



The Goodwin-Niering Center for Conservation Biology and Environmental Studies



Reflection Papers for the Class of 2006

Ben Alander
Save the Bay, Providence RI

Salt marshes dominate the southern New England Coast, comprising some 967,000 acres of the New England States. The widespread abundance of these wetlands as well as their proximity and easy access to the open ocean often renders them vulnerable to human initiated construction projects, such as roads, bridges or dams. These objects restrict tidal flow into the marsh area, resulting in severe tidal impoundment. The resulting retention of tidal waters creates numerous ecological impacts including loss of salt marsh, harmful algal blooms, and invasion by the common reed *Phragmites australis*.

Combating these ecological damages is Save the Bay, a non-profit organization based in Providence, Rhode Island, that specifically targets the Narragansett Bay portion of Long Island Sound. The organization is dedicated to ensuring that the environmental quality of Narragansett Bay and its watershed is protected from the degrading effects of human activity. Save the Bay also seeks to restore the bay area to a level that can support healthy populations of local organisms. The goal of the organization is careful planned use of the Bay, in order to the balance the natural processes of the watershed and its use by the community.

In defense of Narragansett Bay and its watershed, Save the Bay's actions include: serving as a monitor for the programs and activities of government and society that may potentially harm the environmental quality of the Bay; increasing public awareness and knowledge of the Bay area, by initiating informational programs; and performing actions that will directly restore the Bay.

During the past three months, my role at Save the Bay was concerned with the last of these tasks. I conducted research on a salt marsh on Narragansett Bay, adversely affected by human construction projects. The marsh, known as Gooseneck Cove, was experiencing severe habitat loss as a result of salt water impoundment caused by three human initiated tidal restrictions, (the Ocean Drive Causeway, A Dam constructed in 1942, and Hazard Road). The water impounded by these restrictions was resulting in as systemic increase of high tide levels and decrease in low tide conditions. Local invertebrate species, ranging from microscopic flatworms to large wolf spiders rely upon the regular flooding and receding of the marsh for both food and habitat. The rising sea level was consequently causing a decrease in the numbers of species in the area.

My role was to investigate the effect of this habitat infringement on the diversity and abundance of local invertebrate populations. To this end I was responsible for conducting biological

sampling, namely transects, and soil core samples, and identifying the macro and micro-invertebrate species present in the marsh area. I was also responsible for compiling the data and calculating both the diversity and abundance of the identified species.

Upon completion of data analysis I discovered that both diversity and abundance decreased steadily as the transects moved from the Ocean Drive Causeway northward to hazard road. I concluded that this was due to the compounding effects of impoundment and the secondary impacts, including invasion by *Phragmites*, and algal blooms. Analysis of soil core samples supported these conclusions. These finding made it very clear that the three human constructed impoundments were negatively impacting the invertebrate species in Gooseneck Cove.

My experience with Save the Bay gave me an extensive amount of insight into how the research portion of habitat restoration groups function: the background research, field work, and final restorative proposal. The collection of data required long hours, both in the marsh area and in the laboratory. While extremely time intensive, the experience gave me the understanding the biology, especially field research, is simply put, hard work.

I also gained a familiarity with field sampling techniques particularly transects and soil coring, as well as the biological statistics associated with each. These methods will undoubtedly serve me in my senior integrative project, which is as yet undefined, but will most likely center on salt marsh invertebrate species.

At the conclusion of my internship, I came away with the sense that I had contributed in quantifying a serious ecological problem associated with Narragansett Bay. While I had an understanding that human initiated construction projects can have indirect effects on the areas in which they are instituted, I did not have a grasp of just how severe the impacts can be. I am certain that the general public has absolutely no idea of these impacts, as the marsh looks generally healthy to the untrained eye. My hope is that the data I collected and analyzed will be utilized as a basis for the future restoration of the Gooseneck Cove salt marsh area.

Allie Baldwin
Legambiente (League for the Environment), Italy

Legambiente (League for the Environment), an Italian environmental non-governmental organization (NGO) facilitated my internship experience this summer. One of the most well-known environmental organizations in Italy, Legambiente's environmental aims extend to essentially all areas of environmental protection, all connected by the same central theme, "Pensare globalmente, agire localmente: Un mondo diverso è possibile" Think globally, act locally: A different world is possible.

