



## The glowworm

Mississippi State  
UNIVERSITY  
**Extension**  
SERVICE

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Camp packets on the way!

The camp packets have been mailed out. If you are registered for camp you should have your packet. If not, put down the *Gloworm* and call or email us now so we can be sure that you get one ASAP. The camp packets contain information about camp and provide answers to FAQs.

**Oops we forgot something about camp...**



After the camp packets left we had a staffer agree to do painting on shirts this year. Mr. Dan Kennell, a teacher and former student of Dr. Collison, will be joining us and doing this activity. [Dan is pictured here at his sheet given some collecting advice to a camper.] To do this activity, you will need to bring a white T-shirt to camp. This has to be one that you can paint so ask a parent first. This was not listed in the "What to bring" list so please add it.

**Questions to think about:** How many states have designated state insects? Which state has the mosquito as its state insect? How many states have the European honeybee as their state insect? What is Mississippi's state insect and state butterfly? (Answers on next page)

## Send this Gloworm to a teacher!!

Do you wish you could do more fun things with insects in the classroom? Ever wish your teacher brought in live bugs so you could watch them? Think how cool a class insect collection would be! Well, you can help your teacher learn cool things about insects by asking them to attend Entomology Camp! Teachers that attend the second camp in July will be able to earn credits for teaching. More importantly they will learn how to do really cool things in the classroom with insects.

If you are a teacher, the second camp will give you a great opportunity to learn easy ways to incorporate insects, plants, and outdoor experiences into your lesson plans. Mark Twain penned, "Don't let school interfere with your education". I couldn't agree more. The July camp will demonstrate that learning can be exciting and interesting for you and students of any age. The July camp will also be at Plymouth Bluff, just west of Columbus. Just look at this lineup of folks: Dr. Marty Harvill will be lead groups collecting aquatic insects on his new sampling boat, Mr. Doug Stone will cover forestry insects and bark beetles, Dr. Collison will do bee hive tours, Dr. Blake Layton will teach a photography in the field and indoors, Dr. Don Cook will show us crop insects and different way to monitor insects in crops, we will have plant identification hikes and, of course, insect hikes.

For more information contact:

Dr. John Guyton, [jguyton@cfr.msstate.edu](mailto:jguyton@cfr.msstate.edu), 662-325-3482

Dr. David Held, [david.held@msstate.edu](mailto:david.held@msstate.edu), 228-546-1019

Dr. Mike Williams, [MWilliams@entomology.msstate.edu](mailto:MWilliams@entomology.msstate.edu), 662-325-2085

## Now is the Time to Launch Pre-emptive Strike Against Paper Wasps

As soon as I see a queen, or foundress, paper wasp begin building her spring nest I launch a pre-emptive strike. Knowing a little about insect behavior and physiology can certainly reduce your wasp problems.



When the queens emerge in spring they find a suitable location for their nests and go to work. As soon as they have a few cells completed, the queen, fertilized during late summer or early fall, begin laying eggs to create a work force of females to assist in expanding and protecting the nest, gathering food and water and feeding the larvae. The time for a pre-emptive strike is before the workforce of sisters becomes a reality. All female paper wasp are capable of ascension to the throne, however they typically are subservient during the breeding season. If

something happens to the queen the virgin workers are capable of laying eggs that will become male wasps and then becoming fertilized. In some cases multiple queens work the same nest with one dominating. So the best practice is to kill, or capture for

your collection, the first queen before she reproduces thus eliminates the colony - Dr. Held called this Polisticide, a play on the genocide of the paper wasp genus. I remember Dr. Henry Green, entomology professor, describing the function of the compound eye mentioned as being more sensitive to movement than a static presence. It makes sense that the more ommatidia engaged or registering changes in light intensity the greater the cause for alarm. Dr. Green said that if you move unperceivable slow you can reach behind a paper wasp nest and tear the short stalk loose and, continuing to move unperceivable slow, you can set it down on a table without most of the wasp flying off. Now, that statement had a better chance of being tested than a double dog dare!

The nest outside the front door was small enough to fit in a mason jar and there was a table below. I donned my bee gear and secured the cuffs and veil on my pith helmet. I was ready. I climbed the ladder, and moving unperceivable slow, I broke the stalk. A few wasps flew off, most returned in just a few seconds while I remained perfectly still. Once they began to resetttle, I resumed my unperceivable slow movement and set the nest on the table, upside down. Most wasps remained on the nest. Then, I slowly covered it with the inverted ball mason jar without a single sting!

