

# Regulatory Review

Tracy E. Outlaw, Editor

## Big Things Come in Small Packages...

That old saying is usually true, but in this case, you may not like what's waiting inside.

The Department of Plant Industry (DPI) is assisting the USDA Animal Plant Health Inspection Service, Plant Protection, and Quarantine (USDA APHIS PPQ) in a national survey for light brown apple moth. Approximately 350 traps have been placed in and around nurseries, susceptible crops, and natural areas in our state to determine whether or not the moth is present in South Carolina. DPI's role is locating the trapping sites.

Light brown apple moth (*Epiphyas postvittana*) is a native of Australia. The U.S. first detected it in California in 2007. The adults are moths that are usually a yellowish-brown color, with darker brown markings on the forewings. Female light brown apple moths lay eggs on the leaves of host plants. After hatching, the young larvae (pale yellow-green caterpillars) stay on the plant and wander until they find a suitable feeding spot, which is usually on the underside of

a leaf next to a vein. After choosing a favorable location, they spin a protective web around themselves and feed as they mature into moths.

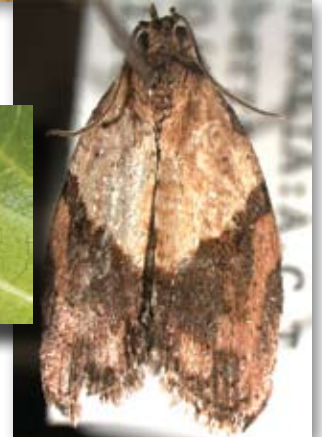
The light brown apple moth has the potential to be one of the most devastating agricultural pests the U.S. has ever experienced. It will attack over 2000 species of plants and trees, including more than 250 fruits and vegetables. Among many other agricultural crops, stone fruits (such as peaches, plums, nectarines, cherries, and apricots) are at risk for infestation.

"The light brown apple moth's path of destruction is not limited to farms and nurseries," commented Christel Harden, DPI assistant department head. "Homeowners and gardeners will also be affected. Almost every ornamental plant species is susceptible to infestation."

South Carolina has yet to have a report of a light brown apple moth infestation, but it has been identified as a state that is at very high risk because of our favorable climate, the presence of host crops, and the fact that we import nursery stock from California.



Light brown apple moth larva (below), and above, damage on a tomato from feeding larva. (Photos by Hort Research, New Zealand.)



Adult light brown apple moth.

You may have been asked to take part in the USDA APHIS PPQ survey by allowing insect traps to be placed on your property. If you have a trap on your property, thank you for doing your part to protect South Carolina agriculture.

For further information on the light brown apple moth and the national survey, please visit [aphis.usda.gov/plant\\_health/plant\\_pest\\_info/lba\\_moth/index.shtml](http://aphis.usda.gov/plant_health/plant_pest_info/lba_moth/index.shtml) or contact DPI.

## Cogongrass Updates

### Survey Held for Cogongrass

A survey for the noxious weed cogongrass, *Imperata cylindrica*, was held in 26 South Carolina counties during May. This was a collaborative effort of the S.C. Cogongrass Task Force, which includes representatives from the Department of Plant Industry (DPI), the Clemson University Department of Forestry, the S.C. Forestry Commission, and the USDA Animal Plant Health Inspection Service, Plant Protection and Quarantine (USDA APHIS PPQ), along with other agencies and organizations.

As a result of the survey, DPI investigated nearly 100 reports of plants that were suspected to be cogongrass. Of these reports, only five

infestations were identified to be cogongrass. All of those sites have been treated and destroyed. Careful monitoring will continue to check for any signs that the plant may re-infest these locations.

Volunteers participating in the survey included members of the S.C. Exotic Pest Plant Council, the Nature Conservancy, the College of Charleston, S.C. Master Gardeners, and various school groups.

### Two More States Ban Cogongrass

North Carolina and Georgia have joined South Carolina in prohibiting the sale of the ornamental forms of cogongrass.

