



# TECH NOTES

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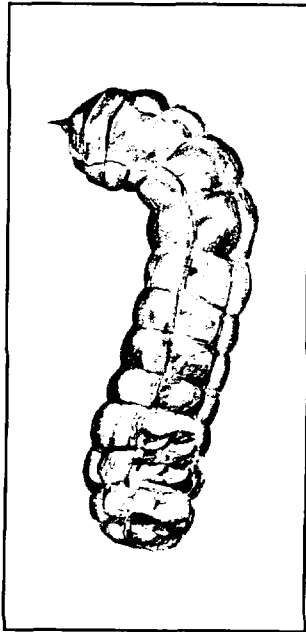
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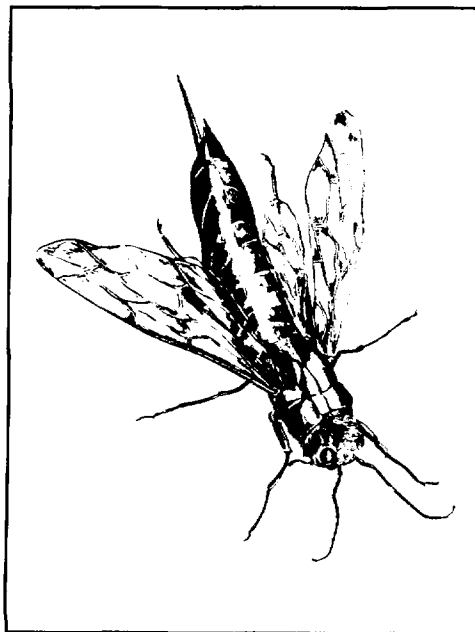
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## Wood or Horn-tailed Wasps

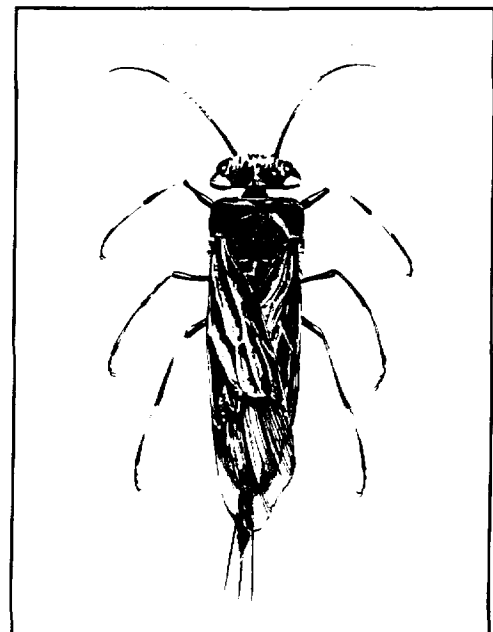
(portions excerpted from *Insects in Western Wood*, published by Western Wood Products Association, © 1990)



*Sirex Juvencus - Larva*



*Sirex Juvencus - Adult Female*



*Sirex Cyaneus -Adult*

### Wood or Horn-tailed Wasps (*Siricidae*)

**Adults:** Large, wasp-like about 1" long or longer, bluish or reddish-brown, with long ovipositors, membranous wings.

**Larvae:** About 1" to 1-1/2" long, cylindrical, creamish white in color with a small, spine-like tail. They burrow deeply into wood, creating circular tunnels about 1/8" to 3/16" in diameter, generally filled with wood-fiber borings (frass).

**Species Affected:** Wood Wasps are attracted to coniferous, or evergreen trees that are weakened or dying as a result of fire, disease, insect attack or other debilitating factors.

**Damage:** Emerging adults leave perfectly round exit holes and do their damage usually within two to three years after a house is built. Holes are about 1/4" in diameter, round and clean cut. While not usually numerous, the holes can deface floors, walls, and interior surfaces. Holes in wood or drywall can be filled and refinished.

Wasps do not reinfest seasoned wood and do not pose a threat to the structural capabilities of the wood. The flying adult insects may appear frightening because the long ovipositors look like enormous stingers. However, Wood Wasps are not venomous and do not sting. The ovipositor is sharp enough to penetrate tree bark to deposit eggs, but is not used by the wasp as a stinger.

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## **Wood Wasps in Nature**

Wood Wasps are wood-boring forest insects that develop from eggs deposited in the bark of dead or dying trees, as well as logs. Upon hatching, the larvae bore into the inner bark, forage there for several weeks, and then enter the wood. They slowly tunnel their way along and derive nourishment by ingesting the soluble carbohydrates in the wood particles and/or available fungal tissues. The larval stage lasts from several months to several years and is the only phase in the life cycle of these insects when wood is used as food.

Following the larval stage, the insect pupates and then emerges as an adult wasp to mate and fly away in search of susceptible trees or barked logs on which to deposit eggs. The boring larvae usually inflict only minor damage to the wood. If the larvae survive processing and the lumber is used for construction, the emerging adults may bore out through drywall and/or finishes in their efforts to reach the outside.

Wood Wasps can be recognized primarily by the larvae, the size and shape of the larval tunnels and on the exit holes, which are perfectly round, about 1/16" to 1/4" in diameter. Positive identification should be confirmed by a university entomology department or its extension service, or by a U.S.D.A. Forest Service office.

In the normal cycle of life in the forest, wood-boring insects like the Wood Wasp serve an important role in disintegrating the forest litter. They seldom attack healthy living trees and do not cause serious damage to lumber which is produced in the usual sequence of logging, sawing and drying. Only when a destructive agent such as fire or wind destroys or seriously impairs the vigor of standing timber does the wood become subject to attack by these insects. Wood Wasps and other forest insects require an environment provided by a weakened, dead or dying tree or a log, complete with bark, to carry on their life cycle.

## **Wood Wasps in Logs and Lumber**

When logs already infested by Wood Wasps are sawn, most of the insects are removed with the slabs and edgings. Those insects which are deep within the wood, however, may be carried in the lumber. Their presence in the wood is difficult, if not impossible to detect during lumber manufacturing or even after the lumber is finished because the tunnels are tightly filled with wood fiber from the insects' boring actions. Wood Wasps will not infest other dry lumber in storage or in wood structures.

The major problem with Wood Wasp-infested lumber is the appearance of adult insects after the material is in place. It can be alarming if these insects emerge into homes, even though they are harmless and will not reinfest the seasoned lumber already in service. The wasps look frightening because the long ovipositors look like enormous stingers. However, Wood Wasps are not venomous and do not sting.

When Wood Wasps emerge from lumber in use, they will fly away seeking host trees and will not reinfest the structure. Typically, the tunnels bored by these insects do not alter the structural properties of wood framing and there is rarely a need to replace any of the structural members.

Because the Wood Wasp, either as larvae or pupae, may be deep within a board and the tunnels are usually tightly packed with wood fiber from their boring, surface applications of insecticides or fungicides are not effective. Because of this, fumigation of Wood Wasp-infested lumber, either prior to or after installation, is not recommended.

*(Information on the Wood Wasp and other insects detailed in WWPA's *Insects in Western Wood* publication was developed with the assistance from David Bridgwater, senior entomologist in the Pacific Northwest Regional Offices of the U.S.D.A. Forest Service, Division of State and Private Forestry and Forest Pest Management.)*

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