

# A 3D Model Set by Ken Gilliland

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



### OF THE WORLD - VOLUME 1

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**OF THE WORLD - VOLUME 1** 

### 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 Rosy Boa and Ball Python as well as commonly found snakes like the garter snake and European Adder. Some of the most deadly snakes are also featured such as the Australian Inland Taipan, the King Cobra and the Eastern Coral snake.

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*).

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.

# **Common Garter Snake**

### Thamnophis sirtalis

The common garter snake is a diurnal snake. In summer, it is most active in the morning and late afternoon; in cooler seasons or climates, it restricts its activity to the warm afternoons.

In warmer southern areas, the snake is active year-round; otherwise, it sleeps in common dens, sometimes in great numbers. On warm winter afternoons, some snakes have been observed emerging from their hibernation to bask in the sun.

**Habitat:** The species is indigenous to North America and found widely across the continent. Depending on the subspecies, the common garter snake can be found as far south as the southernmost tip of Florida in the United States and as far north as the southernmost tip of the Northwest Territories in Canada.

The habitat of the common garter snake ranges from forests, fields, and prairies to streams, wetlands, meadows, marshes, and ponds, and it is often found near water. It is found at altitudes from sea level to mountains.



**Status:** Least Concern. Water contamination, urban expansion, and residential and industrial development are all threats to the common garter snake. The San Francisco garter snake (*T. s. tetrataenia*), which is extremely scarce and occurs only in the vicinity of ponds and reservoirs in San Mateo County, California, has been listed as an endangered species by the U.S. Fish and Wildlife Service since 1967.

**Diet:** This species diet consists mainly of amphibians and earthworms, but also leeches, slugs, snails, insects, crayfish, fish, lizards, other snakes, small birds, and

rodents. They are effective at catching fast-moving creatures such as fish and tadpoles.

**Identification:** Most common garter snakes have a pattern of yellow stripes on a black, brown or green background, and their average total length is about 55 cm (22 inches), with a maximum total length of about 137 cm (54 inches). Common garter snakes come in a wide range of colors, including green, blue, yellow, gold, red, orange, brown, and black.

**Venom:** Garter snakes have a mild venom in their saliva, which may be toxic to the amphibians and other small animals that they prey upon. For humans, a bite is not dangerous, and many handlers can attest to garter snakes gently biting in protest when held or restrained; these bites do not often break the skin, given the garter snake's smaller size, but may cause slight itching, burning, and/or swelling at the location of the bite. However, it is more likely that, prior to expending their energy through biting, garter snakes will secrete a foul-smelling fluid ("musk", "musking", "skunking") from postanal glands.

**Subspecies:** There are several recognized subspecies.

- *T. s. sirtalis.* First reported by Linnaeus in 1758. The nominate subspecies is known as the eastern garter snake and found in eastern North America.
- *T. s. parietalis.* First reported by Say in 1823. The red-sided garter snake is found as far north as Fort Smith, Northwest Territories, and as far south as the Oklahoma-Texas border.
- *T. s. infernalis.* First reported by Blainville in 1835. The California red-sided garter snakeis found along the California coast.
- *T. s. concinnus.* First reported by Hallowell in 1852. The red-spotted garter snake is endemic to northwestern Oregon and southwestern Washington.
- *T. s. dorsalis.* First reported by Baird & Girard in 1853. The New Mexico garter snake is found in Mexico and southern New Mexico.
- *T. s. pickeringii.* First reported by Baird & Girard in 1853. The Puget Sound garter snakeis endemic to Northwestern Washington, Vancouver Island and the southwestern British Columbia.
- *T. s. tetrataenia.* First reported by Cope in 1875. The San Francisco garter snake (endangered)is endemic to San Mateo County, California
- *T. s. semifasciatus.* First reported by Cope in 1892. The Chicago garter snake Chicago, Illinois.
- *T. s. pallidulus.* First reported by Allen in 1899. The maritime garter snake is found in northeastern New England, Quebec, and the Maritime provinces.
- *T. s. annectens.* First reported by B.C. Brown in 1950. The Texas garter snake is endemic to Texas, Oklahoma and Kansas
- *T. s. fitchi.* First reported by Fox in 1951. The valley garter snake is endemic to the Rocky Mountains and interior ranges
- *T. s. similis.* First reported by Rossman in 1965. The blue-striped garter snake is found in northwestern peninsular Florida.

