

## **SBSC Weekly Highlights February 16, 2007**

### **SBSC Biologist Partners with Multiple Agencies to Reverse Snake Population Decline:**

SBSC Wildlife Biologist/SCEP and narrow-headed gartersnake expert Erika Nowak attended a meeting on February 12 in Phoenix, Arizona to discuss initiating captive breeding programs for the critically threatened narrow-headed and Mexican gartersnakes (*Thamnophis rufipunctatus* and *T. eques*). Each species is highly aquatic and appears to be declining across its respective historic range in the US, likely due to a combination of anthropogenic changes in stream systems, introduced predatory species, loss of native prey species, and possibly siltation, disease, or other unknown factors. Nowak, in collaboration with the US Forest Service and Arizona Game and Fish Department, has been conducting one of the few research programs for narrow-headed gartersnakes in the wild since 1999. The new initiative builds on her and others' work, and is a multi-agency, mostly volunteer, partnership whose goal is to protect genetic diversity of both species, especially that from populations which appear to be on the edge of watershed extinction. In addition to the USGS, partners include representatives from the US Fish and Wildlife Service, Arizona Game and Fish Department, Mesa Community College, University of Arizona, New Mexico State Department of Fish and Game, Phoenix Zoo, Arizona Sonora Desert Museum, and the Phoenix Herpetological Society. In addition, Nowak has also been asked to assist with the development and implementation of the State of New Mexico's recovery plan for the narrow-headed gartersnake. Contact: Erika Nowak, USGS SBSC Colorado Plateau Research Station, Flagstaff, AZ. (928)556-7462 x. 239, Erika.Nowak@nau.edu

**Thesis Completed:** Kirsten Ironside has completed her Masters thesis on Wupatki National Monument within the Northern Arizona University's Environmental Science and Policy Program. The 206-page thesis has three chapters entitled: 1) *Wupatki National Monument Packrat Midden Series; A 17,000 year record of vegetation change*; 2) *Case Study; The National Park Service's Global Change Research Program*; and 3) *Modeling Future Changes in the Distribution of One-seed Juniper*. The thesis is a product of the USGS NRPP Project (9394-BMI), "Five Centuries of Environmental Change at three southern Colorado Plateau Parks", K. Cole, PI. The modeling methods displayed in chapter 3 are so popular that Kirsten has been funded through the DOE National Climate Change Research Program (NICCR) to further develop them. Please contact Kirsten to receive an electronic copy. Contact: Kirsten Ironside, Kirsten.Ironside@nau.edu

**SBSC Scientist on the Air:** Brief portions of NPR reporter Sadie Babits' interview of SBSC Scientist Kenneth Cole will be broadcast this weekend on the NPR series "Living on Earth". Dr. Cole will discuss fossil packrat middens and their relevance to vegetational effects of the upcoming climate warming. In Flagstaff AZ, this series is broadcast on Sundays at 2:00 PM local time. An mp3 file of the broadcast will be available for download after Friday at: <http://www.loe.org> Contact: Kenneth L. Cole USGS Southwest Biological Research Center Colorado Plateau Research Station, Northern Arizona University Phone: (928) 556-7466 -230