

Asombro Insights

Science education for eager minds

A Quarterly Newsletter

Volume 20, Issue 3 (July - Sept. 2011)

Asombro's newest schoolyard activities on biodiversity teach about unique aspects of our region. In early June, 20 teachers participated in a



workshop to learn these activities. **Page 2**

Numerous projects are underway at the Chihuahuan Desert Nature Park. Learn more about them and see how you can get involved. **Page 3**

So far this year, Asombro programs have reached **7,753 K-12 students**. See a list of locations and topics of programs offered between April and June. **Page 4**



August 20 is Butterfly Flutterby time at the Chihuahuan Desert Nature Park. Read about the exciting new activities planned for the 9th annual event. **Page 4**

Asombro donors bring science to life in classrooms, schoolyards, and at the Chihuahuan Desert Nature Park. Help thank our generous donors for 2011 and learn how you can join this amazing group of people! **Page 5**

Check the map for directions on getting out to the Chihuahuan Desert Nature Park to learn and explore. **Page 6**



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Gen M Science & Art Institute

Close your eyes and picture a scientist. What does your scientist look like?

This was the question posed to 5th-8th graders during the first day of the Gen M Summer Science & Art Institute on June 6. The answers reflected many of society's stereotypes about scientists:



Participants completed science experiments, including examining tadpole shrimp growth rates in different water temperatures.

"A guy with poofy hair."

"I see long beards. Oh, and test tubes."

"Someone in a little office working with lasers."

The Gen M Summer Science & Art Institute was designed to help remove some of these stereotypes

and allow students to begin to see themselves as scientists too. It was also designed to show the integration between science and art.

Although these are lofty goals, a collaboration of five nonprofit organizations and funding from the Wal-Mart Foundation helped make it possible. Partners included:

- Asombro Institute for Science Education - provided science activities and trained all staff on how to set up and run activities.

Continued on page 4



Students participated in science activities and several art forms (including screen printing) related to the science topics.

NOTES FROM THE DIRECTOR

The Asombro staff always loves interacting with teachers who attend our workshops. They inspire us with their willingness to learn continuously and share new knowledge with their students.

On June 2 and 3, we had an especially inspiring group. The fact that they dedicated two of their first days of summer vacation to a workshop told us all we needed to know!

The workshop was exciting for other reasons too. It marked the debut of six new activities on biodiversity that we have been creating and pilot testing for a year. We are working with scientists from the University of Illinois, University of Oklahoma, and USDA-ARS Jornada Experimental Range on a four-year project to examine the effects of shrub removal on biodiversity.

Teachers spent a morning in the field with Dr. Brandon Bestelmeyer, one of the project's researchers. They learned about the Bureau of Land Management's "Restore New Mexico" project (www.blm.gov/nm/st/en/prog/restore_new_mexico), which has already treated 1.5 million acres in New Mexico. We discussed ongoing research to determine what effects native grassland restoration is having on birds, kangaroo rats, and plants.

The rest of the workshop focused on Asombro's six new hands-on activities to teach about biodiversity in the classroom and schoolyard. Teachers gave the activities rave reviews, confirming what we have been seeing during pilot testing all spring.

This workshop was just the first part of our interaction with these inspiring, fun teachers. We'll give them materials and support once school starts back up so they can continue to share their new knowledge with students.

Stephanie Bestelmeyer



Biodiversity teacher workshop participants visited a restored grassland site north of Las Cruces with researcher Brandon Bestelmeyer (left).



A new board game on Chihuahuan desert biodiversity had teachers laughing while also learning about slime molds and other organisms!



Proving that you don't need to be way out in the desert to study biodiversity, teachers set up a study to see if plant diversity affects insect diversity right outside the Asombro office.

Calendar of Events

Aug. 13 Trail Workday at the Chihuahuan Desert Nature Park 8AM –Noon

Bring a shovel, rake, and wheelbarrow if you have them!



Aug. 13 Native Plant Society Field Trip to Pine Tree Trail 8AM
\$3/car. Meet at Kmart on Hwy 70.

Aug. 13 Full Moon Hike at White Sands National Monument 8PM
Programs are free but monument fees apply. Registration required.

Aug. 20 Annual Butterfly Flutterby at the Chihuahuan Desert Nature Park 9AM-Noon
Come enjoy a fun filled day about butterflies. Arts, crafts, butterfly

gardening and more! Please see page 4 and /or call 575-524-3334 for more information.

