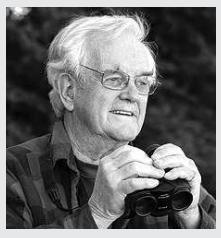

Tales from a
Sisters Naturalist
by Jim Anderson

Nature's hunters

My two older sons are F-16 pilots, they get paid to fly fast and are prepared to go into lethal battle to protect us from anyone who is a threat to our welfare and safety. They have to train religiously to keep current of what the rest of the world is up to and insure they are faster and better then their potential adversary.

Old Mother Nature does the same thing, and through the processes of natural selection, insures that only the best survive.

Take beewolves, also known as bee-hunters. They're burrowing wasps known by their scientific name: philanthuses. They are solitary, predatory wasps, most of which prey on bees, hence their common name. The adult females dig tunnels in the ground for nesting, while the territorial males mark twigs and other objects with pheromones to claim the territory from competing males. The larvae are carnivorous, and the female keeps them supplied with bees and wasps.

They are notable in stinging their prey on the ventral surface where the venom quickly paralyzes major voluntary muscles. The key word here is "paralyzes," which means the female beewolf does not kill the prey. The bee may attempt to sting in return, but it's always grasped in such a way that only the well-armored portions of the beewolf's body are presented. The female beewolf then carries the paralyzed bee back to a cell burrow for "cold storage," where an egg is laid on the victim, supplying the larvae with fresh food when the eggs hatch.

Adult beewolves also collect nectar from flowers or — get this — from squeezing the bees they capture; the nectar is their fuel for flight (which reminds me of the way my sons refuel their F-16s from a K-135 tanker). Thank goodness beewolves are a solitary hunters, therefore not creating a serious problem for us bee-keepers. The bees have enough problems surviving Colony Collapse Disorder, without having to duck every time a beewolf flies by!

PHOTO BY JIM ANDERSON

The F-16 of the insect world, a robber fly with its prey, the infamous botfly.

Then there's the "cicada killers." I'm sure most of you have heard a nice, big, fat, delicious cicada screeching (actually clicking) in the dog-days of summer. You'd know that anything that captures, stings and carries them away for food for their off-spring are BIG! And cicada killers are just that.

The giant cicada killers (best compared to the F-111 fighter bomber) are in the genus Sphecius, with four species represented in the U.S. Most of the other 21 species are found in tropical regions, worldwide. Sadly, in all my 87 years of crawling around on my hands and knees looking for and sweep-netting insects, I have yet to witness a cicada killer in action, but I'm still looking. If you've seen it happen, please share the adventure!

Then there's the robber flies (pictured above). Just about anytime throughout summer you may see a robber fly come to rest grasping it's prey and sucking the goodies out of it. They usually capture their victims in flight, snatching them out of the air and ramming their powerful straw-like feeding tube though the exoskeleton of their prey and sucking it dry.

The next aerial killers we'll look at are the spider hawks, familiar to most people because of a classic PBS show on the tarantula hawk. There are over 290 species of these agile spider-killers in the U.S. and Canada, better then 4,200 of them world-wide, and probably another 100 or so species that no one has found yet.

Most spider hawks are black, metallic blue, or reddish, and measure up to two inches in length, and their wings range from clear to smoky-gray or bright red-orange in color. The wasp's extraordinarily long hind legs distinguish spider wasps from other wasps, and they're usually seen walking on barren ground or in tangled undergrowth searching for prey.

As they walk, their wings flicker, antennae tap the ground, and they often break their restless walking with short flights. If you see that wasp doing that, keep your eye on it, you will soon witness the battle between predator and prey. If you're lucky, you may even watch the wasp as it digs out a burrow, places the paralyzed victim inside, lays an egg, covers it up and flies off.

DO NOT pester a spider hawk unless you're prepared for a powerful and very painful sting. The venom is both biochemically and medically engineered to work immediately. I often wonder how an essentially non-toxic venom causes so much pain — that I can only describe (through experience) as blinding, debilitating, and almost shockingly electric — can subside in only a few minutes in humans.

But, oh those few minutes can be excruciating! I can still remember the hurt! Then, on the other hand I have to wonder, how does it permanently paralyze a spider, yet keep it alive?

The spider hawk's venom is a specific, evolutionarily tailored cocktail of compounds best suited to the wasps' needs. Perhaps studying spider hawk venom may help gain insight into treating human problems, such as chronic pain from injury or disease.

I'd love to hear from you if you notice any odd or fascinating behavior on the part of any of nature's hunters (jim@northwestnaturalist.net). It's truly an amazing world we live in.