

# Bosque Ecosystem Monitoring Program

Black Institute for Environmental Studies at Bosque School

Volume 7, Issue 3 ~ July 2012



## OUR MISSION

The mission of the **Bosque Ecosystem Monitoring Program (BEMP)** is collaborative **long-term** ecological monitoring of key abiotic and biotic processes and characteristics to promote continued education, understanding and stewardship of the riparian ecosystem to scientists, teachers, students, policy makers and the public.

[www.bosqueschool.org/bemp.aspx](http://www.bosqueschool.org/bemp.aspx)  
edited by: Kimi Scheerer



THE UNIVERSITY of  
NEW MEXICO

BOSQUE SCHOOL



scholarship • community • integrity

## Science, Education & Stewardship on the New Mexico Landscape

As the school year finishes, students retreat to the world of summer camps and swimming pools, teachers take much needed vacations, and BEMP staff & interns monitor on... take a look at the fabulous events of BEMP's 2011-2012 school year finale!

**Photos 1 & 2** – BEMP Field Coordinator Jen Schuetz and Educator Kim Fike worked to train and to help teach New Mexico **Envirothon** students this year. **Envirothon** is a hands-on environmental problem solving competition for high school students. This year's **Envirothon** special topic included low impact development and preventing non-point source pollution in stormwater run-off. Over 100 students from throughout New Mexico participated in the event. To learn more visit:

[www.nmenvirothon.org](http://www.nmenvirothon.org)

**Photo 3** – City of Albuquerque Open Space Parks & Recreation educator Bill Pentler works with Rio Grande Elementary (Belen, NM) students at our BEMP K-6<sup>th</sup> Spring Congress. Summer **ABQ Open Space** events can be found at:

[www.cabq.gov/openspace](http://www.cabq.gov/openspace)

**Photo 4** – UNM Museum of Southwest Biology Herpetology Collections Manager Tom Giermakowski presents the delights of reptiles and amphibians to students at Bosque School's summer program: *Weird & Wacky Wildlife*. Two other programs, *Bosque Biology Bonanza* and *Spunky Science* fall under the realm of **BEMP's Eco-Science programs**, but there are dozens of programs to choose from:

[www.bosqueschool.org](http://www.bosqueschool.org)





## Science, Education & Stewardship... cont.



**Photo 5** - Current **Amy Beihl High School** graduate **CB Bryant** shows off her final project... a 3 part depiction of the flow of local waters from the mesa, through the arroyo system and into the Rio Grande! CB worked with BEMP throughout her senior year to grow her passions: working with kids, art and the environment. CB's art is currently on display in Budagher Hall on the Bosque School campus in Albuquerque.



**Photo 6** – *Acting batty*: the spring **Jackrabbit survey team** (Aiden, Donny, Nick, Julie, Jennifer, Clair and Kimi) stopped to check out the migrating spring bats that have returned to roost under an I-25 bridge near Sevilleta lands. The bats hang between the bridge supports and flush out with the setting sun to feed. As for rabbits... our team spotted **61 Jackrabbits and cottontails**, along with several small herds of *pronghorn antelope*.



**Photo 7** – Seventh through 12<sup>th</sup> grade students from BEMP and *New Mexico Game & Fish* sponsored **Watershed Watch** program gather and share information about their year of monitoring at our Congress event. Students visit **El Rancho de las Golondrinas** in April to learn from local educators and present their own findings. Highlights include: visiting reptiles and amphibians with the **New Mexico Herpetological Society**, tours of the Golondrinas historic culture and a visit with Gavilán, the Red-tailed hawk.