Sept. 12 Full Moon Hike at White Sands National Monument 7:15PM
Programs are free but monument entrance fees apply. Registration required. The hikes are limited to 40 participants.

Sept. 17 Kids Walk 9AM-11AM
Mark your calendars now for a new Asombro program for the young and young-at-heart. More information coming soon at www.asombro.org or by calling 575-524-3334.

Sep. 17 Native Plant Society Field Trip to Ropes Springs 8AM
Meet at Kmart on Hwy 70.



Literature box and new donation box in their new location near the Desert Experience Mini-Trail entrance.

Chihuahuan Desert Nature Park

When the temperatures soar, improvement projects at the Chihuahuan Desert Nature Park also heat up. This spring and early summer, we have been busy with several projects to enhance the Chihuahuan Desert Nature Park.

In June, our **literature and donation boxes** were moved to the entrance of the Desert Discovery Mini-Trail. The new donation box makes it easier than ever for visitors to the Park to donate funds that are used to enhance and maintain facilities.

In early July, Site Coordinator Paul Harper installed **data display boxes** on the Mini-Trail. These will be used to describe and show data from long-term monitoring projects that have been taking place at the Nature Park for years. Students will examine and analyze the data and add their own data during field trips to the Nature Park.

We are also excited to announce that we have been working with Ron Nims and Richard Haas from Steve Newby Architects on plans for an **upgraded entrance area and small amphitheater** near the parking lot. We are so grateful for their help and creative ideas that merge natural beauty and function. We will certainly update you with additional information on this project soon!

Many people comment on the beauty and information packed into our interpretive signs at the Park. That is

due to considerable hard work by Program Coordinator Rink Somerday and many others. This spring, we began designing an **interpretive sign** describing a long-term experiment examining the effects of reduced precipitation on creosote bush growth. After much editing and consultation with Dr. Osvaldo Sala from Arizona State University (the researcher whose large-scale experiment served as the model for this smaller scale study at the Nature Park), the sign is almost ready to be manufactured. We use high pressure laminate material with a UV-resistant coating that holds up well in our extreme desert conditions.

Finally, we are also planning a large **restoration project** on the northern side of the Nature Park. Mimicking the Bureau of Land Management's Restore New Mexico Project, we will remove shrubs from 6 acres of the Park. Students will then help us monitor changes in plant and arthropod diversity over time in these plots and in control plots. The project plan is almost complete, and we have applied for funding to begin the project in 2012.

If you would like to be part of the action and help improve the Nature Park, please join us on Saturday, August 13 for a trail work day. Drop by anytime between 8AM and noon to help with trail maintenance and other projects. This is YOUR Nature Park, and we are so grateful for your support!



Barrel cactus (*Ferocactus wislizenii*)



New data display cases highlight student research projects at the Nature Park.



All improvement projects at the Chihuahuan Desert Nature Park enhance the experience for visitors, including approximately 3,000 students who attend field trips to the Park each year.

GEN M (continued from page 1)

- Court Youth Center / AmeriCorps - staff taught all art projects and received training in science activities. This was the site of the summer program.
- Boys & Girls Club - Staff taught all science activities.
- Big Brothers Big Sisters - Coordinated a booth at a community event highlighting the students' science and art work.
- Community Foundation of Southern New Mexico - Served as fiscal agent and coordinated project evaluation.

During the Institute, students participated in hands-on science activities to learn about weather, soil,

plants, and animals of the desert. AmeriCorps artists then developed and set-up art projects that correlated with each science activity. The art was as diverse as the science, with students doing projects ranging from watercolor paintings to theater productions to poetry.

By the end of the two-week Institute, students' perceptions of science and scientists changed dramatically. When asked what they now pictured when they thought of a scientist, students said:

"Anybody with an education."
 "Me!"
 "All of us."

We couldn't have said it better ourselves!



Clockwise from left: Desert wall art; planting seedlings in different soils; radish seedlings after 7 days. Photos by Lulu Wang and Shakera Crawley.

Education Programs

YOUR donations brought the wonder of science to 7,753 K-12 students so far in 2011. On behalf of these students, thank you for your support!



