



**Sevilleta Long Term Ecological Research Project
November 10-13, 2005 – New Mexico**

FIELD TRIP REPORT

Field Trip Overview

The Ecological Society of America's SEEDS (Strategies for Ecology Education, Development and Sustainability) program sponsored a Student Field Trip from November 10-13, 2005 to the Sevilleta Long Term Ecological Research (LTER) Project. Attendees included twenty-five students from sixteen schools across the country, four SEEDS Chapter faculty, and two SEEDS staff from the Ecological Society of America (ESA). A list of attendees can be found in Appendix A.

The primary goals of the field trip were to further students' knowledge about the field of ecology; provide students with an overview of several interesting and ecological important sites; enable students to build a network among professionals and students sharing the same interests; expose students to the practical applications of ecology; and build student awareness of various ecological internships, degrees, and career options. An online photo album of the field trip can be found at <http://www.esa.org/seeds/albumPhotos/>.

The Sevilleta LTER is part of the National Science Foundation's LTER Network established in 1988 to study ecological systems over long intervals. The Sevilleta LTER, which has the primary research goal of understanding how abiotic drivers and constraints affect dynamics and stability in an aridland ecosystem, is managed by the Department of Biology, University of New Mexico (UNM) in cooperation with the U.S. Department of Interior Fish & Wildlife Service. Funds from the NSF LTER Program and the Andrew W. Mellon Foundation helped support travel and other costs during the field trip.

Ecologists from the University of New Mexico, Sevilleta LTER, and Arizona State University exposed students to research being conducted at several sites in New Mexico including the Chihuahuan Desert grasslands and shrublands of the south, the Great Plains grasslands to the north, Piñon-Juniper woodlands in the upper elevations of the neighboring mountains, Colorado Plateau shrub-steppe to the west, and riparian vegetation along the middle Rio Grande Valley. A full itinerary of the field trip can be found in Appendix B. A complete list of volunteers who participated in the field trip can be found in Appendix C.

Students were asked to keep journals on carbonless xerographic paper to record each day's activities and their own personal reflections. At the end of the field trip, students kept a copy of their notes and submitted a copy to the faculty team leaders and ESA staff. In addition to individual notes, rotating groups of six students were responsible for writing this report, which was then edited by SEEDS staff. The sketches are also from the group reports. Therefore, the report reflects the voices of the diverse students who attended this trip.

Thursday November 10, 2005

Team 1 Students: Shawnte Greenway, Charissa Jones, Angela Loud Bear, Steven Wysinger, Shannan White, Loren Reinhardt
Team Leader: Sashi Sabaratnam

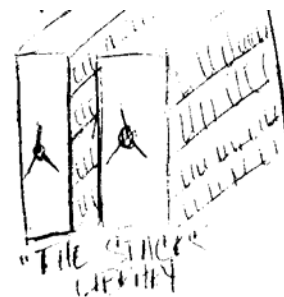
The field trip began when students arrived at the Quality Inn and Suites for a field trip introduction and orientation. Participants were given more details about the SEEDS program by SEEDS staff Jeramie Strickland and Melissa Armstrong. Dr. Nancy Grimm, the ESA President, and Dr. Scott Collins of the University of New Mexico provided us with an introduction to New Mexico and an overview of the weekend.

Friday November 11, 2005

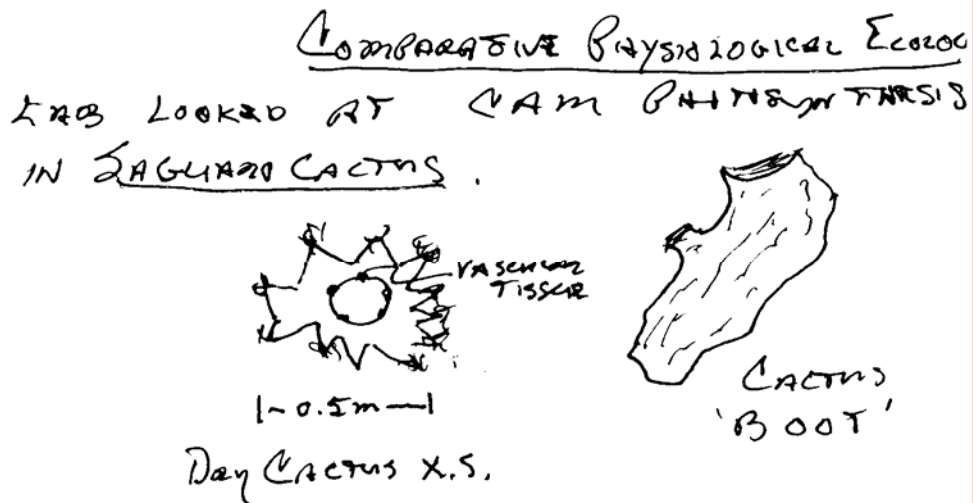
Team 2 Students: Marla Collins, Michaele Lindeman, Toni-Ann Hylton, Joshua Booker, Cheyenne Garcia, LaKenya McNear
Team Leader: Joseph Fail

