Ph.D. Assistantship: Bats, Birds, and the Role of Ephemeral Water Sources

The Laverty Lab in the Department of Fish, Wildlife and Conservation Ecology and the Department of Plant and Environmental Sciences at New Mexico State University invites applications for a Ph.D. position supported by research and teaching assistantships. The successful applicant will be hired as a graduate student position beginning in January 2026.

This project will be focused on assessing the roles of temporary water sources—playas (i.e., ephemeral lake beds), tinajas (i.e., natural bedrock depressions that are spring- or precipitation-fed), etc.—on structuring aerial vertebrate communities in the Chihuahuan and Sonoran Deserts using acoustic monitoring. While the distribution of aquatic organisms is tightly associated with water features, terrestrial species may only visit water a few times each week to drink or hunt for prey. Among terrestrial vertebrates, highly mobile, aerial species (i.e., bats and birds) may provide information on the quality of individual water sources as well as the use of and connectivity among dispersed sources. Many bats and birds remain active in the Southwest year-round where the role of highly ephemeral water sources in structuring their communities is only somewhat understood. Activity of these aerial vertebrates at times when playas or tinajas lack water can reveal insights into the function of these sites beyond water drinking and may inform how a species would be expected to respond under a changing climate. The student will develop exciting questions investigating how bat (and potentially bird) activity and diversity interact with ephemeral water sources in desert landscapes.

This project is funded through a combination of graduate research assistantships supported by the National Science Foundation's Long-Term Ecological Research program and the National Park Service's Southwest Border Resource Protection Program as well as teaching assistantships in the Department of Fish, Wildlife and Conservation Ecology. Research will involve collaborative efforts with other university researchers and state/federal agencies. Benefits include an annual salary range of $28,384.56 – $29,698.32, full tuition waiver, and subsidized health insurance.

Qualifications:

Required: B.S. in wildlife science, biology, conservation ecology, or related field. As you may work on a U.S. military base and make research trips to Sonora, applicants must be a U.S. citizen and possess a valid U.S. driver's license and valid passport. The successful applicant must also meet the minimum requirements for admission to the NMSU Graduate School (minimum 3.00 GPA). Applicants should also have demonstrated excellent written and oral communication skills, and an ability to work independently. Applicants should have experience working in the backcountry and are willing to lead field crews in rugged, desert terrain in the Jornada Basin (New Mexico) and areas in/adjacent to Organ Pipe Cactus National Monument (Arizona), including El Pinacate y Gran Desierto de Altar Biosphere Reserve (Mexico).

Preference may be given to applicants with an M.S. degree in wildlife science, biology, conservation ecology, or related field and with a GPA of 3.30 or higher. Successful candidates will have experience working in R, an interest in acoustic ecology, and working with large datasets. They should also demonstrate the ability to work as part of a team and have a willingness to lead field work crews. Applicants with experience in processing acoustic data and statistical analyses are encouraged to apply.

The Laverty Lab is committed to providing a place of work and learning free from discrimination and harassment and encourages applicants from diverse backgrounds.

How to apply:

For consideration, please submit your application using the form on the following link: https://airtable.com/app22ZC66GEtCTx19/shruXqT6iFNwLazdy

The deadline to apply is 1 October 2025 with interviews for short-listed candidates conducted in mid-October. Information about the departments can be found at https://fwce.nmsu.edu/ and https://pes.nmsu.edu/