

Workshop Title: Bat Ecology and Field Techniques

May 29 – June 1, 2014

Location: Chimineas Ranch and Carrizo Plain Ecological Area (San Luis Obispo County)

**Instructors: Dr. Dave Johnston, Santa Clara University/H.T. Harvey & Associates
Dr. Joe Szewczak, Professor, Humboldt State University**

Coordinator/Contact for Questions: Cynthia Perrine, csgperrine@yahoo.com

Description:

This workshop combines lecture, discussion and demonstrations to introduce participants to the ecology and conservation of California bats, covering species accounts, physiology, anatomy, behavioral ecology, conservation issues, and mitigation strategies. Field techniques of mist-netting, assessing species presence or absence, and acoustic monitoring will be demonstrated with participants gaining hands-on experience in mist-net set-up and acoustic monitoring and analysis. Evening field excursions typically capture a half dozen bat species and allow practice in extracting, handling, as well as collecting and recording data from captured bats. **20 participants maximum!**

Requirements for Handling Bats During Workshop:

Handling bats is not a requirement of this workshop; participants will learn valuable field techniques with or without handling. To handle bats, participants must provide **proof of rabies vaccination or sufficient rabies antibody titer results affirmed by a physician's note (Doctor's signature w/ "OK" on the titer results is sufficient)** within past 3 years. We advise that participants start the 3-shot vaccination series immediately, as Occupational Health & Safety/Private Health Insurance approval may be lengthy. Workshop participants operate under current federal and state permits held by the instructors, and follow Western Bat Working Group protocol to prevent transmission of WNS. The series takes at least 3 weeks to receive the 3 complete doses to provide sufficient immunity.

Registration Fees and Details:

Registration fee includes shared lodging or camping space, 9 meals, snacks, and beverages from Thursday dinner through Sunday lunch, and all workshop materials. There is a cancellation fee of \$50 applied up to 14 days prior to the workshop. After that date, no refunds will be given regardless of personal or professional emergency. However, the registration may be transferred to another registrant from the same organization.

Pre-registration required by May 27th

\$520 Western Section Members

\$200 Students with proof of current (half-time minimum) university affiliation or Young Professionals (within 6 months of graduation from university or employed part-time or seasonally in a wildlife technician position.

\$555 Others

- The maximum enrollment is 20 after which, a waiting list will be kept. A minimum of 10 participants must register for the workshop by **May 8th** or the workshop will be cancelled and all registration fees will be returned. If the workshop can be rescheduled, we will offer transfer to the alternate dates in the priority registrations were received. Registrants will be processed in the order received and successful registrants will receive workshop logistics and information once full payment is confirmed received.

All registrants (whether paying by credit card, check or purchase order) complete on-line registration at this address:

https://www.wildlifeprofessional.org/western/bat2014_ft_reg.php. Credit cards are accepted on-line. Instructions for purchase order or check payments are sent after on-line registration.

Accommodations: lodging is in shared facilities, indoor sleeping space is limited so will be on a first-request basis. There is ample lawn space for camping near the facility and toilets/sinks/showers are available to all registrants. Keep in mind that field nights may go as late as 12:00 midnight. Additional needs must be made in writing to the workshop coordinator by March 18th to adequately accommodate each request.

Draft Schedule – 2014 Bat Ecology and Field Techniques Workshop

Thursday

- 5:00 p.m. Registration check-in, lodging assignment, settling in
- 6:00 p.m. Introductions of Participants and Instructors, snacks
- 6:30 p.m. Field Exercises: Setting acoustic equipment
- 7:45 p.m. Dinner, Introductory lecture will start during dinner
- 8:30 p.m. Introductory Lecture on California Bat Natural History (Szewczak): life history; challenges to life as a bat and the special solutions bats have developed, anatomy; bat physiological ecology relevant to their habitat needs; threats to bat survival; why are they so threatened?; ecological value of bats; foraging behavior and considerations
- 9:45 p.m. Field Exercises (end at 10:45 p.m.)

Friday

- 8:00 a.m. Coffee, followed by 8:30 a.m. Breakfast
- 9:00 a.m. Lecture: Acoustic monitoring (Echolocation 101 – Szewczak): The mechanics of sound and how it carries information; Techniques used to monitor bats; advantages/limitations of capture methods; advantages/limitations of acoustic methods; what information can be gained acoustically; Where and how to collect calls; practical advice; Monitoring program design, implementation, and data analysis; Understanding bat detectors and how they work (know your tool); Understanding and using digital sound recording - automated recording; Terminology used to study bat echolocation; Call morphology and species discrimination

- 12:30 p.m. Long Lunch (rest time) & Pack your own dinner
- 2:00 p.m. Lecture: Identifying California bats (Johnston and Szewczak): diversity and distribution; introduction to species identification and handling bats; using keys; tips on differentiating similar species; accounts:
1. Physical description and identifying characters
 2. Geographic range and habitat associations
 3. Status (e.g., California species of special concern)
 4. Reproduction and development
 5. Ecology –a. roosting b. foraging c. other aspects of natural history
 6. Conservation issues (threats to California populations)
- 5:30 p.m. Review gear, Field Exercises: Acoustic Monitoring/Mist-netting (Dinner in field, end at 10:30)

Saturday

- 8:00 a.m. coffee
- 8:30 a.m. breakfast
- 9:00 a.m. Review Previous Night's Captures, Additional Ecological Considerations, Data Analysis
- 12:30 p.m. Lunch & Pack your own dinner, BREAK (Go take a nap)
- 4:00 p.m. Review gear, prepare caravan for field exercises
- 5:00 p.m. Depart for Field (Dinner in field), Set nets, acoustic Equipment, roost presence/absence
- 11:00 p.m. Return to Field Station and begin data analysis

Sunday

- 8:00 a.m. coffee, pack up & clean camp area, followed by 9:00 a.m. breakfast, pack optional sack lunch
- 10:00 a.m. Conservation Issues & Strategies (Johnston and Szewczak) & Discussion (All)
- 1:00 p.m. Workshop concludes, fill-out evaluations