I worked with Legambiente in two extremely different projects. The first was a nature camp for children. This took place at Campsirago, a tiny, 20-person village on a hill in the Colle Brianza region of Lombardia. While the camp had running water and electricity, the nearest phone was an hour away on foot. Due to the remote location, the activities focused mainly on nature in the surrounding area. The children, ages 7-11, were from the Lombardia region and nature-

enthusiasts. We took the children on short hikes in which we identified plant species and animal tracks based on footprints, scat, sounds, partially-eaten vegetation or markings on trees. Since everything was conducted in Italian, most of this vocabulary was unfamiliar to me. However, my language skills had advanced such that, by this point I was able to follow along, perform all necessary tasks, and I was able to learn a lot and assist the children in finding and identifying parts of nature.

Some other activities included using leaves, rocks, or other parts of nature to create art (Andy Goldsworthy-style), learning about energy and brainstorming ways to conserve it, and one day dedicated to making and baking bread using an old wood stove in an abandoned house. Furthermore, there was an organic garden that needed to be watered each morning with water from the communal fountain, and tomato plants that needed planting and staking with large sticks from the woods.

Other than overseeing each activity, my responsibilities were largely focused on keeping the camp running smoothly; for instance, ensuring that three meals were prepared each day and subsequently cleaned. I was responsible for keeping everyone together and assisting in each task from tying shoes to pitching tents to reassuring the kids that no, there were not ghosts or dead campers lurking in the woods.

The second project I worked on truly incorporated the “think globally act locally” theme. I was responsible for an international work camp in the city of Lecco on Lake Como. Working with one of the other adults from Campsirago, we organized a project with fourteen people between the ages of 18 and 28 from countries all over the world including Turkey, South Korea, France, Belgium, Latvia, and Germany. The project entailed improving the river system of the city. We pulled plants from the banks of rivers that were infringing on the concrete which kept the city separate from the river, we removed plants in another specific area in order to allow for erosion and to prevent flooding (which had been a problem in the fall), we worked on a few small beach clean-ups, and one afternoon we removed car batteries from another river and properly disposed of them.

My responsibilities centered on organizing daily activities: transportation to and from the work site, daily food orders, collaboration with city officials and city volunteers, and general control of the other volunteers. It forced me to become a more authoritative leader since the fourteen other people relied on my guidance for their experience.

I entered my affiliation with Legambiente with the main objective of learning how environmental activism is employed in other parts of the world and seeing if I could not become completely immersed in a volunteer project abroad. I was truly dedicated to absorbing environmentalism from an Italian perspective. In this end the children’s camp was extremely useful in that I was able help inspire an excitement for nature and the outdoors in children, as well as learn about the local environment myself. The international work camp was also inspiring in that, despite the fact that the work was physically challenging and relatively unimportant on a global scale, it was carried out with a passion and excitement that I could never have foreseen. It was here that I truly understood the phrase “think globally, act locally.” In this sense my original objectives were met and surpassed through my internship with Legambiente.

As a learning experience, my internship was effective. I accomplished what I had originally hoped to accomplish in the sense of leading successful camps in a foreign environment. However, it also taught me that this type of work is not what I am looking for in a career. While it was fun for a summer, it was intellectually unchallenging and even monotonous once the initial novelty and charm had worn off. I felt environmentally ineffective because my personal talents and skills were not utilized; it seemed that anyone in my position could have accomplished what I accomplished and for a long-term job I will need something more demanding. For these reasons I have decided that my senior project will focus more on the political side of international environmentalism.

For my senior project I will be working with Jane Dawson to explore the political side of environmentalism in Italy. Italy has had a Green Party for a long time, yet it has not been effective. I will research why it has remained in existence for so long yet accomplished basically nothing, and I will investigate the influence of NGOs in the political scene. I would like to see how environmental philosophies are tied in and what, if any, theories can be applied to Italian environmental politics.

**Selin Devranoglu
Bumerang, Istanbul, Turkey**

This summer, I interned in an environmental organization in Istanbul called Bumerang. Bumerang, founded in the winter of 2005, is a very young organization which currently focuses mainly on the problem of toxic substances in Turkey. The founders of Bumerang are also Greenpeace volunteers and Bumerang is working very closely with Greenpeace Turkey. One of the short-term goals of Bumerang for this summer was to establish an information basis for Turkey's national implementation plan for the Stockholm Convention on persistent organic polluters (POPs).

