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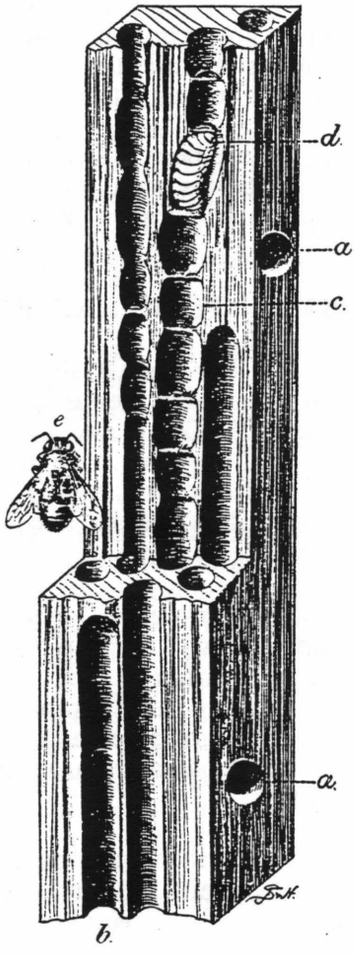
INSECT NOTES

CARPENTER BEES

Some recent requests for information on the biology and control of carpenter bees has reminded me that the information in the PMG is less than complete; and that these critters don't seem to play by the rules at times, making control difficult.

Carpenter bees are certainly active this time of year, either collecting pollen and nectar from early flowering plants or by beginning to tunnel into the sides of houses and barns. The adult females do the tunneling and provisioning of the nest, apparently the males simply mate and hang around providing some nest defense. The males can not sting, so most of their defense is just threatening behavior. The perfectly round, about 1/2 inch in diameter, hole (a in the figure) is a characteristic sign of carpenter bee damage to wood. Through this hole the female creates a long gallery in the wood (b), or sometimes extends a gallery already there. She lays an egg and provides some food material in several separate partitions she creates in the gallery (c). The larva (d) consumers the food provided, and completes development. The adults spend the remainder of the year and winter in and around the nest; the following spring they take their turn at mating and nest building.



The control of these insects is necessary in some situations because they can occur in large numbers and deface the sides of houses. They are especially bothersome to modern log houses and buildings with wood shake walls or roofs. The most effective control strategy is to apply a small amount of insecticide (liquid or dust, carbaryl, diazinon, chlorpyrifos work well) to the hole during or after it is made. The bees will get some of the material them as they move in and out. Placing a small mothball in the entrance to a gallery can kill what is in the gallery (fumigation effect) and keep out the female. There are few, if any, chemicals that can be applied to wood that will last long enough or be there in sufficient concentration to provide long-term control. Remember that the bees are not eating the wood, just tunneling. So, an insecticide impregnated into the wood may not be as effective as something on the surface. Carpenter bees often collect in large numbers at certain locations, and this may result in some real structural damage to wood. However, most of the time the damage is cosmetic--but always important to the homeowner.

OTHER BEES

Other solitary bees--those that don't gather together in large nests such as honey bees--are busy making nests in patches of soil in the yard or in the abandoned beetle emergence holes in log houses, or in the holes that naturally develop in the mortar of brick houses. [When these bees use the holes in brick mortar we often get calls that something is "eating" the mortar--they are not doing that! Simply expanding the hole that was already there; sometimes the mortar is fragile enough that it can be easily tunneled--no the chimney is not going to fall over.]

These bees are not usually aggressive and rarely sting--but they can, mind you! Control is usually not necessary, but a light spray with carbaryl, diazinon, chlorpyrifos (Dursban) will do the job.

URBAN ENTOMOLOGY BULLETIN BOARD

We have established an computer "Bulletin Board" here at the Urban Pest Control Research Center (UPCRC). Let me explain. We have dedicated a phone line (703/231-3441) and a computer with a large data base to the Bulletin Board. It is intended to serve three distinct audiences: homeowners, Extension Agents, and the scientific community. The Urban Entomology Bulletin Board is available 24 hrs/day, 7 days/week. The information available to each audience is slightly different.

Homeowner/homemaker - By calling the Bulletin Board homeowners and homemakers will be able to obtain information on the biology, habits and control of a wide range of household and structural insect pests. While they may read the information on their computer screen, it is primarily intended to be downloaded as files to their computer and the material can be read later. Some files are quite long and it would be easier to read or print them after transferring them to a home computer.

While there may be a limited number of households that have a computer/telephone hookup, this is changing rapidly! There are schools and libraries that have computer/phone hookup, and many businesses have this

capability. [Actually, any computer can be adapted to a phone modem for about $90.]

