

CLEMSON UNIVERSITY

~ URBAN ENTOMOLOGY EXTENSION & RESEARCH ~

Palmetto Pestalk March 2005 Newsletter¹

*Dr. Eric P. Benson
Urban Extension Entomologist
Department of Entomology
Clemson University
(864) 656-3111
fax: 656-5065
e-mail: ebenson@clemson.edu*

Sometimes people frustrate me. I'll get calls from folks with pests in their home and they'll ask for my help. Depending on the type of insect, I'll try to diagnose the problem over the phone, including possible entry points and/or food resources. Some folks will respond that there is absolutely no way for these pests to get in the house or that there is absolutely nothing for them to eat. If I ask their opinion on how the pests are entering or surviving in the structure, many will say they don't know and that's why they called "Clemson." So once again, when I give them the probable causes of the infestation, they'll retort that everything I tell them is impossible. Some will even imply that they think the pests have spontaneously generated from some mysterious source. This is when I'm tempted to ask them how many biology classes they skipped in high school. Don't they remember the experiments by Francesco Redi?!

Francesco Redi was an Italian scholar in the 1600's. At that time, many individuals, including scientists, thought that worms (maggots) would spontaneously generate from

decaying meat and dead bodies. In a series of experiments in 1668, Redi, placed various types of meat in flasks either sealed or open. Over time, meat in the open flasks developed worms while the meat in the closed flasks never developed worms. Through careful observation, Redi noticed that flies visited the open containers and left "droppings" (eggs). After rearing the maggots from the open containers to adult flies, Redi correctly concluded that worms on decaying meat did not spontaneously generate, but rather, came from flies.

In 2005, with the help of my son, I was able to reinforce Redi's scientific conclusions by observing an increase in the number of smokybrown cockroaches I was noticing in our family room. Over the December holidays, we purchased a case of soda. In general, we don't drink a lot of soda, and our kids are supposed to ask permission before they have one. The soda was kept in an old refrigerator in the basement, not far from family room and television.

Mysteriously, all the soda disappeared by early January, yet I couldn't remember having that many guests over the holidays drinking soda. When I asked my 13 year old son if he knew what happened to all of the soda, he just shrugged his shoulders and replied "Nope."

Two weeks ago, our remote for the television was missing, so

I started a search. During my quest, I began to find open soda cans, many with soda (and various molds) still in them. There were three cans hiding behind the VCR, five cans behind the TV cabinet, six cans behind a small bookcase and multiple cans tucked in various nooks and crannies around the couch. Behind the TV, I also found several smokybrown cockroaches, well-fed and satisfied with their winter accommodations in our home.

Without the soda can discovery and my memory of Francesco Redi, I might have drawn the conclusion that the cockroaches were spontaneously generating in our basement. In fact, I'm sure that is an argument my son would have used if there was not overwhelming evidence of covert soda consumption during episodes of *The Simpsons*. It was also a good lesson that the punishment for covering up a crime is far worse than the punishment for the crime alone. (Think Richard Nixon.) The lesson for a pest professional is that spontaneous generation does not occur. If the pests are there, they got in somewhere and are probably finding a cryptic food source. If your client swears that there is absolutely nothing in the house the little buggers could eat, ask them if they have a 13 year old boy about the house. *Never say never, never say always.*

Piloting Pest Management Flies High

Attendees to the 46th Annual South Carolina Pest Control School had a high flying time. Over 530 owners, managers, exhibitors, speakers and invited guests attended the three day program: "Piloting Pest Management." We had over 290 evaluation forms completed this year which is almost twice as many compared to previous years. It appears that changing the schedule to have open forums on Wednesday afternoon and regular sessions ending at noon on Thursday, kept more folks at the meeting until the end. That's a good thing.

Overall, the evaluations of the program were very positive. Most questions on the program evaluation were on a scale of 1 to 5 with 1 = strongly disagree, 2 = disagree, 3 = neither, 4 = agree and 5 = strongly agree. When asked "I am pleased that I participated in this school" participants gave an average response of 4.62. When asked "I plan to come to future winter meetings", the participants gave an average response of 4.57.