- 1 Apr Tombaugh Elem. – life cycles & scientific process
- 4 Apr Sunrise Elem. – scientific process
- 4 Apr Tombaugh Elem. – enrichment: states of matter
- 4 Apr Camino Real MS – phenology
- 5 Apr Camino Real MS – phenology
- 5 Apr Desert Dawber Garden Club – native plants
- 5 Apr Tombaugh Elem. – scientific process
- 6 Apr Dona Ana Elem. – soil
- 7 Apr Sunrise Elem. – scientific process
- 7 Apr Hermosa Heights Elem. – Earth movers
- 7 Apr Desert Hills Elem. – Science Night
- 8 Apr Sierra MS – field trip
- 11 Apr Tombaugh Elem. – enrichment
- 12 Apr East Picacho Elem. – habitat stats
- 13 Apr Alameda Elem. – field trip
- 15 Apr Kiwanis Club – Asombro Institute
- 18 Apr Tombaugh Elem. – senses part 1
- 19 Apr Tombaugh Elem. – arthropod id
- 21 Apr Torres Elem. (Deming) – field trip

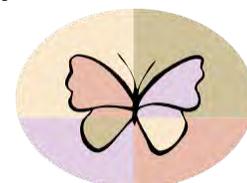
- 25 Apr Tombaugh Elem. – gravity
- 26 Apr Hillrise Elem. – Earth movers
- 27 Apr Las Cruces Catholic – habitat stats
- 27 Apr Fairacres Elem. – Ag Day
- 28 Apr Central Elem. – soil
- 29 Apr Monte Vista Elem. – Desert Day
- 30 Apr Earth Day Festival in Alamogordo – see it little, see it big
- 2 May Monte Vista Elem. – field trip
- 3 May Sierra MS – biodiversity
- 4 May Las Cruces Catholic – rock and mineral identification
- 6 May Conlee Elem. – field trip
- 9 May East Picacho Elem. – arthropod id
- 10 May Vista MS – field trip
- 11 May Farmer's market – Asombro Institute
- 11 May Sonoma Elem. – science fair judging
- 12 May Big Brothers Big Sisters – arthropod identification
- 13 May Jornada Elem. – Earth movers
- 17 May Radford (El Paso) – field trip
- 18 May Tombaugh Elem. – animal adaptations
- 19 May Tombaugh Elem. – field trip
- 20 May Mayfield HS – science fair judging
- 3 June Sunset walk at the Nature Park
- 4 June El Paso Library - animal adaptations
- 15 June El Paso Library - arthropod identification
- 15 June El Paso Library - I'm A Scientist, Too
- 15 June El Paso Library - Earth movers
- 18 June El Paso Library - arthropod identification
- 18 June El Paso Library - animal adaptations
- 24 June NMSU PREP - field trip
- 25 June El Paso Library - Earth movers
- 29 June El Paso Library - Earth movers
- 29 June Friends of Rockhound State Park – Chihuahuan desert wildlife

Butterfly Flutterby August 20; 9AM - Noon

It's back! The Asombro Institute's popular Butterfly Flutterby flutters back to the Chihuahuan Desert Nature Park on Saturday August 20 from 9AM - noon. \$2 entrance fee includes access to all activities.

- This 9th annual event will feature a few favorite stations as well as many new features to delight butterfly lovers of all ages, including:
- Steven J. Cary, author of Butterfly Landscapes of New Mexico, will travel from northern NM to talk butterflies and autograph his book.
 - Wheel of Butterfly Fortune allows participants to test their knowledge of butterflies and learn fascinating facts.
 - Butterfly Gardening station will highlight the best native plants for attracting butterflies to your own yard.
 - New art stations allow kids of all ages to create butterfly antennae and a painting describing the butterfly life cycle.

Some of the most popular stations from previous events will also be on hand, including displays of butterflies from around the world, face painting, and the sponge toss. Don't miss the fun and learning at the Nature Park!





Asombro Institute for Science Education
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YES! I want to support the Asombro Institute for Science Education's efforts to increase scientific literacy by fostering an understanding of the Chihuahuan Desert. All donations are welcome. Please sign me up in the following category:

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Many Thanks

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Chihuahuan Desert Nature Park

Open Tuesday - Saturday, 7:00 AM - 5:00 PM

- From I-25 in Las Cruces, head east on Highway 70.
- Take the Mesa Grande Drive exit (at Oñate High School).
- Make a U-turn under the highway to head west. After the U-turn, stay in the right lane.
- Turn right (north) on Jornada Road.
- Follow Jornada Road north for 6.5 miles. After approximately 1.5 miles, the road is unpaved.
- Turn left at the Chihuahuan Desert Nature Park sign.
- Follow the entrance road to the parking area and trailhead.

