Uvalde National Fish Hatchery

Monthly Activity Report

March 2016

Staff

Project Leader ● Patricia Duncan

Fish Biologist ● vacant

Engineering Equipment Operator ● Cirilo Alonzo

Maintenance Worker ● Rene Guerra

Administrative Assistant ● Mark Dietrich

Volunteers ● Thomas Jetzer, Patricia Schenk, Mark Kundzins

Partnerships and Accountability

As identified in approved Recovery Plans, refugia efforts continued for the Texas Wild Rice, Fountain Darter, Comanche Springs Pupfish, Devils River Minnow, and San Marcos salamander in March.

The station continued to maintain communications with the San Marcos Aquatic Resource Center (SMARC) for existing and upcoming refugia activities of threatened and endangered species native to the Edwards Aquifer system.

In collaboration with the Southwestern Native Aquatic Resources and Recovery Center (SNARRC) and other partners, Uvalde NFH will be raising Rio Grande silvery minnow (RGSM) again in 2016. Planning discussions began with Manuel Ulibarri for preparation of the ponds at Uvalde for receipt of the RGSM in May this year. As with last year, the fish produced at Uvalde will augment the numbers released to the Rio Grande in Texas in recovery efforts.

Workforce Management

The job announcement for the vacant fish biologist position was advertised in March and eligible candidates identified. The selection process for the position is ongoing.

Volunteers Thomas Jetzer and Patricia Schenk continued to work on a variety of projects at Uvalde throughout March.

Cecilia King from Southwestern Native Aquatic Resource and Recovery Center (SNARRC) continued a two week detail at Uvalde NFH until March 10. Cecilia began work as an animal caretaker at SNARRC in July 2015. The extra help provided by Cecilia was greatly appreciated.

Volunteer Mark Kundzins

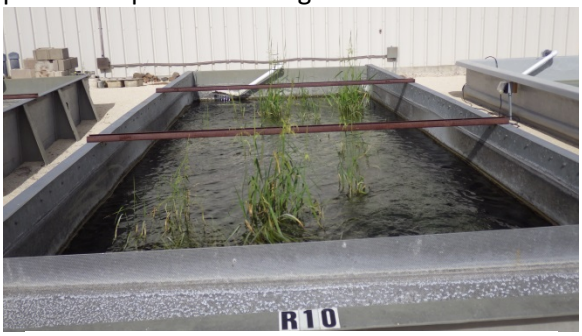
From March to May, Uvalde will be hosting another volunteer direct from Yellowstone National Park. Mark Kundzins arrived at Uvalde on March 21 for a volunteer stint after completing volunteer duty at Yellowstone National Park as a fishing guide among other responsibilities.

Progress continued on the processing of the Uvalde Student Conservation Association (SCA) Career Discovery Internship Program (CDIP) student this season. Student candidates who submitted applications for the position were interviewed and the processing of the selected applicant is ongoing. The student will begin work at Uvalde in late May.

Aquatic Species Activities

Temperatures started to warm in March although there were still some cool night temperatures. Pond water temperatures ranged from 14.0°C to 23.8 °C. Young of the year channel catfish continued to thrive with an increase in feeding due to the slowly increasing seasonal temperatures. The smaller size class averaged approximately 11 inches while the larger fish were approximately 17 inches in length.

Cleaning of new and old Texas wild rice raceways continued and pumps were removed for maintenance. Both older raceways and the new larger raceways were cleaned and new drain pipes and pump outlet pipes installed to better control water movement and adjust flow rates. Debris and any weeds were cleaned out and plants were resituated into cleared tanks with improved flow rates for growth and tiller development. Drain lines below the set of old rice tanks were completely cleaned out to provide improved drainage and flow.



Texas Wild Rice with improved flows

Changes were made to the spray bars and distribution pipes in the old rice tanks and the new larger tanks. Flow rates were reduced to better represent rates recommended by San Marcos for optimum growth and regeneration. In a relatively short time, the Texas wild rice plants are responding to the new pump arrangements and flow rates with improved growth and increased production of seeds.

Production of Devils River minnow continued in the tank house raceways. Transfer of gravel trays from tanks with broodstock Devils River minnows to net cages for collection and hatching of eggs and larval fish rearing continued in March. Larger fry from fish spawned in February were moved from screen net cages to grow-out raceways.

Comanche springs pupfish continued to be reared in outdoor ponds and inside in raceways. Solar operated aeration systems remained in operation on pond 23 holding Comanche Springs pupfish and continued to help control blooms of filamentous algae and aquatic weeds. Because of the success of this approach, another two solar voltaic aeration systems were placed in pond 21 which also held Comanche Springs pupfish. Problematic algal blooms were beginning in this pond so the systems were deployed as a management tool to control aquatic vegetation. These aeration systems were designed and built by volunteers Thomas Jetzer and Patricia Schenk at a much lower cost than the original systems. If these systems perform well, we will be able to use these as models to build more of these lower cost systems which provide aeration with no additional fuel or electrical costs. Since these systems are built on trailers, they can be moved to different ponds which experience water quality or dissolved oxygen problems as they occur.

