

Bosque Ecosystem Monitoring Program

Black Institute for Environmental Studies at Bosque School

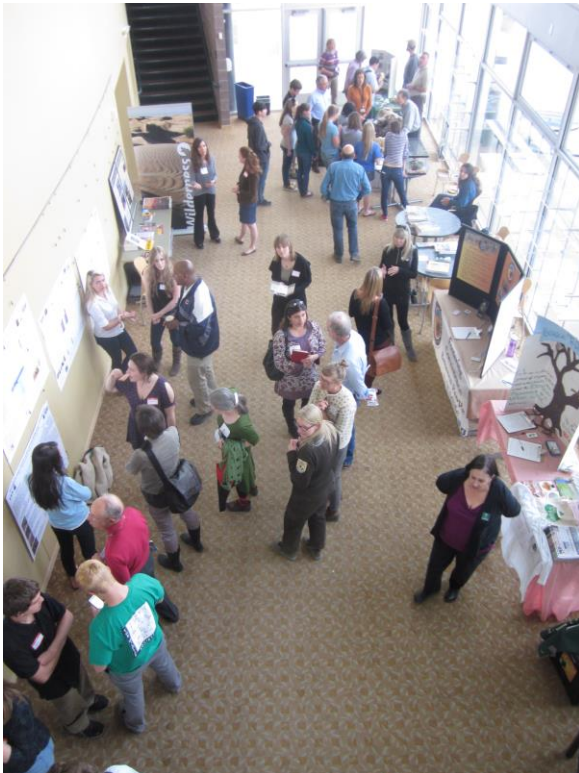
www.bosqueschool.org/bemp.aspx

March 2014: Cherishing our New Mexico Lands

2014 Crawford Symposium

~ *Green* Trails for the Next Generation ~

A program of the Cebrin Goodman Youth, Education, and Environment Project



THANK YOU to our information tables and community displays, which included the following partners:

Bosque Action Team
Federal Junior Duck Stamp program
New Mexico Department of Game & Fish
New Mexico Wilderness Alliance
Project Coyote
Sandia Mountain Natural History Center
Sierra Club

Tish Morris with a 17 year long cottonwood photo survey
Valle de Oro National Wildlife Refuge

Special THANKS to Claudia Crawford and her Seasonal Sightings Along the Middle Rio Grande team!

They presented their online and smartphone i-Naturalist App and shared their new calendar with all symposium guests. To get one of their beautiful 2014 Phenological Calendars contact Bernalillo County Open Space Coordinator Colleen McRoberts at calangan@berncogov.

The symposium opens with an information session in the foyer with chatting and snacks, then moves into Budagher Hall for professional and student presentations.

Student presentations included...

Albuquerque Academy's Trashion

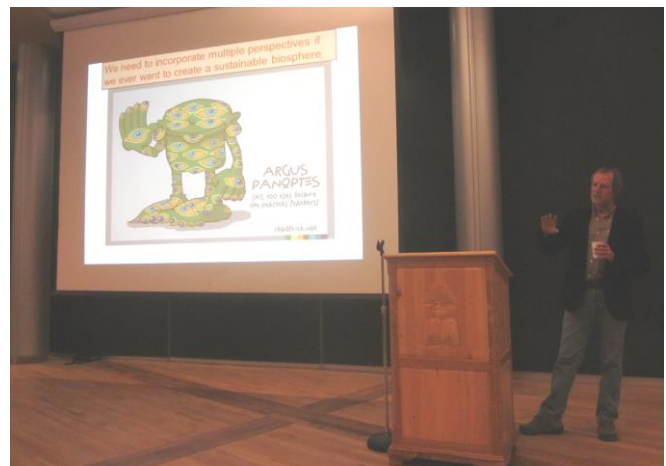
Fashion. Check out their **Recycled Fashion Show** on April 19th in Simms Auditorium.

Abq. Institute of Math & Science's

Jarek Kwiecinski, presented 'Improving Carbon Use Efficiency in Soil Microbes'.