During the internship, my main responsibility was to conduct research about the Stockholm Convention on persistent organic polluters in general and about Turkey's stance in regards to this convention. I used internet sources and contacted Unido (United Nations Industrial Development Organization) which is working under the Ministry of Environment and Forestry in Turkey in order to get information about the actions taken so far and actions that are planned to be taken in order to fight the problem of persistent organic polluters in Turkey. The Stockholm Convention focuses on 12 of the most dangerous and most commonly emitted POPs and aims to decrease the emission of these POPs and ultimately eliminate these emissions by calling for more environmentally friendly methods in production and in waste treatment. Turkey has signed the convention but has not yet ratified it and therefore the demands of the Stockholm Convention are not binding for Turkey yet. Unido has prepared a proposal about fighting the POPs problem in Turkey and was granted \$500,000 by GEF (Global Environment Facility, a programme set up in 1992 by the initiation of several EU countries) for the implementation of a 2-year project which aims to bring together the inventories on POPs and prepare the ones that are missing; prepare the national implementation plan; and lobby the government for the ratification of the Stockholm Convention.

I also worked on some Greenpeace campaigns, such as the energy and the oceans campaign, and helped with preparation for fairs, translations and with general office work. I worked in the “Recycling Fair” that took place in the second week of July in Istanbul. I attended lectures about current recycling methods and possible improvements and future plans in Turkey. I helped with preparing the stand in the fair and informed visitors about the actions of Bumerang and Greenpeace concerning the waste problem and recycling. Open system incineration plants which are portrayed as a good solution to the waste problem have been one of the concepts that we have been fighting against due to the vast amount of harm it brings to the environment. A devastating result of burning solid waste in open system incinerators is emission of many toxic substances including some very dangerous POPs into the air, soil and water. We have been promoting feasible and much cleaner alternatives such as closed system incinerators which are increasingly being used in many developed countries. We have also informed people about how recycling alone can never be sufficient if it is not complemented by clean production, reduction of consumption and reusing.

As a part of my internship, I also attended a three day long MaB (Man and the Biosphere Programme) conference in Edirne (a city bordering both Greece and Bulgaria) about the shared bio-reserves in the Meric/Evros/Marissa River Delta. I represented Bumerang at the conference, attended all the lectures and the workshops and made a presentation about the results of my workshop group. I gained a lot of information regarding the problems in the area and met many people working in all three countries such as professors and heads of NGOs.

One of my expectations from this internship was to learn more about the environmental problems in Turkey, about how the organizations such as environmental NGOs work and about the government's approaches to the environmental issues. Through my internship I have gained a considerable amount of knowledge about these. I was also expecting to meet active environmentalists in Turkey and I made many contacts with both high level administrators and volunteers both in Greenpeace Turkey and Bumerang. I think this experience has been very valuable because there is no better way of learning about these than actually working actively in an environmental NGO in Turkey. Because I am continuing my education in the US and not in Turkey, I have always felt the need to learn more about the environmental issues of my home country. This internship provided me with the opportunity to do so.

This internship has also been a helpful experience for my senior integrative project. Before this internship, I did not have an extensive knowledge about the most urgent environmental issues in Turkey and about the actions taken by the government. I came to realize the importance of pressure from international cooperation treaties and the pressure from NGOs once more and saw for myself the effectiveness of these pressures and the methods through which they can be exerted on the governments. Learning about the main environmental issues in a developing country like Turkey has helped me understand the factors that might be affecting the situation of the environment in similar developing countries. Learning about how some issues can be more urgent than others has also helped me decide on the focus of the topic of my senior integrative project. I also came to realize I want to focus on environmental issues that are very urgent and that are relatively more important for developing countries.

For my senior integrative project, I will focus on the environmental problems in developing countries and the environmental policies that are in place to deal with these problems. I plan to focus on the problem of increasing amounts of municipal and industrial waste as a result of economic development and the methods used for dealing with this problem such as open-system waste incineration technology. I will take some countries such as Turkey and Greece as case studies and pay special attention to similarities and disparities between them. I will also analyze the factors that play important roles in the decisions about environmental policies regarding this issue.

Meghan Lucy
Ocean Alliance , Gloucester, Massachusetts

In the summer of 2005, I worked as an education intern for the organization Ocean Alliance on their whale watch vessel, Hurricane II. The whale watch boat was docked in Gloucester, Massachusetts with Cape Ann Whale Watch. I spent about four days a week on the boat and had various tasks to perform. The main goal of Ocean Alliance is to promote the conservation of whales and their ocean environment through education and research. The role of the interns was to help with this goal every single time we stepped on the boat each day.

Ocean Alliance is conducting several different research projects. A source of pride for Ocean Alliance is the fact that their study and population survey of the Southern Right Whale, off the coast of Argentina, is the second longest running mammal study after Jane Goodall's primate research. Another amazing research project, sampling sperm whale blubber, has just concluded its data-gathering voyage around all of the world's oceans. Originally attracted to Ocean Alliance by this traveling research sailboat's mission, "The Voyage of the Odyssey", I am still extremely interested in the project and the very informative and valuable data that has been gathered. The samples of whale blubber will be tested and analyzed to study the toxicity levels of the world's oceans.