Biological data suggest that the red cultivars Japanese bloodgrass and "Red Baron" can spread aggressively by their rhizomes; therefore, they do pose an environmental threat.

#### Attention nurseries & greenhouses

- Nursery & Dealer licenses are valid from October 1<sup>st</sup> through September 30<sup>th</sup>.
- Nursery Registration Renewals begin in August of each year, with all forms being due by October 1<sup>st</sup>.
- Nursery Certificate Tags are valid from January 1<sup>st</sup> to December 31<sup>st</sup> of each year.
- Nurseries can begin ordering tags for the following year on October 1<sup>st</sup> of each year.

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## Putting It All on Paper: Statewide Plant Disease Index Now Available

Over the past 22 years, the Plant Problem Clinic (PPC) has collected diagnostic data on hundreds of plant diseases caused by fungi, bacteria, viruses, and nematodes. Now all that information is available in one place, the Plant Disease Index for South Carolina.

Available initially as an online publication at [clemson.edu/plantclinic](http://clemson.edu/plantclinic), the index will be an important tool to help Clemson University County Extension agents diagnose plant diseases. Once identified, treatment or control programs can be put into place. If the disease is unknown or has not yet been identified in South Carolina, Extension agents can work with the Department of Plant Industry and other state agencies to determine if it poses any risk to our state's crop or livestock health.

"This is an excellent resource for our county agents to learn what plant diseases have been reported in South Carolina," said Meg Williamson, PPC plant disease diagnostician. "We are excited to make this available for University and state personnel."

## ...And Thanks for All the Fish

The Clemson University Department of Pesticide Regulation (DPR) is responsible for the education and enforcement of laws related to safe pesticide use. Part of these responsibilities involves preventing the loss of natural resources in South Carolina's coastal and freshwater areas while balancing the efficient control of insects and other pests.

Each year, DPR field inspectors investigate pesticide-related fish kills of South Carolina lakes, streams, ponds, and salt-water inlets. A fish kill is



DPR field inspector Mike Weyman samples water after a fish kill.

determined by large numbers of dead or dying fish, not just one or two organisms. Fish kills occur when pesticides are improperly applied in or around water, even though some fish kills are the result of natural conditions, such as oxygen depletion.

Most pesticide labels contain very specific language about how a pesticide product should be applied. Phrases such as "do not apply to water" or "do not apply to areas bordering any bodies of water" provide clear guidance on how to use a product. Failure to follow the label directions is a violation of the South Carolina Pesticide

Control Act and may lead to civil penalties or criminal prosecution.

If you believe you've seen a fish kill, please contact DPR as soon as possible. It is critical that DPR field inspectors be notified immediately to determine if pesticides were involved. Measurements and samples must be obtained and stabilized quickly, especially in flowing or tidal systems

where the chances of obtaining representative information decrease with each passing hour. If done quickly, corrective action can usually be taken to reduce further losses.

For a guide to preventing fish kills, please see DPR's Bulletin #10, *How to Prevent Pesticide-Related Fish Kills*, available at [clemson.edu/dpr](http://clemson.edu/dpr).



Pesticide-related fish kill.

### How do you know if pesticides caused a fish kill?

- If there is a sudden onset of visible symptoms or death.
- If the surviving fish are swimming erratically.
- If the gills of any live or dying fish are "flaring."
- If other aquatic animals have died.
- If predators and scavengers have died.
- If mostly smaller fish are dead. Smaller fish will initially be more affected by pesticide exposure.
- If water quality measurements are normal to near normal.
- If one species has died, but not another. For instance, all of one or more sensitive varieties of fish may die, but other kinds of fish may not be visibly affected.

## If it's not Certified Turf, then What is It?

Let's face it—from the Upstate to the Lowcountry, our South Carolina lawns, golf courses, and athletic fields are among the most beautiful in the nation. Ever wonder how all that rich, beautiful turf got there? It takes a lot more than the lawn and garden store's fanciest sprinkler or a top-of-the-line lawn mower.

