

# Asombro Insights

*Science education for eager minds*

A Quarterly Newsletter

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## Teachers Are Researchers At Biodiversity Workshop

*By Stephanie Bestelmeyer*

At 6:00 AM on a cool July morning, teachers Marci Behrens and Gabe Quiñones were already at the Chihuahuan Desert Nature Park counting birds. While most teachers were enjoying a well deserved summer vacation, Marci and Gabe researched bird diversity. "I'm excited to see if there are differences in species richness on the shrub removal and control plots," said Marci.

Gabe and Marci were part of an Asombro workshop on biodiversity research and science communication with 14 other teachers from Alamogordo, Anthony, Deming, Las Cruces, and La Uñion. For two weeks in July, teachers participated in activities to learn more about research on biodiversity and habitat restoration in the desert.

The workshop began with a visit to BLM shrub removal sites north of Truth or Consequences with Bob Schooley from the University of Illinois and John Coffman from the Jornada Experimental Range. They learned about BLM's Restore New Mexico program and Dr. Schooley's research on biodiversity differences in shrublands and sites where shrubs have been removed.

Teachers spent several days doing their own research projects modeled after Dr. Schooley's project. They chose one taxa (e.g., plants, birds, arthropods) and compared diversity on control plots and

shrub removal plots at the Chihuahuan Desert Nature Park. The research project culminated in a research symposium on the last day of the workshop where teachers presented their project posters.

In addition to research projects,

teachers also completed six classroom and schoolyard activities developed by Asombro to teach about biodiversity issues. They enjoyed a visit from Jack and Martha Carter, who generously gave each teacher a copy of their information-packed book [Trees and Shrubs of New Mexico](#) and taught

them how to use dichotomous keys.

Funding for the workshop was provided by a competitive research grant awarded to Dr. Schooley from the USDA's Agriculture and Food Research Initiative.



*Teachers Kathleen Guitar and Cathy Fister examine track plates at the Nature Park. They used track plates and trail cameras to determine which mammals inhabit the Park.*



*Madison Hill (Alamogordo Public Schools) and Susan Swope (Deming Public Schools) exhibit their research poster on plant species richness in shrub removal plots.*

## Desert Data Jam 2013

By Stephanie Bestelmeyer

Recent technological advances have allowed ecologists to collect large amounts of data, vastly outpacing the general public's ability to understand it. Last year, Asombro created the Desert Data Jam competition to encourage high school students to gain expertise in interpreting and presenting scientific data to nonscientist audiences.

The 2013 Desert Data Jam culminated in judging and awards on May 1st and 2nd. More than 60 students from five high schools participated. Judges were once again amazed at students' creativity. Students created board games, children's books, videos, and a variety of physical models to present data on topics including weather, plant species richness, and mammal populations.



*Oñate HS students Nikita Saenz-Lopez and Aspen Hall with their 2nd place project. 1st and 3rd prizes went to Stephanie Goodman and Hailey Peck, both from Mayfield HS.*

## Earth Squad - Empowering 7th Graders to Make a Difference

By Stephanie Haan-Amato

Asombro piloted a new Earth Squad program with the 7th grade class at J. Paul Taylor Academy Charter School this spring. The goal was to empower students to understand climate change and then propose and implement solutions.

Students drafted a school-wide carbon emissions reduction plan and put it into action. Students set a goal of offsetting two weeks of the carbon emissions from their class's transportation to and from school, which students calculated to be approximately ½ ton of carbon.

Their plan consisted of three main components: begin a school recycling program, reduce energy use in the school, and establish a no-idling zone in the school's drop-off and pick-up area.

Through these actions, students offset 0.89 tons of carbon, more than three weeks of their class'

transportation carbon emissions. They exceeded their goal!

Pre- and post-test analyses indicated that the project helped increase students' knowledge of greenhouse gases and the main human sources of carbon emissions. They also demonstrated improved attitudes toward the environment and increased frequency of environmental behaviors.

Following this successful pilot program, Earth Squad will continue in an afterschool program at Vista Middle School this fall.



