Texas Tech's National Science Research Lab celebrates 50 years of excellence

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Guest columnists

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As Texas Tech celebrates its 100th anniversary in 2023, one of its most successful programs, the Natural Science Research Laboratory (NSRL), recently celebrated 50 years of accomplishments and contributions to the University, the State of Texas, and to society (worldwide). Those contributions include advancements in scientific research, graduate and undergraduate education, scholarly publication, leadership in natural history collections development, and public engagement through exhibits and outreach activities.

The NSRL, a division of the Museum of Texas Tech University, is comprised of four primary biological collections—Mammals, Genetic Resources, Invertebrate Zoology, and Birds. The Mammal and Genetic Resources collections are the largest in Texas and are among the most significant in the country and the world. This collection includes scientific specimens and associated genetic tissues that document the taxonomy, distribution, natural history, and conservation status of the mammal fauna in Texas and other states and regions of the world.

The NSRL collections have enabled the research and education of more than 250 TTU graduate students and an estimated 500+ undergraduate students, and since 1996, they have supported faculty who competitively received more than $25 million in external research awards and endowments to TTU. These faculty and students have generated >2,000 peer-reviewed scholarly publications describing the biodiversity in Texas and worldwide. These accomplishments are unparalleled compared to any similar university program in Texas.

The global decline and extinction of biological diversity represents one of the most pressing concerns faced by humanity. The estimated 1 million species at risk of extinction and a 69% decline in wildlife populations between 1970 and 2018 emphasize the urgency to halt these trends. Collections such as those maintained at the NSRL are vital to efforts that document and provide the information necessary to mitigate the loss of biodiversity.

Texas is not immune from these challenges as discussed in a recent book entitled 'Texas Natural History in the 21st century' published by the Texas Tech University Press and authored by NSRL personnel. This book provides an overview of the influence of human-dominated changes in landscapes and land uses in Texas and their impact on the state's wildlife fauna (especially mammals) over the past 120 years and makes predictions for the remainder of the 21st century.

Many Texans lack a clear understanding of wildlife conservation issues in Texas. Consequently, one of the NSRL's new initiatives involves developing a worldclass exhibit at Texas Tech's Museum to educate and engage with the Texas public about the pending conservation crisis in Texas and how landowners and citizens can be part of the solution.

By supporting and contributing to the growth of the NSRL, Texas Tech University has become a state, national, and international leader in the efforts to curb the extinction of wildlife. The university has committed to seek funding for new facilities that will accommodate needed expansion to grow the collections, and to advance the research and

educational contributions of the NSRL. Success with these initiatives will continue to position the NSRL, TTU, Lubbock, and West Texas as a state and national leader in the conservation of wildlife resources.

David Schmidly is Past President, Professor Emeritus, and Research Associate of the NSRL at Texas Tech University; Robert Bradley is Professor of Biology and Director of the Natural Science Research Laboratory at Texas Tech; and Lisa Bradley is a Research Associate at the Natural Science Research Laboratory. They are the authors of the recent book, 'Texas Natural History in the 21st Century,' published in 2022 by Texas Tech University Press.