Today we toured the biological facilities of the University of New Mexico (UNM). Our first stop was at the Museum of Southwestern Biology where we were treated to a glimpse of the museum's specimen room guided by Dr. Tom Turner, Curator of the Division of Fisheries, and Dr. Joe Cook, Curator of Mammals. It was interesting to find that the museum served as a library of rare books, and that they preserved biological records of species during many different periods of time. These records can be used as a teaching tool for students of all ages. They also act as a repository of baseline data for future research. Frozen soft tissue samples were also preserved at the facility and can be used to track heavy metal accumulations through time.

Next we toured the Microbial Ecology Laboratory of Ph.D. candidate Andrea Porrás-Alfaro. We learned that the diversity of arid environments is much higher than expected due to discoveries of a wide range of fungi that was previously unknown. A demonstration was performed using an ultrasound as a way of examining physiological parameters. SEEDS participant LaKenya McNear of Livingstone College volunteered her neck for the demonstration. Andrea also pointed out that in graduate



school students have more freedom to study what they want rather than what is assigned.



The next lab that we visited was the Plant Ecology Lab. Aspects of photosynthesis were being measured using a RGA Moisture-Gas Analysis to measure water and carbon gain. We found it interesting to learn that they created their own instruments to measure their own experiments. It was mentioned that a current hot research topic is aquaporins (water channels in which water crosses cell membranes) because of their functional importance of moving water into the cacti.

We also visited Dr. David Hanson's Plant Physiology Lab, which focused on the mechanisms of photosynthesis, especially very old photosynthetic systems of cyanobacteria. Dr. Hanson's research is centered on the evolution of photosynthetic functions with an emphasis on the carbon reactions.

Dr. Christina Vesbach, Assistant Professor of Biology, gave us a tour and presentation of her Microbial Ecology Lab. Dr. Vesbach is studying microbes in extreme environments. This research is important because it demonstrates the limits of life. Afterwards, we heard Dr. Robert Sinsabaugh, Associate Professor of Biology, speak about the impacts of human inputs of nitrogen (N) on ecosystems and their effects on decomposition rates.

UNM graduate students Jessica Snider and Armand Dichosa spoke about their cave ecosystem research interests and projects. Jessica and Armand spoke about the human impacts on these cave ecosystems including prehistoric art left by early Native Americans and how it may be affected by modern exploration of these caves. It was also mentioned that these caves modeled a system for life on Mars. As a part of extreme ecosystems the caves' ferro magnesium bacteria are chemoautotrophic organisms which are very primitive. Dr. John Craig, Biology Annex Analytical Labs Manager, analyzes all of the soil samples from the Sevillaleta.

After touring the UNM campus, we then ventured to Old Town Albuquerque where we had lunch and explored local artisans' wares, and witnessed a peaceful antiwar demonstration. We stayed in Old Town for 2 hours and departed shortly afterwards to

head to the Sevilleta Research Field Station in Socorro, New Mexico. Participants explored the surrounding hillsides, after which we adjourned for dinner. Before dinner we received an overview of the Sevilleta and Central Arizona Phoenix Long Term Ecological Research (LTER) sites. Both sites are studying nitrogen cycles and both projects are looking at net primary production. In addition, both sites are arid ecosystems that rely on abiotic drivers such as climate, fire, and soils.