**Photo 8** – With former BEMP Administrator Colleen Seager and her family relocating out of the Albuquerque area, **Rebecca Belletto recently joined the BEMP staff as Operations Manager**. Rebecca has experience with grant writing, education policy and has taught middle school English and Gifted in South Los Angeles and Albuquerque. She is a *Permaculturalist* who has worked on organic farms around New Mexico. Rebecca was born and raised on the Navajo Nation and graduated from Gallup High School. She earned her B.A. in International Relations from Pomona College, a M.A. in International Development from Nelson Mandela Metropole University in South Africa, and a M.A. in Elementary Education from Loyola Marymount University. *Her favorite arthropod is a hard-working beneficial insect, the Green Lacewing – known to eat farming and gardening pests like aphids & mites.* BEMP **loves** arthropods, take a look at the the lacewing below!



Kingdom Animalia (Animals)  
Phylum Arthropoda (Arthropods)  
Class Insecta (Insects)  
Order Neuroptera (Antlions, Lacewings & Allies)  
Suborder Hemerobiiformia  
Family Chrysopidae (Green Lacewings)  
**Photo:** JC Schou @ [www.biopix.com](http://www.biopix.com)

So far, this 2011–2012 School Year, more than **6,000**

...students, teachers, community members, college interns, research partners, parents, agency professionals, festival attendees, tribal representatives & government leaders have been... **BEMPin' it Up!**

## Bosque Ecosystem Monitoring Program (BEMP): Comprehensive Report: 1997-2009



Kim D. Eichhorst, Daniel C. Shaw, Jennifer F. Schuetz, Kimi Scheerer,  
Melanie Keithley, and Clifford S. Crawford



## BEMP Comprehensive Report 1997-2009

Great news... in dedication to our BEMP founder, mentor and friend, **Dr. Cliff Crawford**, and after 15 years of data collection along our favorite 140 mile stretch of the Middle Rio Grande, BEMP has printed a comprehensive overview. With site data and management strategy interpretations in regard to 25 BEMP sites (now up to 27 sites), BEMP highlights the effects of: fire, flood, mechanical clearing, the San Juan Drinking Water Diversion dam and more, along the often urban interface of the Rio Grande corridor.

The report will be online at the beginning of the 2012-2013 school year, but **request your hard or electronic copy today** by contacting BEMP Operations Manager  
Rebecca Belletto at  
[rebecca.belletto@bosqueschool.org](mailto:rebecca.belletto@bosqueschool.org) or  
505.898.6388 ext. 128!

## LTER 2012 Monsoon Prediction Contest

<http://sev.lternet.edu>

### Sevilleta LTER: a BEMP partnership

Sevilleta Long Term Ecological Research (LTER) supports long-term, integrated, interdisciplinary research programs addressing key hypotheses on pattern and process in arid land ecosystems. BEMP has been an education & outreach partner working with students and community groups to monitor on Sevilleta lands since collections began at the BEMP SEV site in October of 2003. In addition, our full moon jackrabbit surveys have been in effect every quarter since early 2005! They are a great way to understand precipitation and vegetation effects on the local herbivore population. Each year, and down to the closest minute, Sevilleta scientists compete in an annual monsoon prediction contest. Check out the LTER website at <http://sev.lternet.edu> to learn more about LTER projects and when local scientists think the rains will finally come to New Mexico. *Hint: see if you can find when BEMP Field Coordinator Jen Schuetz thinks the monsoons will hit!* ☺





## Professional Development...

### Opportunity!

### Soar to Greater Heights

~ growing STEM's for the next generation ~



Join NMSTA, EEANM and NMCTM at  
Bosque School **October 11-13<sup>th</sup> 2012** for our  
annual conference.