Bosque School's Wildlife Biology & Conservation students, Sharing various

projects including turtles, student/snake interactions, coyotes & hydrocarbon detection.



Event keynote, Scott Collins, PhD, Professor of Biology & Director of the Sevilleta LTER shared an entertaining and educational program on 'Global change impacts on Chihuahuan Desert ecosystems'. Presenting the "sad stuff, pretty stuff and a philosophical" view of the environmental change captured by the scientists of New Mexico's landscape. Encouraging collaboration and integrated perspectives, Dr. Collins noted we were in a time of rapid change that includes a shift in our grass and shrub-land communities.

BEMP and the Beetles of the Rio Grande

~ BEMP Presents at Riparian Restoration Conference ~

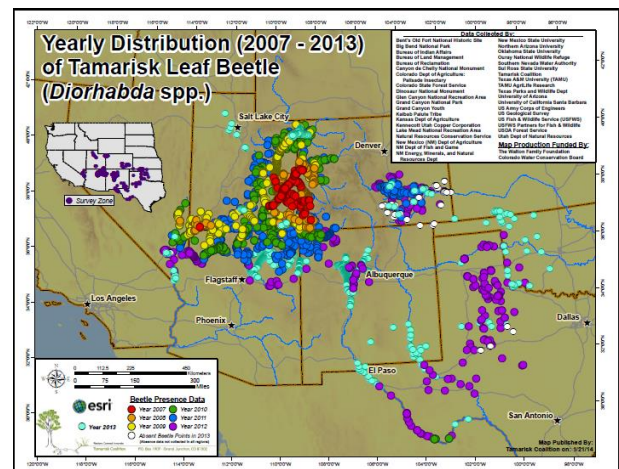


By: Jennifer Schuetz and Rowan Converse

February 18 and 19 Science Coordinator Jennifer Schuetz and staff biologist Rowan Converse attended the "Riparian Restoration in the Western U.S." conference in Grand Junction, CO, hosted by the Tamarisk Coalition. Jennifer gave an oral presentation on how BEMP collects much of its data using citizen scientists, highlighting our tamarisk leaf beetle monitoring conducted May to August 2013. Rowan presented a poster on her GIS work modeling the spread of the tamarisk leaf beetle in the middle Rio Grande valley and its impact on the habitat of the endangered southwestern willow flycatcher (SWFL).

Rowan and Jennifer connected with professionals in other Southwest regions who identify tamarisk leaf beetle and weevil species. They plan to send them samples collected in the Middle Rio Grande to help expand the scope of this research. In addition, BEMP (via Kim Eichhorst) is partnering with Drs. Anna Sher and Eduardo González Sargas at the University of Denver by providing data to help model plant responses to *Tamarix* control efforts.

Jennifer learned that SWFL populations are most impacted by tamarisk leaf beetle infestations in the first year of defoliation because of such quick loss of habitat. Land managers are attempting to mitigate this impact by planting willow swales so the birds can use their native habitat instead of the tamarisk substitute.



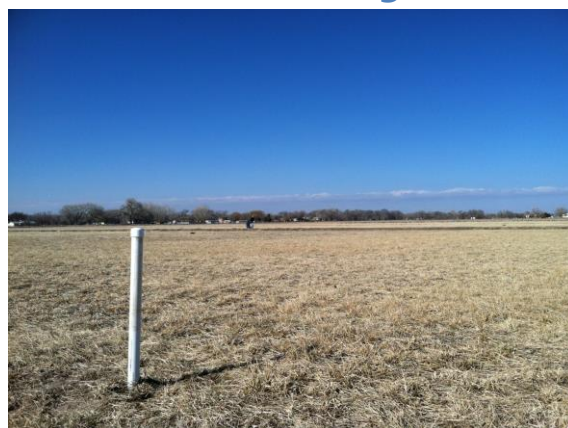
Images above, left) Rowan shares her poster with conference folks; right) 2013 distribution map from the Tamarisk Coalition.

