



The Ecological Society of America's SEEDS Program



SEEDS Field Trip

Jornada Basin LTER Site, New Mexico

October 6th-9th, 2011

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Introduction

The 2011 SEEDS Fall Field Trip took place from October 6 – 9, 2011 in south central New Mexico at the Jornada Experimental Range LTER. The SEEDS program supported 22 undergraduate students from 18 colleges and universities to participate in the fall field trip. The field trip theme was “making science accessible and relevant to society”. The group learned about the unique history of the Jornada LTER with both academic and government interests, which makes the focus of their research applied and connective in nature, informing global arid land management. An agenda of the field trip can be found in Appendix A. The complete list of field trip participants, including mentors and volunteers can be found in Appendix B.

Students prepared for the field trip by doing the background readings and getting to know one another on the SEEDSNet Jornada “group” <http://esaseeds.ning.com/group/jornadafieldtripgroup>. During the field trip, students worked in one of four groups to prepare a written summary and presentation of the portion of the field trip to which they were assigned. These summaries were combined to create the field trip report, found below.



Unique aspects of this field trip included an exposure to a wide variety of types of institutions (academic, federal agency, nonprofit organization), the housing accommodations in our luxury “tent city”, the hospitality of our hosts including the home cooked meals, and the hands on experience with heavy equipment. The field trip was a great success, as indicated in the group energy during the field trip, and in the follow up evaluations, found in Appendix C.

Group 1: Jornada History

Leiloni Begaye (leader), Landon Collins, Victor de Jesus-Reyes, Monica Erviti, Michael Hanft, Ezra Mutai

We headed out after our orientation to the Jornada site in two vans on sandy roads. Our first stop was at an ancient river bed. There we caught sight of our first oryx, the African antelope that was introduced to southern New Mexico a long time ago. From the presentation of Dr. Kris Havstad we created a timeline including the following important dates and events:

- 1.5 million years ago – Rio Grande deposits pumice rocks in the sediment of the future Jornada basin Long Term Ecological Research (LTER).
- 3000 years ago – Jornada Mogian found villages near the Jornada Basin LTER site.
- 1493 – Columbus brings livestock to America on his second voyage.
- 1500’s – Spanish Settlers bring livestock to southwest
- Early 1600’s – Spanish settlers trade cattle and horses with Native Americans

- 1620's – First reports of overgrazing in southwest
- 1880's – Detroit and Rio Grande Livestock Company has 20000 heads of cattle and horses
- Late 1800's – Railroads increase cattle trade throughout the US
- 1888 – First vegetation map of the Jornada del Muerto shows both grass/shrub species
- 1890's – Drought causes cattle business to bust in southwest
- 1912 – Jornada LTWE founded as part of the USDA (five months after NM statehood)
- 1915 – 2nd Vegetation Map shows 50% grasses and 50% shrubs
- 1950's – Drought drives shrub encroachment
- 1987 – Kris Havstad starts working at Jornada Basin LTER
- 1998 – Most recent vegetation map shows 8% grasses
- 2011 – ESA SEEDS field trip visits Jornada Basin LTER



Next, we had a talk from Dr. Curtis Monger, an expert in pedology. He had three main sections of his talk, using the soil profile to illustrate these points.

1.) Soil is a substrate providing nutrients and water to the plants. Although the soil composition is relatively similar throughout the basin, there is negative heterogeneity because of differences in topography. These differences change the amount of water/wind certain areas receive, creating microclimates that impact vegetative makeup.

2.) Secondly is soil memory which can remember things by erosion, the soil profile is 1.5 million years old. Also this profile has many layers that date back to the ice age over 20,000 years ago. Along the historic river, mammal fossils were discovered as well.

3.) The third and the final soil factor Dr. Monger talked about was carbon. He demonstrated the production of carbon dioxide gas by reacting Hcl with causic rock i.e. calcium carbonate which produces carbon dioxide gas as one of the products. Microorganisms play an important role in combining calcium carbonate plants is one of the sources of carbon. There is more carbon in organic matter as compared to other carbon sources.

Group 2: Debra Peter's Presentation and Career Panel
Ashley DeLeon (leader), James Hunt, Aleah Henderson, Victoria Kahle, Abigail Johnson, Jason Harris,

Intro:

During the 2nd session of Fri Oct. 7 Debra Peters (credentials – USDA etc) who has a research position with the USDA and is an administration figure for the Jornada Basin LTER spoke to us about the vegetation history and expanded upon the desertification process on the Jornada Basin. After lunch in the amphitheatre, located in the Chihuahuan Desert Nature Park, a career panel composed of SEEDS representative Joey Johnson, New Mexico State University professor Heather Throop, SEEDS alumni and second year graduate student at NMSU Brenda Nieto, non-profit director Dr. Stephanie Bestelmeyer, and the aforementioned Debra Peters shared with us their experiences and advice regarding our aspired careers in ecology.

