

PROGRAM for Survey Guidelines and Techniques Workshop

Schedule Overview

Monday August 8 - Arrival, Registration, Evening Mixer

Tuesday August 9 - Breakfast, Introduction with Dave Smith, Lunch, Field Sessions, Poster Session & Mixer

Wednesday August 10 - Breakfast, Lecture and Field Sessions, Lunch, Lecture and Field Sessions, Dinner, State and Federal Survey Protocols Town Hall

Thursday August 11 - Field Trip, Departure

Workshop Program

The Survey Guidelines and Techniques Workshop, along the banks of the famous Duck River, has been designed to help everyone learn or improve their sampling and data interpretation techniques. **Participants will be able to choose one of two paths during the Workshop: Survey Techniques and Advanced Topics.** Both paths will consist of four sessions of 3 - 3.5 hours each. There also will be an evening poster session and a town hall style discussion.

Survey Techniques Path participants will be assigned to groups of no more than 20 people that will rotate through the following four sessions:

1. **Field Sampling** – participants will conduct semi-quantitative, quantitative, and qualitative sampling.
2. **Classroom sampling exercise** (Mussel battleship) – participants will use semi-quantitative sampling in a classroom simulation to delineate a mussel bed, then quantitative sampling to assess standard metrics with confidence intervals.
3. **Finding and processing mussels** – participants will learn techniques for mussel handling, identification, measuring, aging, and marking.
4. **Habitat and survey design** – participants will learn techniques for evaluating mussel habitat, identifying where to sample, and for designing a mussel survey

The learning objective for the **Advanced Topics Path** is for participants to develop an awareness of advanced methods that are applicable to assess and study freshwater mussel populations and communities. Participants will remain together in a symposium-style setting as speakers provide introductory overviews, case studies and demonstrations on the following topics:

1. **Population and community assessment fundamentals** – This session will include an overview of core techniques and data types that are needed to conduct a baseline status of populations and communities, population health and resilience, and assessments. Species status assessments (SSA) as used in endangered species decisions will be presented as a special case.
2. **Estimation of change and trend** – The session will include an overview of statistical inference of change and trend of an event either a disturbance or reintroduction/augmentation and case studies on impact assessment and trend detection.
3. **Capture-recapture based methods** – The session will include background on why estimation of detectability is important, relationship between distribution and habitat at multiple scales, vital rates (survival, movement, recruitment, lambda, and relationship between vital rates and habitat, and case studies illustrating occupancy sampling, modeling and tag-based sampling.
4. **Emerging topics** – The session will include introductory presentations to discuss new methods that have promise to solve persistent or emerging information needs, case studies, and panel discussions. Possible topics include use of eDNA to sample for native and AIS, estimation of ecosystem services, formal protocols for expert elicitation, and forecasting. Coverage of topics will depend on availability of expertise. If time allows, discussions will be scheduled for participants to describe survey or analysis issues they are facing to get advice and suggestions from other participants and instructors.

Field Trip

On Thursday August 11th, Workshop attendees will have the option of attending a Duck River mussel sampling field trip with Tennessee Wildlife Resource Agency. Due to our proximity to such tremendous freshwater mussel resources the fieldtrip will focus on freshwater mussels of the Duck River and a TWRA ongoing monitoring program. The cost is \$50 and will include roundtrip transportation and a box lunch.