

SBSC Weekly Highlights, September 8, 2006

USGS scientist interviewed by PBS: A New York City PBS affiliate interviewed USGS scientist Charles van Riper III for a show they plan to produce on the lions of Venetia Limpopo Nature Reserve in northwestern South Africa. Several years ago, Dr. van Riper conducted a baseline inventory of mammals on the 80,000-acre Limpopo Reserve – one of only a few areas in South Africa that has a complete component of top predators, as well as large grazing animals. (<http://charlesvanriper.com/africa/index.html>) (Contact Charles van Riper III, 520-626-7027)

Desert Tortoise and USGS Scientist Make Front Page: The front page of the August 26 Tucson Citizen newspaper featured an article on desert tortoises and the perils they face in crossing roads. In the article, USGS scientist Cecil Schwalbe points out the importance of pointing tortoises in the same direction they are headed if one stops to rescue a threatened animal from traffic. Schwalbe further explained tortoise wanderings, detailing the journey of a radio-tagged female tortoise from the Rincon Mountains to the Santa Rita Mountains and back. Elissa Ostergaard, Arizona Game and Fish, and Don Swann, Saguaro National Park, caution against moving animals from familiar places. (Contact: Cecil Schwalbe, 520-621-5503 x. 3)

Uncovering the Ecology of Neotropical Migrant Birds During Winter: The willow flycatcher is a small migratory bird that breeds in North America and winters in Central and South America. Breeding populations are endangered or rare in many parts of the Western United States. Although extensively studied on its breeding grounds, almost nothing was known about the wintering ecology of willow flycatchers - despite the fact that flycatchers spend over half the year in their wintering areas. A newly published article describes the results of a 4-year USGS study of willow flycatchers wintering in Costa Rica. Researchers discovered that flycatchers maintain winter territories in habitats that are similar to those on the breeding grounds, located within a matrix of agriculture and grazing areas. Flycatchers return to these same wintering areas, and even specific territories, each year. These results suggest that persistence of willow flycatcher winter populations is compatible with some agricultural practices, but that destruction of habitat may decrease survival of birds that formerly wintered at the impacted sites. Full citation: Koronkiewicz, T.J., M.K. Sogge, C. van Riper III and E.H. Paxton. 2006. Territoriality, Site Fidelity, and Survivorship of Willow Flycatchers Wintering in Costa Rica. *Condor* 108:558-570. Contact: Mark Sogge; 928-606-1286; mark_sogge@usgs.gov

Southwest Biological Science Center Co-Sponsors Science Symposium Celebrating 10th Anniversary of Grand Staircase-Escalante National Monument: On September 12-14 in Cedar City, Utah, the Southwest Biological Science Center (SBSC) will co-sponsor "Learning From the Land 2006" – a science symposium celebrating the 10th anniversary of Grand Staircase-Escalante National Monument (GSENM), the first and largest unit in the

Bureau of Land Management's National Landscape Conservation System. The symposium will open with a keynote address by Jayne Belnap entitled "Meeting the Mission – The Interplay of Science and Management." Other presentations by SBSC-affiliated scientists will include "Broad-Scale Assessment of Upland Ecosystem Conditions in GSENM," "Cheatgrass Performance in Relation to Soil Characteristics in Colorado Plateau Drylands," and "The Emergence of GSENM as a Center for Long-Term Ecological Research on the Colorado Plateau" by Mark Miller; "Community Structure of Flies in GSENM," "Differences in Ant Community Structure at Two Sites in GSENM," and "Toad Population Dynamics in Altered Semiarid Riparian Systems" by Tim Graham; "Upland Free Water – Past, Present, and Future in GSENM," and "Lions on the Plateau – A Research Program for the Colorado Plateau," by Jan Hart, David Mattson, and Terry Arundel; "Using Biological Soil Crusts as Indicators of Rangeland Health" by Matthew Bowker; and "Using Packrat Middens to Assess how Grazing Influences Vegetation Change" by Ken Cole and Jessica Fisher. Contact: Mark Miller, mark_miller@usgs.gov, 435.644.4325, Kanab, UT.

Canyonlands Research Station Cooperates with Prescott College: On September 11, 2006, Tim Graham of the Canyonlands Research Station will provide an introduction to invertebrates for the Grand County High School Youth Garden Project class. Students will spend some time discussing what makes an invertebrate, with an emphasis on arthropods, how they differ from vertebrates and the advantages and disadvantages of exoskeletons and endoskeletons. Students will also visit the garden as well as adjoining riparian and aquatic habitats of Mill Creek to explore the diversity of invertebrates living around them. The Youth Garden Project is a partnership among the schools and the community, and is funded in part with Americorps grants. Students assist in all garden activities, interns work through the summer, and produce from the garden is sold at the local farmers' market, as well as prepared into meals for volunteers that help with weeding and other garden chores biweekly.

Tim Graham of Canyonlands Research Station Publishes and Presents: Tim Graham of the Canyonlands Research Station will be presenting two papers and a poster at the 10th Anniversary Grand Staircase-Escalante National Monument Science Symposium (or something like that). The conference will be held in Cedar City, Utah on the campus of Southern Utah University, 12-14 September. The titles of his presentations are: *Differences in ant community structure at two sites in Grand Staircase-Escalante National Monument: changes over time in response to drought or anthropogenic disturbances*, by Graham, Tim B. and Wyatt I. Williams, as well as *Community structure of flies in the Grand Staircase-Escalante National Monument: differences in occurrence and abundance at two sites, spring 2000 and spring 2005*. by Graham, Tim B. and Sarah J. Foltz, along with a poster, *Toad population dynamics in altered semi-arid riparian systems: differences in size class distribution as an indication of chronic riparian/aquatic ecosystem disturbance*. by Graham, Tim B.1, Laura J. Lingenfelter, Sena Nissen, Renata Platenberg, Kim Plengemeier, and Matt Van Scoyoc.

From 15-19 September, a Prescott College Colorado Plateau Field Biology class will be assisting Tim Graham of the Canyonlands Research Station with fieldwork in Salt Creek, Canyonlands National Park. This is a continuation of work that began in 2000, tracking arthropod communities and amphibian populations along the section of the canyon where four-wheel drive vehicles are allowed to drive, a section that was closed to vehicle use in July 1998, and a section that has been closed to vehicles since Canyonlands NP was established in 1964. Students will be collecting arthropods using pitfall, colored bowl, and flight interception traps, at four sites, one in the open road section, two in the closed road section, and one in the no road section. Graham will also use pitfall trapping and visual encounter surveys to compare the number and size distribution of amphibians at the different sites. Data from this study will be provided to Canyonlands National Park managers to assist in their management of Salt Creek, one of very few riparian ecosystems in the park.

Tim Graham of the Canyonlands Research Station will be presenting two posters at the Natural Areas Conference in Flagstaff, 20-23 September. The poster titles are:

Riparian invertebrate communities of Salt Creek, Canyonlands National Park: variability and finding indicator taxa. by Graham, Tim B.

Vehicles in streams: effects of driving through pools on Bufo woodhousii (woodhouse toad) egg survival. by Graham, Tim B.