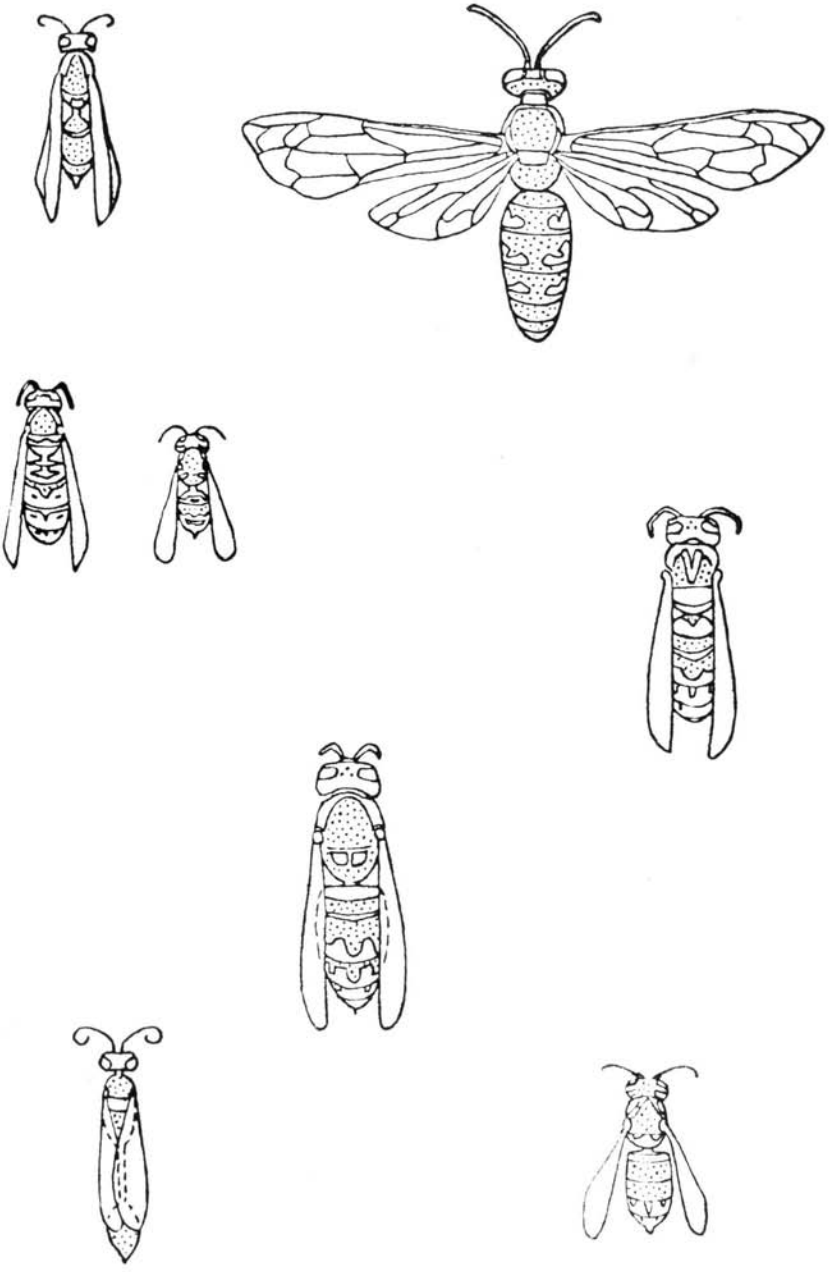
WASPS IN CONNECTICUT

Appearance, Habits, Control

Stephen W. Hitchcock



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Wasps have intrigued people for several centuries. Their color, their activity, and their painful sting have made them sources of interest or worry to many people. Of the many species found in Connecticut, only a few are of direct concern to the homeowner.