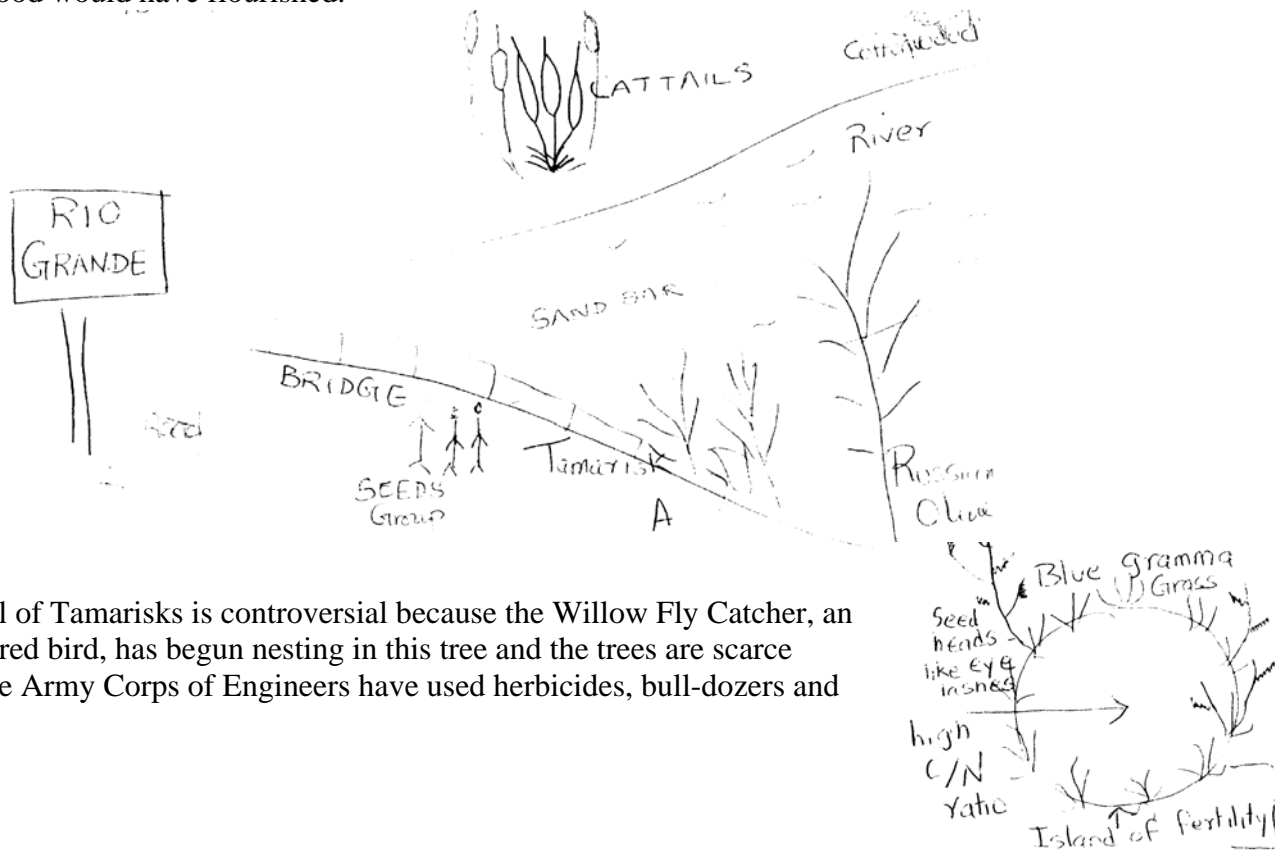
Overall the day was enjoyable and filled with fascinating information. It would have been more enlightening if we had a little more time to process the information. If the time frames were a little more flexible and open, the day would have been flawless.

Saturday November 12, 2005

Morning

Team 1 Students: Shawnte Greenway, Charissa Jones, Angela Loud Bear, Steven Wysinger, Shannan White, Loren Reinhardt
Team Leader: Sashi Sabaratnam

It was a cool Saturday morning. The sun was shining. We were at the Rio Grande learning more about riparian vegetation. The structure of the river has been altered by human control of water flow. The river flow has been impacted by various uses and by different communities. In 2003, there was an arson fire that destroyed the 2000 acres of riparian vegetation. During succession following this, salt cedar recovered faster than the cottonwood. This is attributed to the deep tap roots of the salt cedar that reached the water table and led to a faster recovery than the native cottonwood. If this area was flooded as it historically had been, the salt cedar tree would have died while the cottonwood would have flourished.



Removal of Tamarisks is controversial because the Willow Fly Catcher, an endangered bird, has begun nesting in this tree and the trees are scarce now. The Army Corps of Engineers have used herbicides, bull-dozers and

goats to eradicate this invasive species from this ecosystem. The most practical method has been the use of bull-dozers.