Some of evaluations included comments such as: "The information was excellent," and "Great meeting!" A lot of the participants enjoyed the open forums and discussion sessions on Wednesday. Many also enjoyed the keynote talk by Major Bridgers from the SC Air National Guard, with one comment being: "The pilot was the best ever in at least 24 years!" "Very inspiring."

No meeting is perfect and ours had some negative aspects.

The construction in the hotel, the noise level of other groups disrupting our sessions and some of the sub-par meals were listed as areas needing improvement for future meetings. We will address these issues with the new hotel management coming in this year and review all of the suggestions for program improvements, speakers and topics for the 2006 meeting. Please feel free to share any additional comments you may have with me and please take a moment to scan and enjoy some of the candid pictures from the meeting in this issue of Pestalk. Also, mark your 2006 calendars for the 47th Annual South Carolina Pest Control School on February 7 - 9, at the same location in Columbia.

Marauding Mulch Marsupials Make Mayhem

What could this be: exotic wallabies from Australia infesting mulch? Perhaps native opossums with a mean streak? Actually, no. I'm talking about good ole boring pillbugs and sowbugs.

Of course, pillbugs and sowbugs are not marsupials, but did you know that their eggs are deposited in a marsupium or brood pouch on the underside of the body? After about 45 days, the eggs hatch in the marsupium and the young emerge from the pouch, not unlike true marsupials, such as opossums or wallabies.

I am also taking poetic licence for my alliteration of marauding mulch marsupials making mayhem. Pillbugs and sowbugs rarely make mulch mayhem, but these crustaceans

can create client consternation. Commonly found outdoors under rocks, boards or thick mulch, pillbugs and sowbugs are more closely related to lobsters and shrimp than insects. They breathe with gill-like structures and must be in very moist areas to survive.

Sowbugs and pillbugs are similar in appearance. Both are oval in shape, have a rounded upper surface and a flat lower surface. They are gray, about 1/4 to 5/8 inch long and have body segments that resemble armored plates. They differ in that sowbugs have two tail-like structures at the rear, which pillbugs do not have. Pillbugs are commonly called *roly-polies* because they roll up into a tight ball when disturbed. Sowbugs cannot roll up. Both sowbugs and pillbugs have similar habits, biology and control. They live in areas of high moisture to survive. They are active at night, feeding mainly on dead plant material and occasionally, young plants and their roots. During the day, they are inactive in their moist, sheltered retreats.

Although sowbugs and pillbugs normally live outdoors, they occasionally make their way into homes, especially damp basements and first floors of houses. This usually occurs in years when there has been a long, wet spring. Having many pillbugs or sowbugs invade a home is usually a sign that a large population exists outdoors. They may establish populations in house plants. They are completely harmless to humans.

If sowbugs and pillbugs become a serious nuisance, the key to effective control is to

reduce the moisture, hiding places and food sources that are needed for their survival. Reduce leaf litter, mulch, piled lumber, rocks and similar materials from near the outside of the house. Properly ventilate basements and crawlspaces to decrease moisture. In addition, prevent them from entering the house by making sure windows and doors, especially sliding patio doors, fit tightly, and cracks and crevices are caulked.

If necessary, an appropriately labeled pesticide can be applied to foundation walls, crawlspaces, unfinished basements and plant beds that border the home. Applications made to mulched areas should be made with the mulch pulled back or enough water for the insecticide to penetrate through mulch to reach the soil. In general, insecticides are not recommended for indoor control because pillbugs and sowbugs dry out and die quickly inside a house. Indoors, they can be removed with a vacuum or broom and dustpan. *Source: Clemson Insect Information Sheet IIS/HS-19.*

¹Note: This newsletter is a regular submission to Palmetto Pestalk.

For information concerning this publication contact:

Tom Gochnaur
9721 Dunbarton Drive
Columbia, SC 29223
Phone: 803-788-6699
Fax: 803-788-9698
Email: teegee342@aol.com