My role in OA's office was to help input the raw data sheets into the database from the sightings logs, photo logs, audio recordings, sample logs and many others. The value of the data that I worked with is mind-boggling, and I am so proud to be a part of this never-before-attempted exploration. The major part of the internship was devoted to education aboard Hurricane II. On the way out to watch the whales, the other inters and I walked around with various teaching tools to educate the passengers. These tools included a real sample of five Baleen plates from a fin whale, replicas of Sperm whale and Orca teeth, recordings of songs of male humpback whales, a map of the ocean floor, and photos of various parts of the whale that we can see from the boat. Using these tools, we tried, and most often succeeded, in connecting the passengers to the whales that we were going to see and inspired within them a sense of need for preservation of their habitat. Cynde, my supervisor and the naturalist on the boat, always used a quote in her dock-talk before the trip that will stick with me forever, "We conserve what we love, we love what we understand, and we understand what we are taught." I believe this concept is the real essence of Ocean Alliance's mission and is also the reason that there are educators aboard the whale watch boat (which is not something many other whale watch programs can boast).

Intern tasks didn't end once we finished walking around the boat; there was no relaxation aboard this vessel. When we finished our rounds, we went up outside the wheelhouse to scan the horizon for "blows." When found, we would point out the blow to the captain and Cynde and then head inside the wheelhouse to grab either the quantitative or qualitative data sheet for the trip. Once we were "on the whale" we took note of its behavior and many other observations. After roughly and hour and a half or more observing this whale and others, we would move off and head back towards Gloucester. On the way in, more teaching tools were brought out. We walked around with samples of plankton that had been gathered with the plankton tow while we were on the whale, showing the passengers what the whales were eating and telling them about the food web. We walked around with a game to show how we identify humpback whales; played with toy models of various whale species and marine mammals with the younger kids; sold many different souvenirs and "whale adoptions" to support Ocean Alliance; took note of the conditions of the trip and weather; and answered peoples' questions. In addition to the boat trips throughout the week, all the interns came together with the naturalist once a week to go over marine science current event articles and discuss various aspects (both positive and negative) of the whale watch boat and Ocean Alliance.

I feel that my original objectives were met and even surpassed by my internship this summer. My goals to connect with people and develop contacts in the field of marine research were met and were developed further through conversations every day with people from all over the country out on trips to see whales. It was most interesting to hear so many peoples' different stories and experiences relating both to the ocean and environment but also beyond. Other ways that my mind was stretched were through watching and reflecting on the transformations of passengers from before and after the trip and also thinking about how my own experiences over the summer have changed the way that I make decisions. The experience has opened my eyes in many ways. I was living at home, yet through this internship I met people from all different walks of life and places with diverse backgrounds. Getting to know and "read" these people aboard the boat and watch their reactions to the whales was the most interesting and rewarding aspect of the internship. Knowing that the trip had impacted almost everyone in some way or another was amazing to think about when I left the boat each day.

The internship ultimately led me to finally settle on my Senior Integrative Project. Luckily, and surprisingly, I worked with Laurinda Wong this summer on the boat as well, a fellow member of CCBES. We were both very influenced and moved by our experiences and discussions with Cynde, and we wanted to take these thoughts further in order to put something into action. With questions from passengers about boats' effects on the whales, and seeing how whales behaved as we motored through their home, we pondered what we could do to help the situation. It is somewhat peculiar that we go out everyday with our dirty diesel engine and noise pollution and circle around through the whales' habitat. Having only been slightly familiar with biodiesel fuel before this summer, it is a subject that I now find extremely interesting. For my senior project, I want to conduct thorough research on many aspects of biodiesel and prepare a proposal to present to Cape Ann Whale Watch outlining the advantages of running the boat on biodiesel. Not only do I want to simply present the advantages, but also research and outline every aspect of how to convert the Hurricane II to a completely "green" whale watch vessel, including modifications to the engine, mechanics in the area willing to support the project, sponsorship by organizations, cost and vendors of biodiesel ingredients, advertisement suggestions for website

and brochures, and much more. I plan on presenting them with an idea that is completely thought-out and researched. If they choose not to act on my recommendations, my next step will be to establish my own biodiesel-powered, “go-green” whale watch company and provide stiff competition. I am also proposing that this project will be a joint effort by both Laurinda and I, to ensure thorough research, enthusiasm and a strong final proposal.