Our next stop was Blue Gamma grasslands. One research project at this location is to look at the influence of grazing on plant communities. Three communities are being studied: (1) communities currently being grazed; (2) communities that were grazed but now are fenced off; and, (3) communities that have not been grazed since 1973. Another research project that is conducted at this site is fertilizing plots with 10 grams of $\text{NH}_4\text{NO}_3/\text{m}^2/\text{yr}$ versus no fertilizer over a 10-year period. This study has led to the discovery that fungi have a greater role than bacteria in decomposition in desert systems. Rhizotrons help simplify identical soil preparation and this allows researchers to learn more about long-term changes in the soil.

Yucca is a common plant species in the community. The roots of Yucca are edible. Ephedra, which is a medicinal plant with flexible needle-like leaves, also grow in this area. A third species, Black Gamma grass, has alternate seed heads; seed heads are found on mature plants in clusters of seeds at the end of a growing season. This site also contained Cholla cactus and paper flowers, which are predominant members of the vegetation. Some lizards were encountered along with fire ants in this area. We saw a jack rabbit during our voyage as well.

The last stop before lunch was at the Meteorology Center where we saw a tipping bucket rain gauge, dry and wet deposition buckets, a bulk precipitation catcher, and an anemometer. Each of these instruments are solar-powered. A new research project that will soon start is the use of 'bed frames' to measure changes in H_2O and N deposition. This project is important because it mimics global changes. Overall we learned that humans have made serious impacts to the environment and we believe that by understanding the changes caused by humans in the long term, we can better protect the ecosystem.

Afternoon

Students: Fabian Faulknor, Pavithra Ramani, Fernanda De La Cerda, Hector Estrada-Nieves, Andrea Rivera, Nevarro Korina
Team Leader: Michael Collins

After lunch we headed to see the Sevilleta LTER prairie dog restoration project. On the way there we saw the mountain range Los Piños, which is primarily composed of granite and is about 1.2 billion years old. The mountain range is separated by a normal fault and streaked sedimentary formation that is about 270 million years old. The younger formation corresponds with the Triassic and the Permian periods. This is important because the substrate was eroded from the mountain range and the prairie dog location

was chosen for several reasons. First, it is located within the LTER zonation. Secondly, the site was previously known to have an abundant population of prairie dogs prior to



eradication. Also, the area is located within boundary layers and the mountain is far away from ranchers who dislike prairie dogs.

Over 90% of prairie dogs have been decimated, and they are now considered an endangered species. Therefore, an experiment was set up to relocate about 327 prairie dogs to this site. 90 artificial burrows were created throughout the site. A cage was placed over the burrows for about a week and they were fed corn. After a week, the cages were removed and the prairie dogs were free to stay, go to a neighboring burrow, or make their own burrow. Many of the prairie dogs continued to reside in their artificial burrow.

At this site, they are also studying shrub growth. Understanding the recovery rate of the shrubs is important within different environmental conditions such as global warming. Global warming and El Niño events are predicted to cause extreme environments in the future. Therefore, a study was conducted to experimentally introduce drought by creating stressed scenarios. Rainfall was regulated and reduced by 50%. This was done by covering the ground so precipitation did not reach the ground. The experiment was divided into three treatments. The next experiment will involve setting up sprinklers to introduce rainfall to examine the effect of an extreme rainfall event.

During our way back to the Sevilleta LTER we were fortunate to see a herd of *Antilocapra americana* or prong horn antelope.

Saturday evening

Students: Jallah Rouse, Kimberly Komatsu, Aja Reyes, Khangl Le, Gamola Fortenberry, Michelle Scott,
Team Leader: Stacey Mortensen

Saturday evening there was a panel discussion following dinner with five faculty, one undergraduate student and three graduate students. Panelists were asked: What happened to help you get to where you are now and what advice do you have for the students?

- **Christina Vesbach**, Assistant Professor, University of New Mexico
Dr. Vesbach was told in the beginning of her educational pursuits that she could not do it. She also had many doubts of her own, but through persistence, flexibility, and being able to network, she was able to succeed.
- **Nancy Grimm**, ESA President, Professor, Arizona State University
Dr. Grimm reiterated the importance of being involved with a professional society and being a female in a male-dominated field. She said we should not have to be forced to choose between a family and a career. As the ESA president, she discussed the need for bringing more minorities to ESA and minority recruitment is one her priorities as ESA president. Dr. Grimm feels that ESA means friends and sharing ideas and insights.
- **Bill Dunn**, Ph.D. student, University of New Mexico
Bill discussed the importance of being able to speak and write well in the scientific field. As a non-traditional student, he believes that communication is the key to maintaining a successful family relationship and professional career.
- **Melanie Moses**, Postdoctoral Researcher, University of New Mexico

Dr. Moses never took a science course in her undergraduate career, but she always had an interest in science. She chose a field that she was good in rather than choosing a field that she loved. She loves biology because it is very interdisciplinary. Dr. Moses also advised students to find funding before enrolling into graduate school.

