Science on Six Legs

An Overview of Educational Outreach at

Purdue University

Melissa Montague Shepson
Educational Outreach Coordinator
Department of Entomology
Purdue University
The primary goal of outreach at Purdue University is...

- To promote science education using insects (and other arthropods!)
BUG BOWL

- General public
- Break down the barriers between “town and gown”
- Engage donors and friends
- Provide student organizations the opportunity to develop outreach and community service skills
Insect Art Contest: from this...
to this!
Insect Petting Zoo...the line is how long?!
Millipedes...
And roaches...
And spiders, oh my!
Cricket Spitting - the venue...
The crowds...
The spitters...pah-tooey!
Running of the Roaches!
It’s a beautiful day here at Roachill Downs...
Apiculture Exhibits and Honey Tasting Room...
Insect Crafts and Face Painting...
Insects as Food? You ate what?
Cake Decorating Contest...
Other...
Insectaganza

- 1000 fifth graders!
- Four different programs at four different venues.
Goals for Insectaganza

- To facilitate science education through the use of insects.
- Give students an opportunity to experience a university environment.
Butterfly Encounter

- Audience: General public
- This event began in 2003 with only ten participants; in 2009, 109 people attended the encounter.
Goals....

- To engage butterfly enthusiasts as “citizen scientists”
and...

- Document the health of the habitat, facilitate butterfly and wildflower identification.
a nature photography workshop...
Indiana State Fair

- Audience: General public
- Twice daily Roach Racing at Roachill Downs
- Cricket spitting event on Purdue Day
- “Bug Day”
Talks and Tours

- Widely diverse groups

- Presentations are specific to the presenter, the audience and the event.
DISCOVER!
Science Workshop for Teachers

- Teachers from across the US, K-12

- Workshop components include:
  - Concepts that Teach Math
  - Creating Cross-Curricular Connections
  - Rearing Insects in the Classroom
  - Deductive Reasoning and Physical Science
  - Insect Classification
Goals...

- Coordinated with the COE GERI (Gifted Education Research Institute) designed to provide teachers with methods, materials and strategies to introduce insect science into their classrooms.
Frankfort High School Mentors Project

- HS science students from diverse backgrounds and scientists from the entomology department
- Trimester long activity culminated in a Science Fair Project event open to the community
Goals...

- Create mentoring relationships
- Increase awareness of the scientific method
- Promote entomology and associated careers
- Showcase higher education
- Improve critical thinking and problem solving skills
Informal pre and post surveys suggest that participating students...

- Improved their understanding of the scientific method
- Experienced a reduction in anxieties associated with interacting with professional scientists
4H Youth Round Up Career Day

- Typical audience: 99% are current 4-H members
- Encourage young people to explore ag career interests through experiential learning
- Motivate students to study at Purdue University
4H Entomology Workshop

- 4H high school students
- Two days of activities, focused heavily on hands-on field experiences.
- Components include:
  - A Short Introduction to the Long History of the Scientific Method
  - Aquatic Insect Identification and Collection
  - Beekeeping Workshop
  - Charting Insect Diversity in the Environment
  - Predator/Prey Relationships
  - Tutorial on Insect Collection and Pinning Methods.
Goals...

- Encourage young people to explore ag career interests
- Aid in career decision making
- Motivate students to study at Purdue University
HONORS – Insects in Literature and Art
HONORS – Theater and Science
Catch the Reading Bug

- The CRB DVD was used to introduce young people to entomological ideas and arthropods in a fun way while facilitating the national summer reading program, *Catch the Reading Bug!*
What's Bugging Belva?

Belva woke up grumpy one morning. "Being an insect really bugs me," she said, stretching and her six legs. "We have all these legs and humans are always trying to squash us. I hate being an insect!"

Grenda Belvedere heard Belva and turned around. "What! Being an insect is the best!" Grenda said. "Come with me to the garden. I'm going to show you an amazing world!"

"Oh, if I have to," Belva moaned.

Stay tuned to learn more about Belva and her adventures!
Belva woke up grumpy one morning. "Being an insect really bugs me," she said, stretching out her six legs. "We have all these legs and humans are always trying to squish us. I hate being an insect!"

Grandpa Belvedere heard Belva and turned around. "What? Being an insect is the bee's knees," Grandpa said. "Come with me to the garden. I'm going to show you our amazing world."
"OK, if I have to," Belva moaned.

What's bugging Belva?
Zip Trips

- Purdue zipTrips are 45-minute live broadcasts that introduce middle schoolers to the world of science.
- Free for teachers from public, private and home schools
- In 2009, 9,000 sixth-grade students from Indiana, North Carolina, Virginia, Ohio and Indonesia tuned in to watch the zipTrips
Special thanks to...

- Professor and Department Head, Steve Yaninek
- Professor Tom Turpin
- Arwin Provonsha
- Other faculty, staff and students who contribute their time and talents to support educational outreach at Purdue University
Questions, comments, concerns...

Contact Melissa Shepson
mshepson@purdue.edu