Some persons have an aversion or fear of these insects and needlessly destroy them wherever found. It is not necessary to kill wasps just because a nest has been discovered. Usually an aerial nest is not noticed until late summer or fall, after it has grown to considerable size or falling leaves have revealed its presence. Obviously if its existence has gone undetected all summer long, little harm can occur if the colony finishes its life in peace. Wasps will *not* use the same nest the following year as each young queen must start her nest anew. When the nest is near a pathway or there is danger of children or pets stumbling into a nest, control is warranted. Likewise, if yellowjackets are bothersome about outdoor living areas, some control may be desirable.

Wasps sometimes found about homes and yards. Control sometimes necessary.

The large grey paper nests (Fig. 1) suspended from a tree branch or the eaves of a building are made by the bald-faced hornet, *Vespula maculata,* or a yellowjacket, *Vespula arenaria* (Figs. 2 & 3). The nests may also be found hanging near the ground in thickets or on low tree branches.

Other yellowjackets, *Vespula vulgaris* and *Vespula maculifrons,* make their nests on or in the ground, sometimes in deserted rodent holes or hollow logs.

The large European hornet, *Vespa crabro,* is an introduced species that nests in hollow trees and resembles a large yellowjacket.

All of these species are alike in their habits and life histories. Only the fertilized female queen, hiding in a protected spot, survives the winter. In the spring, she flies out and starts her new nest. The cells resemble honeycomb in shape but are made of fibers rather than wax. They are horizontal to the ground and are suspended by a short stem. The queen also forms a paper covering to surround the nest and starts to lay eggs in the individual cells. The queen must find food for the developing larvae as well as build the nest. Soon after the larvae mature and pupate, they emerge as workers to help enlarge the nest and provide food for successive broods of young. There may be up to 2500 adults present late in the season.

The grey paper for the outer covering of the nest is obtained from wood fibers. The wasps collect the wood by scraping bark or weathered boards with their mandibles, then masticating it into pulp that will be added to their home. In one nest I examined, streaks of pink in the paper nest told that much of the wood pulp came from a nearby old red barn.

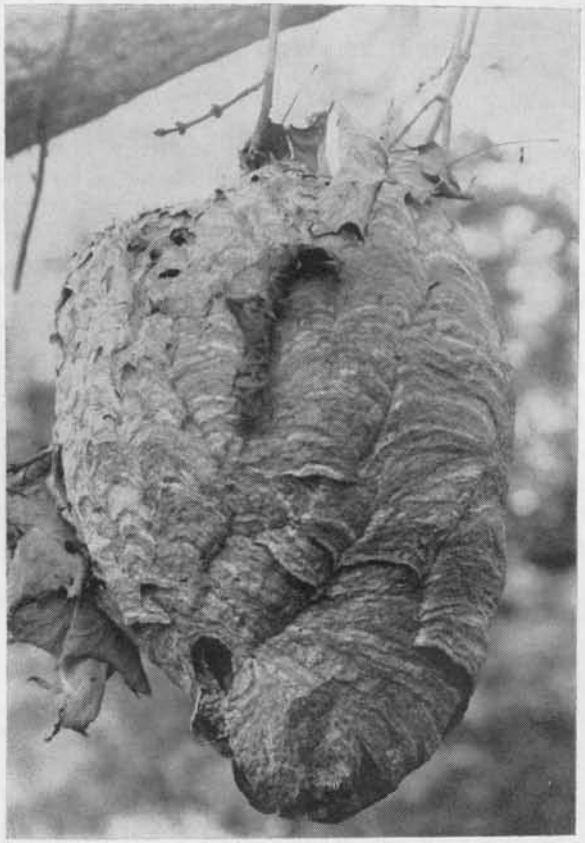


Figure 1. Nest of the bald-faced hornet, *Vespula maculata.*

Vespa crabro can cause considerable damage to lilac, dogwood, dahlia, rhododendron, or boxwood in its search for wood pulp, by girdling branches or stems, thus causing death to the affected portion. (Fig. 4).

The adult wasps drink fruit juices, nectar, or honeydew. If jams or canned preserves are available, they will take those also and so become occasional pests at picnics or outdoor barbecues. The young are fed on meat. The adults fly about until they locate a victim, perhaps a fly, pounce on it, dismember it, and chew up the remainder to be fed to the larvae as a softened mass of meat. Yellowjackets, but not usually the bald-faced hornet, will also utilize carrion or other meat, including picnic foods. The larvae reciprocate for the gift of meat by secreting a clear drop of liquid that the adults eagerly lap up. Sometimes the adults tease the larvae to give up their drop of saliva without giving any meat in return.