The Department of Plant Industry (DPI) administers the Turfgrass Certification program in South Carolina. Purchasing certified turfgrass means that contractors and consumers have invested in the best quality product—and it's backed by DPI.



*DPI field inspector Michael Bishop flags an off-type grass.*

Certified turfgrass producers must adhere to a very strict set of standards set forth by DPI. These standards include requirements on planting stock, land history, weed management, sampling, and labeling.

DPI field inspectors conduct three inspections per year to detect diseases, off-types, other crops, and weeds in each field that produces a class of certified turf.

Turfgrass fields are sampled at random and grown out to ensure the identity of the grass is being maintained. Once the fields have passed one inspection, DPI issues the producer a booklet of S.C. Certified Turfgrass certificates.

Producers may sell the turfgrass as sod or sprigs, but a Turfgrass Certificate must be issued with each shipment. This is the buyer's assurance that the turfgrass is the quality that is expected from certified turf.



*Harvesting certified turf.*

There are currently 17 Certified Turfgrass growers in our state, accounting for about 5300 South Carolina acres.



*DPI program coordinator Brad Stancil waters the 2008 turfgrass growout. Every year DPI field inspectors take turfgrass sprigs from fields in the certification program and plant them in pots. The samples are grown under controlled conditions to determine that the genetic purity of the grass is being maintained.*

For more information about the Turfgrass Certification program, please contact the Department of Plant Industry. For information about growing and maintaining turfgrass, please contact your local Clemson University Cooperative Extension Service office.

### *Attention certified seed & turfgrass producers & conditioners*

- Seed conditioner applications are due March 1<sup>st</sup>.
- Turfgrass, rye, and sweet potato applications are due March 1<sup>st</sup>.
- Small grains applications are due April 15<sup>th</sup>.

If you're considering purchasing Certified Turfgrass sod or sprigs for your lawn, start with a soil test! Soil test kits are available through Clemson University's Public Service Activities Publishing. Visit [clemson.edu/psapublishing/SoilKit/SoilKitinfo.html](http://clemson.edu/psapublishing/SoilKit/SoilKitinfo.html) for more information.

## The Little “Green” Schoolhouse: Integrated Pest Management in Schools



Our children deserve a safe, clean, and pest-free school so they can focus on learning from their books instead of squirming away from a bug! Insects such as flies and gnats can enter through open doors and cracks in windows, and by their very presence are nuisances. Yellow jackets and fire ants can build nests around playground equipment; their stings can be very painful and even life-

threatening in some cases. Rat and mouse infestations can contaminate lunchroom food and spread diseases.

Spraying insecticides routinely has been the mainstay of interior pest control for decades. It is important to recognize that chemicals should not necessarily be the first choice for solving pest problems. And that’s where Integrated Pest Management, or IPM, comes in.

IPM is an alternative and improved approach to traditional pest management based on the lifecycles of pests and their interactions with the environment. Its programs seek to manage pests by the most economical means with the least possible damage to people, property, and the environment.

“Pesticides are very powerful and effective tools, and these chemicals need to be used cautiously and wisely around children,” said Leslie Godfrey, reduced risk specialist and IPM manager for DPR. “Children are more sensitive to pesticide exposure than adults.”

A Southern Region School IPM Workgroup of Extension and Regulatory personnel was formed in 2007 to combine efforts in order to develop materials that will assist the implementation of better pest management strategies. This information will be available to school district employees, pest management personnel, and those involved in design and construction of new school buildings.

“The Department of Pesticide Regulation supports IPM programs whenever possible, although that doesn’t mean we are discouraging or disallowing the use of pesticides,” Godfrey continued. “The increased focus on “green” buildings really meshes well with IPM goals and is beginning to push our efforts to the forefront.”

