

## Halloween Horrors: The Dark Side of Mother Nature

by Francie McGowan

As Halloween approaches, monsters, bats and bugs will loom in the darkness of a moonless night in October to scare us. Mother Nature also has some macabre critters of the bug and insect variety that are every bit as eerie and unsettling as any Halloween costume or horror film. [Spoiler alert: do no read this article while eating or you may get sick.]

To start with a seemingly pious bug, the praying mantis (order Mantodea), is actually a deadly eater and mater. With her long forelegs she captures her prey and eats them alive while holding them in a death grip. While she is mating, she bites the head off the male clean off and continues chomping the rest of the poor victim until he dies. She then saunters off well fed and fertile.

The Japanese giant hornet (*Vespa mandarinia japonica*) is so big that, in flight, it resembles a small bird. It stings or sprays its victims - including humans - with a flesh-dissolving acid. It usually aims for the eyes. Embedded in this acid is a pheromone that attracts the other hornets in the hive to the victim and they attack en masse. Thirty of these hornets can attack a honey bee hive and kill thirty thousand of them in a matter of a few hours.



Another creature to throw the most stalwart person into a state of arachnophobia (fear of spiders) or entomophobia (fear of insects) is the cockroach wasp (*Ampulex compressa*). They live in Asia and in Africa. This wasp turns cockroaches into zombies. After they inject their venom into specific areas of the victim's brain, the cockroach will do its bidding. The wasp first jabs its stinger into the thorax of the insect then,

as the cockroach tucks in its chin as a protection, the wasp inserts her stinger into the insect's head tissues, carefully, maneuvering until it reaches the brain. After this ghastly operation, the cockroach is in her power and doesn't move. She then goes in search of a safe chamber. She bites off the cockroach's antenna and uses it like a leash to lead it to its new home. She then lays one egg in the cockroach and seals up the chamber. The poor insect is left as food for the egg when it hatches. The wasp then flies off to catch another victim.

The botfly (family Oestridae) is another of Mother Nature's creepy creatures. They live in Central and South America. Their larvae are internal parasites of mammals. Some types grow in the stomach and others grow in the flesh. The botfly traps a mosquito, fly or a tick and lays eggs on it. When the insect bites a mammal, the eggs are then deposited into the victim. In 2013,

ABC news reported that a couple, while visiting Bolivia, were bit by mosquitoes and assumed the raised welts were as a result of the bites - until they noticed that the welts were moving. It was very painful to have them removed. The eggs incubate inside the host for six to eight weeks, and then leave to mature outside.

The Goliath spider (from the tarantula family Theraphosidaeis) is the biggest of all the spiders. They are a foot across. They hunt by weaving a mat of silk outside their lairs. They can sense when a mouse or a baby bird walks over it, and they strike. They have fangs about an inch long, but their bite feels more like a bee sting and there have never been human deaths reported due to their bites. They inhabit rain forests of northern South America. The local cuisine includes this spider and it is cooked by singeing off its hairs and roasting it in banana leaves.

This Halloween, no matter how frightening the costumes, they can hardly compete with Mother Nature for grizzly appearances. Of course, many bugs and spiders are actually beneficial for the garden and are needlessly killed off by insecticides. But next time you are in the jungles of South America or Africa watch out for these ghastly creatures. HAPPY HALLOWEEN!

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*Sources:*

*Gudrun Herzner in the Proceedings of the National Academy of Sciences of the United States of America, vol. 110, no.4 (article and picture credit on the emerald cockroach wasp)*

*Amy Stewart, "Wicked Bugs: The Louse that conquered Napoleon's Army & Other Diabolical Insects," Algonquin Books of Chapel Hill, 2011*