



## *The glowworm*



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Camps are over for the year but insect collecting and plans for camp next year are still ongoing! This year at the second camp we began making plans for camps next year. These plans are still tentative but we plan to do a typical camp geared toward youth in June and a camp for youth leaders, teachers, and college students in July. The July camp will likely be more intense and cover more details of taxonomy and biology for each group. If it gets approved for college credit there will also have to be tests! More details will be in a future edition of the *Gloworm*.

We have a 2nd place National Winner in the BEE ESSAY contest. Grace Layton's Bee Essay has been named 2nd place nationally by the Foundation for the Preservation of Honey Bees, Inc. She competed against 18 other winners from across the U.S. Hayley Schoeppler from Wisconsin wrote the first place entry. Grace received a check and a book for the American Bee Federation. She kept the tradition going for Mississippi and we congratulate Grace for her work and dedication to excellence. We had eight essays submitted this year in the Mississippi competition. The Federation announced the 2007 contest title -

"Pollinator Conservation." Check the 4-H Entomology Web pages for the rules for the 2007 contest.

### Every Bug Has a Story - the Comma

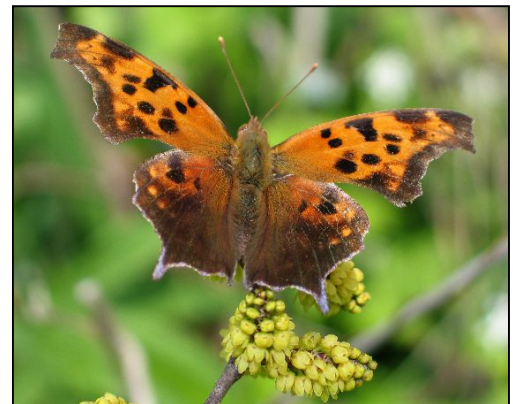


While working up the list of insects collected during bug camp I noticed Nicholas collected a Comma butterfly at the Wall Doxey camp. The Comma is interesting for several reasons.

The Comma is a member of the anglewing group because of the angular notches on the outer edge of its forewings and the brush footed group because of its much-reduced forewings that resemble brushes that are carried folded on its breast. Close observation may reveal an interesting function for their forelegs since they are not used for walking.

A related butterfly, the Question Mark, was also collected at Wall Doxey State Park. Both are interesting because of small white marks on the undersides of their hind wings, one resembling a comma the other, with a little imagination, a question mark. I wonder what possible forces in nature could result in these unique markings.

The colorful wing top may be an effective deterrent hinting at their distastefulness to some predators, however their mottled dull brown to grey underside blends in so well with tree bark they are almost impossible to find, until they fly. Their camouflage enables them to overwinter as adults on the underside of branches. The spiny caterpillar's camouflage resembles bird droppings.



The comma lives on the edges of woods, and is most easily collected while feeding on spoiled fruit and sap. Plants they are commonly associated with include stinging nettle, hops and elm.

Both the Comma and Question Mark butterflies are part of the family of brush-footed butterflies (Nymphalidae). This is a large family of butterflies (138 species in the U.S. and Canada, >7000 species worldwide) and contains other beauties such as Gulf Fritillary and the Painted Lady.

How did we do at camp this year?

Dr. John has some data on the insects collected. At the June (Wall Doxey) camp, 1097 insects were reported collected in 20 orders. At the July camp near Newton, 779 insects were reported collected in 17 orders. The numbers are a little misleading until you realize the July camp was much smaller. More on this and other fun from the 2006 camps in a future Gloworm.

Have you been GPSing?

Everyone that attended camp this year was given the opportunity to learn how to use and apply GPS technology to entomology. Well the fun is not over. You can continue to collect insects and record their locations. If you do not own or have access to a GPS receiver then you can get coordinates for free through some websites (<http://www.gpsvisualizer.com>). These allow you to enter the address of the collection site and it will generate the latitude and longitude data. We would like to know this information because there are limited species records for many parts of the state and new species here that have not been previously recorded. For example, last week a gentleman brought in live specimens of the Asian cockroach, *Blattella asahinai*, from a location in Pascagoula. This species was suspected to occur in south MS for some time but no one has entered a specimen into the Entomology Museum. You have the same chance (probably better) as I do to get a new state or county record!

The fall is still a great time to collect and don't forget to report your captures and GPS coordinates once you have your specimens identified. The U.S. Geological Survey has online maps of insect diversity of MS for key insect groups. For example, this link is to the Tiger beetle page ([www.npwrc.usgs.gov/resource/distr/insects/tigb/ms/toc.htm](http://www.npwrc.usgs.gov/resource/distr/insects/tigb/ms/toc.htm)). This site contains color pictures of tiger beetles and a county map of MS where they are reported. I would love to have you to help fill in the blanks on this site! For those of you in other states, similar pages can be found under the science topics portion of the USGS website. If you are interested in working on the GIS map of MS, you can contact Dr. John Giesemann ([johng@ext.msstate.edu](mailto:johng@ext.msstate.edu)) to get access to the GIS program or to have data added to the database.

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