Alaya Morning
City Slicker Farms, West Oakland, California

I spent two and a half months this summer working with Willow Rosenthal, Ingrid Evjen-Elias, and other friends at City Slicker Farms located in West Oakland, California. City Slicker Farms is a collection of six small urban vegetable gardens located throughout the West Oakland area. The project is committed to providing low-income residents of West Oakland with affordable locally and sustainably grown produce. It is an entirely volunteer run, non-profit organization.

I worked with City Slicker Farms as a summer apprentice. My responsibilities differed depending on the day of the week. One day each week was spent working in the office. This meant paperwork, errands, and phone calls. The rest of the week was spent at the garden sites. At these sites, I spent my days planting, watering, harvesting, fixing, washing, selling, singing, chatting, and learning as much as I could from Ingrid (the farm’s year-long managing apprentice.) The favorite days were Fridays. Starting in the afternoon and heading into late evening, Ingrid and I (and often many friends) would harvest, wash, and bundle fresh vegetables for the sliding-scale farm stand the next morning. We would transport the veggies from each of the smaller sites to the larger garden in a bicycle rickshaw created especially for City Slickers by a local cart-maker.

My internship with City Slicker Farms was an extremely important part of my education for a number of reasons. First of all, my work with them offered me a low-pressure working environment in which to learn first-hand the practical skills and knowledge needed to garden/farm. I was able to put into context all of the environmental and biological systems work I have studied in my courses here at Conn. Additionally, I was able to observe the trial-and-error process which is key not only in gardening but also in establishing and maintaining a non-profit, volunteer-run organization.

I entered into this project with a few educational objectives. I intended to learn the basics of farming: when, how, where to plant what, etc. I also had the intention of working with children, gaining experience in teaching and curriculum building. However, the importance of working with kids in an official way took a backseat to my desire to learn the hands-on skills required to garden. It was impossible in the time I had set aside for the internship to create a fully structured educational program for children. There was another cooperative organization in the area that was more focused on creating educational opportunities for children in the field of agriculture, food systems, and environmental education. Willow made it clear how important she had found it to not try to “do it all.” There was already an organization working with kids and City Slicker Farms was an organization fighting food-access injustices. She was open to my creating projects for kids, but it was clear to me that there was a lot for me to learn before I could develop a curriculum with which to teach children. However, I was able to work with children in a more

indirect way. Kids would often stop by the garden and I was able to teach them small tasks and get them to start thinking about the science behind them. So while my goal to gain experience in curriculum development was not met, I felt it was made up for by the new directions I was pushed in.

I had not originally intended to intern with an urban garden project, but through conversing with customers and volunteers at City Slickers, I have been exposed to the importance of this type of space in urban areas. Many of the members of the West Oakland community were black Americans with strong familial roots in the rural South (Louisiana). Many of them had grown up on the farms of their parents and grandparents. They knew the most effective ways to prune tomatoes, why our okra failed, and how to keep the rooster from attacking when you went to collect eggs. From an ethnobotanical perspective, these garden plots in West Oakland became important spaces in transmitting and preserving knowledge from one generation to the next.

Exposure to this dynamic has helped me to narrow the focus of my senior integrative project. Working in the “field” helped me to understand the reality of what is important about community agricultural work. I’d like to focus on the importance of land access in maintaining environmental identities, and in maintaining space for the perpetuation of knowledge about specific ecosystems, growing climates, etc. I am currently studying abroad in northern Brazil. There is an opportunity to connect my work here with my experiences this summer by examining more specifically the MST (Movimento Sem-Terra), a group of landless workers organizing to gain access to land for farming and self-subsistence in Brazil.

Adanna Roberts

New York City Department of Education, Office of Occupational Safety and Health

This summer I worked with the New York City Department of Education, under the Office of Occupational Safety and Health (OOSH). The director of OOSH is Emerson A. Greenidge and he was my supervisor during my internship. The Mission of the Office of Occupational Safety and Health is to ensure a safe and healthy environment for DOE employees. The overall general responsibilities of the office of Occupational Safety and Health are: (a) to educate department heads, managers and employees about the provisions of Occupational Safety and Health regulations, (b)to provide leadership in aiding departments and facilities to comply with federal, state and city occupational safety and health regulations, (c)to initiate training programs as required by specific safety and health regulations promulgated by the New York State Department of Labor (Public Employees Safety and Health – PESH), and (d) to provide technical expertise on the assessment of health and safety hazards in the workplace.