As late summer and fall come, males and young new queens appear. They mate and the queens search out a spot to hibernate through the long winter. The workers stay at the nest but show increasing social disorganization. Some

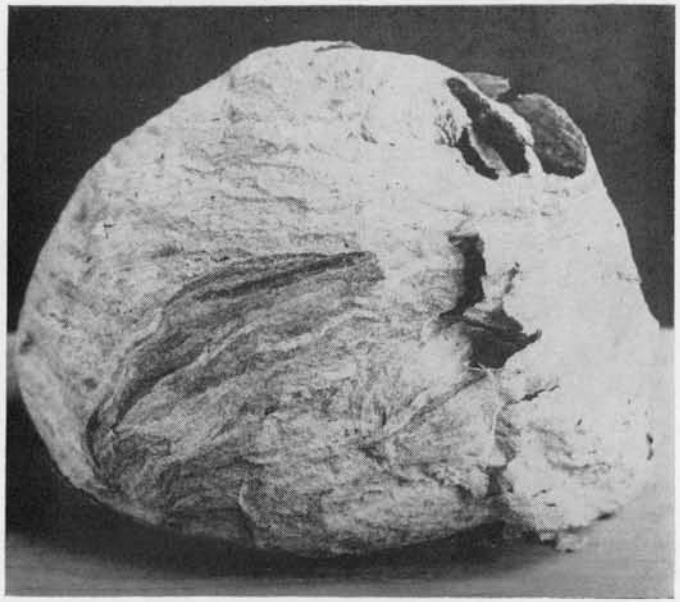


Figure 2. Nest of the yellowjacket, *Vespula arenaria.*

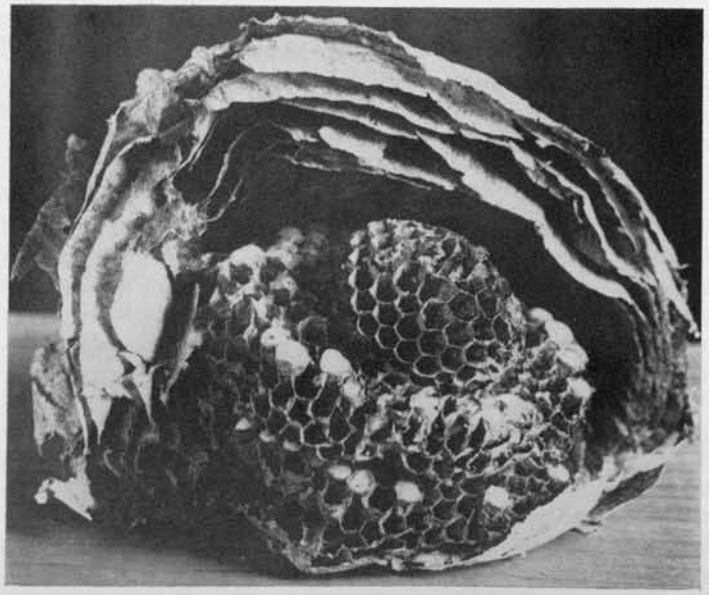


Figure 3. Same nest as Figure 2, but cut open to show larval cells.

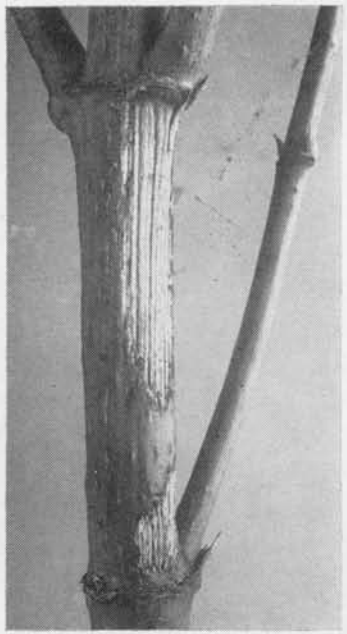


Figure 4. Stem of dahlia girdled by adults of *Vespa crabro* seeking fibres to build their nest.

start laying eggs, not one per cell as with the queen, but several per cell. Eventually the workers attack, kill, and eat the young larvae that were unfortunate enough not to have grown to adults. Late into the fall, the last remaining workers linger about their nest until all succumb to the wintry blast. The nest slowly disintegrates, never to be used again.

