

A modern gate for Ezells Cave

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Abstract

Ezells Cave is one of the most biologically diverse caves in Texas, yet has had a tragic history of mis-management. Early attempts at protection excluded the bat colony which provided important nutrient input to the cave’s ecosystem. In March of 2015, a new bat-friendly gate was finally installed with the help of many volunteers and donors.

History

Ezells Cave (Figure 1), in San Marcos (Hays County), Texas, has a long and colorful history. It was first discovered by land

surveyor Greenberry B. Ezell around 1870, and purchased by him in 1893. He operated it as a show cave for a short time, even building a small boat for touring the Lake Room. (TSS 2015)

The cave fosters a rich ecosystem, with 116 species recorded so far (TSS 2015). Blind, cave-adapted salamanders, *Eurycea rathbuni* (Texas Blind Salamander) (Figure 2), have been noted in the cave almost from the beginning. These salamanders are neotonomous, and have been collected from only seven locations in the small Purgatory Creek basin, including Ezells Cave. As such, they

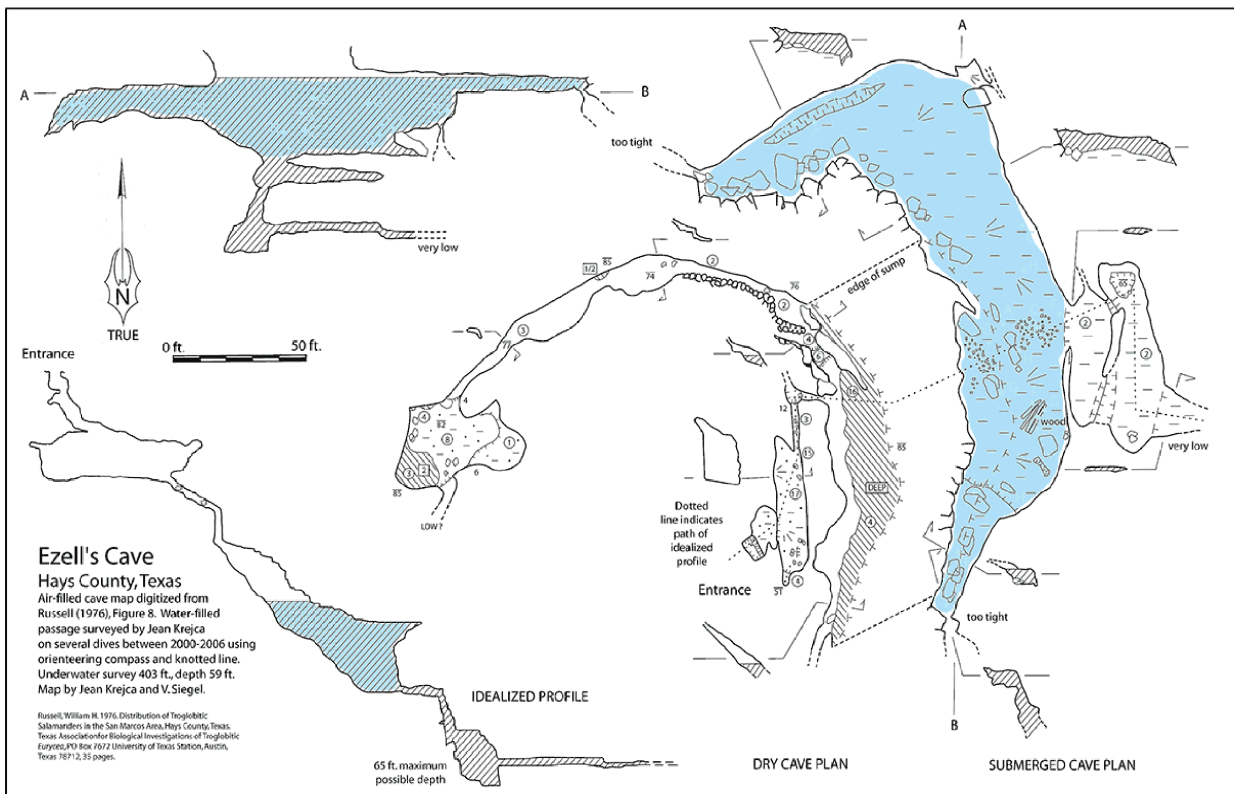


Figure 1. Map of Ezell’s Cave by Jean Krejca and Vickie Siegel

are listed as Vulnerable on the IUCN Red List of Endangered Species (Hammerson and Chippindale 2004). The US Fish and Wildlife Service listed it as Endangered on 11 March 1967 (Udall 1967).

