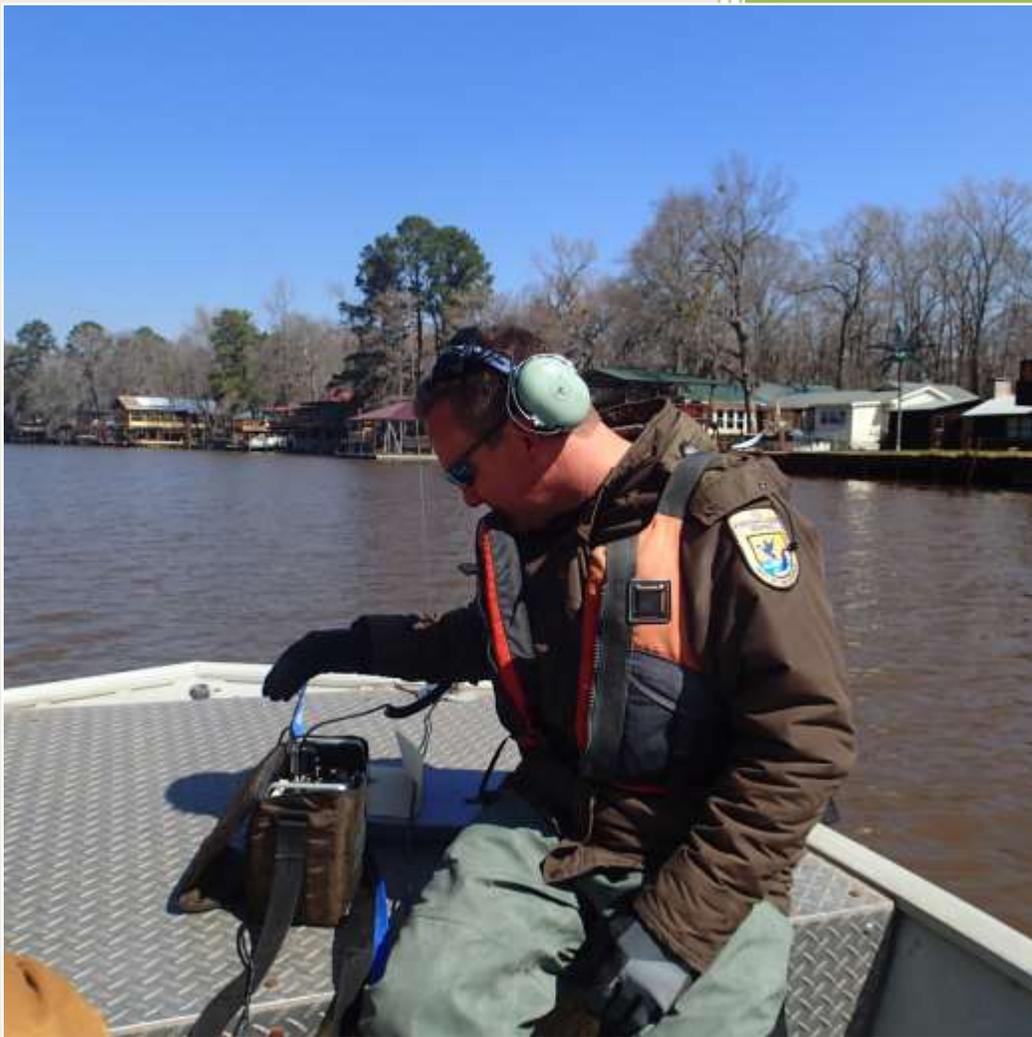


FY 2014

TXFWCO Activity Report: May



American Paddlefish Radio Tracking On
The Big Cypress Bayou

Texas Fish and Wildlife Conservation Office

U.S. Fish & Wildlife Service

Texas Fish and Wildlife Conservation Office

Monthly Report

Fish and Wildlife Conservation Office May Activities

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Paddlefish Reintroduction Project

On 19-23 May 2014 Mike Montagne, Diego Araujo, and Cole Webster (new TERM biologist), with help from TPWD in Marshal TX, conducted American paddlefish (*Polyodon spathula*) radio telemetry monitoring at Caddo Lake and the Big Cypress Bayou. Over thirty miles of Big Cypress Bayou and Caddo Lake were searched and twenty four of the forty seven paddlefish were contacted. Twenty one paddlefish were detected just below the spillway of Lake O' the Pines.

Due to the heavy fishing pressure at the spillway, we have posted signs informing the public that snagging or possessing a paddlefish is illegal and punishable by fines. Thank you to the Army Corps of Engineers for allowing the signs to be posted in the area.

The TXFWCO is now working with landowner Bob Sanders, and Gary Endsley, the director of Collins Academy to develop a project proposal to restore riparian habitat on the Big Cypress Bayou. The Collins Academy creates community-focused education and professional development opportunities for students and families that center around nature and the environment, history and preservation, life skills, and economic growth.