- **Julianna Medeiros**, Ph.D. student, University of New Mexico
Julianne started college as a Creative Writing major, but then decided to take some time off and become a cleaning lady. Her son inspired her to go back to school because it is never too late to continue with your educational pursuits. She said that students should enjoy graduate school.
- **Jennifer Johnson**, Research Scientist, U.S. Fish and Wildlife Service
Ms. Johnson is a self-proclaimed “Jill of all Trades.” She also switched from another path to ecology. Jennifer had many women role models and she encourages students to look around themselves and find role models.
- **Jason Thomas**, Ph.D. student, University of New Mexico
Jason feels that ecology is no longer just observational, it is also very interdisciplinary. He plans to combine genomics with ecology and the study the relationships between them.
- **Paulette Ford**, Research Ecologist, Rocky Mountain Forest & Range Exp. Station
Ecology has afforded Dr. Ford the opportunity to have fun doing her job and make money at the same time. She advised students to find mentors because mentors can help discover potential in the students.
- **Jolene Trujillo**, Undergraduate student, University of New Mexico
Jolene was a peer to the students in regards to her educational status and age. Jolene is trying to decide what she would like to do for a career just as many of the students.

The general themes for all of the panelists were hardships that students must overcome, flexibility to discover your passion, and to have fun while you are going through the process. Most of the panelists were non-traditional students who spoke about integrating science; for example, the idea of fusing genomics with ecology or computer science was presented. Through integration, Nancy Grimm said “we should build sustainability for the future.” The panelists also strongly emphasized the importance of networking in this field.

SEEDS students and team leaders expressed their appreciation for the SEEDS program and the panelists following the discussion. Many students felt inspired and motivated by this opportunity and experience. Others felt that this field trip exposure gave them a clearer direction for their future.

Sunday November 13, 2005

Students: Jallah Rouse, Kimberly Komatsu, Aja Reyes, Khangl Le, Gamola Fortenberry, Michelle Scott,
Team Leader: Stacey Mortensen

It was very cold. Even though there were no lights, all we could see was the twinkling of the stars and the condensation of our breaths. We arrived at the Bosque Del Apache

reserve just before sunrise at 6:00 a.m. Looking out over the marsh, all that we could see were dark patches in the marsh. As the sun came out and everything began to warm up, suddenly hundreds of ducks and snow geese flew overhead. Other types of birds included: sandhill cranes, northern shovelers, and eagles. We spoke with a few wildlife



photographers. The photographers revealed to us that the marsh levels were lower than usual.

The synchronization of the take off confirmed our acquired knowledge and sparked new interests and questions which include:

1. How could global climate change affect the cycle of these migrations and are these birds faced with more predators due to changes in migration?
2. Do the birds contribute or take nutrients away from the environment?

We arrived at the Bosque Del Apache tour center with a volunteer tour guide, Bree. The refuge was established in 1939 and contains about 57,000 acres with man-made channels, which must be drained every 5 years in order to burn cattails because they dominate and out-compete the other plants for nutrients. The channels were also made to mimic the Rio Grande. Biologists at the refuge keep track of salinity and nutrient growth. The main purpose of the refuge is to protect those species of plants and animals that are vanishing. In 1939, there were approximately 12 cranes in the area. Currently, there are more than 12,000 cranes that utilize the refuge. The refuge provides a home for over 376 species each year. The main source of funding for the refuge comes through grants.

The cattails and salt cedar are the most prevalent plant species in the area. They do not provide a great habitat for water fowl. Herbicides are sometimes used to control the salt cedar but bulldozers are used more often. It takes about 5 years to completely remove a monoculture of salt cedar. Burning is the method that is often using to control the cattails.

Over the past 5 years, researchers and scientists have been trying to reintroduce cottonwoods. Cottonwoods are planted twenty-two feet apart and other invasive trees are removed with bulldozers.

Other animals that were sighted during the tour included bald eagles, coyotes, great blue herons, European pheasants, pintail ducks, falcons, and mule deer.



In conclusion, all participants loved the Bosque Del Apache tour and the field trip overall. Many students expressed their interests in returning to New Mexico in the future. Participants also agreed to take the ideas learned from the field trip and take it back to their home institution and community.