The Southern Region IPM Workgroup includes members from Clemson University, Auburn University, North Carolina State University, Texas A&M University, the University of Florida, Oklahoma State University, the University of Arkansas, the University of Tennessee, Virginia Tech, the University of Georgia, Louisiana State University, the University of Kentucky, and Mississippi State University.

For more information about Integrated Pest Management in Schools, please visit [sripmc.org/schoolIPM/](http://sripmc.org/schoolIPM/), the official website of the Southern Region School IPM Workgroup.

### Contact Regulatory Services

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*Assistant Director*  
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864.646.2150

Department of Plant Industry  
*(Nursery Inspection, Plant Pests, &  
Invasive Species)*  
864.646.2130

Department of Plant Industry  
*(Fertilizer Inspection, Seed, Turf, &  
Organic Certification)*  
864.646.2140

Plant Problem Clinic  
864.656.2677

Agricultural Service Laboratory  
864.656.2068

## The Little Green Bug in the Big Purple Trap

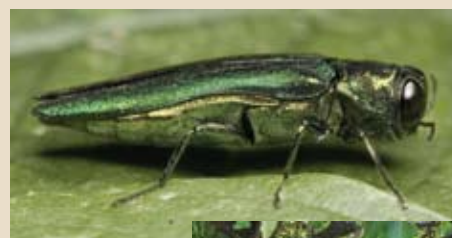
No—the purple box-shaped objects you see hanging from trees around South Carolina aren't something left by visitors from another galaxy. They are insect traps that are being used to attract emerald ash borers. The Department of Plant Industry (DPI) is collaborating with USDA Animal Plant Health Inspection Service, Plant Protection and Quarantine (USDA APHIS PPQ) in a national survey to detect this highly destructive beetle that infests and eventually kills all species of ash trees. The survey will allow scientists to track the insect's movements and determine where it's headed in the U.S.

Although the emerald ash borer has not yet been reported in South Carolina, these large and sticky purple traps will detect them if they are in our state. The traps use non-toxic Manuka oil and glue. The scent of the Manuka oil attracts adult beetles, and once the insect makes contact with the glue, it won't be able to leave its new purple home. The outside surface of the traps is very sticky, but it is not harmful to humans, pets, or wildlife.

The emerald ash borer was introduced to North America from Asia sometime in the 1990s. It was first reported in Michigan in 2002, and from there it has spread to Ohio, Indiana, Illinois, Maryland, Pennsylvania, and West Virginia. Adult beetles nibble on ash tree foliage but cause little damage. The larvae (the immature stage) feed on

the inner bark of ash trees, disrupting the tree's ability to transport water and nutrients. The emerald ash borer is responsible for the loss of 30 million ash trees in Michigan alone.

"DPI is asking the public's cooperation in assuring that these traps are not disturbed or damaged during the trapping season, which will last until September," said Chris Ray, DPI department head. "We are also asking that anyone who may find a trap on the ground to call our department."



***Emerald ash borer.***



***Sticky business: The big purple trap.***

### ***Attention fertilizer registrants***

Tonnage Reports are due on the 15<sup>th</sup> of January, April, July, & October.

## What's Going Online?

The Department of Pesticide Regulation (DPR) is now making things a little easier for the South Carolina pest control industry.

Beginning in late 2008, DPR will offer online pesticide applicator exams. Individuals wishing to become certified South Carolina pesticide applicators will have the option to take the Core exam, along with the category or categories they will specialize in, online at several locations throughout the state: Aiken, Charleston, Columbia, Greenville, Florence, Spartanburg, and Rock Hill.

"Exam sessions for written exams will still be offered at three locations throughout the state, at least six times a year, as we have in the past," said Jim Wright, regulatory supervisor for DPR.

"The department recognized and responded to the need for individuals to have the option to take the exams online because of the growing demand for pesticide certification in South Carolina. We feel very strongly that it is our obligation to make this process readily available to anyone who wishes or needs to take our certification exams."

