



TEXAS NATURAL HISTORY SURVEY

Recording the Lone Star State's natural heritage

TNHS profile

Since its inception, the Texas Natural History Survey has yielded a number of significant plant and animal discoveries.

In 1991, the Conservancy made its first purchase to protect Dolan Falls on the Devils River in West Texas. Although conservation at Dolan Falls was initially focused primarily on the river and associated springs, Conservancy scientists discovered and described Mexican white oak trees on the property. This rare tree had never before been found in the United States. Protecting the Mexican white oak has since become an important element of our work at Dolan Falls.

Two new species of amphipod were discovered at the Conservancy's Independence Creek Preserve on the lower Pecos River. The aquatic crustaceans, one dwelling at the mouth of the springs and the other in caves, were both previously unknown to science.

When it comes to monitoring the flora of Texas, few scientists can match the contributions of Conservancy botanist Bill Carr, who has inventoried over 30,000 plant species in his career. In 2004, Carr had the distinct honor of having a species named after him. Carr's rattlesnake-root (*Prenanthes carrii*) is a plant in the Aster family that grows exclusively in the woodlands and canyons of the southwestern Edwards Plateau.

top photo: Devils River (© Harold E. Malde)



Researchers survey the fish populations of Cyprus Creek, a tributary of the Pedernales River, in Blanco County. (© Ryan Smith)

The Nature Conservancy is dedicated to achieving its conservation goals through the innovative and practical application of science. Grounding our work in science ensures the right natural areas are being targeted and conservation strategies are designed using the best available data.

One of the primary sources of conservation data is The Nature Conservancy's Texas Natural History Survey (TNHS). The TNHS is a program comprising Conservancy science and conservation staff,

dedicated volunteers and private landowners who work to catalog the vast biological diversity in Texas.

Within Texas' borders are part or all of eleven ecoregions and the state is home to a staggering variety of natural life. With more than 4,400 plants species and 1,800 animal species, Texas ranks among the most biologically diverse states in America. Unfortunately, Texas also ranks among the states with the most species at risk of extinction because of global rarity or external threats. The mission of the TNHS is to



At Dolan Creek in Val Verde County, biologists study insects collected from the creek springs. (© Ryan Smith)

collect, maintain and analyze the state's biological information to create programs that protect species currently at risk and prevent others from being added to the endangered list

TNHS data is gathered by Conservancy scientists, volunteers and partners through the ongoing surveying of public and private lands. In a given year, TNHS staff are capable of more than 60 such field studies. Currently, the TNHS houses data on nearly 10,000 locations of rare plants, animals and communities in Texas.

In many ways, the TNHS is a continuation of the state's rich history of biological surveys that began in 1905 with Vernon Bailey's Biological Survey of Texas. In the ensuing years, a wealth of natural data has been collected from scientific literature, museum collections, natural resource agencies, expert biologists and other private naturalists. This data provides valuable insight when analyzed and compared to current information and helps us gauge the needs and progress of conservation in Texas.

In addition to its use by the Conservancy, TNHS data is provided

to NatureServe, a non-profit organization that coordinates the International Network of Natural Heritage Programs and Conservation Data Centers.

Through NatureServe, TNHS data is shared with partners in education, government and other conservation organizations. The information gathered on NatureServe is also available at no cost to the general public through NatureServe Explorer, an online database.

The study of private lands is useful not only to conservationists, but to participating landowners, as well. The landowners we work with are often surprised by the sheer variety of wildlife present on their property. Participating in qualified biological inventories can also help landowners qualify for wildlife management valuations on their property tax.

While the TNHS constantly seeks new opportunities for biological inventories, the program also continuously monitors Conservancy-held lands and waters. At several Conservancy preserves, land management tools like prescribed fire and brush management have allowed

native species to re-establish themselves—a true benchmark of conservation success.

Different species of conservation concern are sometimes inextricably linked, and monitoring one reveals the presence of the other. An example of this is the Leoncota false fox-glove, a small, native wildflower not found in Texas in the past 100 years. At Diamond Y Springs Preserve, conservation programs benefiting the federally-listed endangered Pecos sunflower have spurred the Leoncota false fox-glove to grow in the sunflower's understory.

In addition, ongoing surveys on private lands help scientists refine the status and ranking of species. In the past fifteen years, several species previously thought rare or imperiled have been removed from conservation lists because of multiple sightings.

Regardless of what is found, every site survey helps illuminate the overall picture of natural life in Texas and is thus integral to the continued success of the TNHS. The willing participation of private landowners, other conservation organizations and the general public provides us with knowledge of Texas' biological diversity that is key to protecting our state's natural heritage for future generations.

To learn more about the TNHS visit nature.org/texas or nature-serve.org/explorer today.

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