

### ***The Prairie - An Ecological Bug Camp Theme***

This year as we grow the plant component of camp we have adopted a *prairie theme* around which we will build a few of our activities. We will be collecting at the Osborn Prairie site where Dr. Richard Brown, Joe MacGown and JoVonn Hill have been conducting some research. We will also collect on a *created* prairie site at the Noxubee National Wildlife Refuge. It will be interesting to see if there are any differences in the insects collected. Of course, we will be looking at the plants more closely and comparing them between the two sites as well with Dr. Lelia Kelly's assistance. Dr. Renee Clary (Geoscience) and Bob Brzuszek (Landscape Architecture) will discuss the soil-plant relationship and Dr. Charlie Wax (Geoscience) will cover the climatic and atmospheric influences on the formation of the prairie. In the long run of nature, when a prairie is overgrown with trees, natural succession can be restarted by lightning or bark beetles killing trees thus enabling the sun to reach the ground again. Dr. John Riggins and Richard Smith will be introducing campers to bark beetles. Dr. Brown's ever-popular program this summer will be



#### 2009 Bug Camp Staff

Our summer camp staff is still growing but at this time it includes the following.

Dr. John Guyton, Camp Director

Dr. Mike Williams, Director Emeritus and Lead Bug Chaser

Dr. Lelia Kelly, Director of Plant Component

Ms. Leslie Burger, Camp Coordinator

Dr. Clarence Collison, Entomology and Plant Pathology Dept. Head and Camp Apiarist

Dr. Blake Layton, Insect Photography

Dr. Richard Brown, Entomological Museum and Prairie Collecting

Dr. Jerome Goddard, Medical Entomology - yep after a too long absence Dr. Goddard is back!!!!

Dr. John Riggins, Forest Entomologist

Mr. Dan Kennell, designing this year's t-shirt and black lighting fanatic!

Ms. Karen Benson, adult volunteer coordinator

Ms. Christine Fielder, EMT - we hope!

Ms. Pat Drackett, MSU Crosby Curator and MSU's South Mississippi BugFest Coordinator

Ms. Lauren Goltz, Entomological Graduate Student and volunteer

### ***How NOT to Get Stung by Fire Ants***

by Mary Held\*  
4<sup>th</sup> Grade Christian Collegiate Academy  
Division and Class: Elementary

**Problem** Imported fire ants “description:”  
different sized workers,  
ant mound has no hole,  
swarm if stepped on,  
fire ants sting you and it hurts,  
you will get tiny bumps and  
some people are allergic and they swell up if they get stung.

### Hypothesis

I did this project to find out what we could wear on our feet to keep from getting stung.

### Procedure

“Description of doll:” Holly Hobby plastic doll, about 12 inches tall, the doll was wearing shorts so we could see her legs.

We made marks on her legs. We choose shoes, sandals, and boots. We used socks and bare feet. We dressed the doll for each experiment. One treatment was on each leg. Experiments were done in order. We stood her up straight in the top of a fire ant mound. Ants swarmed out of the mound and went up her legs. We counted how much time it took for ants to cross the line. We wrote down the time for each leg. We put in water to wash off the ants. We dried her legs and dressed her for the next experiment. We used Neutrogena Ultra Sheer body mist spf70.

### Results

exp 1 barefoot 6 sec sandal 15 sec  
exp 2 shoe 7 sec sandal 12 sec  
exp 3 shoe 15 knee high socks shoe 12 sec  
exp 4 shoe 39 knee high sock shoe 45 ankle sock  
exp 5 barefoot 9sec boot 17 sec  
exp 6 boot 36 shoe 38  
exp 7 boot 85 sock knee high 64  
exp 8 right leg sunblock 5:43 left leg bare 17 sec

Sunblock dried before exp.

Ants didn't always crawl up over boot to the skin but went inside boot. Ants came down the sunblock leg but when the ants encountered the sunblock they went back up away from it.

