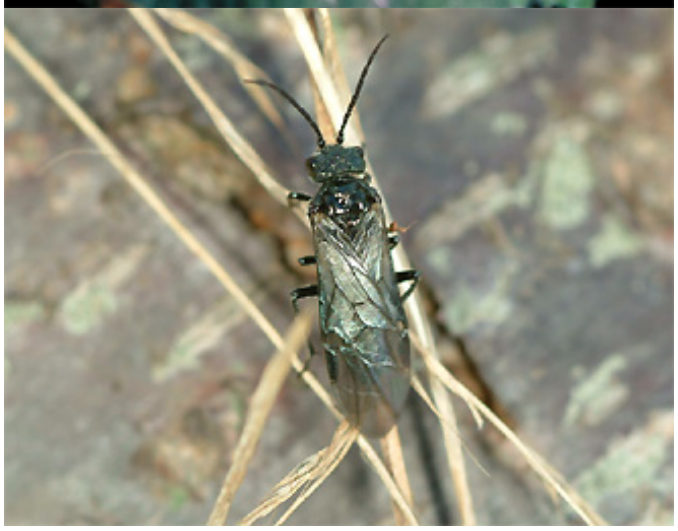
Entomology Basics

Order Hymenoptera: Sawflies, wasps, ants, and bees

The bees, wasps and ants belong to the Hymenoptera. Hymenoptera means 'married wings,' as the hind wings are coupled to the front wings by a line of hooks. This is undoubtedly the most beneficial order of insects and many members are pollinators or important predators or parasitoids of other insects. Hymenopterans have complete metamorphosis illustrated by a sawfly larva and an adult pictured above. Within this group the bees, wasps and ants have characteristic pinched waists, while the sawflies do not. They have chewing mouthparts, but some also have lapping mouthparts (in addition to chewing) for nectar feeding.



Note the number of prolegs on the sawfly larva, sawflies have more than the two to five pairs

found on caterpillars. Many of the Hymenoptera larvae are legless.

Kentucky Examples of the Order Hymenoptera:

Sawflies are common on a number of plants. The redheaded pine sawfly is one that can show up in large numbers on some pines. Many home gardeners often use Bt sprays to control caterpillars, but sawflies are not caterpillars and Bt is not effective against them.

The horntail pictured above is a type of sawfly. Sawflies are unusal in that they don't have the typical pinched waist of other Hymenoptera. The larvae of horntails bore into logs.

This paper wasp illustrates the pinched waist that bees and wasps possess. Very skinny people are sometimes referred to as having a 'wasp waist'. Paper wasps are predatory, hunting for and killing caterpillars to feed to their larvae.

One of the larger wasps in the state is the cicada killer wasp, reaching 1-1/2 inches or more in length. The females search for and stun cicadas before carrying them to their underground burrow. In the burrow she will lay an egg in the stunned cicada. Many of the Hymenoptera act as parasitoids of other insects.

This wasp is a parasitoid of the green June beetle larva. The females will dig through the soil searching for grubs to parasitize.

Some Hymenopterans are important plant pollinators and are covered with fined branched hairs. The hairs on this bumble bee are designed to pickup and transfer pollen between flowers.

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