I:

Debra Peters began the session by discussing the general location in which we were in. The grassland plot in which we were located designated the Donna Anna Mountains to the Southwest, the Rio Grande River to the west, Oregon Mountains to the South, the Franklin Mountains to the West. Peters mentioned that the first vegetation map occurred in 1858 at which point the desert was dominated by grasses. In comparison, Peters talked about the vegetation presently; Black gramma, sporabola, aristida, and mesquite plant life. The second map was formed in 1915 where the desert was half shrub could be described as half shrub and half grass. However, in 1998 imagery was used to remap the Jornada Basin and the desert was 8% grassland. For further understanding of the arid location, it was clarified that the shrub dominant shift began 1915, which was catalyzed by the 1950 drought. However, in order to initiate grass restoration the climate would have to abide by certain conditions: 3-5 consecutive wet years. In addition, it is possible that to reach a point where grasses cannot be restored due to respective environmental conditions and ecological processes. Conclusively, Peters ended her discussion with it is important to understand small scale processes so that these concepts can be applied to large scale ecosystems.



II:

A large scale ecosystem, for example, can be the mountains in which the amphitheatre was located. The event that took place within the amphitheatre was the career panel, which was in the structure of a question and answer session. The first question, asked by Victor, was “Describe what you do, how you got there, and what your favorite part of what you do is.” The panelists discussed how they all uniformly expanded their horizons, got involved with various organizations and events, which led them to find their true ecology-related passion. The second question inquired about the skills required for an ecology-related position. The panelists all agreed that networking, effective communication, patience, enthusiasm and diligence were all quintessential attributes and skills to further a career in ecology. The third question asked about any advice to inspire students wishing to pursue a career in ecology. The panelists agreed to starting early, having multiple strengths, to be open to partake in a diverse range of internships and jobs so as to be a well rounded and competitive individual, and to persevere with what you want to do. The fourth question was “How can ecology contribute to make a positive change in the world?” The panelists expounded upon obtaining a better understanding of how the world works through research so as to influence policy, but most importantly expanding outreach and education programs so as to influence the younger generation and construct knowledge of environmental conservation because ultimately they are the future. The fifth question related to the hope for the future of ecology. The panelists agreed upon a better understanding of the world so as to advance ecology, making general citizens aware of ecology so as to influence policy and increase funding, and the restoring the intimate connections and relationships with nature instead of technology with people. Then, the panel had an open discussion and students asked questions relating to graduate school.



Conclusion:

Overall a plethora of information regarding ecology was ascertained by us, the SEEDS students, which is invaluable and will be used to further each of our careers. In addition, we must remember that apart from being scientists we are also citizens of the world, and as citizens we must remember that a “modern society will find no solution to the ecological problem unless it takes a serious look at its lifestyles” - Pope John Paul II.

Group 3: Asombro Institute for Science Education

Joey Johnson (leader), Stacy Ortego, Danielle Perryman, Arjun Potter, Joshua Scholl and Brittany Stallworth

After a scrumptious meal amongst the shadows of mountains that make up the Chihuahuan Desert Nature Park, Dr. Stephanie Bestelmeyer introduced SEEDlings to the Asombro Institute for Science and Education. “Asombro means wonder in Spanish,” announced Dr. Bestelmeyer passionately, “and at the Asombro Institute we do our best to expose K-12 students to hands on experiences of theoretical concepts.”

The Asombro Institute is a non-profit organization dedicated to environmental science education. About 3,000 K-12 students frequent educational programs and field trips organized and executed by the “Wonder” Institute every year! These outreach events provide students with insight to contemporary ecological research being conducted on large scales at the Jornada Basis Long Term Ecological Research Site and re-produced in the Chihuahuan Desert Nature Park by the Asombro team. In addition, the Institute entertains their participants with unique ecology research experiments and small field work stations such as their phenology station. Here participants are provided with a detailed perspective of plant physiology and important physical characteristics that plants transition through as season pass. Students also participate in data collection, which in the case of the phenology station, is related to the national phenology network. This network uses data collected from numerous locations across the nation to assess trends and make important predictions and suggestions to promote environmental sustainability and habitat conservation.

Funding for Asombro’s numerous educational incentives comes from multidisciplinary grants written by the non-profit’s dedicated staff. Currently, the Asombro Institute is operating under the support of some 17 grants ranging from small 300 dollar grants to a prestigious \$125,000 NSF grant received in partnership with the Jornada Basin LTER. Of course, with a lot of grants comes a great amount of responsibility and paperwork. Consequently, leading staff members of the non-profit organization find themselves spending a significant amount of their time writing reports and applying for additional funding to keep the positive momentum flowing. Nevertheless, all staff does find the time to enjoy the perks of their native desert environments and relish illuminating light bulbs in the minds of the next generation.

Finally, the Asombro Institute is fortunate to have access to a magnificent geographic locale and they are exemplary in their use of it. Their site has a conservation easement on it and the Institute has been given governmental permission to employ and promote it as a perceptual living classroom.

From the diverse desert plants to colorful reptiles, birds, bugs, and mammals, the Chihuahuan Desert Nature Park offers a phenomenal setting for environmental science education. Furthermore, the Asombro Institute for Science and Education is a stellar role model for SEEDS clubs around the nation dedicated to similar goals and composed of equally passionate ecologists.