## Inland Taipan Oxyuranus microlepidotus

It is also commonly known as the western taipan, small-scaled snake, or fierce snake. Aboriginal Australians living in those regions named the snake "dandarabilla". It was formally described by Frederick McCoy in 1879 and then by William John Macleay in 1882, but for the next 90 years, it was a mystery to the scientific community; no further specimens were found, and virtually nothing was added to the knowledge of this species until its rediscovery in 1972.

It is a species of extremely venomous snake in the family *Elapidae*.



**Habitat:** The species is endemic to semiarid regions of central east Australia. In Queensland, the snake has been observed in Channel Country region (e.g., Diamantina National Park, Durrie Station, Morney Plains Station and Astrebla Downs National Park) and in South Australia it has been observed in the Marree-Innamincka NRM District (e.g., Goyder Lagoon Tirari Desert, Sturt Stony Desert, Coongie Lakes, Innamincka Regional Reserve and Oodnadatta). An isolated population also occurs near Coober Pedy, South Australia.

**Status:** Least Concern. Like every other Australian snake, the inland taipan is protected by law.

**Diet:** This species consumes only mammals; mostly rodents, such as the long-haired rat (*Rattus villosissimus*), the plains rat (*Pseudomys australis*), the introduced house mouse (*Mus musculus*), and other *dasyurids*.

Unlike other venomous snakes that strike with a single, accurate bite then retreat while waiting for the prey to die, the fierce snake subdues the prey with a series of rapid, accurate strikes. It is known to deliver up to eight venomous bites in a single attack, often snapping its jaws fiercely several times to inflict multiple punctures in the same attack. Its more risky attack strategy entails holding its prey with its body and biting it repeatedly. This injects the extremely toxic venom deep into the prey. The venom acts so rapidly that its prey does not have time to fight back.

**Identification:** The inland taipan is dark tan, ranging from a rich, dark hue to a brownish light green, depending on the season. Its back, sides, and tail may be different shades of brown and gray, with many scales having a wide, blackish edge. These dark-marked scales occur in diagonal rows so that the marks align to form broken chevrons of variable length that are inclined backward and downward. The lowermost lateral scales often have an anterior yellow edge. The dorsal scales are smooth and without keels. The round-snouted head and neck are usually noticeably darker than the body (glossy black in winter; dark brown in summer), the darker color allowing the snake to heat itself while exposing only a smaller portion of the body at the burrow entrance. The eyes are of average size with blackish-brown irises and without a noticeable coloured rim around the pupils.

It averages about 180 cm (71 inches) in total length, although larger specimens can reach total lengths of 250 cm (98 inches). Its fangs are between 3.5 and 6.2 mm long (shorter than those of the coastal taipan).

**Venom:** The average quantity of venom delivered by this species is 44 mg, and the maximum dose recorded is 110 mg, compared to the Indian cobra (*Naja naja*) 169 mg/max 610 mg, and the North American eastern diamondback rattlesnake (*Crotalus adamanteus*) 410 mg/max 848 mg.

Based on the median lethal dose value in mice, the venom of the inland taipan is by far the most toxic of any snake – much more so than even that of sea snakes – and it has the most toxic venom of any reptile when tested on human heart cell culture. It is a specialist hunter of mammals, so its venom is specially adapted to kill warmblooded species. One bite possesses enough lethality to kill more than an estimated 100 fully grown humans. It is an extremely fast and agile snake that can strike instantly with extreme accuracy, often striking multiple times in the same attack, and it envenomates in almost every case.

Although, it's the most venomous snake and a capable striker, in contrast to the coastal taipan (which many experts cite as an extremely dangerous snake due to its behavior when it encounters humans), the inland taipan is usually quite a shy and reclusive snake. With its placid disposition, it prefers to escape from trouble most creatures it has no interest in. However, it will defend itself and strike if provoked,

mishandled, or prevented from escaping. Because it lives in such remote locations, the inland taipan seldom comes in contact with people; therefore it is not considered the deadliest snake in the world overall. To date, not one human been recorded being killed by an Inland Taipan.

