

“Spiders” by Sally Cureton

Those of us who live in the mountains are very familiar with many of the little creatures that we share this space with. One of these many could do without is one of nature's smaller creations, the spider. Though they're the size of an insect, they are actually arachnids. However, both spiders and insects belong to the largest group of animals on Earth, the *arthropods*, i.e. animals with hard external skeletons and jointed limbs (greek arthro = joint, podos = footed). Arachnids include spiders, scorpions, pseudoscorpions, whip-scorpions, daddy longlegs, ticks and mites. Spiders and insects have differing body structures. Spiders have two main body parts, eight walking legs, simple eyes and piercing jaws (fangs). On the other hand, insects have three main body parts, six walking legs, compound eyes, antennae, and chewing jaws, or mandibles. Another distinction is that many insects can fly, spiders cannot.

Spiders are the only arachnids with special glands in their abdomen which produce silk. Their webs are one reason I really don't mind having one or two around - it keeps the fly population down. However, many spiders do not build webs, they forage or lie in wait for their prey. Webs vary in form, and frequently the type of spider that made a web can be identified from the web's structure. The male is often smaller than the female and in some species the female kills and eats the male after mating. Spiders feed on insects and other small animals, paralyzing their prey with venom. They rarely bite humans and only a few are dangerously venomous.

A few spiders are so small and live such hidden lives that most of us never see them. Others are enormous. Some of the smallest spiders in the world are anapid spiders, they are usually found in damp, cool habitats like forest leaf litter and moss because their small bodies can lose water rapidly in dryer conditions. Many spiders have unusual body shapes and colours. Bizarre bodies can be helpful to spiders in various ways - including to deceive and ambush prey or to avoid being eaten and to attract mates.

Spiders were among the earliest animals to live on land. Despite this, their fossil record is relatively poor. They probably evolved about 400 million years ago. Spiders with spinnerets at the end of the abdomen appeared more than 250 million years ago. By 191 - 136 million years ago, when dinosaurs roamed the earth, the sophisticated aerial webs of the orb-weaving spiders had developed. The rich record of amber spider fossils - complete spiders trapped in clear, sticky, tree resins - shows us that a spider fauna very similar to that of the present day existed more than 30 million years ago.

With this background, I'll talk next month about some of the more common spiders in our area.

Happy wildlife viewing and gardening!