Poem/Rap:

Listen up y'all
Cause this is it

The beat that we're banging
Is Asombrolicious

Through their science education
Asombro reaches out to the nation
It connects kids with the wild
to tease out a smile

Now to fund their activities
and conserve their natural masterpiece
there's Doctor Bestelmeyer

a talented grant writer
who together with her team
brings in the green

And yes their site is worth gold
with species that are bold
from the praying mantis
to funny lizard antics

The site is full of opportunity
(or children to experience ecology)
from experimental plots
that manipulate water flow
to riveting rocks
that make students' eyes glow

Group Four: Goodbye Jornada Basin, LTER and White Sands Monument

Natalia B. López (leader), Erin E. O'Brien, Michelle A. Nelson, Alisha Woodson



It was a very sad morning at the Jornada Experimental Range because it was time to break camp and continue on with our activities of the day. After the delicious breakfast made by the Jornada crew, everyone took turns to add a line to what would be the Jornada Basin Thank You Poem. It turned out great and the Jornada crew liked it, Khris added a line to the poem which made it even more special. We left the cold desert and went on a two hour (approximately) drive to the White Sands Monument, New Mexico. During the bus ride Brittany showed us the game “Sha-boo-yah role call” and it was very fun and dynamic.

When we arrived to the White Sands Monument at the Tularosa Basin, we went to the administration office to learn about managing dunes and the different experiments that are taking place given by Hilda Raiser and John Meyer. John Meyer taught us the composition of the sand at

the desert, which is gypsum rock, $\text{Ca}_2\text{SO}_4 \cdot 2\text{H}_2\text{O}$. Its elevation is about 1,200 meters, the park is about 275 square miles, 40% more or less of the field; precipitation is about 10 inches per year. The White Sands Monument dunes are the largest gypsum dunes in the world, with 45 to 50 feet tall dunes that travel 12 to 15 feet by wind or avalanche. It is located the due that is an evaporative area.

Hildy Reiser talked to us about the work she does at White Sands, and how and why she collects data on the sand dunes. She told us the different kinds of vital signs collected on the dunes, such as movement, meteorology, soil hydrology and dune reformation. The White Sands researchers use techniques such as LiDAR to map the dunes which they then share with other research groups around the world - like good scientists! White Sands are located in the Tularosa Basin between the Sacramento and San Andres mountains. The lowest point in white sands is Lake Lacero, which used to be Lake Otero, which covered the entire basin. White Sands covers 300 square miles.

The dunes are stabilized by the water table, which lies only 1 to 2 feet below the surface. The dunes wick up the moisture are held in place this way. There are over 25 species of plants and animals unique to White Sands which have gone through rapid evolution. Many species of insects and smaller animals show a white color morph. Fourteen new species of moth have been identified outside the visitor's center in the last three years alone!

After the orientations we went dune sliding! We took advice from a wise young child who was also visiting the basin and he taught us how to slide. To dune slide one must wax its sled so you can build up speed, sit on the sled and away you go! We think that the group enjoyed that the most.





Appendix A - ESA SEEDS Field Trip Itinerary

Jornada Basin LTER

"Making science accessible and relevant to society"

October 6th – 9th, 2011

<http://jornada.nmsu.edu/>

Field Trip Goals:

1. To highlight the **unique integration of researchers** from a government agency (US Department of Agriculture) and academic institution (New Mexico State University) in the name of long term ecological research that is highly applicable to societal issues, namely arid land management.
2. To highlight the multi-scale research at the Jornada that requires the synthesis and **integration of projects**, disciplines, and scales so that the research can be applied not only in the American Southwest, but also to arid lands around the globe.
3. To help students further **build a network** of students and professionals in the ecological sciences.
4. To provide students with an **on-site opportunity** to learn more about ecology research and its application, and potential careers in the field. An opportunity that we expect students will share with students from their own campuses.

Thursday Oct. 6: Arrival

- 6:00p.m. Arrival to Jornada LTER
7:00 p.m. Welcome Dinner (*Campfire*)
8:00 p.m. Welcome and Orientation: Debra Peters and Kris Havstad (USDA, Jornada LTER) and SEEDS staff

Friday Oct. 7: Jornada Basin LTER

- 7:30 a.m. Breakfast and pack lunches (*Jornada HQ kitchen*)
8:30 a.m. The historical legacy of Jornada Basin USDA and LTER – Kris Havstad
9:30am Multiple Stressors Site project. Desert soils and below ground systems – Kris Havstad and Curtis Monger
10:30 a.m. Integrated basic and applied research across spatial and temporal scales in arid lands – Debra Peters
12:00 p.m. Lunch and Career Panel discussion: (*Jornada Amphitheater*)
2:00 p.m. The Chihuahuan Desert Nature Park: Environmental Science Education – Stephanie Bestelmeyer (Asombro Institute for Science and Education)
5:00p.m. Student journal writing
6:00 p.m. Dinner (*Ranch style BBQ*)