Research aquaria recirculating systems were cleaned and prepared for upcoming research

with pupfish and Devils River minnow reproductive performance, egg and early life history survival. Additional supplies and equipment were repaired and secured in preparation for upcoming research studies.

Facility Maintenance

Clean up, repair and other work on the ponds in preparation for another growing season continued at Uvalde. Concrete steps were poured in pond 48 to provide easy access in and out of the pond. Further repairs are needed on cracks to complete the work at the kettle.

New steps at pond kettle

Concrete was also poured to complete the porch outside the parking area of the trailers. Work continued on ponds to be used for Rio Grande silvery minnow with clearing of debris throughout the pond bottom and kettles along with identification repair of any tears in the pond liner.

Work continued on clearing all debris and deepening the main slough for water leaving the station. By the end of March the entire length of the slough had been cleared and obstacles removed so that there would be improved drainage of culture water.

Volunteers Patricia Schenk and Thomas Jetzer with the solar photovoltaic aeration system

Solar aeration system in operation

Solar photovoltaic units with compressor ice breaker type aerators were utilized previously at Uvalde NFH to provide aeration to ponds without connections for electrical aerators. Volunteers Thomas Jetzer and Patricia Schenk sourced and selected components of a solar photovoltaic unit to power a DC floating aerator to build a lower cost mobile unit than the existing system used at the hatchery. In March the system was completed and is now being utilized to maintain aeration and circulation as needed. If these systems perform well over the coming months, this will demonstrate a much lower cost system which can be easily replicated to improve water quality conditions without additional electrical or fuel costs. Operation of the floating aerator has provided better circulation in the ponds than the previous compressor ice breaker type aerator system.

Volunteers continued on the complete draining and clean out of the older Texas wild rice tanks on the lower station. New arrangements of piping were also situated in these systems to prevent the growth and buildup of additional areas of algal growth and debris. The lower drain canal for the entire system was also cleaned out.

Visitors

Uvalde NFH hosted a total of 35 visitors during the month of March.

Outreach

The Leakey Independent School Environmental Science class visited the site for an educational tour about conservation and the endangered species and aquatic systems at the hatchery.

Pat Duncan attended the CEO luncheon meeting in Uvalde in March.

Plans continue for working with area Girl Scouts and Boy Scouts to develop scouting projects at the hatchery.

Weather

Temperatures started to warm in March but there were still some cool nights. Temperatures ranged in Uvalde from a low of 34°F to a high of 89°F with an average temperature of 64°F. There was 1.09 inches of measured rainfall in March in Uvalde.

Upcoming Events

Sabinal Elementary School ISD STEM Fair on April 8
Uvalde Tourism Council meeting on April 26
Dia de Los Ninos, Uvalde County Fairplex on April 29
Fishing Derby at Uvalde National Fish Hatchery on May 21

Uvalde National Fish Hatchery

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http://www.fws.gov/southwest/fisheries/uvalde/index.html

Uvalde National Fish Hatchery March 2016			
Species	**Year Class**	**Geographic Origin**	**Approximate Number**
Channel Catfish Broodstock	2014	Domestic Strain	200
Channel Catfish	2015	Domestic Strain	5,943
Comanche Springs Pupfish (Pond)	Mixed	Phantom Springs	157,141
Comanche Springs Pupfish (Tank)	Mixed	Phantom Springs	145
Devils River Minnow (F1)	2013	San Felipe Springs	217
Devils River Minnow (F2)	2014	San Felipe Springs	40
Devils River Minnow (F2)	2015	San Felipe Springs	518
Devils River Minnow (F2)	2016	San Felipe Springs	106
Fountain Darter (W)	2012-2014	Upper Comal River	11
Fountain Darter (W)	2012-2014	Lower Comal River	13
Fountain Darter (F1)	2013/2014	Comal River Mix	250
Fountain Darter (F1)	2015	Upper Comal River	31
Fountain Darter (F1)	2015	Lower Comal River	19
Fountain Darter (F1)	2015	Comal River Mix	58
San Marcos Salamander (M)	2013	San Marcos River	4
San Marcos Salamander (F)	2013	San Marcos River	6
Texas Wild Rice	N/A	San Marcos R. (A)	63
Texas Wild Rice	N/A	San Marcos R. (B)	36
Texas Wild Rice	N/A	San Marcos R. (C)	15
Texas Wild Rice	N/A	San Marcos R. (D)	11
Texas Wild Rice	N/A	San Marcos R. (F)	15
Texas Wild Rice	N/A	San Marcos R. (G)	22
Texas Wild Rice	N/A	San Marcos R. (J)	3
Texas Wild Rice	N/A	San Marcos R. (K)	11
Texas Wild Rice	N/A	SMR (Unknown)	80

Species and number at Uvalde NFH at the end of the month.