Subspecies: There are no subspecies.

### Rosy Boa Lichanura orcutti

It is also known as the coastal rosy boa, or the northern three-lined boa, and is a species from the family, *Boidae*. It is one of four boa species native to the continental United States, the other three being the desert rosy boa (*Lichanura trivirgata*), and the two species of rubber boas (*Charina*). It is primarily nocturnal, with peak activity occurring during dusk, the night, and dawn. During cooler weather this species may also be seen basking in the early morning or late afternoon. During inclement weather and during the hottest and coldest months of the year, it remains inactive in burrows or under cover.

They are one of the most popular snake pets due to their docile temperament, striking coloration, and hardiness in captivity. A well cared for animal can be expected to live around 30 years.

**Habitat:** This species is found North of the US–Mexico border within San Diego County in California and along the coastal Peninsular Ranges, northward into the Mojave Desert and eastward in the Sonoran Desert of California and Arizona. This species also occurs in southern Nevada.



Habitat consists of arid scrublands, semi-arid shrublands, rocky shrublands, rocky deserts, canyons, and other rocky areas. This species may be more common in riparian areas such as oases and permanent or intermittent streams, but it does not require permanent water.

Status: Least Concern.

**Diet:** This species s an opportunistic predator and will feed on any suitably sized vertebrates including rodents, birds, smaller reptiles, or amphibians. This species kills prey by constriction.

**Identification:** It is a heavy bodied snake with smooth scales and a tapered blunt tail. The head is marginally wider than the neck. It has vertical pupils. Adults can range from 43 to 112 cm (17 to 44 inches) in length, though they rarely exceed 91 cm (36 inches). Males typically have well-developed anal spurs.

This species has three stripes that run lengthwise down the dorsal and lateral aspects of the animal. These stripes may be tan, orange, brick red, or reddish-brown depending on locality; interspaces vary from blue gray to tan, yellow, or nearly white. Stripes vary from defined to ill-defined depending on the individual animal. The coloration of younger animals is typically lighter with more defined striping. Despite the name "rosy boa," most individuals do not have the rosy ventral coloration from which the species derives its popular common name.

Venom: This snake is docile and non-venomous.

Subspecies: There are no subspecies.

## Ball Python Python regius

It is also called the royal python. This nonvenomous constrictor is the smallest of the African pythons, growing to a maximum length of 182 cm (72 in). The name "ball python" refers to its tendency to curl into a ball when stressed or frightened. Ball pythons are typically nocturnal or crepuscular, meaning that they are active during dusk, dawn, and/or nighttime. This species is known for its defense strategy that involves coiling into a tight ball when threatened, with its head and neck tucked away in the middle. This defense behavior is typically employed in lieu of biting, which makes this species easy for humans to handle and has contributed to their popularity as a pet.



The ball python is particularly revered by the Igbo people in southeastern Nigeria, who consider it symbolic of the earth, being an animal that travels so close to the ground. Even Christian Igbos treat ball pythons with great care whenever they come across one in a village or on someone's property; they either let them roam or pick them up gently and return them to a forest or field away from houses. If one is accidentally killed, many communities on Igbo land still build a coffin for the snake's remains and give it a short funeral. In northwestern Ghana, there is a taboo towards pythons as people consider them a savior and cannot hurt or eat them. According to folklore a python once helped them flee from their enemies by transforming into a log to allow them to cross a river.

**Habitat:** It is native to West and Central Africa, where it lives in grasslands, shrublands and open forests.

**Status:** Near Threatened. It experiences a high level of exploitation and the population is believed to be in decline in most of West Africa. It is primarily threatened by poaching for the international exotic pet trade. It is also hunted for its

skin, meat and use in traditional medicine. Other threats include habitat loss as a result of intensified agriculture and pesticide use.

**Diet:** The diet of the ball python in the wild consists mostly of small mammals and birds.

**Identification:** It is black, or albino and dark brown with light brown blotches on the back and sides. Its white or cream belly is scattered with black markings. It is a stocky snake with a relatively small head and smooth scales. It reaches a maximum adult length of 182 cm (72 inches). Males typically measure eight to ten subcaudal scales, and females typically measure two to four subcaudal scales. Both sexes have pelvic spurs on both sides of the vent.