The rich biodiversity and rarity of the salamanders and other aquatic species initiated early conservation efforts. It was visited by NSS President Charles Mohr (a cave biologist) (Figure 3) around 1948, who collected and photographed a blind salamander and wrote about his adventure in *The Caves of Texas* (Mohr 1948). In 1955, the Texas Herpetological Society (THS) purchased an easement from the then-landowner, Truman T. Saltonstall, to protect the salamanders. The THS then built a brick wall inside the entrance fissure to support a chain-link fence, believed to still allow bat entry while keeping out unauthorized humans. Neither was true. Vandals cut through the fencing almost weekly to enter the cave and collect salamanders. This was eventually replaced with a



Figure 3. Charles Mohr at Ezell's Cave entrance
Credit: unknown



Figure 2. *Eurycea rathbuni* Credit: Jean

12"x12" steel bar grid gate, but this did little to deter vandals and the cave was essentially left unprotected. (TSS 2015)

The owner of nearby Wonder Cave (a show cave), T. J. Mostyn, bought the cave from Saltonstall in 1962, and covered the entrance with a solid steel plate. This alarmed biologists, who attempted to get The Nature Conservancy (TNC) to purchase the property. However it was sold yet again as a house lot. Eventually, on 27 September 1967, TNC was able to purchase the cave with the assistance of the Southwest Texas Grotto. The solid "gate" was promptly removed, and illegal entry began anew. TNC bought an adjacent property with a dilapidated house, renovated it, and installed a caretaker to keep an eye on the cave. Bats had not yet recolonized the cave after the disastrous closure efforts, although two experiments in transplanting bats from nearby caves were attempted by Texas Tech University in 1970. (TSS 2015)

In 1971 the National Park Service designated Ezells Cave as a National Natural Landmark. And in 2004, TNC transferred ownership to the Texas Cave Management Association (TCMA). Sometime between the purchase by TNC and transfer to TCMA, a new gate was built, involving a solid concrete platform and round tubular bars.

(Figure 3) A chain-link fence was also installed around the perimeter of the cave entrance. Water monitoring equipment was installed by the Edwards Aquifer Authority, which holds a conservation easement to the cave. Vandalism attempts continued, and bats have not returned.

The Modern Era

Recognizing the biologically-unfriendly nature of the entrance gate, biologist (and TCMA Preserves Committee Chair) Jim Kennedy petitioned the TCMA to remove it and replace it with a bat-friendly cupola-style gate. Cavers Ben Hutchins and Andy Gluesenkamp, both biologists working for Texas Parks and Wildlife Department, helped secure a Landowner Incentive Program (LIP) grant to cover the cost of materials and tools. TCMA solicited additional donations from cavers and other organizations, and succeeded in raising a total of \$15,853. Donors all had their names welded on the finished gate bars. An 8' x 12' cupola-style gate was designed by Kennedy, (Figure 4) and constructed on 8 and 15 March 2015 by 29 cavers. There were 282.25 person/hours recorded during the construction, and another 63.2 hours for driving. This resulted in a volunteer value of \$9013.20. The project was featured in the *San Antonio Express-News*, *San Marcos*



Figure 4. Jim Kennedy measuring gate
Credit: Logan McNatt



Figure 3. Concrete gate at Ezcell's Cave
Credit: Jim Kennedy

Daily Record, and *The University Star* from nearby Texas State University in San Marcos.

TCMA still has to remove the old concrete-and-round-bar gate, which will require jackhammers, rock saws, and cooler weather than has been available since March. Even with the effort, it is uncertain that the bats will recolonize the cave. Surrounding habitat has altered, with houses appearing in former ranchland. But as the author asserts, it is a guarantee that bats would not return unless the old gate was replaced. And as a conservancy dedicated to protecting karst and promoting best management practices, TCMA's preserves should be models of good management, not embarrassing failures. Only the future will tell if these recent efforts are successful.

Acknowledgements

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