The Eastern milk snake is considered the nominate subspecies.

# Southern Pacific Rattlesnake

Crotalus helleri

It is sometimes referred to as the Black diamond rattlesnake.

Habitat: It is endemic to southwestern California and southward into Baja California, Mexico.

Status: Least Concern.

Diet: Small mammals (including rats, mice, squirrels, voles and rabbits)



**Identification:** Adults are 61–139 cm (24–55 inches) in total length (including the tail). The color pattern consists of a pale brown, gray-brown, or yellowish brown ground color overlaid with a series of large, dark brown dorsal blotches that may or may not have pale centers. The blotches are more diamond shaped, as opposed to those of *C. o. oreganus* that are more hexagonal, and are bordered by light scales. The tail rings are not clearly defined. In juveniles, the end of the tail is bright orange, but this turns to brown as the snakes mature. In adults, the base of the tail and the first segment of the rattle are brown. The postocular stripe is moderately to very clearly defined. In juveniles, this stripe is bordered above by a pale stripe, but as the snakes mature this turns to drab yellow or brown. A conspicuous pale crossbar is sometimes present across the supraoculars, after which the head is a uniform dark color. In some older snakes the head is mostly dark with almost no trace of the supraorbital crossbar, or none at all.

**Venom:** This snake is known for its regional variety of dangerous venom types. Some populations have a neurotoxic venom that is very similar to the extremely dangerous "Mojave Green" toxin in the way it attacks the nervous system. Other populations can have hemotoxic and myotoxic venom that is more typical among rattlesnakes and though less dangerous, can still give a fatal bite. Thus, depending on where the bite was sustained, envenomation from this snake can require a much higher dose of Crotalidae polyvalent immune fab ("Crofab"), an antivenom used to treat the bite of North American pit vipers, than the venoms of other rattlesnakes, including the venom of *C. helleri* specimens of different provenance. In a survey of various populations of Crotalus in California, every sampled specimen with disabling neurotoxic venom had originated near Idyllwild, California, in the San Jacinto Mountains. Scientists considered the intraspecific variety of venom types "medically significant", while hypothesizing that evolutionary pressures, driven by regional habitat differences and the associated challenges of hunting prey in each, could have been behind the variation of venom types in *C. helleri*, and that cross-breeding with the Mojave rattlesnake, which is geographically separated from neurotoxic Crotalus populations, was unlikely.

The author/artist has the distinction of being bitten in the hand by this particular species while rock climbing. Obviously, he survived the snake bite. Fortunately, he surprised the snake has much as it surprised him so very little venom was prepared for that strike. This species also appear fairly regularly every summer in his garden.



Southern Pacific Rattlesnake in Ken Gilliland's garden

**Subspecies:** There are two subspecies. Scientists studying the dwarf subspecies of *C. helleri* inhabiting California's Santa Catalina Island found that these snakes "attempted to bite 4.7-fold more often than mainland snakes" of the same species, and that "the island snakes delivered 2.1-fold more venom when biting" than their mainland counterparts.

# Sabah Pit Viper

#### Trimeresurus sabahi

It is commonly known as the Sabah Pit Viper or Sabah Bamboo Pit Viper.

Habitat: They are found in Southeast Asia.

In Borneo, it inhabits mountainous regions at altitudes from 1,000 m (3,300 ft) to 1,150 m (3,770 ft), where it is commonly found on branches of shrubs and other low vegetation.

#### Status: Least Concern.

**Diet:** Pit vipers primarily eat small, warm-blooded animals like frogs, birds, and rodents, but their diet can also include lizards, bats, and marsupials.

They are ambush predators, using their infrared heat-sensing organs to detect prey.



Identification: Adults may attain a snout-vent length (SVL) of 62 cm (24 inches).

Dorsally, it is uniform green, without crossbars. Ventrally, it is pale green. There is narrow bi-color stripe on the first one and a half dorsal scale rows. In males, this stripe is rust-colored or red below, and it is white above. In females, it is yellow or white. The iris of the eye is red or orange in adults of both sexes, but in young specimens may be yellowish-green. There are no markings behind the eye.

**Venom:** The venom produced is hemotoxic and considered to be medically significant to humans.

Subspecies: There are five subspecies:

- *T. s. barati.* First reported by Regenass & Kramer in 1981. This race is found in Sumatra, Mentawai Archipelago (Indonesia).
- *T. s. buniana.* First reported by Grismer, Grismer & McGuire in 2006. This race is endemic to Tioman Island (Malaysia).
- *T. s. fucatus.* First reported by Vogel, David & Pauwels in 2004. The "Banded Pit Viper" is found in Malay Peninsula (southern Myanmar, Thailand, West Malaysia). This snake has brown bands.
- *T. s. sabahi.* First reported by Regenass & Kramer in 1981. The nominate subspecies is endemic to northern Borneo (Malaysia).
- *T. s. toba.* First reported by David, Petri, Vogel & Doria in 2009, Endemic to Sumatra.