Some of the topics in the file library for the homeowner/homemaker audience are ants, bees and wasps, general insect pests, cockroaches,and wood-infesting insects. There is also a calendar that provides monthly review of the insects that are likely to be out and about at that time--something like Insect Notes--except that this calendat will not be updated regularly!

For the potential user the **Recommended Terminal Settings:**

8-N-	8 data bits, no parity, 1 stop bit
ANSI	Terminal emulation
Full duplex	Do not use half duplex
XON/XOFF=off	No software flow control
RTS/CTS=on	Enable hardware flow control
Auto-LF=off	Do not translate <*Enter*> into <*Enter*><*LF*>
BS=destructive	<*Backspace*> should erase what it moves over

This information must be provided so that the user can prepare his/her computer to access the Bulletin Board.

We intend for the Bulletin Board to be a means for Agents to provide those in their audience with computers with access to additional information on household and structural insect pests. Much of the information in this part of the Bulletin Board has been taken from Insect Notes--but modified! The Bulletin Board will not take the place of Insect Notes; and I will not simply dump Insect Notes into the files. I write Insect Notes for Agents and no one else!

So, pass out the number (703/231-3441) to those that can use it and see what happens. Yes, you can use the number as well. Of course, there are some routines that you must go through when you get the Bulletin Board, but we have worked on this thing for about a year--so, it should be fairly simple for the average computer literate. When you gain access you will have to give yourself an ID and a Password.

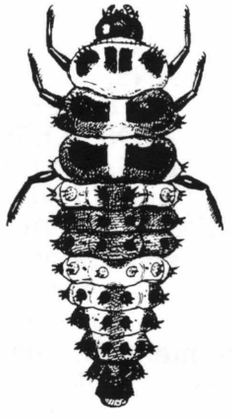
Extension Agent - This aspect of the Bulletin Board is not quite ready yet, but will be in a month or so. We intend to provide more in-depth information in the files here, and this portion will not be accessible to the homeowner/homemaker audience. You will need a Password to get into these files--and we will assign the Password. This portion of the Bulletin Board will not be open to everyone. What I will attempt to do in these files is provide you with some of the research data developed here at the UPCRC, and some of the current research papers we have prepared. The intention is to give you information that can be used to help homeowners and homemakers. In some cases the information may be a bit technical, maybe more than is necessary to solve a problem--but you can sort out what you need.

Scientific Community - For this aspect you will also need a Password assigned to you (maybe even a secret handshake). Here we will attempt to provide

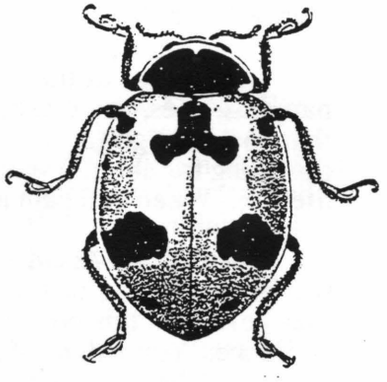
data files on the full range of things that go on at the UPCRC. We have a 20 years history of work with cockroaches, wood-boring beetles, termiticides, etc. Most of this will be available to individuals at other research laboratories.

LADYBUG, LADYBIRD BEETLES, OR LADY BEETLES

Ladybug, ladybug, fly away home
Your house is on fire, your children do roam
Except little Nan, who sits in a pan
Weaving gold laces as fast as she can.



Ladybugs or lady beetles have been recognized by many cultures for their beneficial/predatory behavior. Aspects of their biology have been incorporated into the folklore of many countries. The above English nursery rhyme is based on the ancient farming practice of burning hop fields following harvest to eliminate aphids. Any adult beetles in the field would face the same fate--thus the suggestion to fly away home. Larval stages in the field are also encouraged to leave (roam); only the immobile pupal stage--attached to the leaves by their molt skins or "pans"--may not be able to avoid the fire. I'm not sure what the weaving gold laces means!



Adult ladybugs are some of the most recognized insects in the United States--perhaps around the world. Few small children are not familiar with this little beetle. And the predatory habits of these beetles (attacking aphids) have benefited commercial agriculture since the early 1800s. Both the adults and alligator-like larvae of these beetles are predators of aphids. There are approximately 4000 species of ladybugs, and they all attack aphids, scale insects, or other soft bodied insects. There is great diversity in their color patterns and the common names applied to these insects: *twelvespotted lady beetle*, *convergent lady beetle* (which may have 12 or no spots!), *sevenspotted lady beetle* (which may have less than seven spots), and the *twospotted* or *twice-stabbed lady beetle*).

The beneficial aspects of lady beetles is challanged by the recent introduction of the so called Japanese lady beetle to Eastern U.S. This species overwinters as an adult, and usually occurs in large numbers--seeking winter harborage close to or inside structures.