Saturday Oct. 8: White Sands National Monument

- 7:30 a.m. Break down campsite (*shuttle group 2*)
8:00 a.m. Breakfast and pack lunches (*Jornada HQ kitchen*)
9:30 a.m. NPS White Sands National Monument: Managing the Dunes – Hildy Reiser
10:00 a.m. Dune Sliding, lunch on own
1:30 p.m. Depart for El Paso, TX
3:30 p.m. Hotel Check-in
4:30 p.m. Student journaling groups meet
6:00 p.m. Dinner

7:30 p.m. Group presentations
Journal writing report summaries; Evaluation; Wrap up

Sunday Oct. 9: Departure

5:30 a.m. Breakfast

6:00 a.m. Departures; Transport to El Paso, TX airport



APPENDIX B – Field trip participants

SEEDS Field Trip ♦ Jornada Basin LTER
 October 6 - 9, 2011 ♦ Las Cruces, New Mexico

SEEDS Students	
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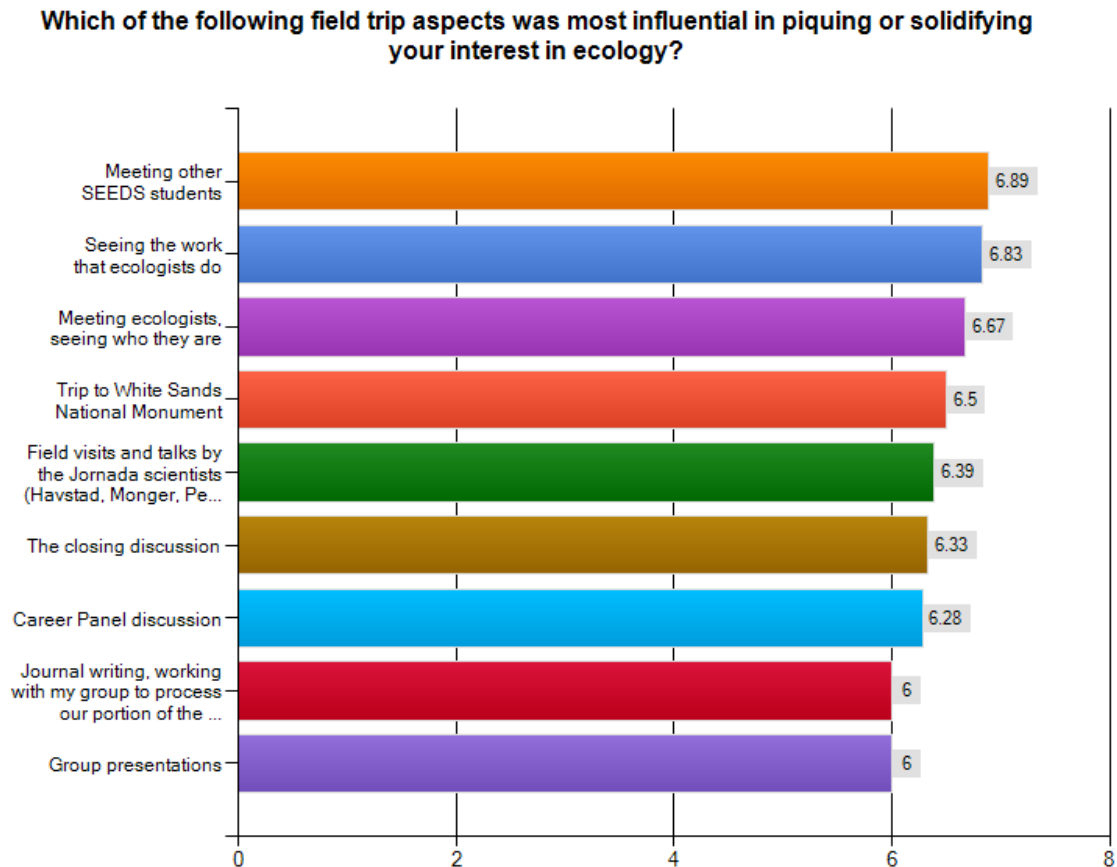
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Appendix C – Evaluations

1. Which of the following field trip aspects were most influential in piquing or solidifying your interest in Ecology?



2. Please describe any other aspects about the field trip that helped increase your interest and/or understanding of ecology.

- Meeting other students interested in the stuff I like, discussions about how science has affected us individually and as a whole, talking with SEEDS staff, the career panel discussion, bonding time with SEEDS family, scorpion hunting, sleeping outside in a tent, trying new things like African antelope
- Being able to share with others that are studying the same as I am.
- The atmosphere and excitement/passion everyone had about ecology. It was great!
- I love every moment of the trip!
- I really enjoyed getting to know everyone I met along the way and their experiences and where they live and worked and grew up and what it was like

there and just how different, but also so very much the same it is to me and my own experiences.