### Eyelash Viper Bothriechis schlegelii

It is a somewhat small, arboreal snake, and is best known for the namesake superciliary ("eyelash") scales above its eyes, and for having distinctly keeled or "raised" scales covering the bulk of its body. This species is also known for producing a veritable rainbow of color forms (morphs). It is the most common of the green palm-pit vipers and is often present in zoological exhibits, owing to its general hardiness.



Certain local mythologies and folktales (notably in remote areas of northern South America) describe how after one is bitten by an eyelash viper, the snake will "wink" its "eyelashes" at the victim. In reality, no snake is physiologically capable of such behaviors as they possess no true eyelids and cannot close their eyes.

Despite its dangerous venom, it is frequently available in the exotic animal trade, and is well represented in zoos worldwide. It is frequently captive bred for color and pattern. Exporting from the wild is not as common as it once was, but is not unknown. In general they make hardy captives, readily feeding on provided mice.

Habitat: The species is endemic to Columbia in South America.

It has adapted to a nearly completely arboreal lifestyle, possessing a strong, prehensile tail with which it secures itself around tree limbs, often coiled into a tight bundle during the day, as the species is primarily nocturnal. After dark, the eyelash viper awakens and awaits the presence of small, tree-dwelling animals that may cross its path.

Status: Least Concern. The snake is not considered to be threatened.

**Diet:** It feeds on mammals (rodents, bats), amphibians (tree frogs), birds or lizards (anoles, geckos, and juvenile iguanas).

**Identification:** The eyelash viper is a relatively small species of pit viper, with adults ranging from 55–82 cm (22–32 inches) long, and females being longer and more variable in size than males, which can grow to 69 cm (27 inches) long. It has a wide, triangular-shaped head, and eyes with vertical pupils. Like all pit vipers, it is solenoglyphous, having large, hypodermic needle-like fangs in the front of the upper jaw that fold back when not in use, and has heat sensitive organs, or pits, located on either side of the head between the eye and nostril.

Its most distinguishing feature, and origin of its common name, is the set of modified scales above the eyes that look much like eyelashes. The eyelashes are thought to aid in camouflage, breaking up the snake's outline among the foliage where it hides. The eyelash viper occurs in a wide range of colors. No external features distinguish the two sexes.

**Venom:** This snake is venomous. The most important components of the venom are phospholipase A2 related to the production of edema, tissue damage and myotoxicity, metalloproteases with dermonecrosis, L-amino acid oxidases with tissue damage, serine proteases with tissue damage and hemorrhagic diathesis, lectin type C with tissue damage and hemorrhagic diathesis, disintegrins with detachment of cells from their extracellular matrix leading to blisters and platelet function impairment, bradykinin-potentiating peptides with hypotension, enzymes that degrade fibrinogen, plasminogen activators, prothrombin activators, factor V activators, factor X activators, and anticoagulant activities (including inhibitors of prothrombinase complex formation, inhibitors of thrombin, phospholipases, and protein C activators).

The eyelash viper is not known to be an aggressive snake towards humans, and is likely to be avoidant of creatures larger than itself, but will not hesitate to strike if repeatedly harassed. Snakebites inflicted on humans are characterized by pain, edema, and ecchymosis at the site of the bite, rarely with blisters, local necrosis, or defibrination. Some investigations using venom samples have reported a typical bothropic envenomation characterized by pain, rapid local tissue damage, edema and inflammatory reactions at the site of the bite, followed by systemic alterations such as coagulopathy and acute renal failure.

Subspecies: There are no recognized subspecies.

# Red-tailed Boa

#### Boa constrictor

It also known as the common boa, chij-chan (Mayan), jiboia (Portuguese), and macajuel (Trinidadian). It is a large, non-venomous, heavy-bodied snake that is frequently kept and bred in captivity. In captivity, it is a staple of private collections and public displays, its color pattern is highly variable yet distinctive.

It is a member of the family Boidae.

**Habitat:** The species is native to tropical South America. It can be found through South America north of 35°S (Colombia, Ecuador, Peru, Venezuela, Trinidad and Tobago, Guyana, Suriname, French Guiana, Brazil, Bolivia, Uruguay, and Argentina), and many other islands along the coasts of South America. Introduced populations exist in Cozumel, extreme southern Florida, and St. Croix in the U.S. Virgin Islands. ).

It flourishes in a wide variety of environmental conditions, from tropical rain forests to arid semi-desert country. However, it prefers to live in rainforest due to the humidity and temperature, natural cover from predators, and vast amount of potential prey. It is commonly found in or along rivers and streams, as it is a very capable swimmer. Boa constrictors also occupy the burrows of medium-sized mammals, where they can hide from potential predators.