A brief description of duties that I performed included (1) taking indoor air quality complaints, (2) filling out the requisite indoor air quality logs and making computer entries into database, (3) conducting indoor air quality investigations, (4) learning to prepare indoor air quality reports, (5) learning how to use and maintain a variety of indoor air quality equipment, (6) preparing training materials, (7) assisting OOSH’s safety and health trainers during training sessions, (8) scheduling the delivery and collection of medical waste kits from NYCDOE sites and (9) performing clerical and administrative duties relating to the delivery of safety and health services.

My learning objectives for this past summer were to get hands on experience in the field of occupational safety and health. This internship was my first experience with this field, and as a result I was very excited and looked forward to what was in store for me over the summer. Specifically, I learned how to test indoor air quality, along with writing reports on my findings. This was an excellent opportunity for me because I was able to conduct tests outside of the lab/classroom. All of my original objectives for this internship were met and I was able to accomplish what I set out to do.

Everything that I learned in my internship prepared me for my senior year individual/integrative study (SIP). Originally, I considered testing indoor air qualities in academic buildings at Connecticut College. However, due to the lack of equipment and faculty expertise in the area of indoor air quality, I decided to focus on a research paper dealing with the role of occupational safety and health using New York City's Board of Education's Office of Occupational Safety and Health's as my focus. Overall, this internship was an active learning experience and the progress that I made during the summer should be reflected in the success of my SIP.

Joel Scata
Atlantic Council of the United States, Washington, DC

During the summer of 2005, I worked for the Atlantic Council of the United States, a foreign policy think tank based in Washington, D.C. Its mission, as the Council defines it, is to "promote constructive U.S. leadership and engagement in international affairs based on the central role of the Atlantic community in meeting the international challenges of the 21st century." It achieves this through hosting discussions and engaging in projects about important international issues with members of the Executive and Legislative branches, the private sector, and leaders from abroad. The Council is subdivided into various programs that concentrate on certain areas of international affairs. I worked for the Program on Economics, Energy, and the Environment. The main projects that were under development while I was there were the "Clean Air for Asia Project" and "A Marshall Plan for Energy and Water Supply in Developing Countries." Assistance on these projects was part of my duties.

My main duties were to help prepare for two major events my program had scheduled for the summer. The first event was the debut of a new book titled, "Twilight in the Desert: The Coming Saudi Oil Shock and the World Economy," by Mr. Matthew Simmons, one of the Council's board members. The book focused on concerns about the continued ability of Saudi Arabia to be a main oil producer. My responsibilities consisted of contacting the media, oil executives, and government officials who would be interested in the topic and inviting them to the book release.

I also did this for the Marshall meeting. However, I was much more deeply involved in helping to prepare for this meeting. The Marshall meeting was the second meeting of a project that was started over a year ago. The concept of the plan is loosely based on the Marshall plan that was developed for the reconstruction of Europe after World War II. The Council's goal is to help bring more stability and security to developing countries. One of the major problems the Council perceives as preventing this from happening is the lack of adequate access to energy and clean water supplies in those countries. The concept of the Council's Marshall Plan is to provide

these basic necessities to countries in need. For the project, I helped research and select a group of applicable countries to be chosen for the initial test of the plan. I prepared documents describing a country's political status, its economic background, and the current energy and water sources that it has. Along with my boss, I helped establish basic criteria to narrow down all the developing countries into a group of about 30 to be presented at the second meeting. We tried to have at least one country from each region of the world, excluding North America and Europe. After the second meeting, I took the new criteria that was established, such as the countries should have a population over 5 million, have a GDP per capita less than 10,000 USD and also be on the list of countries to be helped by the Millennium Challenge Corporation. I then narrowed the list down to these 12 or so countries and produced more research documents about them.

Another one of my tasks at the Council was to conduct my own research project. I initially chose energy security as a topic and then narrowed it down to the growing energy consumption of China and how it affects the United States. In my paper I describe how China's rapidly growing thirst for oil is not only tightening world oil supplies, since China's oil demand increased by 40% in 2004, but also how it is affecting the political influence of the United States and its allies. This is due to the fact that China is willing to go anywhere in the pursuit of oil. As a result, it has helped strengthen regimes like those of Sudan and Iran, regimes that the United States and its allies are trying to exert influential change upon.

Another responsibility I had was to moderate an Intern Discussion Series. The topic was the future of the United States' energy security and I choose former director of the CIA, Mr. R. James Woolsey as my guest speaker. He discussed the future threats the United States will face, such as the foreboding problems with oil and gave suggestions on how to avert disaster. For example, he talked about the need to drive more efficient vehicles, including hybrid vehicles as a means to limit our oil dependency. He also discussed the possibilities of alternative fuels and the use of coal sequestration. He stressed one of surest ways to ensure our energy security was the alteration of the transportation system.

