

## Pretty things that sting



Bees, like this honey bee (shown magnified), have a fuzzy appearance. When at rest, their wings lie flat and unfolded. They tuck their legs underneath their bodies during flight as they forage for nectar and pollen.



Wasps, like this yellowjacket (shown magnified), appear shiny, with less hair. When at rest, their wings are folded into a narrow strip. Their legs tend to dangle during flight. They feed on nectar as adults, but prey on other insects to feed their larvae.

Photos: Jody Green, Nebraska Extension in Lancaster County

## NEBLINE e-newsletter

Nebraska Extension in Lancaster County has started a web- and mobile-friendly version of the NEBLINE newsletter!

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The NEBLINE e-newsletter now gives readers a choice of how they want to receive news and announcements from our Extension office. Every subscriber receiving the print NEBLINE will continue to do so unless you indicate you no longer want it.

4-H news articles will be included in the NEBLINE e-newsletter, but 4-H events and deadlines will not. Lancaster County 4-H has a weekly e-newsletter emailed only to 4-H families and volunteers enrolled through 4-H Online. Anyone may view it at <http://newsroom.unl.edu/announce/4h-lancaster>.

### Jody Green

Extension Educator

The sign of a bee or wasp flying around in the air can be a source of fear and anxiety for many people. In nature, both bees and wasps play beneficial roles: bees pollinate many landscapes and agricultural crops, and wasps are predators and biocontrol agents of many insect and arthropod pests. Both adult bees and wasps feed on sugary substances such as nectar, plant sap and rotting fruits.

Knowing how to identify the insect and determine whether there is a high-sting risk, will

help families protect themselves and enjoy summer to the fullest. Bees and wasps are classified as either social or solitary insects.

### Social bees and wasps

Social bees (honey bees and bumble bees) and wasps (paper wasps, yellowjackets, hornets) live in large colonies and can become aggressive when threatened.

**Honey bees** are perennial species that survive the winter. Sometimes, honey bees swarm when the queen and a large number of worker bees leave the hive in search of a new location like a hollow tree, wall void or

other protected area.

All other social colonies are annual, which means they are founded each spring by a lone, fertilized queen that has overwintered in a protective site. As the weather warms up, she becomes active and begins to search for a suitable location to begin construction of her nest.

**Bumble bees** typically nest in protected sites underground like abandoned rodent burrows or under sheds, but can also nest above ground in compost piles, bird boxes and thick grass.

**Paper wasps, yellowjackets and hornets** live in paper nests, constructed by the founding queen using chewed up wood fibers and saliva.

Paper wasp nests consist of a single-layer of downward-facing, exposed cells which are normally constructed under a horizontal surface like the overhangs of buildings or inside cavities.

Yellowjacket and hornet nests consist of a series of round

combs, stacked in tiers and covered in a paper envelope. They can take the form of a ball-shaped, aerial nest or in an underground burrow or inside a wall void or attic.

### Solitary bees and wasps

Solitary bees and wasps which live and forage alone are usually quite docile. Sometimes they nest in aggregations in lawns and landscapes, but each female builds her own nest to provision with food for her larvae.

Solitary bees include **carpenter bees, digger bees, sweat bees, mining bees, mason bees** and **leafcutter bees**. The lone,

fertilized female prepares each cell with pollen, nectar and her own egg. The species determine the location and material with which she builds her nest and chambers.

Solitary wasps include **cicada killers, mud daubers, digger wasps, grasp-carrier wasps** and **sand wasps**. Solitary wasps are parasitoids where they capture live organisms for their offspring and lay an egg on the body for their emerging larvae to feed on. The female provisions her cells and chambers with paralyzed prey, which, depending on the species, may contain cicadas, spiders, crickets, flies or caterpillars.

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Leafcutter bees (shown magnified) are gentle, solitary, hole-nesting bees that gardeners want to attract to their yard to pollinate fruit trees, flowers and vegetables. They are superior pollinators, carrying pollen on the underside of their abdomen.



Some solitary wasps, like this pretty cuckoo wasp (shown magnified), lays their eggs in the nests of other stinging insects like bees and wasps, and their larvae feed on the larval form of the prey.



Cow killer ant/velvet ant (shown magnified) is a wingless female solitary wasp. Its bright colors act as a warning signal for predators. Though her venom is not very toxic, her sting is very painful.

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