



*JOINT CONFERENCE OF THE PENNSYLVANIA CHAPTERS OF
THE AMERICAN FISHERIES SOCIETY AND THE WILDLIFE SOCIETY*

FEBRUARY 21 – 23, 2019
RAMADA HOTEL & CONFERENCE CENTER – STATE COLLEGE, PA

WORKSHOP DESCRIPTIONS:

1. EPT Identification - Instructor: Mike Brickner (24 person max)

The workshop will cover the three major taxonomic groups that are used as indicators of good water quality; (mayflies)Ephemeroptera, (stoneflies)Plecoptera, and (caddisflies)Trichoptera. The lecture will cover the general distinguishing characteristics of the three Orders and their Family levels. The lab component will be for participants to examine and identify specimens. Participants should have some prior experience with the collection and examination of macroinvertebrates and working with dichotomous keys.

2. Begin Using R for Statistics - Instructor: Christopher Steiha (30 person max)

The R programming language is free and open-source software used for everything from programming to statistics with strong support in all branches of science. In this workshop, participants will be introduced to the basics of R, such as reading in data, plotting, and implementing statistical tests, such as ANOVA and regression. Computers will be available for use, but participants may also bring their own laptop. If bringing your own laptop, please install R from cran.r-project.org before attending the workshop. Although not required, you may also want to install RStudio (rstudio.com) as a friendly user interface to R. If there are any questions, please contact me at Christopher.Stieha@millersville.edu

3. Technologies for Individual Monitoring in Fisheries and Wildlife - Instructor: Shannon White (30 person max)

Tracking individual movement and behavior in fish and wildlife populations can provide improved understanding of resource use and survival, and can be used to identify potential threats to conservation. There is a myriad of technologies available to monitor individuals, ranging from computer software programs to advanced satellite telemetry, and understanding the benefits and limitations of each method is critical for project design and execution. This workshop will explore common monitoring techniques used in fish and wildlife research, including molecular, PIT, VIE, telemetry, Floy, and biomonitoring technologies. Highlighting data from trout, deer, amphibians, and rodents, technologies will be compared and introductory quantitative methods discussed.

4. Fish and Wildlife Disease - Instructors: Justin Brown and Coja Smith (24 person max)

The session will begin with an overview of avian-specific diseases followed by a hands-on necropsy session. Then, take a plunge into the aquatic realm with a fish disease discussion and necropsy.

5. Introductory GIS for Natural Resource Professionals - Instructor: Lillie Langois (30 person max)

Geographic Information Science (GIS) is one of the most important skills in the wildlife and fisheries fields. It is a powerful tool to analyze spatial data as well as publish professional quality maps. This seminar is aimed at a broad audience of scientists from those new to GIS to the ones already working with the program. First the basics of GIS will be covered: What is it? Advantages and challenges of working with GIS. Overview of the most common GIS tasks and tools. How to find spatial data of interest. This seminar is located in a Penn State Computer Lab where attendees will get hands-on experience using ArcGIS software. Global Positioning Systems (GPS) data will be applied in combination with other relevant data to map and complete tasks commonly required of natural resource professionals. Finally, a publication-quality map will be created using the provided example data.

6. Winter Botany - Instructors: Leslie Horner and Sarah Wurzbacher (30 person max)

This session will begin with a hands-on activity to familiarize participants with using a dichotomous key for trees. The bulk of the session will be outdoors, learning to identify trees on campus and nearby. Participants will learn how to use bark, twigs, buds, and other characteristics to identify a tree or shrub. In addition to teaching identification, the instructors will also discuss wildlife values of various tree species, and highlight species that are suitable for growth in riparian areas. Several important species of woody non-native invasive plants will also be noted for identification.

All day field trip (8 am - 2 pm)

Geological Tour of Central Pennsylvania - Instructor: David Kleindienst (28 person max)

THE GRAND TOUR - Rocks, Forests, Waters and People! This field experience will introduce you to local areas with unique and significant geologic, biologic, historic and cultural features. You will observe how changes in the area, with time spans of eons to a few minutes, have affected the environment and the people living in it. Transportation is by van with several stops for observation and conversation. Minimal walking but sturdy footwear is recommended. And of course, dress for the weather. The use of cameras and binoculars is encouraged. Workshop participants will have the opportunity to purchase lunch from a local BBQ restaurant while in route or may bring one along to enjoy on the road.