Have you Seen the Florida Scorpionfly?  By Erin Harlow

Maybe you have seen the Florida scorpion fly, *Panorpa floridana*?  You would be one of a lucky few to have seen this remarkable insect.  Only five specimens have ever been collected, the last in 1982.  It has only been collected in Alachua and Clay Counties, including San Felasco Hammock and Goldhead Branch State Park.  This insect is in the order Mecoptera which includes other interesting insects such as hangingflies and earwigflies.

There are two other species in Florida that look very similar to the Florida Scorpionfly, but with some distinct differences of wing pattern.  All male scorpionflies have an enlarged genital bulb that looks like the tail of a scorpion.  Scorpionflies cannot sting and are believed to eat dead insects, soft snails, and even steal insects from spider webs.  Very few, if any, living individuals of this species have ever been observed.  They are believed to live in areas of low growing vegetation such as mixed hardwood hammocks.

So if you happen to be hiking in a wooded area or spot one of these guys in a customer's yard take a picture and let us know.  Specimens and sightings should be reported to the Florida State Collection of Arthropods or notify your local Extension Agent.  Information for this article was taken from the publication Florida Scorpionfly, *Panorpa floridana* which can be found [http://edis.ifas.ufl.edu/in949](http://edis.ifas.ufl.edu/in949).
All Classes Require Pre-Registration and will be held at the Duval County Extension Office, 1010 N McDuff Ave, Jacksonville, FL 32254 unless otherwise stated. To register visit us at http://duval.ifas.ufl.edu and click Commercial Horticulture/Calendar or call Becky Davidson at 904-255-7450. You can now pay online with a credit card.

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Class Title</th>
<th>Location</th>
<th>Fee</th>
<th>CEUs</th>
<th>Description</th>
<th>Registration Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>December 7, 2012</td>
<td>8:00 am</td>
<td>Advanced Landscape Workshop</td>
<td>Duval</td>
<td>$20.00</td>
<td>4 L&amp;O, 4 LCLM, 4 LL&amp;O, 4 O&amp;T, 4 Pvt</td>
<td>This class is designed for individuals who need to recertify their licenses. Topics include understanding nutrients, soil tests, and creating fertilizer programs and recognizing abnormalities of palms and other plants.</td>
<td><a href="http://duval.ifas.ufl.edu/documents/rtrp_brochure_jacksonville.pdf">http://duval.ifas.ufl.edu/documents/rtrp_brochure_jacksonville.pdf</a></td>
</tr>
<tr>
<td>December 14, 2012</td>
<td>8:30 am</td>
<td>Right Tree, Right Place</td>
<td>Duval</td>
<td>$10.00</td>
<td></td>
<td>ISA and FNGLA CEUs have been applied for. The class will focus on evaluating the planting site, local landscaping codes, working around power lines, and selecting, and planting quality trees.</td>
<td><a href="http://duval.ifas.ufl.edu/documents/rtrp_brochure_jacksonville.pdf">http://duval.ifas.ufl.edu/documents/rtrp_brochure_jacksonville.pdf</a></td>
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<tr>
<td>January 29, 2013</td>
<td>8:15 am</td>
<td>Limited Commercial Landscape Maintenance Workshop</td>
<td>Duval</td>
<td>$30.00</td>
<td>3 CORE &amp; 3 LCLM, 3 LL&amp;O, or 3 L&amp;O</td>
<td>6 CEUs Total: 3 CORE &amp; 3 LCLM, 3 LL&amp;O, or 3 L&amp;O Lunch included, textbooks not included Optional LCLM or LL&amp;O Exam at 3:00 pm You must have all required paperwork to take the exam.</td>
<td><a href="http://duval.ifas.ufl.edu/LCLM2012.shtml">http://duval.ifas.ufl.edu/LCLM2012.shtml</a></td>
</tr>
</tbody>
</table>
### Best Management Practices for the Protection of Water Resources by the Green Industries (GI-BMPs)

- **Date:** December 18, 2012
- **Time:** 8:30 am – 3:30 pm
- **Cost:** $25.00
- **CEUs:** 4 CEUs: 2 CORE & 2 L&O, 2 LCLM, 2 LL&O, 2 O&T or 2 Pvt

To register, download the brochure, or for more information about the workshop, please visit: [http://duval.ifas.ufl.edu/GI-BMPs.shtml](http://duval.ifas.ufl.edu/GI-BMPs.shtml).