*7th graders created a "no idling zone" outside their school to reduce carbon emissions.*

## Education Programs

Thanks to your support, Asombro staff provided 547 hours of science programming for 13,515 students so far in 2013!

4-Apr	Alma d'Arte HS - rock & mineral id	22-Apr	J Paul Taylor Academy - No Idling Zone	9-May	J Paul Taylor Academy - heredity vs. learned traits
4-Apr	LC Catholic - stepping out for science	23-Apr	Mayfield HS - food webs	10-May	J Paul Taylor Academy - science interns
4-Apr	Sierra MS - biodiversity sampling	23-Apr	Vista MS - field trip	11-May	Guided Hike & Movie Night at the Nature Park
5-Apr	Lynn MS - field trip	24-Apr	Sierra MS - stepping out for science	13-May	J Paul Taylor Academy - No Idling Zone
5-Apr	Alma d'Arte HS - rock & mineral id	24-Apr	Sierra MS - biodiversity sampling	14-May	Mesa MS - Wildlife CSI
8-Apr	J Paul Taylor Academy - Earth Squad	25-Apr	Las Montañas HS - Desert Data Jam	15-May	LTER science council tour
8-Apr	Doña Ana Elem. - soil	25-Apr	Alma d'Arte HS - Desert Data Jam	15-May	Mesa MS - Wildlife CSI
9-Apr	Vista MS - stepping out for science	25-Apr	Water Festival - solar cooking	16-May	Vista MS - biodiversity sampling
9-Apr	Central Elem. - soil	26-Apr	J Paul Taylor Academy - scientific method	17-May	Mesa MS - Wildlife CSI
10-Apr	Cesar Chavez Elem. - arthropod id	26-Apr	Booker T. Washington Elem. - soil	20-May	J Paul Taylor Academy - No Idling Zone
10-Apr	Sierra MS - stepping out for science	27-Apr	Take It Outside, NM - teacher tour	20-May	LC Catholic School - field trip
10-Apr	Mesa MS - stepping out for science	27-Apr	Alamogordo Earth Day - sort like a scientist	21-May	Lynn MS - Wildlife CSI
11-Apr	Cesar Chavez Elem. - arthropod id	27-Apr	Mesilla Park Elem. - field trip	23-May	Trans Mountain Early College Prep HS - field trip
11-Apr	Camino Real MS - Wildlife CSI	29-Apr	J Paul Taylor Academy - No Idling Zone	3-Jun	SC2 - Yippee for Yucca and Other Desert Plants teacher training
15-Apr	J Paul Taylor Academy - Earth Squad	29-Apr	Monte Vista Elem. - science interns	4-Jun	SC2 - Yippee for Yucca and Other Desert Plants teacher training
15-Apr	Sierra MS - field trip	30-Apr	LC Catholic School - habitat stats	6-Jun	J Paul Taylor Academy - yucca day
15-Apr	J Paul Taylor Academy - No Idling Zone	1-May	Sierra MS - field trip	7-Jun	AP Environmental Science teacher training
16-Apr	Lynn MS - biodiversity sampling	2-May	Lynn MS - stepping out for science	10-Jun	Capitan Library - fossils
16-Apr	Vista MS - stepping out for science	2-May	Mesa MS - biodiversity sampling	12-Jun	El Paso Library - desert plants
16-Apr	Tombaugh Elem. - soil	3-May	Anthony Elem. - field trip	21-Jun	Alamogordo Public Library - desert animals
17-Apr	Sierra MS - stepping out for science	3-May	J Paul Taylor Academy - No Idling Zone	26-Jun	Rockhound State Park - raptors
17-Apr	Alamo Navajo Community School - biomes	6-May	J Paul Taylor Academy - Earth Squad	29-Jun	El Paso Library - desert animals
18-Apr	Mesa MS - field trip	7-May	Lynn MS - biodiversity sampling		
18-Apr	Lynn MS - stepping out for science	7-May	Sierra MS - Wildlife CSI		
18-Apr	Zia MS - Wildlife CSI	8-May	J Paul Taylor Academy - ecosystem components		
19-Apr	Sierra MS - field trip	8-May	Sierra MS - biodiversity sampling		
22-Apr	J Paul Taylor Academy - stepping out for science	9-May	Zia MS - Wildlife CSI		
22-Apr	East Picacho Elem. - classification				
22-Apr	East Picacho Elem. - animal adaptations				
22-Apr	J Paul Taylor Academy - Earth Squad				

# Learn, Party, and Get Fit with Asombro!

Between August and November, you can learn about butterflies, try your hand at geocaching, enjoy a benefit dinner for Asombro, and race the trails at the Nature Park. We hope to see you at one or all of these events!