### Data



|                      |     |    | <b>total</b> | <b>average</b> |          |
|----------------------|-----|----|--------------|----------------|----------|
| barefoot             | 6   | 9  | 17           | 32             | 10.66667 |
| sandal               | 15  | 12 |              | 27             | 13.5     |
| shoe                 | 7   | 12 |              | 19             | 9.5      |
| knee high socks shoe | 15  | 39 |              | 54             | 27       |
| ankle sock and shoe  | 45  | 64 |              | 109            | 54.5     |
| boot                 | 36  | 17 | 85           | 138            | 46       |
| sunblock             | 103 |    |              | 103            | 103      |

### **Followup**

Pencil sprayed 7:00 minutes, non sprayed pencil 50 sec; we stopped the exp at 7:00 due to no activity.

### **Observation**

Ants didn't always crawl up over boot to the skin but went inside boot.

Ants came down the sunblock leg but when the ants encountered the sunblock they went back up away from it. Sunblock kept the fire ants off the longest. Barefeet or shoes with no socks were the worst. In 10.6 s or less, fire ants were up to her knee.

### **Analysis**

Sunblock kept the fire ants off the longest.

Barefeet or shoes with no socks were the worst. In 10.6 s or less, fire ants were up to her knee.

### **Conclusions**

To keep fire ants from stinging you, wear shoes with socks. Sunblock worked on the doll but it wasn't tested on humans.

\* Yes, you do recognize this name, and those of you who were at the last Bug Camp at Tombigbee State Park will no doubt remember Dr. David Held's famous (or was that infamous) fire ant experiment! Like father like daughter.

I will never forget Dr. Held's excitement when early one morning he rushed into my office still excited, over 15 hours after picking Mary up from school. He then launched into a description of her entomological adventure the day before. When he arrived at her school she had a large group of boys on their hands and knees combing through the grass looking for insects! She is not only going to be an entomologist she is going to be a department head!

### ***Camper Reports***

We really like to hear from you and look forward to our next report of a camper achievement. Mary has not been to Bug Camp, yet. But her father has and the camp staff thinks he needs to bring her!

We are working on a rumor, and a strong one, that a camper has possibly found a stonefly new to science and we look forward to learning more about her project!

***Sneak Preview*** - So who is this Dr. Goddard?

Older campers will remember his incredible stories and some of our younger campers may have read some of his children's books. But for an enjoyable snapshot check out his web page and be sure to look at his short videos! <http://www.jeromegoddard.com/>  
I think you should avoid watching his Cockroach Doo doo video!

### ***Milkweed and Monarchs***

Milkweeds are blooming and with the Insect-Plant camp format I thought an insect plant article may be appropriate. I strongly suspect there are a variety of milkweed pollinators and since our local variety is white or light green it may be a moth. Nature is not wasteful and nocturnally pollinated plants are typically light colored and easier to be seen at night. Look for some plants near you and watch to see what is pollinating them.

Latex is produced by over 2,500 species of plants and latex is an incredible natural product. In the vein of "nature inventing it first," nature certainly created an indispensable product. And it is waterproof! Plants use latex as a band aid to cover wounds. Interestingly this secretion is not the plants sap. This latex is also bitter and where the monarch gets the chemicals that make it a bitter meal for birds!

Latex solidifies with exposure to air and there are several experiments that come to mind. My first experience with the latex was wiping it on my blue jeans where it remained through many washings. To keep latex from solidifying during storage or shipping a stabilizer is added. You could experiment with a few drops of ammonia in an ounce or two of latex. Wait until after the milkweed has finished blooming before nicking the stem and collecting the latex. It can be collected and stored in a small glass vial. When the ammonia is allowed to evaporate the latex will harden into rubber.

Milkweed regrows from the roots each year so after the monarchs have departed consider experimenting with the inner bark to make a piece of string. Native Americans used the milkweed for this purpose.

The fluff attached to the seeds makes an excellent tinder for starting fires. The fluff was used in life preservers since they repel water. And as long as you are checking out those pods you may want to harvest a few before they get too hard to play with. Carefully separate a seam and dig out all of the fluff and notice how nicely the pod snaps shut again. Collect a few carpenter ants or a cricket and place in the pod cage and leave where an unsuspecting brother sister or parent can enjoy the noise from nowhere or have their attention focused when it starts moving!



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