Now, I keep a wasp stick handy that is long enough to reach the 10 foot ceilings in my shop and, moving unperceivable slow, I position the top of the stick about an inch below the nest and then - wham! The queen and all of her potential descendants are history.

Now, don't try this at home, we are professional wasp busters!

John Guyton, Ed. D.

### **Research project from the 2006 Camp**

Last year at camp we sampled deer flies. Deer flies, several species of true flies in the genera *Chrysops* and *Tabanus*, are ambush predators and a real pain in the neck if you are bitten by one. Dr. Mizell from the University of Florida developed a simple method to collect these flies. You take a nursery pot and paint it blue. This blue pot, once dry, is painted with sticky trap used to monitor insect activity. The pots can then be carried on walks to keep the flies from attacking you. In 2005, two groups walked along trails in Mathiston and trapped a fair number of flies.





In 2006, we wanted to expand this work by trapping flies in different habitats. Dr. Mizell had suggested that not much was known about this collecting method in different habitats. We sampled flies in four habitats available to us at the camp site. We had groups take a trap on a 15 minute walk in each habitat. These traps were then brought back and the number and type of flies counted.

We found the most deer flies in or adjacent to wooded sites. Despite that these

flies start their lives on vegetation near water, there were relatively few flies collected near the water's edge. No flies were collected in the open field. These results suggest that flies are more abundant in or near the woods and that this technique may be effective to prevent human attacks when walking or hiking through these areas.

**Captures of deer flies in different sites using blue sticky traps.**

Site	Chrysops sp.	Tabanus sp.	Total
Water's edge	3	0	3
Woods	5	2	7
Open field	0	0	0
Wood's edge	4	1	5

**RESEARCHERS:** Devin Doole, Derrick Doole, Daniel and Kathleen Meyers, Hannah, Olivia and Laurie Moss, Mathew Christianson, Coley Dawson, David Held

**Answers:**

- 1) How many states have designated insects? 42
- 2) What state has the mosquito as its insect? TN
- 3) How many states have the honeybee as their state insect? 16
- 4) What is the state insect and butterfly of MS? European honeybee and spicebush swallowtail

## Entomology\4-H Calendar

### June

June 3-7 Wildlife and Fisheries Camp #1

June 12-Project Achievement Days, SE District

June 13-Project Achievement Days, SW District

June 14-Project Achievement Days, NW District

June 15-Project Achievement Days, NE District

June 15-Deadline to register for the July Camp #2

June 17-21 First Entomology Camp

July

July 8-12 Wildlife and Fisheries Camp #2

July 15-19 Second Entomology Camp

**ATTENTION: TEACHERS – PARENTS  
ALL WHO ARE INTERESTED IN ENTOMOLOGY!!!!**

THE MISSISSIPPI STATE ENTOMOLOGY DEPARTMENT PRESENTS ENTOMOLOGY  
CAMP:

**Camp #2: July 15–19 –Plymouth Bluff Environmental Camp, Columbus**

This camp is for **adults** (teachers, college students, youth leaders) that are looking for a unique learning experience. The camp will be also be taught by professors from the Entomology

Department at Mississippi State. This camp will include:

- Lecture and field collecting components that cover ecology, behavior, and taxonomy of insects
- Field identification and use of keys for family level identification of pinned specimens
- Field collecting methods

**Mississippi State University  
4-H Entomology Camp #2 Registration Form**

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_ Zip: \_\_\_\_\_ County: \_\_\_\_\_

Age: \_\_\_\_\_ Gender: \_\_\_\_\_

Telephone \_\_\_\_\_ email \_\_\_\_\_

Indicate t-shirt size: Small \_\_\_\_\_ Medium \_\_\_\_\_ Large \_\_\_\_\_ XL \_\_\_\_\_ Other \_\_\_\_\_

**All shirt sizes are measured in adult sizes, the vendor does not handle children's sizes**

I am interested in: CEUs

Please submit a **separate copy of this form for each camper.**

**Certification of health is required - so camp physicals are in order**

Mail individual applications along with **\$60.00 deposit** to reserve your place to:

**Entomology Camp  
MSU Entomology Department  
Box 9775  
Mississippi State, MS 39762**

Charges include room/ board, t-shirt, and miscellaneous supplies. Pins and insect boxes can be made available for an additional cost. Deposit is not refundable after June 15, 2007.

Deposit is applied to camp costs.