This is the pre-requisite class for the Urban Fertilizer License. Everyone who works with fertilizers is required to have this license by Jan 1, 2014, even if you are licensed in another category including pest control operators.

### Two-Day Professional Landscape Training

- **Dates:** March 27 & 28, 2013
- **Time:** 8:30 am - 4:30 pm
- **Cost:** $150.00

This can be used as a prep class for the Florida Nursery, Growers, and Landscape Association (FNGLA) Certified Horticulture Professional exam (FCHP) or by individuals wanting to gain more extensive knowledge in landscaping. The FNGLA FCHP manual will be used for this class and provided in the cost of the class. If you already have a manual please let me know and the cost of the class will be adjusted by $75.00.

This is an intensive hands-on 2-day course. Lunch and snacks provided.

### Pest Control Operator CEU Day

- **Date:** April 9, 2013

Save the Date! Details to come. 2 CORE, 2 L&O, 2 GHP, and 2 WDO CEUs will be available.

### Pesticide Testing in Duval County

- **Dates:** December 5, 2012, January 2, 2013, February 6, 2013
- **Time:** 8:30 am - optional CORE review video
- **Time:** 9:15 am - testing begins

You may register for exams online or by calling Becky at 904-255-7450 two days prior to the exam date. You must have your paperwork to take a limited exams. These can be downloaded from our website.

[http://duval.ifas.ufl.edu](http://duval.ifas.ufl.edu)
I’ve been asked several times in my first months here with Extension about these brightly colored and prolific ladies, and I’m sure they are no ID challenge to most readers. They are still lingering around the favorite plants of many a butterfly gardener, despite the cold temperatures. And yes, they are all girls – the nymphs seen in the photos are deposited by adult females – making them very different from the eggs produced by males and females of most insects. These dainty daubs of sunshine are anything, but in the eyes of many gardeners. While the sight of a yellow haze on your milkweeds and oleanders may have you reaching for some serious sprays, I encourage you to put them away! Despite some minor problems to host plants, the fact is, that where these girls are, beneficial insects and pollinators are likely to follow. These ladies rarely cause enough damage to warrant a heavy-armed response – and some of the beneficials they attract may even take care of the problem for you. Even if you easily guessed the name of this insect, stay tuned until the next issue to learn about cultural, biological, and low-impact controls to keep these gals in check!

http://duval.ifas.ufl.edu

2013 Jacksonville Landscape Show Seminar Schedule
February 14 & 15, 2013

- Avoiding Trouble - Working Safely Around Plants and Power Lines
- New and Emerging Pests in Florida
- Crapemyrtles: Proper Pruning and New Selections
- Integrated Pest Management Techniques for the Landscape
- Crime Prevention Through Environmental Design
- Using Climate Data for Effective Turfgrass Weed Control
- Recognizing Plant Sensitivity to Chemicals

FL pesticide, GA pesticide, GCSAA, ISA, and FNGLA CEUs have been applied for.

Registration will be available soon online at www.nefngla.org
Where Do Insects Go for Winter?

by Raymond Zerba, Retired

Answer to the October/November 2012 “Do You Know What This Is?”

I felt the question where do insects go for winter was an interesting one and when I ran across an answer in an issue of a North Florida Research and Education Center newsletter, I set it aside to use when winter came and fewer pests were around to discuss. Credit for the information goes to Dr. Richard Sprenkel of NFREC.

Although many insects can be active throughout the winter (example: various scales), there are fewer types around because they, like everything else, have to protect themselves from the cold.

Some species (the monarch butterfly) migrate just like flocks of birds to a warmer spot. Others like the velvet bean caterpillar are killed off by the cold, but then as spring comes, their specie migrates up from the south (where they were not killed by the cold) and re-establish here.

