



SCPN News

The newsletter of the Southern Colorado Plateau Network ❖ Fall 2012

Meet the data management team—new faces, new roles

Data is core to the Inventory and Monitoring Program. SCPN is fortunate to have a strong data management team that does everything from database design and maintenance, quality assurance, website design and maintenance, to mapping and GIS support.

The SCPN data management team has settled into a new configuration. Allison Snyder remains the steady hand at the helm as data manager. Kristin Straka successfully competed for the GIS specialist position after two years as the assistant data manager. Between expeditions as a regional river guide, Paul “Zeke” Lauck continues as an NAU cartographic technician.

We welcome Cindy Parker as the new assistant data manager. Cindy brings a background in software engineering and nine years in GIS and visitor services with the Flagstaff Monuments group of the NPS to her new position. She studied physical geography for both her BA (1981, UC Santa Barbara) and her MA (2009, NAU). She’s excited about her current project of adapting our website to the new NPS template. Cindy loves winter in Flagstaff and hopes for a decent snow-pack for snowshoeing.



Data management team, left to right: Kristin Straka, Paul Lauck, Allison Snyder, Cindy Parker

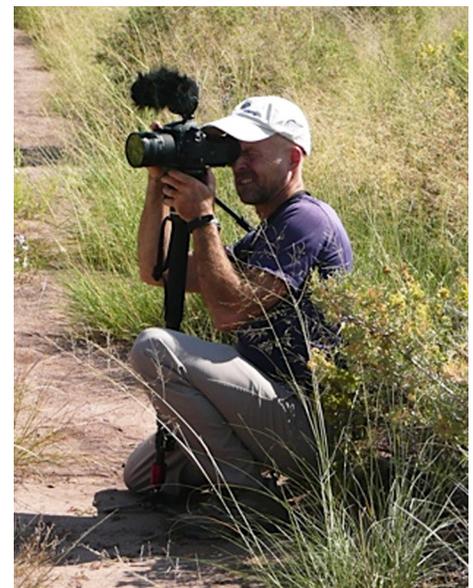
Communications

NAU intern videographer

Lights, camera, action! Kent Wagner is on a story-quest this fall. His internship with SCPN continues a fruitful collaboration with the School of Communication at NAU, which last year produced several student documentaries of network parks. Kent is developing a set of 4-5 minute videos documenting recent research and discovery in the parks. One of his projects, for example, will be to document new natural and cultural resource finds at Petrified Forest NP.

Kent is an experienced videographer and an undergraduate student at NAU in the Photojournalism degree program. He’s been a Grand Canyon river guide for 21 years—inspiring his passion and broad knowledge about the Colorado Plateau.

We’ll post the videos on the *Learning Center of the American Southwest* (www.southwestlearning.org) and make them available to park websites as well. Look for them this next spring and enjoy learning about research and discovery in the parks!



In this issue

- Communications update
- Staff portraits
- Landscape phenology
- Fieldwork calendar
- New publications

Sonya Daw, editor

What's new with our water resources crew?

Congratulations to Stacy Stumpf who successfully competed for the permanent NPS water resources crew leader position this summer! Stacy has run the aquatic macroinvertebrate monitoring project since 2007 and also assists with coordinating and carrying out the fieldwork. He's always on the lookout for invasive aquatic species, continuing his interest in the topic he researched for his MS in Biology from NAU (2007).

Meet part-time NAU research technician, Kristin Brown. She earned her BA (1992) and MS (1999) in Earth Science from UC Santa Cruz, and a GIS certificate from NAU (2007). She has worked on the Colorado Plateau for years as a geographer with the USGS and Museum of Northern Arizona. Kristin looks forward to participating in SCPN's water resources field activities and will also provide data management support. Kristin loves getting her hands "wet and dirty"!

Sampling for "contaminants of emerging concern" at streams in SCPN parks

The water resources project manager, Steve Monroe, leads a partnership that began in 2011 between the SCPN and the US Environmental Protection Agency to assess the occurrence of pesticides, personal care products, pharmaceuticals and waste water indicators in streams flowing through SCPN parks. Included in this group of substances are "contaminants of emerging concern"—a term referring to chemicals used in homes, businesses, and industries that are increasingly found in water. For many of these contaminants, the risks to human and ecosystem health from exposure are unknown. These data will help to establish baseline levels and identify potential sources.



Flagstaff-based water resources crew, left to right: Kristin Brown, Stacy Stumpf, Melissa Dyer

Right: NAU water resources technician Ellen Soles sets up survey equipment in Walnut Canyon NM. The hydrologic monitoring she does is one component of water resources monitoring.



Jodi Norris investigates landscape phenology

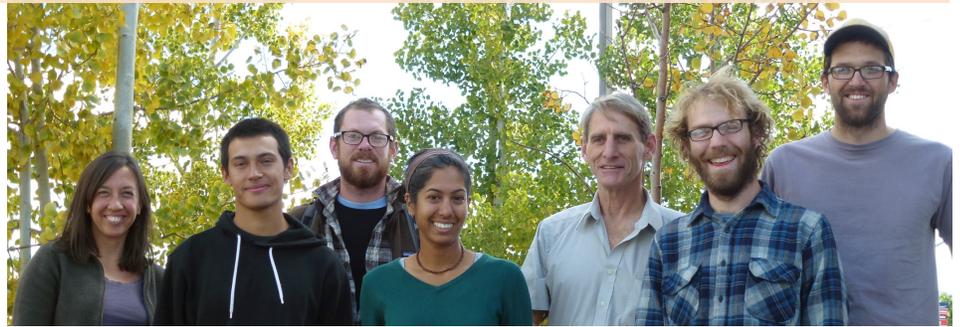
Jodi Norris develops and implements sampling and analysis strategies for network monitoring projects as the new SCPN quantitative ecologist. In her words, providing this kind of statistical expertise "makes sure the information we collect can answer the questions we are asking." Jodi has BS and MS degrees in Geology, and a PhD in Botany from the University of Wyoming (2006). In addition to these duties, she's currently focused on two remote sensing projects. One involves working with Utah State University to explore the use of LiDAR/color infrared imagery to map riparian corridors. The other uses multispectral satellite data acquired by the Moderate Resolution Imaging Spectroradiometer (MODIS) to monitor vegetation phenology and snow cover at a landscape level.



