

THE GREAT OUTDOORS



This opossum feigns death to discourage a wood-be assailant. Photo Tony Alter, Flickr.

Trickery in Nature

No fooling: Our April Fool's Day topic deals with examples of ruses in the animal kingdom.

Animals can be masters of deception

By J. Morton Galetto

In the wild there are many masters of deception ready to fool the unsuspecting predator. A number of animals rely on camouflage, either in the form of mimicry or crypsis, to protect themselves. Our April Fool's Day topic deals with some examples of ruses in the animal kingdom.

Mimicry is used when a species imitates the warning signals or appearance of another species, which acts as a deterrent to predators and interlopers. In snakes mimicry is rather common; for example, the benign king snake at first blush appears to display the coloring of the venomous coral snake.

A false fer-de-lance was convincing enough on my last trip to Belize for me to give it a wide berth. The true variety is one of several extremely venomous snakes, and its harmless but ill-tempered cousin takes advantage of its relative's deadly appearance to stay safe. A guide assured me that it was not "the real deal," at which I simply moved a greater distance away – far be it from me to spoil a snake's otherwise great day. The false fer-de-lance should have been an Oscar nominee for its convincing portrayal of its dangerous cousin.

I used to get phone calls from folks swearing they had an exotic cobra in their yard. Common hognose snakes have a display when threatened, wherein they flatten their head and look rather cobra-like. People who annoy and torment them further will find that they roll over, curl up, and play dead. However it is unnecessary, unkind, and unlawful to persecute snakes.



*The hognose snake flattens its head to appear venomous.
Photo Doug McGrady, Flickr.*

The viceroy and monarch butterflies get their unpleasant taste from different sources– the viceroy via noxious salicylic acid from willow and monarchs from milkweed. They have co-evolved to look similar, giving them a “lookalike taste terrible vibe.” Thus each species benefits from the other’s unpalatable attributes, so that fewer butterflies die.

We have previously talked about the startle response triggered by some moths and butterflies, and their hind wing spots that resemble eyes. A fast flash of the wing’s fake eyes may scare off a predator. And if by chance the colorful fake eye is attacked, the hind wing generally retains enough structural integrity to enable continued flight.



The female IO moth's hind wings have eyespots resembling an owl's eyes. Photo by Author.

United States Fish and Wildlife describes crypsis camouflage as the masking of one's body with noises, cryptic patterns, or even odors. Organisms that have evolved to blend into their surroundings are displaying crypsis. A bird whose feathers look like bark, greenish yellow birds that resemble foliage, lizards that appear to be leaves or bark, a walking stick insect that's a branch lookalike – there are numerous examples. In fact, I find it takes a trained eye in the field to distinguish many species from their habitats.

Pit vipers can avoid detection while both hunting and being hunted by having no detectable scent. Mongoose can pass over a pit viper and never smell it. Some animals mask themselves in scents of other species. Squirrels roll in snake skins to deflect would-be assailants. And what dog owner hasn't experienced Fido happily rolling in the freshest *Scat du Jour*, to mask their own smell.

Some animals develop specific skills/strategies to locate hard-to-find prey. Many green caterpillars camouflage themselves on leaves to evade insectivorous birds. As a result many birds have learned to look for holes in leaves to locate munching caterpillars.

I have found that the female black and yellow garden spider (*Argiope aurantia*) is an outstanding trickster. For a spider it is outstandingly attractive. Her body can grow $\frac{3}{4}$ "- 1 $\frac{1}{8}$ " while the male's is $\frac{1}{4}$ "- $\frac{3}{8}$ ", and they are decorated with a striking yellow and black pattern. When photographing a female on its web I watched as she began to bend and extend her legs repeatedly, until the web actually flexed like a trampoline, bounding a few inches in each direction. I learned later that this is a protective mechanism to make her body look bigger in order to scare off an intruder. If the strategy

fails her, she will drop to the ground and hide.

Most gardeners and naturalists are familiar with the *Argiope aurantia* web's ladder. It is a zig-zag-like pattern called a stabilimenta, where strands of web are multiply reinforced. Its purpose is debated but all theories are fascinating and multiple ones are plausible. One is that it provides structural integrity to the web, tightening connected strands where necessary.

Another explanation suggests that it acts as both an attractant and a deterrent. The ladder enables a bird to see the web, keeping it from colliding with it and destroying it; in addition or alternatively the zig-zag pattern reflects ultraviolet light and mimics the patterns of many flowers' *nectar guides*. Pollinators follow these ultraviolet *nectar guides* in search of food. Thus this optical illusion entices an insect meal to become entrapped: "April Fool's!"

Each day a garden spider recycles its web and builds a new one, generally in the evening. It changes the pattern as part of its offensive strategy. *Argiope aurantia* are formidable predators that can snare a species up to 200% of its own size.

By the way, at least 78 species incorporate stabilimenta in their web's construction.



The zag-like pattern, or stabilimenta, in a black and yellow garden spider's web resembles a nectar guide which becons pollinators to the web. Photo: Author.

One of North and Central America's most famous pranksters is the opossum. Once our dog Blue, now deceased, captured one. After his tumultuous battle with it the opossum lay silent and in a state that defied life. Blue was dispatched to his kennel, looking quite proud of himself for killing that nasty growling critter. I chastised him with an adequate number of expletives, making my displeasure clear as he was placed in lock-up. Then I went to the garage for a shovel for the dearly departed little creature. After

I'd collected all that was necessary for a proper burial I returned to the site of the crime and much to my delight the little bugger had vanished. He'd all but said April Fool's Day! He was simply playing 'possum, and I fell for it. A clever trick indeed.

Then there are the thieves: corvids such as ravens and crows are well known for taking shiny objects and seem to have an affinity for windshield wiper blades. There are endless solutions to windshield wiper theft by these birds as well as vultures if you care to Google the topic. The most popular method is employing PVC pipes, which drivers slide over their wiper blades when cars are parked at natural areas plagued by winged robbers.

In July of 2022 a litter of foxes developed a habit of stealing shoes from porches in a Media, Pennsylvania neighborhood. Prior to being caught red-handed, or -pawed in this instance, neighbors thought a local resident possibly had a foot fetish.

Animals primarily use trickery for survival, and these pranks are clearly not limited to April Fool's Day. But that doesn't mean you shouldn't take the time on April 1st to plan an innocent prank or two of your own.

Sources

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