Most insects in North Florida are able to survive the winter in a stage called diapause. Diapause is a neurohormonal-controlled condition/development that can occur at the egg, larval, pupal, or adult stage of an insect depending on the species. Diapause enables a species to survive unfavorable environmental conditions in ways comparable to hibernation in higher animals (such as bears). Diapause is not triggered by the harsh conditions, but happens when subtle stimuli precede the change that is to occur – changes in day length, nocturnal/diurnal temperatures, soil moisture, etc. Diapause begins before the actual severe conditions take place. In preparation, the insect usually accumulates additional fat reserve, and seeks out a location that is somewhat protected. Such sites may be underground, in leaf litter, in galls, or in well constructed cocoons. During diapause, development is halted and metabolism (requiring the production of energy) is reduced. Many insects also increase the thickness of their outer exoskeleton by adding wax to reduce moisture loss.

Examples of diapausing insects in North Florida include the Eastern Tent Caterpillar in its tar-like egg sac (upper right photo), Preying Mantids in their distinctive hard waxy egg case (upper left photo), Lubber Grasshopper eggs buried an inch below the soil, the Oleander Caterpillars in a smoky-grey fibrous cocoon under the eaves of a house (middle right photo), the Fall Armyworm as a brown pupa two inches below the soil (bottom left photo), the odd-looking speckled pupa case of a ladybug glued to a leaf (pictured in last month’s “What is it” column), or the grotesque looking galls of the wasp that over-winters on Live Oaks in our area (bottom right photo).

So what does all this mean to us? Not much I guess. No matter where they went this winter, they’re about to return and become the “friend or foe” to the maintenance person trying to keep a client’s plants looking “perfect” – good luck to you who have decided to do this for a profession in the year to come – you’ve taken on a real challenge.

To receive more information from the NFREC by go to http://nfrec.ifas.ufl.edu

http://duval.ifas.ufl.edu
Common Galls on Oak Trees?
by Larry Figart, Urban Forestry Extension Agent

Every year it at this time we start getting a lot of phone calls about little round balls falling out of trees. Sometimes they are fuzzy, and sometimes they are smooth. The fuzzy balls falling to the ground are called woolly oak leaf galls. They are usually attached to the lower surface of an oak leaf and fall off of the leaf. The smooth BB like gall is called the live oak pea gall. When I first encountered these galls I wondered what made them. After a little research, I found out that there are many types of galls on oaks and they can be caused by insects, fungi and even bacteria. The galls we will be learning about in this article are all formed by insects.

The most prolific insect that causes galls is called a gall wasp. Most gall wasps are in the Cynipidae family and are called cynipid wasps. These wasps are very small and all but a few species are less than 1/4 inch in length. Color varies greatly. Some species are black, others are red, yellow, or amber. The larvae are legless and both larvae and pupae are white in color. The gall wasp eggs are usually laid in actively growing plant tissue. The irritated plant tissue quickly surrounds the egg or immature insect, and protects and provides food for the gall-maker until it matures. The confusing (or interesting) thing about cynipid wasps is that they have two different life cycles that skip a generation and look completely different from each other. For instance, one generation of bullet gall wasps are all female and they lay eggs that create small galls on leaves. The adults from these galls can be male or female when they emerge from the leaf gall. Then the male and females deposit eggs on twigs that become twig galls. Each generation can last from a month to three years. The image to the left is a rough bullet gall wasp ovipositing into an oak bud.

Most oak wasp galls are harmless to the tree. In some cases, the galls can cause cosmetic damage and occasionally they can cause significant dieback in heavy infestations. Chemical control is difficult at best. However, if populations are a problem, target the adult gall-makers before they lay eggs (often at bud break) with a contact insecticide. Correct timing is important. Monitor adult activity by placing sticky traps near the galls and dissect several galls a week to track insect development.