- I really liked doing the extra activities such as wielding and driving the construction equipment. I thought it was great that the scientist exposed us to these skills knowing that we could someday need to be able to use them in our research.
- The talks we got throughout the trips were extremely motivating, whether they were over soil and grass or over what we should do for grad school.
- Just being able to interact and network with so many different people currently in the field of ecology as well as the other SEEDS students really rejuvenated me and my interest in the field. It was great taking night walks around the desert at night with everyone as well. Getting to know everyone and what makes them "tick" was phenomenal!
- Sharing ideas and personal experiences by fellow students and the staff
- I loved how we were presented the idea that researchers don't only do research, but that there are other tasks that come with it and somebody has to do it. Such as driving loaders, welding, communicating with the public etc.
- The whole Jornada Basin was very intriguing and amazing.
- The wide variety of ecological professionals that we witnessed truly inspired me to continue to pursue ecology even though I am not sure exactly what I want to do with it.
- I liked seeing the large plots the Deb and Chris manage and I was interested in how each was changed and how it recovered from each change. I was surprised at the very large scale of the very long term experiments. I think actually walking around in the environment increased my interest in ecology the most.
- Just hanging out and swapping ecology experiences with everyone.
- Learning pertinent skills that are essential to research and data collection.
- Seeing a typical field site.
- Seeing the landscape that I'd read about in the articles solidified my understanding of processes of desertification.

3. From the list above or from your own responses, what was the single most important aspect of the field trip that helped pique or solidify your ecology interests? Why?

- Talking with SEEDS staff and meeting other SEEDS students. The SEEDS staff is SUPER motivating and supporting. They almost open your eyes and give you a perspective that you never thought you could see (same with the career panel). I love these trips because you don't have to conform to what everyone else is doing, it's okay to be different and go off the path but as long as you're doing something you love, you have fun, and you're learning. Meeting other SEEDS students is a big thing for me personally because I am a minority in this field so seeing other minorities who care as much as I do really makes me feel secure, like hey you're still doing something right! People may not always understand you but if you have a few that do, that's how we can reach the world.

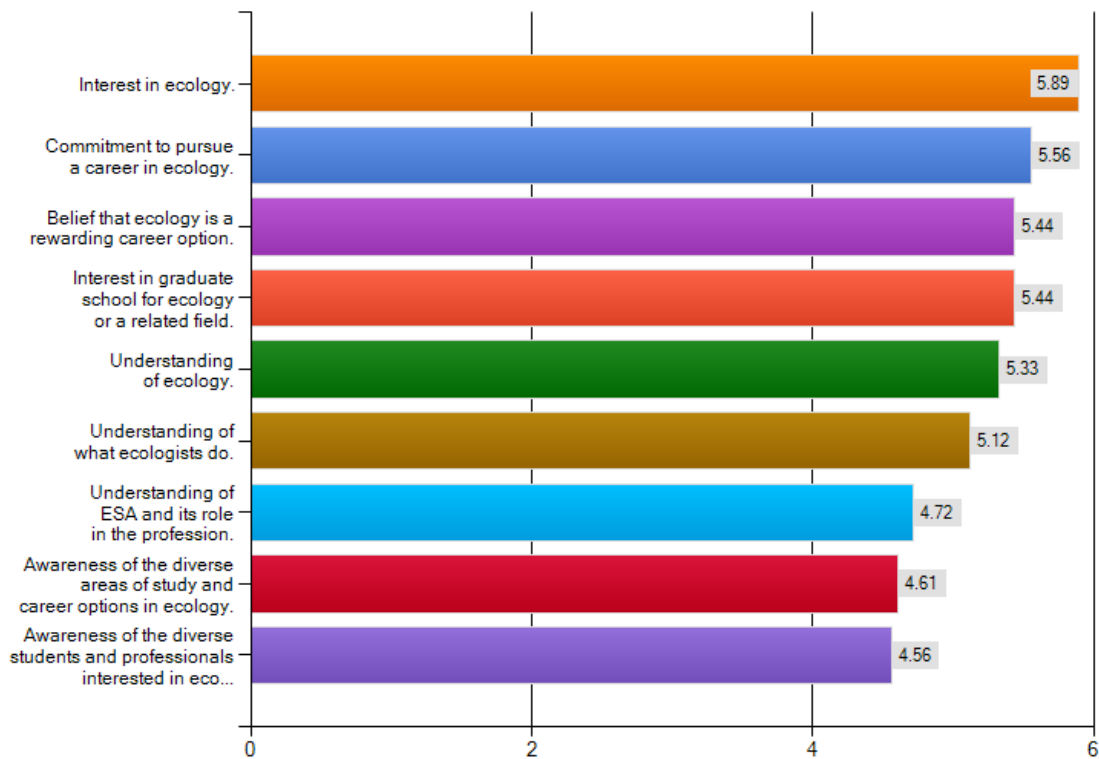
- Having the hands on experience with real field equipment management because that's what really tests the student's skills
- Seeing the work that was possible with ecology, and how many aspects there are and the great people involved.
- Meeting the other students was the most important aspect. Knowing that people with the same interests as me exist was very comforting.
- I was really impacted by the speech given our first night at Jornada. It was during that time that I really, really listened and it seemed that everything just clicked and I thought "I could really do this for the rest of my life." I also thought that the ending day with group presentations and discussion/speech was very inspirational, because it helped me to look back at all of the amazing things we did and experienced in such a short amount of time. With this being my second SEEDS Field Trip, it helped me realize that the first SEEDS Field Trip that I participated in was indeed REAL and not just a onetime shot of fun and learning.
- Meeting and talking to the Jornada scientists was the most important part of the trip for me. It was really interesting to get their perspective on current day research and our futures were very inspiring.
- Meeting the ecologists and doing field journaling were on the same par. Knowing what ecologists do for a living and getting to feel like I was a scientist studying ecology with a group of people who love ecology really made the trip special. It definitely solidified my interest in ecology.
- The field visit and talks. It was great seeing ecology "in action". The field visit was key. I love seeing new places and seeing how the ecology is different from where I am from and there's no better way to experience that than field visits.
- The closing discussion; It was a typical example of what people can achieve once they made up their mind and how we can help change the world in a small way during our lifetime.
- Field visits and talks with preeminent scientists! Very exciting to see how they see the landscape.
- The discussions with the group and professionals in the field. This allowed for an exchange of perspective from different generations and levels of expertise and experience. Were not only was ecology spoken of in the professional level, but how that affects your personal life and how to deal with it; what changes are being made and so on.
- Meeting other SEEDS students and Meeting ecologists, and seeing who they are.
- Seeing the work that different ecologists do, from the Jornada Field Team to the Asembro environmental team, I learned a great deal and most importantly broadened my horizon in terms of possibilities in ecology. I saw firsthand that scientists with common interests in ecology and conservation can have a whole array of different professional positions.
- The most important part of the trip was meeting very different people and learning what they were interested in and what they did with their own SEEDS chapters at home. I was most impressed just by walking in the desert and picking things up and seeing a