**Status:** Least Concern. All boa constrictors fall under CITES and are listed under CITES Appendix II, except race *occidentalis*, which is listed in CITES Appendix I. In some regions, boa constrictor numbers have been severely hit by predation from humans and other animals and over-collection for the exotic pet and snakeskin trades. Most

populations, though, are not under threat of immediate extinction; thus, they are within Appendix II rather than Appendix I.

Boa constrictors may be an invasive species in Florida and Aruba.

**Diet:** Their prey includes a wide variety of small to medium-sized mammals and birds. The bulk of their diet consists of rodents (such as squirrels, mice, rats and agoutis), but frogs, larger lizards (such as ameivas, iguanas and tegus) and mammals as big as monkeys, marsupials (opossums), armadillos, wild pigs and ocelots are also reported to have been consumed. Domestic animals such as dogs, cats, rabbits, ducks and chickens are frequently consumed.

**Identification:** The boa constrictor is a large snake, although it is only modestly sized in comparison to other large snakes, such as the reticulated python, Burmese python, or the occasionally sympatric green anaconda, and can reach lengths from 0.91 to 3.96 m (3 to 13 ft) depending on the locality and the availability of suitable prey. There is clear sexual dimorphism is seen in the species, with females generally being larger in both length and girth than males. The usual size of mature female boas is between 210 to 300 cm (7 to 10 ft) whereas males are between 180 and 240 m (6 to 8 ft). The size and weight of a boa constrictor depends on subspecies, locale, and the availability of suitable prey.

Other examples of sexual dimorphism in the species include males generally having longer tails to contain the hemipenes and also longer pelvic spurs, which are used to grip and stimulate the female during copulation.

**Venom:** This snake is non-venomous. Boa constrictors strike when they perceive a threat. Their bite can be painful, especially from large snakes, but is rarely dangerous to humans. Specimens from Central America are more irascible, hissing loudly and striking repeatedly when disturbed, while those from South America tame down more readily

Subspecies: Four subspecies are recognized:

- *B. c. constrictor.* First reported by Linnaeus in 1758. The Red-tailed boa cis the nominate subspecies. It is found throughout South America except for the ranges of the other three subspecies.
- *B. c. longicauda.* First reported by Price & Russo in 1991. The long-tailed boa is found in northern Peru.
- *B. c. occidentalis.* First reported by Philippi in 1873. The Argentine boa is found in Argentina and Paraguay.
- *B. c. ortonii.* First reported by Cope in 1878. Orton's boa is found in northwestern Peru. The subspecific name ortonii is in honor of American naturalist James Orton.

### Common Pipe Snake Cylindrophis ruffus

It is also called The red-tailed pipe snake or red cylinder snake.

**Habitat:** It is found in Myanmar and southern China (Fujian, Hong Kong and on Hainan Island), south into Vietnam, Laos, Cambodia, Thailand, the Malay Peninsula and the East Indies to Indonesia (the Riau Archipelago, Sumatra, Bangka, Borneo, Java, Sulawesi, Buton and the Sula Islands.

Status: Least Concern.



**Diet:** Compared to other snakes, this snake have a limited gape size, so their primary diet consists of long, thin prey animals including snakes, caecilians, and eels.

**Identification:** Adults can grow to 100 cm (39 inches) in length. The dorsal scales are smooth, in 19 or 21 rows, with 186-245 ventrals, which are not quite twice as large as the contiguous dorsal scales; the anal plate is divided, and five to 10 sub-caudals.

Venom: This snake is non-venomous.

Subspecies: There are no subspecies.

#### Special Thanks to:

... to my beta testers, Alisa and FlintHawk

### **Species Accuracy and Reference Materials**

The author-artist has tried to make these species as accurate to their real life counterparts as possible. Snakes of the same species vary considerably, just as all others do in nature. The snakes were created using the correct field markings and the most common similarities.

With the use of one generic model to create dozens of unique moth species, some give and take is bound to occur. In addition, 3D-models have many technical challenges, which make exact representations difficult, if not impossible. It's best to think of these moths represented as resembling the particular species, and they may not, in some cases, be 100% scientifically accurate.

The model and morphs were created using Luxology's Modo. The texture maps were created in Corel's Painter. The model was rigged in Poser and materials created in Poser and DAZ's DAZ Studio.

#### Sources:

- Animal Diversity Web. <u>http://animaldiversity.org</u>
- Wikipedia <u>http://wikipedia.org</u>
- California Herps <u>https://www.californiaherps.com</u>
- The Snake Guide <u>https://thesnakeguide.com</u>



www.empken.com/store