

ACOUSTIC SURVEY METHODS FOR BATS COURSE – SWRS, AZ AND GRBA, NV

SWRS/GRBA Sample Agenda – Exact Times, Lectures, Demonstrations, Field Trips, Meals will Vary According to Venue

DAY 1: INTRODUCTION TO ACOUSTIC SURVEYS, PROJECT PLANNING, BAT DETECTOR OPTIONS, AND SURVEY SITE-SELECTION

1:00pm—Meet at Venue for Introductions, Orientation, and Training Objectives
1:30pm—Lecture: Introduction to Acoustic Monitoring: Basic Considerations for Successful Projects
2:30pm—Lecture: Detector Types, Micro-siting, Data Collection, and Deployment Tips
4:00pm—Hands-on Demonstration: Bat Detectors, Settings, and Deployments
6:00pm—Field Trip: Ready Participant Gear for Deployment: Settings, Data Sheets, Meta-data Collection, Go-button Steps
7:00pm—Field Trip: View Bat Out-flight and/or Demonstrate Active Bat Recording and Bat Observation Techniques
10:00pm—Field Trip: Collect Data, Tips for Assessing Proper Detector Function, and Archiving Data and Metadata

DAY 2: ACOUSTIC SURVEY DATA, DATA MANAGEMENT, POST-PROCESSING, AND ATTRIBUTING FILES USING KAPRO & SONOBAT

8:00am—Field Trip: Collect Long-term Passive Data, Confirm Detector Functioning, Record Essential Metadata
10:30am—Lecture: Acoustic Data Management, Tips, and Tricks
11:30am—Lecture/Demo: Acoustic Analysis Software Types and Hands-on Demonstration of KaPRO and SonoBat
1:30pm—Hands-on Demo: Organize Digital File Storage and Create Metadata Files
2:30pm—Hands-on Demo: Using KaPRO and/or SonoBat to Post-process Data, AutoID, and Prepare for Manual Vetting
4:30pm—Lecture/Demo: Understanding KaPRO and/or SonoBat Outputs
6:30-9:00 Field Trip: Passive and/or Active Recording at Local Natural Area
9:00-11:00 *Optional Geek Session - Post Processing Data Using Other Acoustic Analysis Programs*

DAY 3: INTRODUCTION TO ECHOLOCATION AND IDENTIFYING BATS ON THE BASIS OF THEIR ECHOLOCATION CALL RECORDINGS

8:30am—Lecture: Introduction to Echolocation and Viewing Bat Calls
9:00am—Assessment: Identifying Bats, Non-Bats, Behavior and Call Quality
10:30am—Lecture: Qualitative and Quantitative Call Characteristics of High-frequency, Non-myotis Regional Bat Species
11:30am—Assessment: Identifying High-frequency, Non-myotis Regional Bat Species
1:00pm—Lecture: Qualitative and Quantitative Call Characteristics of Low-frequency, Non-myotis Regional Bat Species
2:00pm—Assessment: Identifying Low-frequency, Non-myotis Regional Bat Species
3:00pm—Lecture: Qualitative and Quantitative Call Characteristics of Regional Myotis Bats
4:00pm—Assessment: Identifying Regional Myotis Bats
6:30-9:00pm Field Trip: Practice Passive and/or Active Recording at Local Natural Area
9:00-11:00pm *Optional Geek Session – Manually Vetting Post-processed Bat Call Data from KaPRO and/or SonoBat Outputs*

DAY 4: GENERATING AUTOID COMPUTER OUT-PUTS, MANUAL VETTING EXERCISES, AND REPORTING ON ACOUSTIC DATA

8:30am—Assessment: Identifying Regional Bats
10:00am—Lecture: Viewing KaPRO and/or SonoBat Outputs; Excel Tips for Interpreting AutoID's, Preparing for Manual Vetting
11:00am—Hands-on Demonstration: Begin Manual Vetting Exercises
1:30pm—Hands-on Demonstration: Continue Manual Vetting Exercises
3:00pm—Lecture: Using Excel to Interpret KaPRO and/or SonoBat Outputs
4:00pm—Q&A: Individual Issues and/or Lingering Questions
6:30-9:00pm—Field Trip: Last Chance to Practice Passive and/or Active Recording, Comparing Bat Detectors, Collecting Data
9:00-11:00pm—*Optional Geek Session - Post Processing data/manual vetting call files upon return from fieldwork*

DAY 5: CONDUCTING ACOUSTIC TRANSECTS, GEAR SELECTION, ROUTE SELECTION, DEPLOYMENT TIPS, PRACTICUM

9:00am—Lecture: Acoustic Survey Essentials: Considerations for Compliance Surveys, NABat, and Other Regional Protocols
10:00am—Lecture: All About Mobile Transects, Pros and Cons, Route Selections, Essential Equipment Needs
11:00am—Hands-on Demonstration: Setting Up Detectors and Computer Files for a Mobile Transect
1:30pm—Lecture/Demo: Using Myotissoft Transect to Interpret Mobile Transect Data
2:30pm—Hands-on Demonstration: Rigging Vehicle(s) For Transect
7:30-9:30pm—Field Trip: Conduct Mobile Transect
9:30-11:30pm—Hands-on Demonstration: Off-load, Post-process, Analyze, Manually Vet, and Report on Mobile Transect Data

DAY 6: PUTTING IT ALL TOGETHER, WHAT HAVE WE LEARNED?

9:00am—Lecture/Discussion: Results of the week's data analysis and acoustic survey results
10:00am—Data Sharing and Instructor Led Q&A: What have we learned? What obstacles remain? How can we improve?