Pre-post Field Trip Evaluations

Before and after the trip, students were asked to rate their understanding of and exposure to ecology, in addition to how likely they were to pursue a career in the field on a scale of one to five (5 highest, 1 lowest). The average three scores in each of these three categories increased as a result of participating in the field trip. The greatest increase in rating was seen in the students' exposure to ecology and understanding of ecology.

Figure 1. Mean student rankings before and after the trip.

Category	Pre	Post
Understanding of ecology	3.68	4
Exposure to ecology	3.77	4.21
Likelihood to pursue a career in ecology	4.61	4.56

After the field trip, students were asked to rates various components of the field trip. The panel discussion was rated the highest (4.88), followed by the Bosque del Apache Bird Wildlife Refuge tour (4.45), the Museum of Southwestern Biology tour (4.39), and the Sevilleta Field Station overview/LTER presentation (4.26).

Students described the best aspects of the field trip as:

- Tour of the University of New Mexico and the Sevilleta research sites
- Hiking
- Panel discussion and the advice that panelists gave

- Choosing a field trip site that was far away from urbanization
- Socializing and networking with the next generation of minority ecologists
- Learning about new ecological aspects in desert ecosystems
- Free time and exploration time
- The field station (great hospitality, food, housing)
- Massive sunrise bird take off and tour of the refuge and witnessing animal wildlife
- Cave research presentations
- Informal gatherings and discussions
- Seeing coyotes at the refuge because they are carnivores
- Journal writing and group writing, which allowed us to share new ideas and insights
- Touring the Museum of Southwestern Biology
- Interacting with the ESA President, Dr. Nancy Grimm
- Meeting new people with similar interests and being able to expand my knowledge on ecological principles
- Meeting professionals with different career and research interests
- Visiting UNM, which is a Research 1 institution

When students were asked would they would improve future field trips, the students mentioned:

- Have guests from other areas and not just academics
- Longer field trips
- Competitions between groups to see who had the best journal to encourage excellent journal writing
- Hands-on research involvement and data collecting with the students so that they can retain more information that is presented
- More time for journal writing and team meeting for the group reports
- More flexibility with time “not so pressed for time”
- Less structured note taking and journal writing
- More time in between lab tours because too many can become overwhelming
- Create smaller groups so that students can learn more
- More group discussions about the cultural history and their methods for sustaining the environment

Appendix A

FIELD TRIP ATTENDEES

Name	School	Email
<i>Students</i>		
Joshua Booker	University of Michigan	bookerj@umich.edu
Marla Collins	United Tribes Technical College	marlacollins2001@yahoo.com
Fernanda De La Cerda	University of Texas at El Paso	fdelacerda@utep.edu
Hector Estrada-Nieves	University of Puerto Rico at Humacao	climbhle@hotmail.com
Fabian Faulknor	Johnson C. Smith University	ffaulknor@jcsu.edu
Gamola Fortenberry	Florida A&M University	gamolafortenberry@hotmail.com
Cheyenne Garcia	Western Washington University	ravensruin@hotmail.com
Shawnte Greenway	Northern Arizona University	slg65@dana.ucc.nau.edu
Toni-Ann Hylton	Florida A&M University	toniann1hylton@fam.u.edu
Charissa Jones	New College of Florida	charzy.jones@gmail.com
Kimberly Komatsu	University of California, Irvine	kkomatsu@uci.edu
Khangl Le	University of Hawaii at Manoa	khangl@hawaii.edu
Michael Lindeman	United Tribes Technical College	mickilindeman@yahoo.com
Angela Loud Bear	Mount Mary College	gloudbear@yahoo.com
LaKenya McNear	Livingstone College	ktmcnear@hotmail.com
Korina Navarro	University of Texas at El Paso	navarrok@utep.edu
Pavithra Ramani	University of Virginia	pr8m@virginia.edu
Jorge Ramos	University of Texas at El Paso	geckor21@gmail.com
Loren Reinhardt	Virginia Polytechnic and State University	reinharn@vt.edu
Aja Reyes	University of Hawaii at Manoa	areyes@hawaii.edu
Andrea Rivera	University of Hawaii at Manoa	andrear@hawaii.edu
Jallah Rouse	Johnson C. Smith University	jjrouse@jcsu.edu
Michelle Scott	San Diego City College	michiscott61@yahoo.com
Shannan White	Johnson C. Smith University	swhite@jcsu.edu
Steven Wysinger	Tuskegee University	flumenmortis1@msn.com
<i>Faculty and Staff</i>		
Jeramie Strickland	Ecological Society of America SEEDS Program	jeramie@esa.org
Melissa Armstrong	Ecological Society of America SEEDS Program	melissa@esa.org
Mike Collins	United Tribes Technical College	mcollins@uttc.edu
Joe Fail, Jr.	Johnson C. Smith University	jfail@jcsu.edu
Stacey Mortensen	Fort Berthold Community College	smorte@fbcc.bia.edu
Sashi Sabaratnam	Livingstone College	ssabara@livingstone.edu

