

BUGS ON THE BEAT

by Janet Halfmann

A Bug's Life Can Be Key in Helping Police Detectives Crack Tough Murder Mysteries.

Investigators collect squirming white maggots from the corpse at a murder scene. Gross? Sure. Disgusting? Certainly. But these insects are more than grimy grubs. They are important clues to whodunit and when.

Not long ago, maggots would be washed away as a nuisance, a gruesome reminder of what can happen to a dead body. Now, insects and the scientists who study them are worming their way into courtrooms as witnesses.

"Insects found on dead bodies are specific to dead things," says Dr. Neal Haskell, one of only about 40 experts in the world who gather criminal information from insects, a field called **forensic entomology**. "We know these insects are coming specifically for the dead body, so that pinpoints a time of death."

BLOW FLIES ZOOM IN

The first insect witnesses to arrive are big shiny blow flies.

"What makes the blow flies so important is they get there so quick," says fly expert Dr. Stephen W. Bullington. Outside on a hot day, the insects arrive almost instantly. Indoors, within a day.

Blow flies and other insects act as clocks because they grow up in set stages. Adult blow flies fly to a dead body and lay thousands of eggs. Tiny eating machines called larvae--or maggots--soon hatch. The fattened maggots crawl away from the body to form pupae, and later emerge as adults. Scientists have studied the time it takes for each stage.

PIG IN BLANKETS

An insect expert can find the largest maggot that has infested a corpse and count backward in the fly's life cycle to figure out when the person died. Such information can blast a hole in a suspect's excuse.

But what if, say, the body is wrapped in blankets? How long will it take blow flies to find it then? That was entomologist Dr. M. Lee Goff's challenge in a case that began in 1989 in Hawaii. So he simulated the crime by wrapping a dead pig in blankets. It took two and a half days longer for the blow flies to find the body--information that helped lead to the suspect's arrest.

Often, insect evidence is a piece of a larger puzzle. In one of Dr. Haskell's cases, the extremely dried and mummified bodies of a man's two elderly aunts were found in his house when he died in 1987. Haskell calculated an October death for one aunt because he found remains of a blow fly common in the fall. The other aunt had no blow flies, pointing to death in late December or early January, when blow flies aren't present.

The first aunt's diary completed her tale. The last entry was Oct. 5--1977! The second aunt had opened her Christmas cards of 10 years previous, but not cards for her birthday the following March. The puzzle was complete.

Appendix #2a1

INSECTS COME IN WAVES

The kinds of insects on a body tell detectives a great deal.

"There is a succession," Dr. Haskell says. "Some insects come early, some in the middle, and some come later as decomposition progresses." After the blow flies come flesh flies and other flies, then the beetles and other insects such as ants.

An entire colony of ants helped Dr. Goff determine how long a body had been in a metal toolbox. The key evidence was the presence of winged reproductive ants. They wouldn't develop until 12 months after establishment of the colony.

Insects can provide clues in many ways. A body found in the woods with city insects on it indicates it has been moved. Insects can be ground up to test for drugs. Dr. Haskell is even studying insect remains found on ancient dinosaur bones.

These bugs on the beat have only begun to tell their stories.

Says Dr. Haskell, "I never dreamed **forensic** entomology would take me into so many areas of **science**."

Forensic science article
BOYS' LIFE
July 2000, pp. 42-45

Appendix #2a2

Name _____

7.1 Close and Critical Reading-- Persistent Pursuits--“Bugs on the Beat”—Student Theme: Solving problems/mysteries involves persistence and attention to all of the evidence.

1. What is the article about? (Summarize the article at the literal level) *Just the facts
NO opinions*

2. How does it say it? In other words, how does the author develop the article convey his/her purpose? How is the article organized.

Author's Purpose -

Organizational Pattern -

3. What is the message/theme/concept that the author is trying to get across in the article/text?

4. So what? (Connect the theme to your life or the life of others.)

Appendix #2d