**Venom:** The species is non-venomous and considered docile.

Subspecies: There are no subspecies.

### King Cobra Ophiophagus hannah

The king cobra is a species complex of snakes endemic to Asia. With an average of 3.18 to 4 m and a record length of 5.85 m, it is the world's longest venomous snake and among the heaviest. Under the genus *Ophiophagus*, it is not phylogenetically a true cobra despite its common name and some resemblance.

**Habitat:** Spanning from the Indian Subcontinent through Southeastern Asia to Southern China, the king cobra is widely distributed albeit not commonly seen.



It occurs in elevations of 2,000 m (6,600 ft) from the Terai in India and southern Nepal to the Brahmaputra River basin in Bhutan and northeast India, down to Bangladesh, Myanmar, southern China, Cambodia, Thailand, Laos, Vietnam; to the maritime Southeast Asian countries of Malaysia, Singapore, Indonesia and the Philippines.

In northern India, it has been recorded in Garhwal and Kumaon, and in the Sivalik hills and terai regions of Uttarakhand and Uttar Pradesh. In northeast India, the king cobra has been recorded in northern West Bengal, Sikkim, Assam, Meghalaya, Arunachal Pradesh, Nagaland, Manipur and Mizoram. In the Eastern Ghats, it occurs from Tamil Nadu and Andhra Pradesh to coastal Odisha, and also in Bihar and southern West Bengal, especially the Sundarbans. In the Western Ghats, it was recorded in Kerala, Karnataka and Maharashtra, and also in Gujarat.

It also occurs on Baratang Island in the Great Andaman chain. It may have reached the furthest west of its distributional range in extreme western India & eastern Pakistan, in the vicinity of Lahore and Palanpur. These populations have sometimes been thought to be the result of introduction by snake charmers or transport along rivers, but are now more likely considered natural populations. However, it remains uncertain if any populations continue to persist there.

**Status:** Vulnerable. Regarded as the national reptile of India, it has an eminent position in the mythology and folk traditions of India, Bangladesh, Sri Lanka and Myanmar. It is threatened by habitat destruction.

**Diet:** It chiefly hunts other snakes, including those of its own kind, although other lizards and rodents are occasional prey items.

**Identification:** The skin is olive green with black and white bands on the trunk that converge to the head. The head is covered by drab-colored and black-edged shields (large scales consistently present between individuals). The muzzle is rounded, and the tongue black. It has two fangs and 3–5 maxillary teeth in the upper jaw, and two rows of teeth in the lower jaw. The nostrils are between two shields. The large eyes have a golden iris and round pupils. Its hood is oval shaped and covered with olive green smooth scales and two black spots between the two lowest scales. Its cylindrical tail is yellowish green above and marked with black. It has a pair of large occipital scales on top of the head, 17 to 19 rows of smooth oblique scales on the neck, and 15 rows on the body. Juveniles are black with chevron shaped white, yellow or buff bars that point towards the head. Adult king cobras are 318 to 400 cm (10.4 to 13.1 ft) long. The longest known individual measured 5.85 m (19.2 ft). Ventral scales are uniformly oval shaped. Dorsal scales are placed in an oblique arrangement.

The king cobra is sexually dimorphic, with males being larger and paler in particular during the breeding season.

**Venom:** The venom produced by the postorbital venom glands, consists primarily of three-finger toxins (3FTx) and snake venom metalloproteinases (SVMPs). Of all the 3FTx, alpha-neurotoxins are the predominant and most lethal components when cytotoxins and beta-cardiotoxins also exhibit toxicological activities. SVMPs are the second most protein family isolated from the king cobra's venom, accounting from 11.9% to 24.4% of total venom proteins. This protein family includes principal toxins responsible for vasculature damage and interference with haemostasis, contributing to bleeding and coagulopathy caused by envenomation of vipers.

A king cobra's bite, and subsequent envenomation, is an immediate medical emergency in humans or domesticated animals, as, if not treated as soon as possible, death can occur in as little as 30 minutes.