Diego Araujo downloads the data collector at the Caddo Lake Spillway. (Photo by Mike Montagne)

Salamander Toxicity Project

The TXFWCO, the Arlington Ecological Services Field Office, Austin Ecological Services Office, TPWD, USGS, and the City of Austin have partnered for a two year project, funded by a Science Support Program Grant, to examine the relationship between the federally endangered Barton Springs salamander, (*E. sosorum*), threatened San Marcos salamander, (*E. nana*), candidate Georgetown salamander, (*E. naufragia*), candidate Jollyville Plateau salamander, (*E. tonkawae*), a candidate species Salado Springs salamander, (*E. chisholmensis*), Texas salamander, (*E. neotenes*), the Blanco River Spring salamander, (*E. pterophila*), and an as yet unnamed salamander from Val Verde Co., the Devils River Spring salamander, (*Eurycea* sp.), and land use including, impervious cover and other urban multi-metric indicators in the Edwards Plateau region.

The project is a screening-level assessment to identify the contaminants that may bioaccumulate in salamander tissue. The study provides some of the first information on bioaccumulation of contaminants in populations of central Texas aquatic *Eurycea*, and how these populations may be affected by future anthropogenic modifications. The results from this study will aid in the current proposed listing process for the candidate species and in the reviewing process for listed species. The study objectives were accomplished through a combination of geographic watershed analysis, field surveys, and tissue analysis. Examining the concentrations of bioaccumulative and persistent pollutants (metals and organic chemicals) directly in salamanders provide insight into the decrease of salamander densities surrounding areas affected by human land use.

Data from 2013 has shown that the chemical burden upon salamander populations within different catchments is linearly related to the area of impervious cover within that catchment. Based upon the data collected from tissues and water quality samples in 2013, chemical concentrations tested were below the regulations of the Environmental Protection Agency (EPA) and Texas Center for Environmental Quality (TCEQ), although the chronic interactive or additive effects of these chemicals to the salamanders are not known.

In addition to the higher chemical load within urban catchments, the detrimental effects of urbanization to the ecological processes of the creeks and springs are well documented within the literature and include loss of optimal habitat due to sedimentation,

decreases in flow, changes in retention time of the surrounding area causing less time for dilution of storm water, and scouring of habitat from changes to natural flow paths. Finally, the interactive effects caused by urbanization (chemical and habitat effects) may cause typically nonlethal amounts of chemicals present to negatively impact salamander populations locally on a temporal scale.

Throughout April and May 2014, Pete Diaz and Diego Araujo have deployed passive water samplers and collected invertebrates from all of the study sites. The samplers will be collected in about 30 days and analyzed for contaminants.



Saledo salamander at Robertson Ranch. (Photo by Pete Diaz)

Devils River Minnow Monitoring



Kenny Saunders and Diego Araujo seine a pool on Pinto Creek. (Photo by Pete Diaz)

On 5-7 May 2014, the TXFWCO, Kenny Sanders (TPWD) and Randy Gibson (San Marcos Aquatic Resource Center) conducted Devils River minnow (DRM) monitoring activities on Pinto and San Filipe Creeks.

On 5 May 2014, two crews searched the remaining pool known to contain DRM on Pinto Creek for an hour. Three DRM were captured and transferred to the SMARC and added to the refugia population. No other DRM were captured or seen. A snorkeling survey was attempted in the deeper pool downstream, but the water was murky and no DRM were seen.

A landowner upstream has granted the TXFWCO future access to two additional pools that still may contain DRM. With this access, the TXFWCO now has access to approximately seven miles of the 9 miles of critical habitat on Pinto Creek.

On 6-7 May 2014, the two crews conducted standardized monitoring for DRM in San Filipe Creek. DRM were found in all but one sampling site, excluding the downstream most site which is not in critical habitat.



The team seines San Filipe Creek. (Photo by Mike Montagne)

A privately owned pool at the confluence of the West and East forks of San Filipe Creek, spring number 6, was also sampled. This is one of the very few spots water remains upstream of the golf course, and it continues to shrink . In two seine hauls 20 DRM were captured and were multiple size classes indicating that reproduction is occurring in the pool.



DRM captured at San Filipe Spring #6. (Photo by Mike Montagne)

New Biologist Joins Team

On 5 May 2014, Patrick Cole Webster joined the TXFWCO as a term fish biologist. Cole was in the U.S. Army for 5 years before earning his B.S. in Fish and Wildlife Management. Cole has worked for Washington Department of Fish and Game, and the California State Parks- Natural Resources Department. We welcome Cole to our team!

June Schedule of Activities:

2-5 June 2014: Rio Grande Biological Monitoring

9 June 2014: Clear Creek gambusia collection for health inspection

16-20 June 2014: Paddlefish Radio Telemetry at Caddo Lake

30 June - 3 July 2014: Pecos pupfish monitoring, Phantom Spring monitoring, Rillito Spring monitoring, Calamity Creek monitoring.