Rowan was excited to meet and have the opportunity to thank the researchers at Northern Arizona University (NAU) who collected some of the tamarisk leaf beetle occurrence data she is using in her own research. She also enjoyed the opportunity to talk with researchers at NAU and Texas A&M University also modeling the impact of the tamarisk leaf beetle on SWFL habitat in other states, especially Arizona. She was particularly interested to learn about the work of the NAU researchers to create a model to both determine the areas of SWFL habitat that are most in need of intervention due to the leaf beetle, and also what type of intervention would be most effective, depending on the characteristics of the site.

Jennifer was really excited about a presentation on use of tablets in the field to directly enter data, significantly reducing time and cost of office data entry! She's going to research possibilities and hopefully BEMP will start instituting tablet use in field data collections such as vegetation cover, fuel load, groundwater chemistry and lab work such as arthropod identification and litterfall sorting.

This conference is going to be held in Albuquerque next year, so if you are interested in attending or presenting at this conference, keep your eyes open for updates! Visit <http://tamariskcoalition.org> for more information.

BEMP's 28th site at Valle de Oro National Wildlife Refuge (NWR)



The Valle de Oro refuge location hosts BEMP's newest site! Established by our field team in January, this is BEMP's second land monitoring partnership with the US Fish & Wildlife National Wildlife Refuge system. Our first US Fish & Wildlife Service BEMP partnership site is the Sevilleta NWR, which also pairs with the Long Term Ecological Research Network (www.lternet.edu/sites/sev). The Sevilleta BEMP site, near San Acacia dam, was established in the fall of 2003. BEMP also does quarterly full moon surveys at Sevilleta to document the jackrabbit population of McKenzie flats.

Above left: Teacher Terry Dunbar's students from the APS School on Wheels jump for joy off the Valle de Oro (VdO) land. These students regularly monitor the National Hispanic Cultural Center (NHCC) BEMP site and after we finished our data collection in February we drove south to explore the VdO.

Above right: Upon arriving we compared the students' forested NHCC site to this **NEW** fallow agricultural land site only to be **interrupted by hundreds of snow geese** rising up from the river and over our heads... what a trip! Special **THANKS** to Americorps Educator **Teresa Skiba** for joining our tour.

BEMP would also like to **WELCOME South Valley Academy** teacher Tish Mereweather (a previous UNM 408 BEMP intern) and her students to our team. South Valley Academy started their monthly monitoring collection in February and will continue to be a BEMP and Valle de Oro NWR partner!

Dale Dombrowski

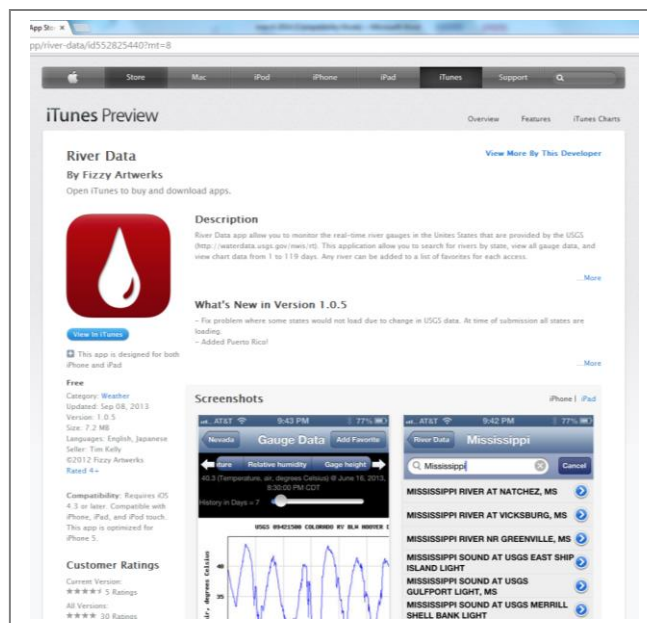
BEMP/Audubon Outreach Coordinator
Mesilla Valley Bosque State Park