Appendix B

FIELD TRIP ITINERARY

Thursday, November 10

- 1:00-4:00 pm Arrive at the Albuquerque International Airport, claim luggage, and meet Jeramie Strickland at the baggage claim
- Comfort Inn & Suites shuttle to the Hotel
- 5:00-7:00 pm Field trip orientation and introduction in the meeting room at the Quality Inn & Suites Hotel with SEEDS staff, Dr. Nancy Grimm, ESA President, and Dr. Scott Collins, UNM ecologist.

Friday November 11, 2005

- 7:00-8:00 am Deluxe continental breakfast at Quality Inn & Suites Hotel.
- 8:15 am Coach departs the Quality Inn & Suites Hotel for travel to UNM campus
- 8:30-9:15 am Tour the Museum of Southwestern Biology
- 9:20-9:50 am Tour the Molecular Biology Research Labs
- 9:55-10:25 am Tour the Animal Physiological Ecology Labs
- 10:30-11:00 am Tour the Plant Ecology Labs
- 11:00-11:30am Tour the Microbial Ecology Labs
- 11:30am-12:15pm Tour LTER Research Labs, Aquatic Ecology Research Labs, and the Biology Annex Analytical Labs
- 12:30 pm Depart UNM Campus and travel to Old Town ABQ for shopping/sightseeing/lunch etc.
- 3:30 pm Depart downtown ABQ for travel to the Sevilleta Field Station
- 6:00-7:00 pm Dinner at the Field Station.
- 7:30-9:00 pm Group gathering at the Sevilleta Field Station for a brief overview of Sevilleta LTER research by Dr. Scott Collins and Dr. Nancy Grimm, followed by open discussion.

Saturday November 12, 2005

- 8:00-9:00 am Breakfast at the Field Station
- 9:00 am Depart the Sevilleta Field Station and for an all day field trip to research sites at the Sevilleta
- 4:00 pm Depart Sevilleta research sites and return to the Sevilleta Field Station
- 6:00 pm Dinner at the Field Station, followed a panel discussion and an open group discussion with other scientists to discuss ecology, career paths, obstacles, interests, life, etc.

Sunday November 13, 2005

- 5:00 am Depart Sevilleta Field Station and travel for a field trip to Bosque Bird Wildlife Refuge
- 7:00 am Met tour guide "Bree" at the visitor center of the Bosque del Apache for a tour of the refuge. The tour and presentation will focused on management, salt cedar, restoration and birds.
- 9:00 am Breakfast at the Field Station.
- 10:00 am Depart Sevilleta Field Station for the ABQ airport.
- 12:00 pm Arrive at ABQ airport for departure

Appendix C

FIELD TRIP PARTICIPANTS

Thursday, November 10
Orientation and Introduction

Melissa Armstrong

SEEDS Program Coordinator
Ecological Society of America
3450 N. Jamison Blvd.
Flagstaff, AZ 86004
928-214-7301
melissa@esa.org

Scott L. Collins, Ph.D.

Professor/Lead Principal Investigator
Department of Biology
Castetter Hall / Biology Annex 101A
University of New Mexico / Sevilleta LTER
Albuquerque, NM 87131
505-277-6303
scollins@sevilleta.unm.edu

Nancy B. Grimm, Ph.D.