new ecosystem, as well as meeting the people who really cared and were interested in the research being done at the Jornada and White Sands.

- The strength building hour, because it really helped put the ecology field in perspective.
- The career panel at the Chihuahuan Desert Nature Park solidified my ecology interest; the discussion provided me with several ideas about ecology promotion and career opportunities.
- Meeting people from a like minded community! I've never felt so comfortable to talk about the things that I enjoy more than I had in Jornada.
- Meeting other SEEDS students and knowing what a great group of colleagues that I would have as an ecologist.

4. Using the scale below, please think about your feelings BEFORE your participation in the field trip, what was your:

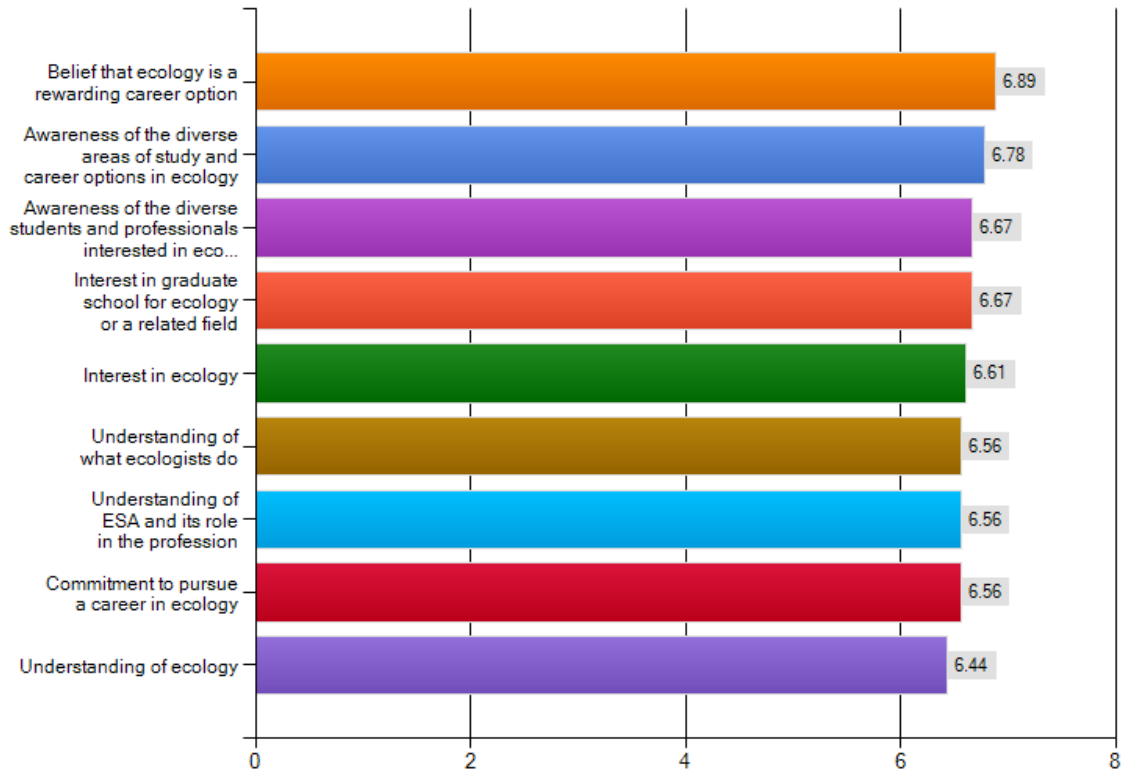
Using scale below, please think about your feelings BEFORE your participation in the field trip, what was your:



***Answers are compared with the next question**

5. Using the scale below, please think about your feelings after your participation in the field trip, what is your:

Using scale below, please think about your feelings AFTER your participation in the field trip, what is your:



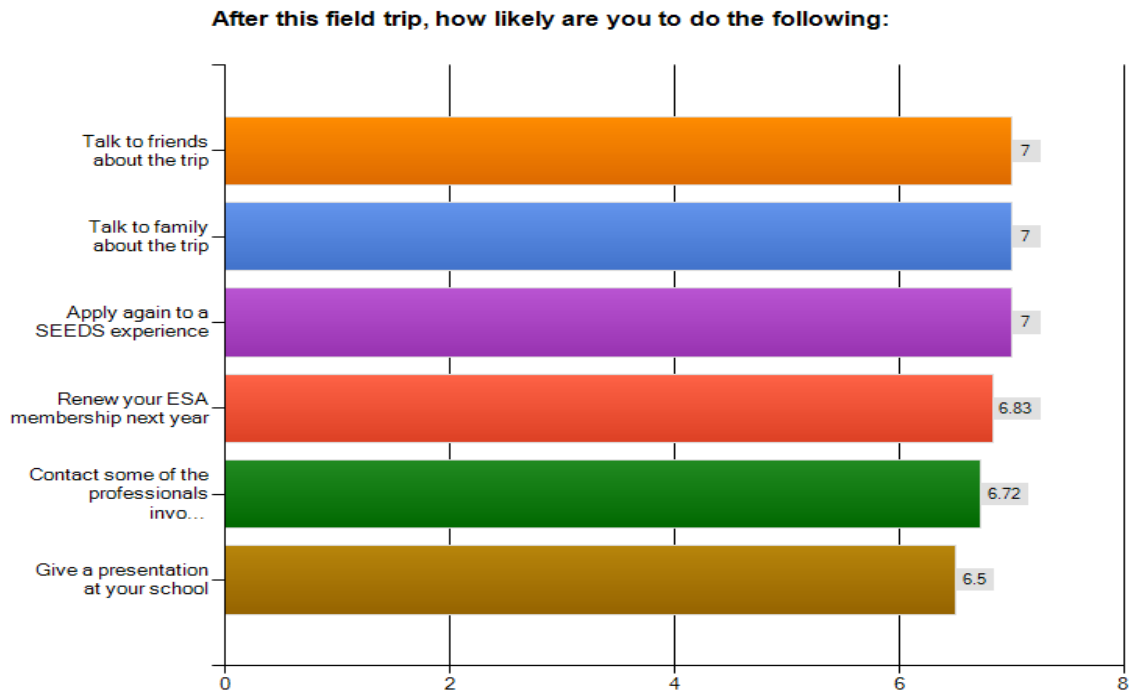
When compared to the answers BEFORE the Field Trip the students interests considerably **increased** in ALL fields. The most notable of these were:

- A) 31% - Awareness of the diverse areas of study and career options in Ecology
- B) 30.2% - Awareness of the diverse student and professional interests in Ecology
- C) 26.3% - Understanding of ESA and its role in the profession

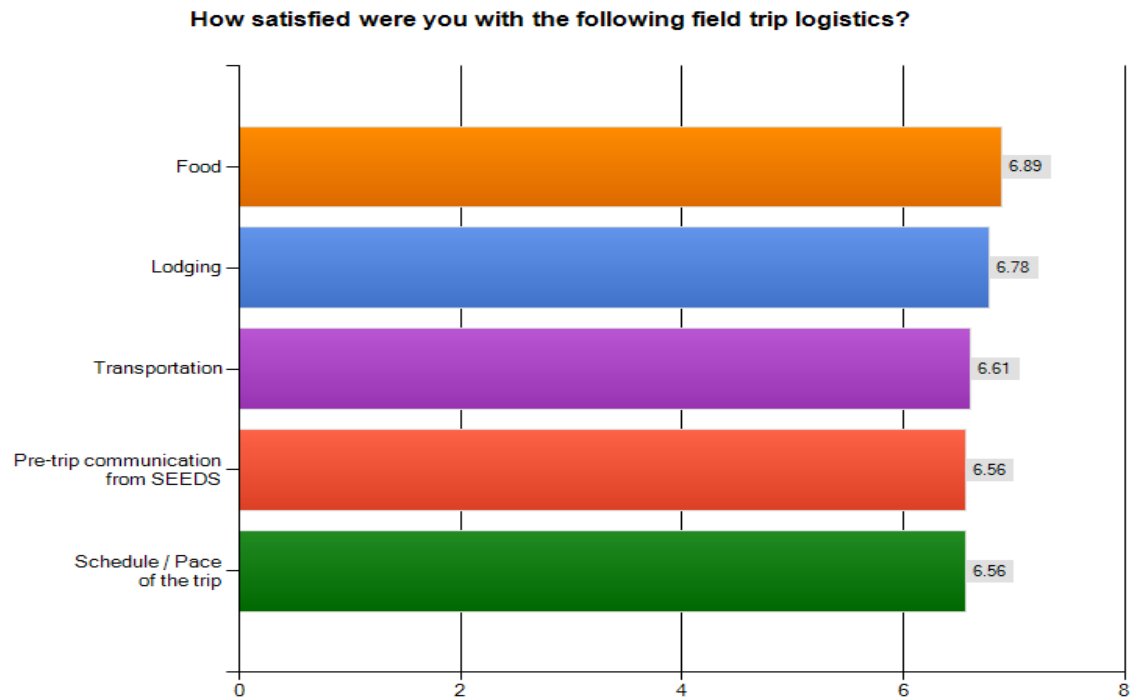
The lowest percentage of change was 10.3% for Interests in Ecology.

