



The glowworm

Mississippi State
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Eastern Tent Caterpillars and Horses

I received an email report recently from the University of Florida Diagnostic Clinic. This spring, pregnant mares in Florida's horse country are losing foals before they are born. This situation is analogous to losses in Kentucky in 2001 when 30% of thoroughbred mares lost foals—an estimated \$330 million loss. Local newspapers called it a crisis but researchers labeled it Mare Reproductive Loss Syndrome (MRLS). There was no cause identified until 2002 when an experiment showed that ingesting larvae of the Eastern tent caterpillar, *Malacosoma americanum* induced MRLS.



Caterpillars of this native pest species attack cherry trees from large communal nests in the center of the tree (compared to webworms which make nests at the tips of branches). The caterpillar does not attack the mare directly but is accidentally eaten during its wandering stage (induced by hormonal changes when caterpillars move off their food plant in search of a place to pupate). Populations of tent caterpillars were abundant in plague-like numbers in spring of 2001 and 2002 in KY. Wandering larvae were abundant in pastures, and water and food

buckets where they were eaten. When eaten, hairs from the caterpillar's body make small lesions in the gut allowing pathogens to move from the gut and be delivered to the developing foals. The foals often died from this infection. The response from many horse farms was to cut down many of the old wild cherry (*Prunus serotina*) trees that grow naturally on horse farms, or to begin an insecticide spray program in the spring. This species has only one generation a year but it's spring activity is coincident with the foaling season for horses. If you are lucky you can still collect larvae from nests in fence rows trees. This would be a great addition to your collection. I would like to see someone research the life cycle of eastern tent and bring a collection of at least three life stages to camp this year. Here's a hint: you can rear the adults from larger larvae. Adults are a brown, hairy moth. The egg stage is most commonly found on trees that have old nests in them. Egg masses can be clipped off the branch and preserved dry. Eggs, larvae, and adults would make a great show and tell before one of our meals at Camp. The pupal stage is going to be tough but it is covered in a white silken covering and found in the cracks of tree trunks or under the rail on a fence post. Drop me an email if you are hunting this creature so I can plan for you to give a show and tell.

D. Held

Speaking of Camp...

Don't wait until the last minute to send in your registration. Spots fill up quickly. We don't want anyone to miss out because they waited too long to send it in. If you have any questions, please call or email us.

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Nocturnal Collecting Tip From Eisner's Book, For the Love of Insects

Moths typically begins their courtship ritual at dusk (within $\frac{1}{2}$ hour after sunset) with the female remaining stationary on a limb allowing her pheromones to drift down wind attracting males. A female can be caged, using a piece of mesh cloth, on a limb to attract males. Eisner also mentioned puddling behavior in moths.

Another nocturnal collecting technique you might want to experiment with is to provide puddles near black lights.

Carpenter Bees

Most people consider carpenter bees to be serious pests of wood and go to great lengths to try to prevent injury to structures. There is a Mississippi 4-Her who



considers them to be beneficial as pollinators. Caitlin Myrick as part of her science fair project has done a study on these critters. Her interest prompted this feature on Carpenter Bees, *Xylocopa* species. These large robust insects resemble bumble bees. They are usually about 1 inch long and colored a metallic blue-black with green or purplish reflections. They differ from

bumble bees in that their abdomen is shiny with fringes of hairs on some segments. Males of some species are lighter colored, ranging into golden or buff hues.

Female carpenter bees bore into wood sometimes sound or sometimes into decaying wood to make nests. Nests usually consist of tunnels 1/2 inch in diameter and 6 to 10 inches deep that are partitioned into several chambers, each containing an egg and a supply of food (pollen). Carpenter bees may use old tunnels for their nests, which they sometimes enlarge; several bees may use a common entry hole connecting to different tunnels. Over a period of time, tunnels may extend as far as 10 feet into wood timbers. Tunnels are vacated after the brood's larval and pupal stages complete their development.

Each female may have six to eight sealed brood cells in a linear row in one gallery as she backs outward. Larvae develop on the pollen/nectar food mass provided, with the life cycle completed in 30 to 40 days. New adults chew through the cell partitions and emerge in late August. They collect and store pollen in the existing galleries, return to



the tunnels to hibernate and mate the following spring. The previous year's adults die. They are not social insects and there is one generation per year.

Carpenter bees are generally considered beneficial insects because they help pollinate various crop and noncrop plants. Under most conditions they can be successfully controlled using the preventive measures, i.e. paint. If infestation is

high or risk of damage is great, insecticides may be used to augment other methods of control.

Information and pictures were taken from California, Ohio and Georgia Extension Web sources.

M. Williams

**ATTENTION: YOUNG PEOPLE –
TEACHERS – PARENTS ALL WHO ARE INTERESTED IN ENTOMOLOGY!!!!**
THE MISSISSIPPI STATE ENTOMOLOGY DEPARTMENT PRESENTS:
Entomology Camp #1 on June 18-22 – Wall Doxey State Park, Holly Springs
Entomology Camp #2 – July 16-20 –Christian Service Camp, Newton

This camp is for **adults and youth** (over age 10) **who want to learn about insects** from experts. The camp will be taught by professors from the Entomology Department at Mississippi State, and will be educational and fun!!!!

- _ Learn how to collect, identify, and preserve insects!
- _ Learn about unique critters you've never seen, yet they live all around you!
- _ Make an insect collection with help from the experts!

Adults are encouraged to enroll for the camp!!! Out of state campers are also welcome!!!!!!
Enrollment is limited and will be on a first come basis.

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

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

5 day Entomology Camp costs: \$160.00

Costs include room/board, t-shirt and miscellaneous supplies - deposit is not refundable after May 1, 2006 for camp #1 and June 15, 2006 for camp #2, deposit is applied to camp costs.

I will be attending CAMP Session #_____. Indicate 1 or 2, please!

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

Name: _____

Address: _____ City: _____

State: _____ Zip: _____ County: _____ Age: _____ Gender: _____

Telephone _____ email _____

email address is very helpful in quick communication

4-H rules and guidelines apply.

Please submit a **separate copy of this form for each camper** - be sure to indicate the session the camper will be attending.

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

2006 4-H Entomology Calendar

30 May – 1 June – 4-H Congress

**Insect collections
Visual Presentations
Judging and Id
Linnaean Games**

13 – 16 June Project Achievement Days

**Insect collections
Visual Presentations
Judging and Id
Linnaean Games**

18-22 June Entomology Camp

Wall Doxey State Park

15 July Linnaean Superbowl

Jackson Horse Show

16 – 20 July Entomology Camp

Mississippi Christian Services Camp, Newton, MS

Coming in August...

Another adult Entomology Camp!

BugFest at the Crosby Arboretum, Picayune

August 18 from 4-8 pm