## Butterfly Flutterby

August 17, 9AM - Noon  
Chihuahuan Desert Nature Park  
\$2 per person



Ten activity stations will help you learn about butterflies and their role in the desert. Butterfly experts will have displays of butterflies and be on-hand to answer your questions. There will be face painting, metamorphosis matching, insect olympics, and other activities for even the youngest butterfly enthusiasts. A bucket auction with wonderful treasures will help raise funds for Asombro's education programs.

## Geocache the Desert

September 14, 9AM - Noon  
Chihuahuan Desert Nature Park  
Free.

Geocaching is like an outdoor treasure hunt, and it's a great way to get outside and explore our beautiful desert. Never Geocached before? No problem! We have GPS's and helpers to teach and explain caching etiquette. Mystery Caches will be in place for novices. Micro and Multi-caches are for the intermediate Geocacher. See if you can find them all. Veteran Geocachers are welcome to find more difficult "Cache In Trash Out" caches in areas that need some extra care. Geocache while helping the Nature Park.

## Moonlight Taste of the Desert Fundraiser

September 21, 6:30 PM  
Mesilla home of Gil and Sally Tellez  
\$50 per person; tickets must be purchased in advance

This dinner fundraiser is back after a successful first run in 2012. Enjoy tastes of edibles with desert ingredients along with a full catered meal. Live music, a beautiful outdoor setting, and a gathering of community members who support science education and the desert makes this an evening to remember. Bid on incredible silent auction items like a Turkish rug and Chinese silk robe and know that all proceeds benefit science education in our region.

## Desert Dash 10K, 5K, and 1K Trail Race

November 9; races start at 9:00.  
Chihuahuan Desert Nature Park  
Registration: \$25 until November 1 ([www.asombro.org](http://www.asombro.org))

Enjoy expansive views of the desert, including three rugged mountain ranges, as you run or walk the beautiful 5K or 10K trail courses. Bring your little ones for the Children's 1K trail race (guardian should accompany child). All levels welcome.



## Movie Night at the Park

By Anna Keener

Asombro held a movie night and guided hike on May 11<sup>th</sup>. Justin Van Zee and Rink Somerday led the hike, explaining what makes the Chihuahuan Desert unique compared to other deserts around the world. After sunset, everyone enjoyed an outdoor showing of the BBC's *Planet Earth: Deserts*, transporting the audience to the deserts of the world and demonstrating how life persists in the harshest environments on Earth. Many thanks to Justin Van Zee, Mary Beth Harper, Graham Carssow, and Will Keener for volunteering. Special thanks to Brian Peterson of Southwest Kettle Corn for donating his exceptional kettle corn for movie snacks.



Justin Van Zee leads an evening hike prior to the start of the movie at the Nature Park.

## Nightlife of the Desert

By Rink Somerday

At sunset on July 12, visitors joined scientists to explore and learn about desert wildlife. We hiked to the Chihuahuan Desert Nature Park amphitheater where Doug Burkett gave a presentation on local snake species, including two different color varieties of Trans-Pecos ratsnakes. Jean McKeever, Carlos Vargas, and Robert Edmonds from NMSU's Astronomy Department guided us down the trail while explaining the distance between the planets. Leaving a lamp as the sun at the top of the hill, we were able to experience how small the sun looks from Jupiter and Saturn. We next met with entomologists Graeme Davis, Jenny Davis, and Ryan Reynolds who had several nighttime arthropods like a vinegaroon and tarantula. Learning about these animals made them more familiar to us and helped dispel trepidation. Asombro is grateful to all of these scientists for sharing their time and knowledge with us.



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FOR SCIENCE EDUCATION

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