I believe the duties that were required of me at the internship where beneficial in achieving the goals I had established for myself in the internship proposal. I learned extensively about the United States' energy needs and the various directions it will go in the future. I also gained a better understanding of my career interests. I realized that I am more interested in national security and potential threats to it, such as our energy vulnerability. I would like to pursue this career path after I graduate. I also realized from the internship that I would like a career that requires physical involvement instead of simply being a researcher. The internship also helped me achieve my goal of preparing for my senior project. I gained a valuable knowledge base about energy security and the threats to it that the United States will face. I also learned valuable methods to approaching the study of the topic. For example, before starting the internship I planned on researching the topic by simply breaking it down into domestic and international problems. However, since numerous countries are often energy interdependent it was often hard to separate into the subject areas. A better way is to view energy security in the short term/long term analysis. This gives a better perspective of the numerous existing threats and then allows, if applicable, the topic to be further explored at on the domestic and international level. This has given me a better concept of where to begin my senior project.

Currently, my senior project proposal needs further defining, but I am considering researching the short and long-term threats that the United States' energy needs will present in the future. For example, I would like to highlight our oil dependency problem and how this makes the United States vulnerable in numerous ways. I would then like to research how improvements in our automobile fleet could help to curtail this problem.

Overall, I believe my summer internship experience was very advantageous. It helped me to gain a better understanding of a topic that interests me, an idea of future career aspirations, and to prepare for my senior project. I would recommend the internship program at the Atlantic Council of the United States to future Goodwin-Niering Center students.

Ceileigh Syme
Wildlife Friends of Thailand- Petchaburi, Thailand

It is nearly impossible to travel within Southeast Asia and not be painfully aware of the animals. The stray dogs and cats in Bangkok almost rival the number of people jamming the city streets. And it is not uncommon for homes to have pet gibbons or macaques chained up in yards. To complement the array of wild smells and colors one encounters in this part of the world, wild animals are also a part of the experience. Thailand is no exception to the untamable trade of endangered and rare species. At weekend markets cages of techno-colored birds (often smuggled in from other countries or caught in the jungles) can be bought for a small price and with further inquiry endangered species such as sun bears, orangutans, and even tigers can be bought. The Wildlife Friends of Thailand Rescue, Rehabilitation, and Education Center is an organization that gives refuge to animals that have been unwilling participants in a culture that fosters consumptive habits that can often be startling and confusing to Western eyes. The array of animals at the center only further demonstrates the multitude of applications that animals are used for in Southeast Asia. There are wild animals, no longer able to ever be released from too many years of being a pet, to animals that were almost destined to be upon a dinner table. From an ecological standpoint, it is frightening to think of the damage that is being done by taking these animals out of the wild. Habitat depletion and ecosystem damage happens not just from the bulldozer, but from the poachers' snares as well. Therefore, the Center is not just one that promotes animal rights, but also environmental education. Wildlife Friends of Thailand strives to give animals a better life, by not only providing a safe haven but by also re-releasing if possible. The Center provides education as well to tourists and locals alike on the importance of fair treatment to animals and the environmental ramifications that animal rights have.

At the center I spent a lot of time with the vet assisting in spaying and neutering of local stray dogs. I also assisted other volunteers with many of the different animals, from a binturong, to civet cats, to gibbons, to an ostrich and otters. The area that I concentrated on most, however, was working with elephants.

Logging, using elephants, was made illegal in Thailand in 1986, causing these now beasts of burden to often be out of work and out of a home. Many owners could not afford to keep on the elephants, and so it is not uncommon to see bone thin elephants begging on city streets

dangerously close to being hit by automobiles. Many of the elephants at the center had previously endured this sort of life. The others however came from tourist camps where they would be continuously giving rides to tourists who would sit on wooden contraptions strapped to the animals' backs. The monotony and physical strain of a life like this can be very difficult for an elephant to undertake. Therefore my job as a volunteer was simply to give these elephants a better space to live in both physically and mentally. In the past elephants at the center have been re-released, yet the particular ones that I worked with had unfortunately been workers for too long to ever really be "wild" again. Therefore daily feedings, washing, and river trips were my main responsibilities, as well as picking pineapple plants for the elephants to eat. It is no easy task working under the Thai sun in a full cover outfit picking sharp, spiny fruit and foliage, but even this being the worst of the work was incredibly rewarding and enjoyable. Often I was required to sit atop an elephant to better guide it on long forest walks or on walks to the river. This was done in the most humane manner, with no wooden seats, without even a bull hook (a device often used to control elephants that unfortunately can be used as a weapon). Getting to see the beauty of the hot, lush Thai countryside with five or six of the Center dogs accompanying and then being on an elephant and feeling their excitement and happiness as they and the dogs all rushed into the local river became a common occurrence, but was never taken as mundane. To feel an elephant's breathing come into your own, as their pace falls in rhythm with you is a feeling that cannot be described. And really that is the most crucial point of my experience. What I felt this summer, as a direct result of my experiences will only further enhance and enrich my Life. Thailand, and working with such wonderful animals on a day-to-day basis was beyond incredible. I never imagined my expectations to be so utterly fulfilled. It was a collection of experiences that can really only be described by feeling it rather than explaining it, and so has given me perhaps one of the most valuable learning experiences I have ever had.

