

YELLOWJACKETS: THE GOOD, THE BAD AND THE ANGRY

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Now is the time that queen yellowjackets of all species establish new colonies. They are nearly an inch long, distinctly yellow (or white) and black banded, mated females that have overwintered in sheltered places outdoor or in buildings. Although yellowjackets are generally considered nuisances, several species are actually beneficial. Most problems are from 3 or the 13 species occurring in Minnesota. Other species are seldom encountered unless their nests are disturbed.

Beneficial species belong to the genus *Dolichovespula* and the rufus group of *Vespula*. Common species are the aerial yellowjacket, *D. arenaria*, the baldfaced hornet, *D. maculata*, and the blackjacket, *V. consobrina*. They are predators and can be effective biological control agents of caterpillars in trees, shrubs and gardens, especially on cole crops. Prey include grasshoppers, spittlebugs, leafhoppers, plant bugs, caterpillars and flies. Caterpillar-infested trees are often buzzing with yellowjackets in search of prey.

The nuisance species belong to the genus *Vespula* which are both scavengers and predators. Their scavenging and love of sweet liquids causes several species to be nuisances especially around picnics and trash cans. Although 5 of the 9 Minnesota species are commonly encountered, the introduced German yellowjacket, *V. germanica*, has become the dominant urban species in Minnesota.

Before the mid-1970's, the commonly collected species in the Twin Cities area were the

blackjacket, eastern yellowjacket, *V. maculifrons*, hybrid yellowjacket, *V. flavopilosa* and the widow, *V. vidua*. The German yellowjacket was not collected in Minnesota until the 1970's, and appears to be displacing the other species in the Twin Cities metropolitan area. Collections of yellowjackets at the University of Minnesota and the Minnesota Department of Agriculture from the 1980's to date are mostly the German, with the baldfaced hornet a distant second. As late as 1976, *V. germanica* was only recorded in a few East Coast states and Pennsylvania.

Urban sites apparently provide many structural spaces in which the German yellowjacket can nest, which are less suitable to other subterranean species. These include spaces between walls or the roof, cinder blocks of foundations, stair cases, in addition to subterranean nests in old rabbit, rodent and other burrows. Aerial nesters such as the aerial and baldfaced hornets have apparently not benefited by intensified urbanization because of changes in architecture and landscaping which offer little or no suitable nesting sites. This observation is emphasized by the absence of the German yellowjacket in undisturbed and rural areas.

Natural control of yellowjackets appears to be combinations of diseases, predation by skunks, raccoons and birds, especially robins and by parasites--mesostenine ichneumonid wasps (parasites of the pupae) and trigonalid wasps. Biological control of yellowjackets using diseases would have to be carefully studied because they may also be infectious to honey bees.

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