The following are common wasp galls found on oaks:

The gall to the left is called the leafy oak gall and is actually tree tissue forming around the egg of the wasp, *Andricus quercusfoliatus*. It resembles a sandspur attached to the twig. If you carefully cut it in half you often see the developing larvae inside.

The gall to the right is called an Oak Apple Gall. They are in the genus *Amphibolips*. They are growths that are filled with a spongy mass. There is one larva encased in the center of the gall. I once convinced a co-worker that it was the fruit of an oak tree.

Continued on page 7
The image to the left is a very interesting gall called a wool sower gall. These are wasp galls that appear on white oak in early summer and resemble toasted marshmallows. One gall is actually a group of small hairy galls joined at a common spot on a twig. They can be pulled apart to see seed-like structures that contain the developing wasps.

Lately we have been seeing a very severe infestation of rough bullet galls on live oaks in commercial plantings. The trees that are severely infested have heavy infestations. It appears that in the most severe cases the tips of heavily infested branches die back. Some researchers are looking into whether or not there are any live oak cultivars that are more or less resistant to rough bullet galls.

Pruning and destroying infested plant parts is an effective, but labor-intensive, way to minimize gall problems. Without pruning, leaf galls will either drop off with the leaves or “jump” off by themselves. However, those on the branches, roots, and stems of trees may persist for several years.

Host plant selection is important, but more work is needed to identify resistant plant varieties and species to certain gall-makers. Gall susceptibility is likely linked to a plant's genetics and age. In general, galls are more likely to form on actively growing plant parts. Maintain normal fertilization, irrigation, and other approved practices to keep plants healthy.

For more information on Insect Galls See: [http://edis.ifas.ufl.edu/pdffiles/MG/MG32500.pdf](http://edis.ifas.ufl.edu/pdffiles/MG/MG32500.pdf)

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**Clay County Welcomes a New Horticulture Agent**

Stop by the Clay County Extension Office and meet Amy Morie, the new Horticulture Agent. Her mission is to bring the most up-to-date research-based information from the University of Florida to the community in ways that are engaging and enriching to the county’s residents. Amy’s background is in landscape architecture, where she worked with public, institutional, commercial, multi-family and residential projects. Her particular focus was working with diverse groups within communities to find common ground for landscape design of public parks. She holds degrees in Landscape Architecture from the University of Florida and the University of Southern California. Amy is taking over for Ray Zerba who retired in October 2011. She is responsible for the commercial and residential horticulture program plus coordinating the many Master Gardener volunteers in Clay County. We want to welcome Amy to Northeast Florida. Be sure to tell her hello at your next class. If you need to contact her before then, her email address is amorie@ufl.edu and her phone number is 904-284-6355 or 904-269-6355.
Local EXTENSION Offices

Duval County
1010 N. McDuff Avenue
Jacksonville FL 32254
(904) 255-7450
FAX 387-8902
http://duval.ifas.ufl.edu

Erin Harlow - Commercial Horticulture/Urban IPM
erine@coj.net

Larry Figart - Urban and Community Forestry
lfigart@coj.net

Rebecca Jordi - Co. Extension Director
Nassau County
543350 US Highway 1
Callahan, FL 32011-6486
(904) 491-7340
http://nassau.ifas.ufl.edu/
rljordi@ufl.edu

Amy Morie
Clay County
2463 SR 16 West
Green Cove Springs, FL 32043
(904) 284-6355
http://clay.ifas.ufl.edu/
amorie@ufl.edu

For individuals requiring special accommodations, please contact our office (904/255-7450) within a minimum of 5 working days of the program. For persons with hearing or speech impairments, when contacting our office, please use the Florida Relay Service at 1-800-955-8771 (TDD). Your comments and input are necessary for this to be a useful tool for all of us.

Extension Programs are open to all regardless of race, creed, color, sex, sexual orientation, marital status, age, disability, religion, national origin, political opinions or affiliations.

This newsletter is jointly sponsored by the Florida Cooperative Extension Service, IFAS, Nick Place, Dean; City of Jacksonville, Alvin Brown, Mayor; and the Duval County Cooperative Extension Service, Mike Sweat, Director.