Registration is open at: [www.nmsta.org](http://www.nmsta.org)

Artwork: Lauren Bennett

### 2011-2012 Participating Schools & Groups

Albuquerque Biopark	La Cueva High School
Abq. Institute of Math & Science	Las Cruces Public Schools
Alvarado Elementary	Los Lunas High School
Bandelier Elementary	Mesilla Valley Bosque State Park
Bernalillo Middle School	Montessori of the Rio Grande
Bosque Farms Elementary	Mountain Mahogany
Bosque School	NM Museum – Young Explorers
Citizen Schools	New Mexico State Parks
Cottonwood Valley Charter School	North Star Elementary
Dolores Gonzales Elementary	Ohkay Owingeh Comm School
Earthforce: Summer of Service	Pueblo of Santa Ana
Escuela Luz de Mundo	Rio Grande Elementary
Georgia O'Keeffe Elementary	Rio Rancho Cyber Academy
Harrison Middle School	Roots & Shoots
Holy Ghost Catholic School	Santo Domingo Middle School
Hoover Middle School	School on Wheels Alternative HS
Hope Christian School	Sevilleta National Wildlife Refuge
Infinity High School	Van Buren Middle School
La Academic de Esperanza	Wilson Middle School

### New Mexico Watershed Watch / BEMP Partners

Cimarron High School, Cochiti School, Desert Academy, East  
Mountain High School, Espanola Valley High School, NM  
School of the Arts, Santa Fe Prep & United World College



## IMPORTANT DATES

- July 16-20<sup>th</sup> – **BEMP monthly monitoring**
- August 2<sup>nd</sup> – Sevilleta NWR jackrabbit survey
- August 7<sup>th</sup> – **BEMP scheduling calendar opens!!!**
- August 13<sup>th</sup> – APS 1<sup>st</sup> day of school
- August 20-24<sup>th</sup> – **BEMP monthly monitoring**
- Sept. 17-21<sup>st</sup> – **BEMP monthly monitoring**
- Sept. 24-28<sup>th</sup> – **BEMP pitfall trapping**
- Sept. 29<sup>th</sup> – SW Women in Conservation 10-1pm

Randall Davey Audubon Center, Santa Fe ~ 505.983.4609



## Naturalist Series



Awaken your senses to the natural world around you by observing the wondrous plants and animals in the bosque and learn from local experts about this extraordinary ecosystem.

Bernalillo County Open Space is bringing the public this Naturalist Series, featured at Bachechi Open Space that includes a number of nature-related sessions throughout the year. The workshops are **FREE**; however, space is limited. To register, e-mail [calangan@bernco.gov](mailto:calangan@bernco.gov) or call 505.314.0398. For more information, visit [www.bernco.gov/openspace](http://www.bernco.gov/openspace)

**August 12<sup>th</sup>, 2012** (10-1pm) = **Summer Nature Journaling Workshop** led by Margie O'Brien.

This is a 4 part journaling series based on the seasons.

**September 7<sup>th</sup>, 2012** (7-9pm) = **Stargazing and Astronomy**. Check out this indoor presentation on the constellations followed by stargazing through large specialized telescopes with local experts.

**October 21<sup>st</sup>, 2012** (10-12pm) = **History of the Alameda area**. Discover the explorations of a nearby archaeological dig, learn about ancient communities along the Rio Grande, and consider how history has shaped the current environment at the Alameda Bachechi site.

# THANK YOU

to those that sponsor BEMP

AMAFCA, Stormwater Quality Team ♦ Albuquerque Community Foundation ♦ Bernalillo County Open Space ♦ Bosque School ♦ Captain Planet Foundation, Inc. ♦ Educational Foundation of America ♦ Goodman Family ♦ McKee/Crawford Foundation ♦ Messengers of Healing Winds Foundation ♦ Middle Rio Grande Bosque Initiative/U.S. Fish and Wildlife Service ♦ Middle Rio Grande Conservancy District ♦ National Science Foundation's Schoolyard Education Program at UNM's Sevilleta Long Term Ecological Research Site ♦ New Mexico Association of Soil & Water Conservation Districts ♦ New Mexico Forest & Watershed Institute at Highlands University ♦ Norcross Foundation ♦ PNM Inc. ♦ Sandoval County ♦ U.S. Army Corps of Engineers ♦ U.S. Bureau of Reclamation ♦ USDA Forest Service ♦ 7 Bar Foundation