These results are significant and show that these Field Trips are successful at encouraging students to pursue career goals in the field of Ecology.

6. After this field trip, how likely are you to do the following:



7. How satisfied were you with the following field trip logistics:



8. Please describe any concrete suggestions for improvement.

- The time management was a lot better than my previous SEEDS experience. Although we as students made that difficult. More time at the White Sands Monument!! or tell us to get up earlier haha
- less vegan options
- The last morning we were there it seemed we were running behind and didn't get much time at white sands. I guess, make sure everyone is awake by a certain time.
- It was wonderful!
- Have the extended wait at the airport on the first day was kind of a drag since I had to get up so early to make the flight. The last minute flight changes were unfortunate, but I understand that sometimes things like that can't be helped.
- Stay on schedule as best we can.
- I think the Career Panel could include a more diverse group. For instance, Deb Peters talked with us about what she does before the Career Panel, so maybe just have some new faces in different areas of ecology. Instead of having a SEEDS member, maybe use that space for someone that works for a non-profit or in another federal agency (EPA, FS, FWS, etc).
- Warning us about the cold of the night more would have helped... though it was unexpectedly cold, so I understand!
- Maybe include in the activities schedule as little as 20 minutes to enjoy the area we were in. For example when being up in the mountains it would've been even more awesome to have time to ourselves and breathe all that beautiful landscape in.
- The Jornada Badin LTER SEEDS members have a reunion!! :)
- Extend the trip time!!! I loved this trip but it was so short.
- Scuba Diving Trip in Puerto Rico.
- I wish we could have had another day or half day so that we could spend more time at each stop. I would have liked more time to explore Jornada.
- In the future, the transportation schedule should be clearer. There was confusion amongst the SEEDS participants in this regard. I nearly missed my flight because the arrival time on the schedule was thought to be the PLANE's take-off time leaving the airport. I later found out that this particular time slot was displaying the e.t.a at the El Paso International Airport.
- Missing school days around midterm time wasn't easy
- This is probably just a matter of scheduling and time, but we read a paper about small scale to large scale interactions and I would have loved to have solidified my understanding of that model and how it applies to Jornada but it was only briefly mentioned by Debra.

9. Please describe what most stood out to you during the field trip (or in other words, what "filled you up").

- The relationships and knowledge I gained :) I will never forget those people. I think the bonding was more apparent on this trip; I left feeling like I knew everyone from before. I

had time to sit down and talk to every person individually. Everyone and everything taught me something.

- Visiting the white sand dunes, sharing with others and learning new skills in field ecology
- The atmosphere. Being surrounded by so many people who are very passionate about what they do/want to do was great. It really gives one encouragement, especially when you see all the good that they do.
- I was filled with excitement!
- All of the friends I've made and the connections I've built and knowing that there ARE other people who think the same way regarding ecology and knowing that I can most likely count on these people later on.
- Being around like minded students and professionals who all had that interest in the environment and research was really enlightening. That much positive energy towards the profession that I'm getting ready to enter was very reassuring.
- The experience of getting out in the desert and learning about the environment and finding different creatures and looking at the stars. *plus the food!*
- Just being able to be in a totally different environment was fantastic and eye-opening. Also, meeting such a phenomenal, diverse group of students that all share a love for ecology was really exciting. I loved getting to know such great folks in my area of study.
- The last day discussion at El Paso Guest House Hotel.
- Seeing and interpreting the landscape with the lens of desertification and geology.. meeting with other ecologists and SEEDS students with diverse interests and backgrounds.
- Just being able to have a wonderful time with SEEDS member while still learning about something that links us all. Being surrounded by such wonderful environment and people, and the variety of activities we got to do in such time lapse.
- What filled me up was the diversity of students, each had their own personalities. The Jornada staff had great hospitality. The overall trip and what our agenda was, filled me up.
- The Jornada field team and their culture of research. They seemed like a dedicated bunch with plenty of on-site activities to balance their research activities.
- The diverse desert ecosystem.
- The new people and the great food definitely filled me up! I really loved walking around and getting a feel for the unique environment.
- Being with like-minded students just as on fire about ecology as I am.
- The experience with ruminant ecology was great!!
- I loved the discussions about people's fears and hopes about ecology, as well as just being out in the desert. That is my favorite part about studying the outdoors, actually being there.