

Texas A&M Researchers Develop Activities at the Field Station in Hidalgo, Mexico



CICHAZ landscape in Calnali which promotes science, education, and community outreach.

Texas A&M faculty Gil Rosenthal (Biology) and Rhonda Struminger (Ecosystems Science & Management) operate the CICHAZ field station (Centro de Investigaciones Científicas de las Huastecas “Aguazarca”, A.C.) on the outskirts of Calnali, a small town in the Sierra Madre of Hidalgo. In addition to hosting hundreds of researchers from institutions in Mexico, the USA, and other countries, Struminger and Rosenthal run their own research programs centered at CICHAZ.

Struminger’s research focuses on developing best practices for STEM education and outreach at field

stations throughout the Americas. In recent years, she has worked with visiting scientists and a Calnali-based NGO to implement a STEM-focused summer camp for younger children, with high school aged counselors trained at CICHAZ on STEM activities and concepts. The signature outreach event is CICHAZ’s annual Day of Science (Jornada Científica), where community members hike along an agroforest mosaic dotted with “science stations” on various topics led by academic experts and community naturalists.

CICHAZ is located on the banks of the Río Calnali, an important field site for Rosenthal’s research on mate choice and evolutionary genomics in natural hybrid zones of swordtails, small freshwater fish unique to the region. Until about 25 years ago, two species of swordtails coexisted in the area. Now, local streams abound with hybrids between the two species. Research at CICHAZ has shown that hybridization stems from a breakdown in mating behavior, since females can’t smell species-specific male pheromones in polluted water. Rosenthal’s current work, along with collaborators in the US and Mexico, is funded by a long-term grant from the National Science Foundation and focuses on using next-generation genomic tools to identify how natural and sexual selection on hybrids shapes the genomes, and on using natural hybrids to gain insight into the genetic underpinnings of biological phenomena ranging from skin cancer to personality disorders.



The Swordtail is a small freshwater fish unique to the Rio Calnali riverbanks.

Rosenthal and Struminger were recently awarded a grant through the Field Station and Marine Laboratories program of the National Science Foundation. The grant supports renovations at CICHAZ to create a state-of-the-art facility for field science, including improvements to energy, informatics, and animal facilities, as well as a laboratory for molecular genomics. Mexico Partnership Services (mexico.tamu.edu) will be assisting in implementing this grant.

Permission to reprint obtained by Public Partnership and Outreach from Dr. Gil Rosenthal grosenthal@bio.tamu.edu