The MODIS data allow us to track changes in the timing, duration, and intensity of springtime and monsoon vegetation greenup (phenology) as well as the timing and extent of snow cover. Understanding the relationship between phenology and ecological condition can inform management strategies and help us better understand climate change. Satellite data since 2000 will be available for the project, and Jodi is currently refining the methods and working with the Northern Colorado Plateau I&M Network on a draft protocol.

Jodi sees this as one of the most important I&M projects because of its value as an early indicator of ecological response to climate change. At the *Phenology 2012 Conference* she attended last month, Jodi joined a team working to solve some of the challenges of interpreting satellite-based phenology in arid ecosystems—resulting in a grant proposal submitted to NASA with the SCPN as a collaborator.

Thank you, integrated upland crew for another successful season!



Integrated upland project staff and crew, from left to right: Megan Swan (NPS botanist), Jesse Mike (NAU field crew), Sean Mahoney (NAU field crew), Maria Gaetani (NAU field crew), Jim DeCoster (NPS project manager), Chris Carlson (NAU field crew leader), Scott Massed (NAU field crew). Dr. Ron Hiebert, NAU School of Earth Sciences and Environmental Sustainability faculty (not pictured), supervises the field crew.

Fieldwork calendar — 2012

Inventory and monitoring crews collected vital signs data at SCPN parks throughout the year. The fieldwork calendar below shows the time frame for data collection by park. The three ongoing projects are:

Water resources: Water quality (wq), aquatic macroinvertebrate (am), springs (spr), and hydrologic (hydro) monitoring data are collected along different schedules (although water quality and aquatic macroinvertebrates are often combined), but all comprise the water resources project.

Birds: Bird-community monitoring involves breeding season bird counts and habitat sampling.

Upland: Soil stability and vegetation composition and structure are monitored for this project.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
BAND		wq		wq	wq		wq	wq		am/wq		wq
					birds	birds	upland					
CACH		wq		wq	wq	hydro/spr	wq	wq		wq	hydro	wq
					birds	birds						
CHCU			hydro		hydro			hydro	upland	upland	hydro	
ELMO			spr		spr			spr			spr	
GLCA					upland	wq			wq			
GRCA				am/wq					upland	am/wq		
HUTR			hydro		hydro			hydro			hydro	
MEVE		wq		wq	wq		wq	wq		am/wq		wq
					birds	birds		upland				
NAVA					spr							
PEFO					birds	birds				upland		
SAPU		hydro			hydro			hydro			hydro	
WACA										hydro		
WUPA						spr		spr				
								upland				
YUHO										spr		

New publications

SCPN has published the following reports, which can be found on the *Integrated Resource Management Applications Portal*, <https://irma.nps.gov/App/Portal/Home>, the SCPN website, <http://science.nature.nps.gov/im/units/scpn/products.cfm>, or on the *Learning Center of the American Southwest* website, www.southwestlearning.org.

Vegetation Mapping Reports:

Vegetation classification and map: Salinas Pueblo Missions NM

Vegetation classification and map: Petroglyph NM

Protocols:

Integrated upland monitoring protocol for the Southern Colorado Plateau Network

Monitoring Reports:

Aquatic macroinvertebrate and physical habitat monitoring in

Capulin Creek and the Rito de los Frijoles in Bandelier NM—2010

Tsaile Creek and Black Rock Canyon in Canyon De Chelly NM—2010

Coyote Gulch and the Escalante River in Glen Canyon NRA—2010

Hermit Creek, Garden Creek and Bright Angel Creek in Grand Canyon NP—2010

Mancos River in Mesa Verde NP—2010

Water quality monitoring in

El Rito de los Frijoles and Capulin Creek in Bandelier NM—2010

Tsaile Creek and Chinle Wash in Canyon de Chelly NM—2010

Mancos River in Mesa Verde NP—2010

Hydrologic monitoring in

El Morro NM—2010-2011

Salinas Pueblo Missions NM—2010-2011

Walnut Canyon NM—2010-2011

Bird community monitoring in

Bandelier NM—2008

Wupatki NM—2008

Inventory Reports:

Bryophyte floristics and ecology in Grand Canyon NP



National Park Service
U.S. Department of the Interior

Southern Colorado Plateau Network

Northern Arizona University

P.O. Box 5765

Flagstaff, AZ 86011-5765

NPS staff phone list

Jim DeCoster (Plant Ecologist)	928-523-7454
Melissa Dyer (Hydrologic Technician)	928-523-1930
Stephen Monroe (Hydrologist)	928-523-7458
Jodi Norris (Quantitative Ecologist)	928-523-1942
Jean Palumbo (Writer/Editor)	928-523-9505
Cindy Parker (Assistant Data Manager)	928-523-680
Mary Anne Schrade (CPCESU/SCPN Prog. Asst.)	928-523-1908
Allison Snyder (Data Manager)	928-523-7426
Kristin Straka (GIS Specialist)	928-523-7480
Stacy Stumpf (Water Resources Crew Leader)	928-523-0867
Megan Swan (Botanist)	928-523-7489
Lisa Thomas (Program Manager)	928-523-9280