

## Yellowjackets by Lloyd Eighme, retired entomologist

Everybody hates yellowjackets. They interfere with our activities. They try to steal our food. They frighten people because of their sting. They insist on building their nests where we do not want them. We wish they could be completely eliminated from our gardens and yards.

There are ten different species of yellowjackets in the Pacific Northwest, but we can recognize them just as yellowjackets without knowing their individual species names. They have been studied in great detail because of their importance to people. Some people are highly allergic to their venom and an attempt has been made to develop antivenom medications effective for the species that are most likely to sting people. They differ in their habits and temperament. The common yellowjacket (*Vespula vulgaris*) and the western yellowjacket (*Vespula pennsylvanica*) are the most aggressive species and the ones most likely to sting. They hide their nests, usually in a hole in the ground, but sometimes in the wall of a building or in a rotten log. They eat a wide variety of things including other insects, dead animals, garbage and ripe fruit. The aerial yellowjacket (*Dolichovespula arenaria*) builds its paper nest above ground, often under the overhang of buildings or on branches of a tree. It is also equipped with a stinger to defend its nest, but is not as aggressive as the common and western yellowjackets. It feeds mostly on live insects it captures and kills. It does not scavenge for protein like the common yellowjacket and it is not as much a pest at the picnic table. The bald-faced hornet (*Dolichovespula maculata*) has no yellow color, so it is called hornet instead of yellowjacket even though it is in the same genus as yellowjackets. Bald-faced refers to the smooth white face. It is the least aggressive and is not likely to sting unless its nest is disturbed. The bald-faced hornets often attain large numbers in one nest and the paper nests get very large, up to 24 inches in diameter. Some people welcome them around their house to help control flies which they can do very well. However, they can sting as well as any other yellowjackets, so be careful.

The yellowjacket queen starts a new nest all by herself in the early spring. The overwintering queens are the largest members of the previous season's colony. You may see them gathering wood fibers from weathered fences and porch railings. They chew up the fibers into a pulp mixed with saliva and spread out to dry forming the walls of the paper nest. These little creatures were making paper long before modern paper mills. If you examine a piece of yellowjacket paper closely, you can see patterns made by adding each mouthful of fiber, sometimes of different colors. It takes a lot of mouthfuls of wood fiber to build a paper house. The comb is also made of paper with cells to hold each larva as it grows. The workers are females, but smaller than the

queen and as the colony increases in size and numbers the queen stays home to lay eggs while the workers gather food and fiber.

Yellowjackets do not make honey. They will feed on nectar from flowers, but they do not store it as honey. They like ripe fruit which gives them energy to do their work. The larvae need protein for growth, so the workers gather meat to feed the larvae. They are not choosy and they will butcher caterpillars, spiders, flies, grasshoppers, even stink bugs. Bald-faced hornets are larger than their yellowjacket relatives and will frequently capture and kill yellowjacket workers to feed to their larvae. The larvae grow rapidly and when mature they spin a cocoon in their paper cell and soon emerge as adult workers. Later in the season the queen will lay some unfertilized eggs that will produce males that mate with the largest of the females. These large mated females are the overwintering queens that start new colonies in the spring. The nests are destroyed during the winter by weather and predators and the new queen starts a new nest each spring.

One summer day as I was working in my garden and admiring my beautiful cabbage plants, I saw a yellowjacket climbing out from between the cabbage leaves. My immediate reaction was to stomp on this unwelcome creature that was invading my garden. I noticed it was carrying something in its jaws, a fat green cabbage worm that had been chewing holes in my plants. Well, I have to recognize the fact that even a yellowjacket can do something good. They also eat houseflies and barnyard flies and feed their young with spittle bugs, fall webworms and codling moths. We should not try to kill all of the yellowjackets in our area. However, they can be a hazard, especially to small children and to people who are allergic to their sting, so it is often necessary to destroy yellowjackets nesting in our gardens or houses. People are frightened by the presence of a yellowjacket even if it is not doing anything to threaten them. Food harvesters, loggers and firefighters are inhibited in their work when yellowjackets are present. Food processing plants and garbage attract large numbers of yellowjackets that can be a threat to workers. You can read about some methods of yellowjacket control in EB 643.

If you can learn to identify yellowjackets, common, western, aerial or bald-faced, you will be better able to decide whether or not to destroy them. Look at the specimens in the collection and if you are not sure, I have a book on yellowjackets written by WSU entomologists that have a key to identify all yellowjackets in North America. The common yellowjackets and the western yellowjackets that hide their nests in the ground or other secluded spots are the most dangerous to have around your yard and garden. Some years the yellowjacket colonies never get very large and may not even be noticed. Other years the weather, food and enemies may be such that by late summer each colony contains hundreds of yellowjackets that really cause trouble. Large populations of yellowjackets

discourage people from using campgrounds and outdoor recreational facilities and control measures become necessary.

Knowing that not all yellowjackets are the same and that some are not likely to sting you and that in the right place they can even be beneficial should help you learn to share Skagit County with them. But it surely would help if some way we could convince them to stay in the right place!



The Common Yellowjacket



The Aerial Yellowjacket



The Western Yellowjacket



The Bald Faced Hornet



The Bald Faced Hornet