To apply for a pesticide applicator license, individuals must be at least 18 years-old, pass a two-part exam, and show financial responsibility with the proper level of insurance relative to the category in which they are licensed.

DPR offers 12 different categories of pesticide licensing, four of which are now mandatory in our state. Persons who apply pesticides to lawns, turf, or ornamental plantings for compensation or as part of their jobs must be licensed in Category 3, Turf and Ornamental Pest Control.

## Exotic Snail Found in South Carolina

Horry County residents have just learned there's a new neighbor in town: the island apple snail, *Pomacea insularum*.

Originally from South America, island apple snails are large freshwater snails that are usually kept as pets or as aquarium specimens. A permit is required to sell or distribute the *Pomacea* species in South Carolina; however, some aquarium owners choose to purchase the snails over the Internet, or they bring them into S.C. from other states. When no longer interested in their aquariums, some people often pour the water, replete with snails, into ponds and other waterways. Unfortunately, both the selling and the dumping frequently go undetected by regulatory agencies.

When dumped into bodies of water, island apple snails can quickly become established. They eat virtually any plant material,

but they seem to be particularly attracted to aquatic plants.

"If these snails got out of control they could do some serious damage to the native plant ecosystem," said Sherry Aultman, CAPS coordinator for DPI, "and then that will affect everything from the insects to the fish to the small mammals to the birds and so on. They can also carry parasites and diseases that can affect humans."

The island apple snail's shell is approximately two inches across. It lays bright pink eggs in large masses. The egg masses are attached to plants and other stationary objects at the water line. The snail reproduces very quickly. According to researchers, the females can each lay anywhere from 400 to 3500 eggs per breeding season, depending on the snail population in an environment. That's a lot of snails.

The S.C. Department of Natural Resources (DNR) found the unwelcome newcomer in a private retention pond earlier this year. DNR has been treating the site with copper sulfate, an aquatic pest control chemical. The original Horry County site is a retention pond on private property, where it poses a relatively low risk of spreading.

For more information about island apple snails or to report an infestation, please call DPI.



*Island apple snail*  
(Photo from the Florida Department of Environmental Protection.)

Category 5, Aquatic Pest Control, is required for those persons who apply pesticides to ponds and other bodies of water. General and Structural Pest Control pesticide applicators, Category 7A, must obtain a license before applying pesticides, and public health applicators, such as persons who work for a city government mosquito abatement program, are required to have a license in Category 8, Public Health Pest Control.

Persons taking either the online or the written exam must preregister and submit the appropriate fees for both the online and the written exams.

"In addition to online testing, we are proud to offer pesticide license renewal through our website," commented Wright. "This gives all licensed applicators an

additional means to renew their licenses quickly and easily."

Information about pesticide applicator exams and license renewal can be found on the DPR website at [clemson.edu/dpr](http://clemson.edu/dpr).

### **Attention pest management professionals**

*Commercial licenses expire each year on December 31<sup>st</sup>. Early renewal helps to avoid delays in processing your renewal request. You may conveniently renew your license online at [clemson.edu/dpr](http://clemson.edu/dpr).*

*If your license is not renewed by December 31<sup>st</sup>, you will be charged a late fee of 25%. If your license expires and is not renewed by April 1st of the following year, you will have to retake the Core and Category Exams and apply for a new license.*

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Recently the Clemson University Cooperative Extension Service and the Department of Pesticide Regulation hosted the Apprentice Termite Technician School, a program designed to educate new or inexperienced termite technicians on the proper and most effective way to protect houses and other structures against subterranean termite infestation. The school is held annually at the Sandhill Research and Education Center in Columbia, S.C.

The Apprentice Termite Technician School provides two days of intense, basic instruction and hands-on experience for termite personnel. Students receive instruction in termite biology, practical field identification of wood-destroying organisms, and the safe use of tools, chemicals, and other equipment for their control.