**Subspecies:** In 2024, the King Cobra species was broken into three other distinct aprt from *O. hannah*; namely the Sunda king cobra (*O. bungarus*), the Western Ghats king cobra (*O. kaalinga*) and the Luzon king cobra (*O. salvatana*). These distinct genetic lineages are geographically isolated and adapted to specific ecological regions.

# Common European Adder

### Vipera berus

The adder has been the subject of much folklore in Britain and other European countries.

**Habitat:** The species is extremely widespread and can be found throughout much of Europe, and as far as East Asia.

The common adder is found in different terrains, habitat complexity being essential for different aspects of its behavior.

**Status:** Least Concern. The snake is not considered to be threatened, though it is protected in some countries.



**Diet:** It feeds on small mammals, birds, lizards, and amphibians, and in some cases on spiders, worms, and insects.

**Identification:** It is a thick-bodied snake. The head is fairly large and distinct, and its sides are almost flat and vertical. The edge of the snout is usually raised into a low ridge. The nostril is situated in a shallow depression within a large nasal scale. The eyes are large.

The coloration of this species exhibits significant variation. Light-colored specimens are characterized by small, incomplete, dark dorsal crossbars, while darker specimens display faint or clear, darker brown markings. Melanistic individuals are entirely dark in color and lack any apparent dorsal patterns. However, most specimens show a zigzag dorsal pattern that extends along the entire length of their bodies and tails. A distinctive dark V or X marking is usually present on the dorsal surface of the head. A dark streak runs from the eye to the neck and continues as a longitudinal series of spots along the flanks.

Unusually for snakes, the sexes can often be distinguished by color. Females are usually brownish with dark brown markings, while males are pure gray with black markings. The basal color of the males is often slightly lighter than that of the females, making the black zigzag pattern stand out. Melanistic individuals are often females. Adults grow to a total length of 60 to 90 cm (24 to 35 inches) and a mass of 50 to 180 g (1.8 to 6.3 oz)

**Venom:** This snake is venomous. It is not aggressive and usually bites only when really provoked, stepped on, or picked up. Bites can be very painful, but are seldom fatal.

**Subspecies:** There are three recognized subspecies.

- V. b. berus. First reported by Linnaeus in 1758. The nominate subspecies is called the Common European Adder. It is found in Norway, Sweden, Bulgaria, Finland, Latvia, Estonia, Lithuania, France, Denmark, Germany, Austria, Switzerland, Northern Italy, Belgium, the Netherlands, Great Britain, Poland, Croatia, Czech Republic, Slovakia, Slovenia, Hungary, Romania, Russia, Ukraine, Mongolia, and Northwest China (north Xinjiang).
- *V. b. bosniensis.* First reported by Boettger in 1889. The Balkan Cross Adder is endemic to the Balkan Peninsula.
- V. b. sachalinensis. First reported by Zarevskij in 1917. The Sakhalin Island Adderis found in the Russian Far East (Amur Oblast, Primorskye Kray, Khabarovsk Kray, Sakhalin Island), North Korea, and Northeast China (Jilin).

## Corn Snake Pantherophis guttatus

The corn snake is named for the species' regular presence near grain stores, where it preys on mice and rats that eat harvested corn (maize). Other sources maintain that the corn snake is so-named because the distinctive, nearly-checkered pattern of the snake's belly scales resembles the kernels of variegated corn. It is often referred to as a "Rat Snake"

Though superficially resembling the venomous copperhead (*Agkistrodon contortrix*) and often killed as a result of this mistaken identity, the corn snake lacks functional venom and is harmless. The corn snake is beneficial to humans because it helps to control populations of wild rodent pests that damage crops and spread disease.



Corn snakes are one of the most popular types of snakes to keep in captivity or as pets, second only to the ball python. After many generations of selective breeding, captive bred corn snakes are found in a wide variety of different colors and patterns. These result from recombining the dominant and recessive genes that code for proteins involved in chromatophore development, maintenance, or function. New variations, or morphs, become available every year as breeders gain a better understanding of the genetics involved. **Habitat:** It is found throughout the southeastern and central United States, ranging from New Jersey to the Florida Keys.

