

In The Dark, All Cats Are Gray¹

Suddenly, a flash of bright color on the street. Red, yellow. The average person driving home from dinner, kids jabbering away in the back seat, would have thought: candy wrapper, or more likely, nothing at all. Herpers are anything but average though, and this flash of color had a distinct snake-like appearance. I slammed on the brakes, Coral Snake the only thought running through my brain.

I'd lived in Tucson, Arizona, for sixteen years and had yet to see an Arizona Coral Snake (*Micruroides euryxanthus euryxanthus*) in the wild. I had passed the snake-like object; I was not ready to call it a snake until I got a better look. Rather than back up and risk running it over, I jumped out of the car and darted back twenty feet or so. Sure enough, a small snake of about 16 inches

¹ Phrase attributed to Benjamin Franklin

was lying in the road. My hopes of seeing my first non-captive Coral Snake seemed dashed, for the little snake appeared black and white. Not only were the bright colors missing, I had apparently run over the poor little guy. It was unmoving and had a dead-on-the-road look to it.

At that point, my eight-year-old son, five-year-old daughter and ageless wife joined me in peering at the lifeless snake. The black and white bands made this either a juvenile Western Long Nosed Snake (*Rhinocheilus lecontei*) or California King Snake (*Lampropeltis getulus californiae*), both common in the area around my house.

"Is it a Coral Snake daddy?" said my son, who wholeheartedly shares my passion for snakes.

"No, I think it's just a Long Nosed Snake," I said, straining my eyes to make out details in the dim moonlight. With this statement of obvious wisdom—this is daddy talking—I flicked the snake with the back of my left hand to see if it was still alive.

The answer came in an unexpected way. First let me quell your curiosity. Yes, the snake was alive. I also quickly realized that my 16-year wait was over; I had indeed encountered a Coral Snake. Even though the snake continued to appear black and white, actually I should say gray and white, I knew I had a Coral Snake. For as I

flicked the snake, it had the audacity to open it's mouth and strike the back of my hand. No big deal; I get bit all the time by baby snakes. I hatch hundreds of them a year. A second or two later though, I witnessed a really cool behavior which I had only read about. It's called cloacal popping; King Snakes don't do it.² Coral Snakes do.³

Aside from hissing and tail rattling, this was the only other sound I have ever heard a snake make. There were three or four sharp pops, audible above the noise of my wife's Ford Explorer idling in the background. Putting this interesting behavioral display aside, a bit of anxiety manifested itself upon my psyche. I had just been bitten, well, at least struck, by an Elapid.

First things first. I dashed back to the Explorer (It's a newer one, They're not supposed to tip over as easily). After telling my son to keep an eye on, but not to touch the snake, I returned with a snake hook and bag. I captured the snake without incident and briefly examined it in the bag under my headlights. The halogen light returned color to the scene. An Arizona Coral Snake is a truly beautiful animal to behold. The bright red and yellow contrast sharply with the black, making the Colubrids I

² Long Nosed snakes will occasionally exhibit cloacal popping. Personal communication from Retes, Frank. (I learned this after the incident).

³ Stebbins, R. C. Western Reptiles and Amphibians 1985: p. 222-223

breed seem dull by comparison. But my anxiety was returning. Thoughts of Karl P. Schmidt and Robert Mertens—two prominent herpetologists who died of envenomation from snakes not felt to be deadly—began dominating my thoughts.

As my wife drove the half mile back to our house, located at three thousand feet above sea-level in the foothills of Tucson's Santa Catalina Mountains, I examined the back of my hand. No definite fang marks were visible, but there was a hint of a teeny red dot in the area of the strike. I remembered hearing or reading that the Arizona Coral Snake is so small that it can only bite a human in the web space between fingers or similar areas. However, I felt a slight amount of pain at the site. Was this due to me gently pinching the area to see if any oozing of blood or serum would occur? Or, was the pain evidence of envenomation. I could certainly imagine the fangs being diminutive enough to not allow much visible sign of penetration.

Twenty minutes after the bite I noted fasciculations (muscle twitches) of a muscle at the site of the strike. Fasciculations can be a manifestation of neurotoxic venoms. At this point I felt rather certain that I had been envenomated, at least slightly. Now what?

If the way I got bit wasn't shameful enough, now comes the really embarrassing part of the story. I happen to be a doctor, one of the few in Tucson skilled in caring for venomous snakebites. Usually, when you talk about snake envenomation in Arizona, or anywhere west of Texas, you're talking about rattlesnake envenomation. Although I'd done extensive reading about all forms of envenomation, I knew next to nothing about Arizona Coral Snake envenomation. Much to my chagrin neither does anybody else. My frantic review of the books I had on hand revealed nothing useful. My Google search was also useless. My call to Arizona Poison Control confirmed that they knew less than I did.

