Biologists Unite to Help Fish Thrive Under the Desert Sun

There's a small soft-finned fish that calls Oregon's high desert its home. The Foskett Spring speckled dace spends its days foraging on algae and aquatic invertebrates in a spring-fed pond adjacent to the Coleman Lake playa in Lake County. An environment that is often hostile, where even the simplest ecological change can have dire consequences.

The speckled dace may be the most widespread fish species in the western United States, but the Foskett Spring population is anything but ordinary. Isolated for roughly 10,000 years, this minnow has evolved into a genetically distinct species found nowhere else in the world. Listed as threatened under the Endangered Species Act in 1985, biologists have been actively managing this fish for several decades to ensure its continued survival.

The Oregon Department of Fish and Wildlife's (ODFW) Native Fish Investigations Project monitored the Foskett Spring speckled dace in 2005, 2007 and 2009. Examination of the data collected revealed that Foskett Spring's limited habitat is in good condition, but aquatic plant encroachment is restricting fish abundance. In an attempt to address this issue, biologists decided to try to create a refuge colony at Dace Spring, located on BLM-managed land ½ mile to the south.

In the summer of 2009, two ponds were constructed at the Dace Spring site. Large holes were dug by an excavator and covered with an impermeable liner, rocks were inserted into the pools to create shelter for its future inhabitants, the ponds' edges were concealed with sod mats harvested from the area, and small channels were dug by hand to allow the spring's waters to flow into the structures. The newly established ponds were allowed to rest for a period of one year to promote native vegetation and insect establishment. 50 Foskett Spring speckled dace were relocated to their new residence last summer.

This project was a cooperative venture between the BLM, ODFW, and U.S. Fish and Wildlife Service (USFWS). The BLM's Lakeview Resource Area served as project lead for the National Environmental Policy Act analysis, Endangered Species Act consultation, and engineering design and construction. The ODFW managed the fish capture and introduction process. The USFWS funded the majority of the project and assisted with the planning, design and construction phases.

A fish count will be conducted at the Foskett Spring and Dace Spring ponds in 2011 to assess the overall success of this collaborative effort. Monitoring will continue on a biennial basis for an undetermined amount of time to evaluate the speckled dace's progress. Additional work is planned for increasing the quantity of open water at the Foskett Spring site once Dace Spring is successfully occupied.

The total construction cost of the Dace Spring ponds was $10,000. Biologists predict establishment of a Foskett Spring speckled dace population at the new location will double this species' numbers. If their vision is realized, this small investment will reap significant benefits for the fish. It will pave the road to this species' recovery, dramatically reduce its risk of extinction, and allow the speckled dace to continue to flourish under the desert sun as it has since the end of the Pluvial period.

Photograph showing the encroachment of aquatic vegetation on open water habitat at the Foskett Spring pool; minnow traps in pool (*ODFW photo*).

Foskett Spring Speckled Dace (*ODFW Photo*)

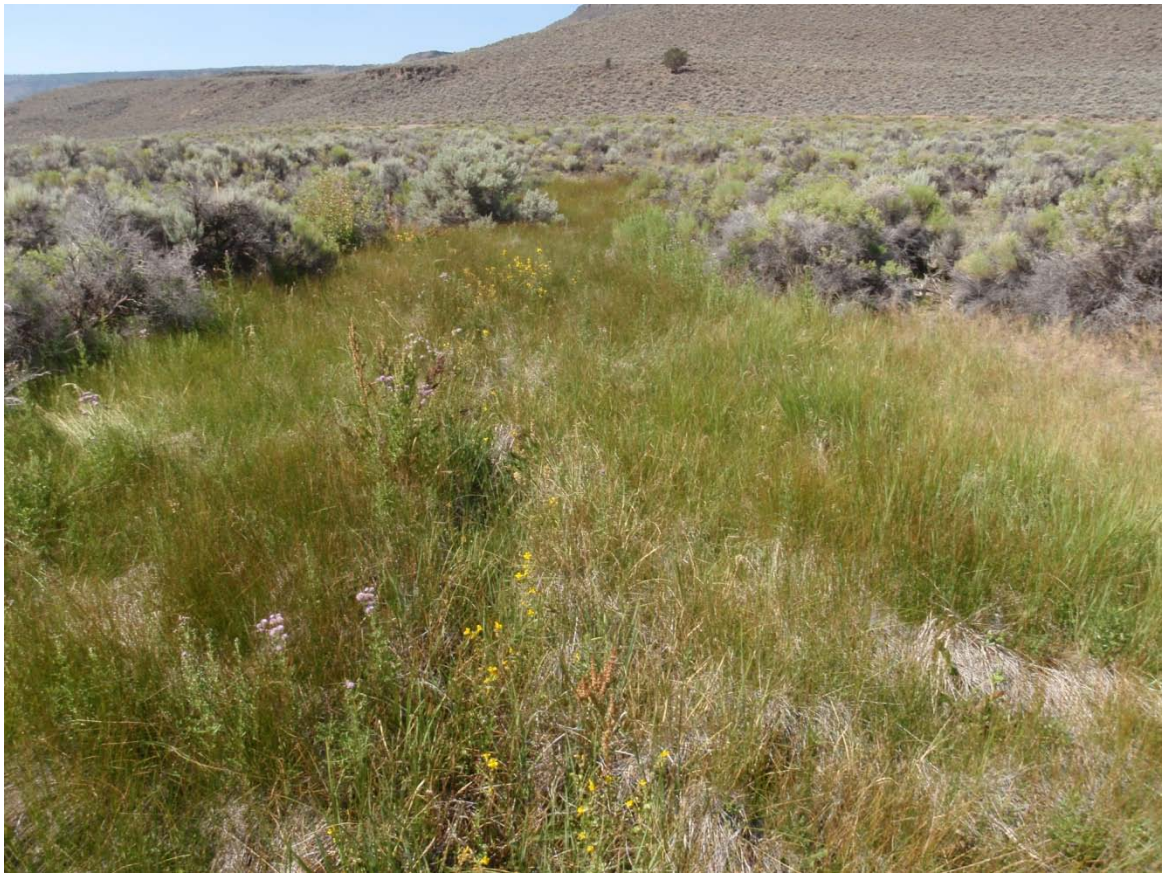
Foskett Spring speckled dace in spring pool (ODFW Photo)

Foskett Spring Pool 2003

Foskett Spring Pool 2009

Photograph showing the encroachment of aquatic vegetation on open water habitat at the Foskett Spring pool (BLM Photo)

Dace Spring Before Project



Dace Spring Immediately Post Project

Pond B Site Before Project

Pond B 2010