

## Longhorn Beetles

with Dr. Ann Ray, Assistant Professor, Xavier University, Cincinnati, OH

May 20-22, 2016

Longhorn beetles (*Cerambycidae*) are the undisputed champions of the charismatic beetle family award with their elegant antenna (or horns) and the almost presidential gestalt of the larger species. With over 1,000 species in North America in 8 subfamilies, identification challenges are many, but rewarding, making this group the perfect "gateway" to your appreciation of beetle diversity.

The beetles are found on every continent except Antarctica, and are known to feed on species in nearly every plant family. The majority of species spend most of their 1-3 year lifespan in the larval stage (round headed borers) primarily boring into and feeding on wood, both living and dead. Some are pests, such as the Asian longhorn beetle, so knowing the group can be beneficial to land managers. They have wide ranging color strategies from: perfectly cryptics; to convincing ant, bee, wasp, fly and even other beetle mimics; to spectacularly colored or patterned.

Dr. Ray is a respected cerambycid authority who studies the evolution of the longhorn beetle's chemical communication and mating behavior. This workshop is being held during the peak of adult emergence so participants can benefit from her experience with the use of pheromones for baiting and luring. Her enthusiasm for these "horned" denizens of forests and suburbs is combustible and unequalled. This will be the first-ever dedicated effort to sample this beetle family on the preserve. Don't miss it!

## Fireflies

June 17-19, 2016

Lynn Faust, independent researcher and author of *Fireflies, Glow-worms and Lightning Bugs! Identification and Natural History of the Fireflies of the Eastern United States and Canada* (in press, University of Georgia Press, due out late 2016)

Fireflies, or lightning bugs, have captured human imagination since the earliest peoples first witnessed these flashing insects. Even today the most uninformed citizen or hardened city dweller knows a lightning bug when they see one flash. Despite this universal awareness and deep time association, very few people can name a single species of lightning bug or have any idea how many species call Eastern North America home.

Lynn Faust is on a quest to change this with her upcoming peer reviewed book on lightning bugs of the Eastern U.S. This workshop will teach participants how to recognize these charismatic beetles both in the hand and by their flash, as every species has a unique flash pattern. There are an estimated 125-175 species known from North America and likely 20 or more species from Ohio. It's expected we could see 7+ species on the preserve just on the workshop weekend alone. Each has a unique ecological story to tell - some prey on other fireflies, some flash synchronously, some flash at sunset while others later and some don't even flash at all.

Participants should expect to spend both nights out in the fields and forests of the preserve to see the show with one of the most exciting and knowledgeable firefly researchers working today, Lynn Faust, the Lightning Bug Lady.

## **Leafminers and Other Herbivorous Insects**

with Charley Eiseman, Freelance naturalist and biological consultant

*July 29-31, 2016*

Charley Eiseman's and Noah Charney's book *Tracks and Signs of Insects and other Invertebrates* took the naturalist world by storm in 2010. Charley's newest book (nearing completion) on leafminers will build on the information about leaf mining insects from his first book. The focus of this workshop will be material from both books, making this workshop a not-to-be-missed leafminer and leaf feeder extravaganza.

The goal of the workshop will be threefold: to train participants how to use leaf feeding/mining signs to identify the feeder/miner; learn more about the ecological roles and vast diversity of insects that use leaves for food and homes; and learn how, where and when to look for leafmining and feeding insects. There will be ample time in the field looking for signs of leafminers and other herbivorous insects so participants should come prepared for the elements. Don't miss this workshop led by Charley Eiseman, one of the greatest inquisitive minds working to unravel the many mysteries we all encounter on leaves.

*Support for this workshop is provided by Crane Hollow Preserve.*

## **Karst Ecology of Adams County**

with Dr. Julian Lewis, Lewis & Associates Cave, Karst & Groundwater Biological Consulting

*September 23-25, 2016*

The karst region of Ohio is found in the Bluegrass Region or Interior Low Plateau Ecoregion of south central Ohio. The bulk of the 17,000 acre Edge of Appalachia Preserve lies in this region and protects many karst features, yet very little is known about the ecology or inhabitants of these unique features.

Sink holes, caves, springs and wells are all windows into the subterranean and the ecology and life forms found within are the focus of this workshop. To date, it's known that one cave on the preserve protects an endemic isopod found nowhere else on earth, but very little work has been done on the preserve's other karst environments.

Be a part of this groundbreaking workshop to sample sinkholes and other subterranean features for isopods, amphipods, flatworks, spiders and other karst dwelling life forms. Dr. Lewis is a world authority on karst environments and works with many organizations like The Nature Conservancy, USDA Forest Service and others to survey and develop management plans for these unique

systems. While hardcore caving will not be a part of this workshop, participants should be prepared to get muddy and possibly wet as we peer into the preserve's subterranean world with this renowned researcher.

*Series 12, Part 1*

## **Bees of the Midwest: An Identification Workshop**

with Mike Arduser, retired biologist, Missouri Department of Conservation

*March 14-18, 2016*

Join noted bee authority Mike Arduser for his five-day intensive identification workshop on the native bees of the Midwest. With over 850 native species in Eastern North America and several in decline, it's critical to start tracking the long term health of these important pollinators. Biologists, conservation manager, citizen scientists and students alike will benefit from this workshop and receive the skills necessary to identify native bees. Be a part of the solution by attending this workshop and leave with the ability to identify native bees to species.