The general consensus of my brief research was: get to the emergency room. I did not take this sane advice for several reasons. There has never been a death from an Arizona Coral Snake bite. There is no antivenom. I felt fine; the twitching of the muscle on the back of my hand was subsiding. On the other hand, neurologic symptoms from Coral Snake envenomation usually occur within 2 to 6 hours, but can take up to 48 hours to peak.⁴

I called a friend of mine, older and wiser—well maybe—who also has experience with venomous snakebites. He

⁴ Campbell J. A., W. W. Lamar The venomous Reptiles of Latin America. Cornell University Press 1989: p 94.

assured me that I wouldn't die, and if I did, it was no skin off his back. He also kindly reminded me that it would take many months for the giggling to die down in the medical community if I presented to the emergency room with an imagined snakebite. A combination of knowledge and pride kept me home. I'm not sure which was greater.

As it turns out, I developed no further symptoms. I did stay awake until about one o'clock in the morning, about six hours after the bite.

At a later date I bumped into the head of Arizona Poison Control and relayed my experience. She has seen or heard of three other Arizona Coral Snake envenomations, none of which resulted in significant systemic symptoms. I also found a paragraph in the book: The venomous Reptiles of Latin America, by Jonathan A. Campbell and William W. Lamar, that I had missed in my frantic evening literature search. It reported on four cases of Arizona Coral Snake envenomation. In this series the symptoms included pain, paresthesia (sensory changes), incoordination of the bitten extremity, nausea and drowsiness. No muscle paralysis was reported.

A few words to the wise. The Eastern Coral Snake (*Micrurus fulvius tener*) is a larger and more dangerous snake. It is in a different genus (*Micrurus*), which

includes all Coral Snakes other than the Sonoran Coral Snake, and it has killed people. Any bite by an Eastern Coral Snake, Rattlesnake (*Crotalus and Sistrurus*), Copperhead or Cottonmouth (*Agkistrodon*) can cause severe illness or death. Immediate transport to medical care is of the utmost importance.

And of course remember, in the dark, all snakes are gray.

Sidebar 1

The Arizona Coral Snake

The Arizona Coral Snake (*Micruroides euryxanthus euryxanthus*) is the subspecies of the Sonoran Coral Snake (*Micruroides euryxanthus*) that extends into the United States. It is the only species in the genus *Micruroides*. Three subspecies occur, which range from central Arizona and southwestern New Mexico, south into Mexico as far as Mazatlán, Sinaloa.⁵

The characteristic coloration of the Arizona Coral Snake is felt to be a warning signal to potential predators.⁶ As its major prey, the Western Blindsnake (*Leptotyphlops humilis*), is truly blind, the bright red, yellow, and black bands do not hinder the Coral Snakes predatory abilities.

An old rhyme, with many variations, goes: "Red on yellow, kill a fellow. Red on black, venom lack." This bit of folk wisdom holds true only in the United States.

⁵ Campbell op. cit., p 154-155

⁶ Lowe, C. H., C. R. Schwalbe, T. B. Johnson . The Venomous Reptiles Of Arizona. Arizona Game and Fish Department. 1986: p. 22

In Arizona, the Coral Snake inhabits arid and semiarid environments.⁷ They are secretive, spending most of their time underground. They are diurnal as well as nocturnal, depending on the season. When molested, they will frequently strike, they may play dead, and cloacal popping is also common—Campbell calls it farting.⁸ I was lucky enough to observe all three of these behaviors at once. Coral Snakes feed on small snakes, especially Blind Snakes, and lizards.⁹ The fact that I was bitten on the back of my hand seems to dispel the notion that the Arizona Coral Snake cannot bite anything larger than a finger. However, since the Coral Snake needs to chew a bit to deliver a significant amount of venom,¹⁰ the flat surface of my hand probably did not allow enough of a grip to inject much venom.

The average size of the Arizona Coral Snake is pencil thin and about 15 inches in length. The largest recorded specimen was 24.4 inches and weighed 1.6 ounces.¹¹

As pretty as they are, due to their neurotoxic venom, tendency to bite, and the difficulty in obtaining a steady

⁷ Stebbins. op. cit., p. 222-223

⁸ Campbell J. A., Lamar W. W. The venomous Reptiles of Latin America. Cornell University Press 1989: 154-155.

⁹ Stebbins. op. cit., p. 222-223

¹⁰ Lowe. op. cit. p. 22.

¹¹ *ibid.*

supply of suitable food, the Arizona Coral Snake is not a good choice for a terrarium animal.