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Neighbourhood kids will soon be making their annual rounds, banging on doors and hollering, “Trick or Treat!” Each child will be disguised as someone or something else, wearing special clothing, masks or make up to enhance the illusion. In nature, there are creatures that practice the art of disguise, too. They exhibit certain physical characteristics or behaviours that imitate other things in order to gain some benefit. This is an evolved adaptation called “*mimicry*,” which enhances survival.

The *black rat snake* (aka eastern rat snake) is Ontario’s largest snake, holding the provincial record at over 8 feet in length. Sure, it can be hair-raising to encounter one dangling from a backyard tree or crawling up the side of your house, but the rat snake is neither venomous nor aggressive. It also packs a punch to the rodent population, making it a good neighbour, indeed. When threatened, the rat snake often mimics the poisonous rattlesnake by shaking its tail. Innately aware that most animals will avoid a deadly rattler, it does this to frighten a potential predator into moving on. When a harmless species imitates a harmful species, it is known as “*Batesian mimicry*.” Ironically, while the rattling ruse of the rat snake often protects it from other animals, it is sometimes killed when people are fooled into believing they are facing a venomous rattlesnake.

If you have a bird feeder in your yard, especially one offering peanuts, the *blue jay* is probably a frequent patron. Like other highly intelligent corvids, (i.e. crows, ravens and magpies), the blue jay is an impressive impersonator with a broad vocal repertoire. It is particularly skilled at mimicking different types of hawks, including red-tailed and red-shouldered hawks, broad-winged hawks and more. While no one is certain why the blue jay does this, most experts concur on two likely reasons. One may be to warn other jays that a hawk is in the vicinity; and the second may be to scare away other birds from a food source or nesting site. If these are correct, the raucous jay gains multiple benefits from its mimicry of hawk calls.

The orange and black *viceroy butterfly* can be found in wet habitats near ponds and swamps. Its wings closely resemble that of the monarch butterfly in colour, pattern and shape. Monarchs are full of powerfully toxic substances as a result of feeding on milkweed plants while they are caterpillars and their brightly coloured wings warn predators not to eat them. Being a monarch look-alike helps the viceroy to avoid being eaten. The viceroy continues to intrigue biologists wanting to better understand the complexities of its mimicry. More recent studies discovered that the viceroy itself is not palatable to many predators. Biologists now believe that the viceroy and the monarch display “*Müllerian mimicry*,” a type of co-mimicry where each species reaps protective rewards by resembling the other.

Another one of our local butterflies practices mimicry, but this time while in its larval (caterpillar) stage. In a bizarre example of mimicry, the remarkably lovely *giant swallowtail butterfly* starts out in life looking like a dribble of fresh, glistening bird plop! The shiny skin of this caterpillar, enhanced with realistic brown and white splotches, creates a poop illusion capable of fooling hungry birds. When a living thing imitates a non-living model, it is referred to as “*mimesis*,” and, in this particular example, it helps the swallowtail caterpillar survive to adulthood.

Maybe we will revisit the topic of mimicry again, as there are other fascinating examples to learn about.