



National Park Service  
U.S. Department of the Interior

Death Valley National  
Park

CA Highway 190  
PO Box 579  
Death Valley, CA 92328

phone 760.786.3200  
fax 760.786.3283

## Death Valley News Release

Release: **FOR IMMEDIATE RELEASE**  
Release Date: February 5, 2009  
Contact: Terry Baldino, National Park Service Public Affairs Officer  
Phone: 760.786.3279

### **Devils Hole Pupfish Research Receives Significant Boost Thanks to the Generosity of the Offield Family Foundation and Death Valley Fund**

Generous donations from the Offield Family Foundation and assistance from the Death Valley Fund are helping Death Valley National Park and our primary collaborators for Devils Hole pupfish research at Iowa State University take the first big steps in moving past inherent challenges to studying the Devils Hole pupfish.

Donation of a state-of-the-art underwater stereo-video system will now enable us to sample fish lengths from the population without the adverse consequences of handling. With the new system, fish are filmed rather than handled and lengths are later determined by photogrammetry. Additionally, with accuracies of  $\pm 1$  mm SD, this new system will allow us to incorporate highly accurate measurements of pupfish length into our long-term monitoring strategy. Protocols will be developed to monitor the health of individual pupfish life stages (e.g., larvae, juvenile, and adult) in order to give us a signal of response from ongoing management efforts and to serve as an early warning from pending recruitment limitations. Perhaps most importantly, we intend to use these highly-accurate fish lengths to develop a stage-specific population model for the Devils Hole pupfish to assess existing hypotheses for the recent decline and to assess future threats to the population.

The status of the single wild population of Devils Hole pupfish remains critical. Ongoing recovery efforts are being developed using the best available information though, as is not unusual in managing natural systems, there remain uncertainties. Several unique challenges have forced Death Valley National Park and our partners to find novel means to research the Devils Hole pupfish. First, the extreme rarity of this species dictates that we take an extremely cautious approach, summed up by the common medical phrase, "First, do no harm." We consider most techniques commonly used to weigh, measure, and age fish to be, in our case, too risky given the possibility of stress-related mortality. Second, these fish are extraordinarily small at just over one inch in length. As such, the

---

EXPERIENCE YOUR AMERICA

The National Park Service cares for special places saved by the American people so that all may experience our heritage.

ability of divers to accurately and precisely estimate pupfish size is limited. The consequence of these limitations to our research are that we have limited information from which to model population demographics in order to understand the age or size class within the population that was most strongly implicated in the recent population decline. To succeed in not only stabilizing the population, but in advancing an understanding of why the population declined in the first place such that we might avoid this occurrence into the future, it is vital that we refine our understanding of Devils Hole pupfish population demographics and dynamics.

Death Valley National Park is extremely grateful for the humbling charity that has allowed us to initiate one of our highest-priority research efforts. With continued support from our partners and collaborators we hope to honor our stewardship responsibilities by advancing our knowledge of the Devils Hole pupfish.

**-NPS-**

---

EXPERIENCE YOUR AMERICA

The National Park Service cares for special places saved by the American people so that all may experience our heritage.