Control. Control is best achieved by finding the nest and destroying the colony. Several insecticides are effective. One percent dichlorvos (DDVP), 2% malathion, or 1% ronnel may be used. The last two are slower acting and if the material also contains pyrethrins, there will be a faster knockdown of the wasps and less chance of being stung. Generally insecticidal dusts are best for terrestial nests, sprays for aerial nests. Throw a shovelful of dirt over the entrance hole of an underground nest after the insecticide is applied.

Control measures should be undertaken only at night when the wasps are less active and when all are present on or in the nest. Cold or wet weather will also reduce the possibility of stings. If one wishes to be cautious, he should wear high shoes, gloves, a hat, and heavy clothes that can be tied about the wrists and ankles. A face veil will give further protection. If a flashlight is used, hold it to one side at arms length so if the wasps fly toward the light, they will be drawn away from the body. Persons allergic to wasp venom should never attempt to spray wasp nests or risk the danger of being stung.

If one chooses not to use a regular insecticide, he can pour gasoline down the entrance hole of an underground colony. The fumes kill the adults, but not the pupae, so some adults will emerge subsequently if the nest is not dug up and destroyed. Aerial nests may be burned by attaching a torch to a pole and

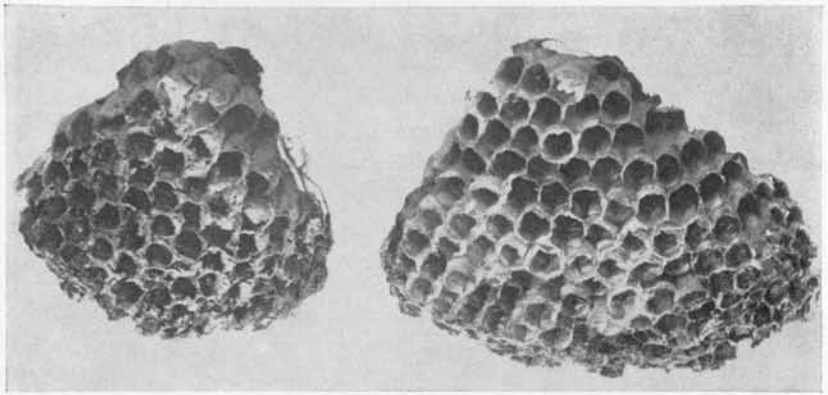


Figure 5. Nests of *Polistes*. These hang with the cells pointing downward and not enclosed by a grey paper covering.

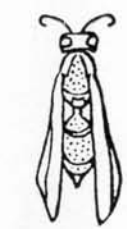
holding the fire to the bottom of the nest. Great care must be used with this method and should not be used if the nest is on a building or evergreen tree.

Sometimes an underground nest cannot be located and then some population reduction can be made with a toxic bait station. The bait must be presented to the yellowjackets in a manner that does not present a danger to other animals. One method is as follows. A five inch square box is made from ½ inch mesh wire screening; one side is hinged so that bait can be put in, and the box suspended from a branch by a wire. The box must be made and hung so that other animals cannot enter or destroy it. The suspending wire is coated with Tanglefoot® or Stikem® to keep out crawling insects. For the bait, fish-flavored cat food or canned tuna fish is mixed with chlordane wettable powder to make a 1% mixture and placed in a shallow pan on the bottom of the cage. The adult yellowjackets pass through the screening, pick up the meat and carry it back to feed their young, so gradually poisoning the whole colony.