President, Ecological Society of America
Professor of Ecology, Evolution & Environmental Science
Principal Investigator and Co-Director, CAP LTER
School of Life Sciences
International Institute for Sustainability
Box 874501
Arizona State University
Tempe, AZ 85287-4501
480-965-4735
nbgrimm@asu.edu

Jeramie Strickland

SEEDS Student Coordinator
Ecological Society of America
1400 Spring Street, Suite 330
Silver Spring, MD 20910
301-588-3873 ext. 313
jeramie@esa.org

Friday, November 11
UNM Campus Visit and Lab Tours

John A. Craig

Laboratory Manager
Biology Annex Analytical Labs
Department of Biology
167 Castetter Hall
University of New Mexico
Albuquerque, NM 87131-1091
505-277-2715
jcraig@sevilleta.unm.edu

Armand Dichosa

Graduate Student
University of New Mexico Biology Department
MSC 032020
1 University of New Mexico
Albuquerque, New Mexico 87131
armand@unm.edu

Joslyn Garcia-Bustamante

Administrative Assistant, Ph.D. Candidate
Department of Biology
167 Castetter Hall
University of New Mexico / Sevilleta LTER
Albuquerque, NM 87131-1091
505-277-6328
jgarcia@sevilleta.unm.edu
jozg@unm.edu

Joseph Cook, Ph.D.

Professor of Biology & Curator of Mammals
Museum of Southwestern Biology
Department of Biology
MSC03 2020
University of New Mexico
Albuquerque, NM 87131-0001
505-277-1358
cookjose@unm.edu

David Hanson, Ph.D.

Assistant Professor
Biology Department
Castetter Hall Rm 182
University of New Mexico
Albuquerque, NM 87131

505-277-6681
dthanson@unm.edu

Juliana Medeiros

Ph.D. Candidate
Department of Biology
238 Marron Hall
University of New Mexico
Albuquerque, NM 87131
505-277-0871
juliana2@unm.edu

Andrea Porrás-Alfaro

Graduate Student
Department of Biology
MSC03 2020
University of New Mexico
Albuquerque, NM 87131-0001
505-277-2388
aporras@unm.edu

Robert Sinsabaugh, Ph.D.

Associate Professor
Department of Biology
167A Castetter Hall
University of New Mexico
Albuquerque, NM 87131
505-277-3407
rlsinsab@unm.edu

Jessica Snider

Graduate Student
3833 Montgomery NE #534
Albuquerque, NM 87109
505-277-4969
sniderj@unm.edu

Tom Turner, Ph.D.

Associate Professor and Curator of Division of Fisheries
The Museum of Southwestern Biology
Castetter Hall 278
University of New Mexico
505-277-7541
turnert@unm.edu

Tina Vesbach, Ph.D.

Assistant Professor

Department of Biology

167-A Castetter Hall

University of New Mexico

Albuquerque, NM 87131

505-277-3411

cvesbach@unm.edu

Sevilleta Field Station and LTER Overview

Scott Collins (information mentioned above)

Nancy Grimm (information mentioned above)

Saturday, November 12

All day field trip to Sevilleta Research Sites

Scott Collins (information mentioned above)

Nancy Grimm (information mentioned above)

Panel Discussion

Bill Dunn

Biology Graduate Student

Department of Biology

University of New Mexico

Albuquerque, NM 87131

505-277-3431

bdunn@unm.edu

Paulette Ford, Ph.D.

Research Ecologist

Rocky Mountain Forest & Range Experiment Station

2500 S. Pine Knoll Dr.

Flagstaff, AZ 86001

520-556-2001

plford@fs.fed.us

Joslyn Garcia-Bustamante (information mentioned above)

Nancy Grimm (information mentioned above)

Jennifer Johnson

Research Scientist

U.S. Fish and Wildlife Service
Sevilleta National Wildlife Refuge
P.O. Box 1248
Socorro, NM 87801
505-864-1226
jjohnson@sevilleta.unm.edu

Melanie Moses, Ph.D.

Postdoctoral Researcher

Department of Biology
University of New Mexico
Albuquerque, NM 87131
505-277-9337
melaniem@unm.edu

Don Natvig, Ph.D.

Director of Sevilleta Field Research Station, Professor

Department of Biology
University of New Mexico
Albuquerque, NM 87131
505-277-5977
dnatvig@unm.edu

Andrea Porrás-Alfaro (information mentioned above)

Jason Thomas

Graduate Student

Department of Biology
Rm. 206B Castetter Hall
MSC03 2020
University of New Mexico
Albuquerque, NM 87131
Phone number?
jaseak@unm.edu

Jolene Trujillo

Undergraduate Student/SEEDS Chapter Representative

15 Clarence's Rd.
Los Lunas, NM 87031
505-854-0790
jet15@unm.edu

Sunday, November 13
Tour of the Bosque del Apache

Carol Bree

Volunteer

Bosque del Apache Wildlife Refuge

NWR

P.O. Box 1246

Socorro, NM 87801

katbidto@yahoo.com