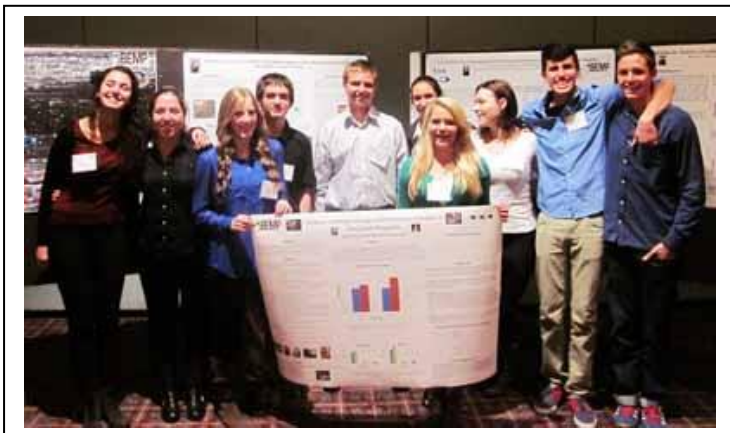


Hired in October, Dale works with the Las Cruces, Mesilla and surrounding communities to share BEMP monitoring, Audubon bird education and a local southern view of the Rio Grande bosque. In January MVBSP and BEMP hosted a Friends workshop, see photo along the dry river bed above.

Sweet FREE App for Water Wonks!

Kimi recommends '**River Data**' – this smart phone app connects you to any UGSG river gauge in the country! Just download and then challenge your colleagues, students and family to a 'river-off' any time of the day. ☺





Wildlife along the Rio Grande

Bosque School Wildlife Biology & Conservation students and BEMP staff share and present mid-region Rio Grande wildlife projects at the joint annual meeting of the Wildlife Conservation Society and American Fisheries Society in

Pinetop, AZ over the first week in February. Joined by Dan Shaw and Kim Fike, the crew represented a variety of wildlife and environmental topics.

Presentations included (in the fisheries division) Nanda '14 and Mirabelle '14 *"Use of a Portable Gas Chromatograph for Detecting Hydrocarbons in River and Groundwater Samples."* In the wildlife division Maddie '14 and Katie '14 presented *"Assessment of Community Attitudes Towards Coyotes in a Semi-Agricultural Community,"* Aaron '14 and Marco '14 presented *"Relative Coyote Activity Within Three Different Habitat Types in a Semi-Agricultural Community,"* Warren '14 and Ramon '14 presented *"Determining the Relative Abundance of Native and Exotic Basking Turtles in Albuquerque,"* and Gigi '14 and Olivia '14 presented *"Do Student Attitudes Towards Snakes Change with Education Involving Live Snake Handling?"*.

In addition, BEMP staff Katie Elder presented a session highlighting *"Demographic Information and Capture Techniques of North American Porcupine in the Middle Rio Grande Riparian Forest"* and Rowan Converse on *"Tracking the Arrival of the Tamarisk Leaf Beetle in New Mexico with Implications for an Endangered Bird"*.

Students also shared their work at the Crawford Symposium, their posters are currently on display in the Upper School Science building halls by the BEMP outreach office at Bosque School.



Albuquerque Community Foundation ♦ Bernalillo County Open Space ♦ Bosque School ♦ Greater Rio Grande Watershed Alliance ♦ Goodman Family ♦ LANL Foundation ♦ McKee/Crawford Foundation ♦ Middle Rio Grande Conservancy District ♦ McCune Foundation ♦ Mid Rio Grande Stormwater Quality Team (AMAFCA; Bernalillo County Open Space; City of Albuquerque; CUIDAD Soil & Water Conservation District; NM Dept. of Transportation; SSCAFCA & the Town of Bernalillo) ♦ National Science Foundation's Schoolyard Education Program at UNM's Sevilleta Long Term Ecological Research Site ♦ New Mexico Association of Soil & Water Conservation Districts ♦ Sandoval County ♦ U.S. Army Corps of Engineers ♦ U.S. Bureau of Reclamation ♦ USDA Forest Service

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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.