It prefers habitats such as overgrown fields, forest openings, trees, palmetto flatwoods, and abandoned or seldom-used buildings and farms, from sea level to as high as 6,000 ft (1,800 m). Typically, the corn snake remains on the ground until the age of four months but can ascend trees, cliffs, and other elevated surfaces.

Status: Least Concern.

**Diet:** This species feeds almost entirely on rodents; particularly rats and mice.

**Identification:** The natural corn snake is usually orange or brown bodied with large red blotches outlined in black down their backs. The belly has distinctive rows of alternating black and white marks. The corn snake can be distinguished from a copperhead by the corn snake's brighter colors, slender build, slim head, round pupils, and lack of heat-sensing pits.

As an adult the corn snake may have a total length (including tail) of 61-182 cm (2.00-5.97 ft).

**Venom:** This snake is non-venomous.

**Subspecies:** It has been suggested that the corn snake be split into three separate species: the corn snake (*P. guttatus*), the Great Plains rat snake (*P. emoryi*, corresponding with the subspecies *P. g. emoryi*), and Slowinski's corn snake (*P. slowinskii*, occurring in western Louisiana and adjacent Texas). At time of printing, it is still being discussed.

# Eastern Coral Snake

### Micrurus fulvius

It is commonly known as the eastern coral snake, common coral snake, American cobra, and more, is a species of highly venomous coral snake in the family *Elapidae*. It should not be confused with the scarlet snake (*Cemophora coccinea*) or scarlet kingsnake (*Lampropeltis elapsoides*), which are harmless mimics. Experts now recognize that certain coloration patterns and common mnemonics—such as the phrase "Red against yellow, deadly fellow; red against black, friendly Jack," which people sometimes use to distinguish between the venomous coral snake and the non-venomous milksnake—are not consistent enough to be trustworthy. While any snake exhibiting the coral snake's color and/or banding pattern in the southeastern United States will almost certainly, in fact, be a coral snake, there are coral snakes in other parts of the world that are colored differently.



**Habitat:** The species is endemic to the southeastern United States. It is found from southeastern North Carolina, south through South Carolina and peninsular Florida, and westward through southern Georgia, Alabama and Mississippi to southeastern Louisiana.

Coral snakes in Texas, western Louisiana, and southeastern Arkansas are now considered to be a different species, *Micrurus tener*.

**Status:** Although it was listed as "Least Concern" in 2007 based on its total global population size, it is of significant conservation concern at the local level throughout most of its range. It is listed as "Endangered" in North Carolina, Imperiled in South Carolina, and of Highest Conservation Concern in Alabama.

**Diet:** This species primarily other snakes and attenuate lizards, but it is also known to eat birds, frogs, fish, insects, and as mentioned, other, typically smaller snakes, including other coral snakes.

It will attack the head of its prey first in order to envenomate it, then hold on to the prey until it becomes paralyzed. After the prey is paralyzed, the snake will consume it.

**Identification:** It is usually less than 80 cm (31 inches) in total length. The maximum reported total lengths are 121.8 cm (48.0 inches) for a specimen in Florida. Males have longer tails than females, but females reach a greater total length.

The color pattern consists of a series of rings that encircle the body: wide red and black rings separated by narrow yellow rings. The head is black from the rostral scale to just behind the eyes. This snake commonly has a black snout as well as black eyes and then a yellow band on the back half of their head behind the eyes. The red rings are usually speckled with black. The bright coloration is likely aposematic, meaning that it is associated with a danger (venom) to predators

**Venom:** The venom of Micrurus fulvius is a potent neurotoxin with a median LD50 of 1.3 mg/kg SC. Envenomation causes rapid paralysis and respiratory failure in prey. In humans, symptoms include local pain, sialorrhea, paresthesia, ptosis, slurred speech, double vision, blurred vision, weakness, paralysis, fasciculation and diplopia. In severe cases, envenomation may progress to respiratory arrest and muscular paralysis eventually leading to respiratory failure. It is estimated that 5 mg of venom can be lethal to humans.

M. fulvius bites and fatalities are very rare. Only two documented fatalities were attributed to this species in the 1950s, and only one has been reported since Wyeth antivenin became available for it in the 1960s. The snakes have a mortality rate between 5–20%.

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>



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