

# PA TWS Fall Field Day

--WORKSHOP DESCRIPTIONS--



## **1. Pennsylvania Elk: Status and Management**

Join the PGC elk biologist for a brief lecture/overview of Pennsylvania's elk population. Lecture topics will include current population estimates, habitat management techniques, a summary of elk hunting, and human-elk conflicts. Following the lecture we'll caravan to, and tour of some secluded areas of preferred elk habitat. Habitat management challenges and the future of elk in Pennsylvania will be discussed. There will be plenty of time for impromptu question/answer sessions and discussion. Whether you're interested in elk hunting or elk management you're likely to find this workshop informative and hopefully entertaining.

## **2. Mist Netting and Bird Banding: Handling Nets and Birds**

Mist netting and banding birds is a common research technique in ornithology; however, it is often difficult to gain experience in this area due to a limited number of biologists with appropriate permits. This workshop will be entirely outdoors and will focus on handling techniques of both mist nets and birds. Participants will learn about and view the process of capturing and banding birds and will have the opportunity to setup and take down mist nets and safely handle and release songbirds.

## **3. Speed Training in Wetland Delineation**

How does the US Army Corps of Engineers, the US Fish and Wildlife Service and the PA Department of Environmental Protection decide where their jurisdiction begins and ends relative to wetlands, streams, lakes and vernal pools? We will briefly discuss the Clean Water Act and the highlights of the science behind the delineation process for wetlands and water bodies. This will include observation of soil and hydrology characteristics as well as the identification of the dominant plant community. We will provide information about important reference resources and answer questions about the ecological diversity and value of wetlands in PA. Wear work boots and bring bug repellent—this workshop will include both class and field components.

## **4. Plant Identification for Wildlife Biologists**

This workshop will emphasize identification of trees and shrubs that provide food or cover for wildlife in Pennsylvania. There will be a short discussion of the characteristics that differentiate

families or genera of trees and shrubs that are important to wildlife (for example oaks, beeches, hickories, pines, dogwoods ) followed by a presentation of resources available to identify plants and determine their value to wildlife. Then we will look at individual specimens of tree and shrub species with high values to wildlife. Lastly we will walk around the Dubois campus to practice locating and identifying trees and shrubs important to wildlife.

## **5. Non-lethal Wildlife Damage Management Methods**

Wildlife damage management techniques involving a diversity of non-lethal management methods and their applicability with different species. The applicability and safe use of multiple methods including habitat modification, exclusion, repellants, and harassment will be presented in the workshop. Hands-on use of tools used by professionals to manage wildlife will be provided.

## **6. New Geospatial and Sensor Technologies for Quantifying Animal Behavior**

New technologies from the realm of smartphones and “wearable” fitness devices are now being incorporated into wildlife telemetry devices, allowing for groundbreaking research in movement ecology and animal behavior. GPS telemetry with cellular Internet connectivity (GSM or CDMA systems) solves three major limitations of satellite telemetry: limited bandwidth, high power requirements, and high costs of transmitting mere kilobytes of data. These technological advancements open doors for researchers to address new and longstanding questions about animal movement and behavior. Here we present how these data can be collected and how they can be used to answer a variety of research questions. This workshop will cover elements of project design and transmitter attachment methods, the basics of solar recharging GPS-GSM transmitters, how to choose the correct transmitter size & shape for the ergonomics of your animal, how to choose a duty cycle (GPS, GSM, ACC system programming) that is optimized for the goals of the study, while also considering the solar recharging and battery side of the equation.

## **7. The Secret Behind the Rattle: Timber Rattlesnakes**

The timber rattlesnake (*Crotalus horridus*) is a quiet and shy creature abundant throughout the forests of Pennsylvania, yet often unseen. A certified timber rattlesnake construction monitor and venomous snake handler will educate you on the natural history and biology of this species while presenting you with an up-close glimpse into the eyes of this gorgeous creature. Learn about common misconceptions associated with this snake along with safety measures the public and outdoor enthusiasts can easily follow during an encounter with this docile animal. Following an indoor seminar, participants will have an opportunity to step outside for a firsthand demonstration on safe approach and handling techniques.

## **8. Raising and Tagging Monarch Butterflies: Educational Opportunities and Disease Challenges**

Despite its iconic status in the eastern US, the monarch butterfly population is in precipitous decline due to threats from loss of milkweed, climate change, pesticide use, land-use changes, and disease. This workshop will review suggested methods for raising and tagging monarch butterflies through the Monarch Watch tagging program and educational opportunities for K-12, post-secondary, and community education. Updates on the current status of the population, the monarch life-cycle and annual migration, and testing for disease will also be covered.

## **9. An Introduction to Bat Sampling Technology**

The disease white-nose syndrome has decimated populations of bats including threatened and endangered species throughout the eastern United States, making it more important than ever to understand these species. Learn about the bats of Pennsylvania and explore the variety of sampling techniques biologist use to study bats with an emphasis on acoustic detection. Follow us out in the field to discuss the deployment of acoustic detectors and collect detectors that were left out the night before. We will analyze these recordings using different software to discover which species we recorded.