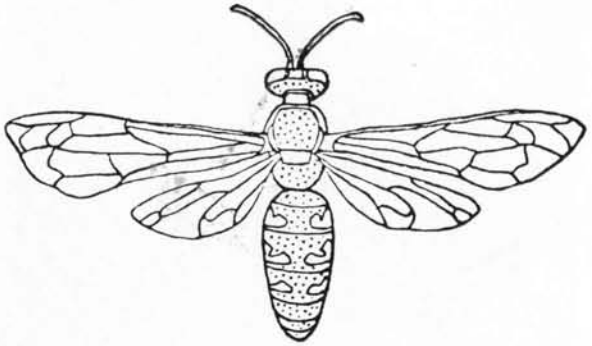
Wasps often found about houses. Control unnecessary.

Polistes, a narrow waisted, dark species makes an open faced nest of cells hanging downward from the ceiling of open sheds and outbuildings (Fig. 5). The nest looks like a layer of papery honeycomb hung from a short stem. Occasionally more than one queen may be found on a single nest, but the nests never reach a large size. The young are fed on caterpillars. Their general life history is similar to that of the yellowjackets. The overwintering females are sometimes a source of worry to the housewife as they are often found in the attics of homes during the winter or spring. On warm days in winter, they may become active and move about, so becoming more obvious to the householder. In spring, some *Polistes* will beat vainly against attic windows trying to escape to the outside. Although more obtrusive than other wasps, *Polistes* are also more pacific and seldom sting unless provoked. The pain of the sting is much less and passes sooner than that of a yellowjacket.

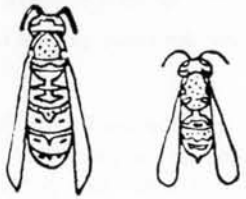
The mud daubers, *Sceliphron* spp., as the name suggests, build their cells of mud. Unlike the wasps discussed above, the mud dauber kills or paralyzes



Polistes fuscatus

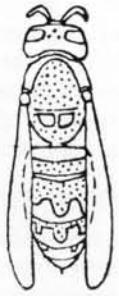


The cicada killer,
Sphecius speciosus



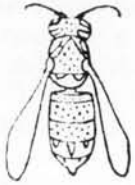
A yellowjacket, *Vespula maculifrons,* showing two different sizes

The large European hornet,
Vespa crabro



Vespa crabro

A mud dauber,
Sceliphron caementarium



The bald-faced hornet,
Vespula maculata

Fig. 6. Common wasps of Connecticut, shown life size.

spiders with its sting and stores them in the mud cell as food for its young. When the cell is fully provisioned, the wasp lays an egg on the spiders and seals the cell over. The young larva hatches and grows within the closed cell without further attention from the mother. The mud daubers are harmless but occasionally their mud nests are found objectionable when found on the sides of houses or in porches.

Control. Adults are easily killed with a fly swatter. Nests may be knocked down and/or sprayed with any commercial household insecticide in an aerosol can.

Wasps sometimes found in yards. Control usually unnecessary.

The cicada-killer, *Sphecius speciosus,* is a solitary wasp that is sometimes mistaken for a very large yellowjacket. It is 1 to 1¼ inches long, dark with yellow markings and may be seen digging or passing in and out of its burrow in the ground. This tunnel is about the diameter of a finger. The cicada-killer stings a cicada, carries it down the tunnel to a room where she attaches an egg to it and leaves it for her young to devour. She forms several rooms off each tunnel and seals up each room after it is provisioned. Although the venom of a cicada-killer is quite painful to a human, only very rarely does anyone get stung.

Several other kinds of wasps burrow into the ground and provision these nests with captured and paralyzed insects. Each wasp makes an individual nest but oftentimes many will nest in the same area, giving the impression of a large nest with many inhabitants.

Ground nesting solitary bees are occasionally thought to be dangerous but are mild mannered in nature. Their general appearance is that of a small dark honeybee. They feed their young on balls of pollen.

Control. No control is needed for the solitary, ground-nesting wasps and bees, but if the necessity does arise, the same insecticides as listed for yellowjackets may be used.

Several books have been written about the habits of these insects and a study of their biology could make a fascinating avocation for the homeowner.

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