This internship only increased my passion of animal rights and also my interest in ecological connections. By being privy to seeing not only endangered but also common animals being viewed as simply a monetary commodity, or if not, than a worthless entity, I was often shocked and inspired to fully throw my energy into understanding why so much atrocity can happen in regard to animals and how these actions then have environmental effects. I was even more reminded of the importance of cultural barriers and differences in understanding the values that are at the core of these problems. My senior project, which will in turn become my thesis, will grapple with trying to uncover and understand what it is that leads to such treatment of living, breathing parts of our world. I cannot fully describe some of the horrors I saw, and while it was at time beyond difficult to witness and even be knowledgeable of such acts, it only strengthened my understanding of the complexity of problems pertaining to flora and fauna. Being exposed to such a dark part of this beautiful country's society only helped me better understand the complexity of the problems that really all nations are facing in regard to animals. Having an internship that was beautiful and difficult, heartbreakingly and blissful was rewarding in a way I will continue to feel for an untold amount of time.

Laurinda Wong
Ocean Alliance , Gloucester, Massachusetts

This past summer I was a field research and environmental education intern at Ocean Alliance in Gloucester, Massachusetts. Ocean Alliance is a non-profit organization that strives to protect and conserve whales and oceans through research and education. Ocean Alliance focuses on three main projects. First, the organization has just completed a five-year expedition, the Voyage of the Odyssey. The Odyssey and its crew spent the past five years sailing around the world collecting blubber samples from sperm whales to indicate levels of chemical pollution in the oceans. Another project studies southern right whale populations off the coast of Argentina. This study has been going on for the past 35 years, the second longest study on any animal species. Lastly, Ocean Alliance is affiliated with Cape Ann Whale Watch, where the naturalist and interns provide the education on the boat to all the passengers and at the same time, get a chance to collect data on whale behavior.

As a field research and environmental education intern, I was expected to spend at least four days a week aboard the whale watch vessel and one day at the Ocean Alliance office. Projects at the office included sperm whale photo identifications and entering various types of data. On the whale watch boat I was expected to become proficient with various teaching tools that were used to educate and engage passengers. Teaching tools on the boat included baleen samples, teeth models, a map of the ocean floor, humpback whale songs and a photo identification game. I was also responsible for collecting different types of data when we were watching the whales. Each trip there were quantitative and qualitative data collectors. Quantitative data collectors would keep track of the different behaviors of the whales that we were observing as well as the number of times each behavior occurred. Qualitative data collectors would keep track of weather as well as how long the whales were diving for and anything else that might seem relevant to the whale watch trip. Another responsibility was to become comfortable and confident to speak on the microphone during whale watches. Lastly, the interns and the supervisor had weekly meetings in which we discussed our progress and were required to share an article about whales, oceans, marine-life, etc. that interested us.

Along with Cape Ann Whale Watch, Ocean Alliance also completed a series of projects throughout the summer. These projects included educational workshops for teachers and a program for children called Ocean Detectives. Ocean Detectives allowed children to explore different marine organisms and their environment through various activities that explored the ocean. World of Whales was another one-day workshop geared toward teachers. This workshop provided teachers with educational tools that they could use in the classroom to educate children about whales and oceans. Ocean Detectives and World of Whales both took place on the whale watch boat.

Ocean Alliance also works with two other workshop groups. First, the Museum Institute for Teaching Science (MITS) was a workshop for teachers to learn about different methods of teaching math and science that are inquiry based rather than the traditional style of teaching. This group had a one day workshop on how to incorporate the ocean and whales in teaching math and science within their classrooms. Another group from the University of Georgia visited to learn about different teaching tools used on the boat and methods for interacting with students. These two workshops occurred outside the boat and the Ocean Alliance, however both groups were able to attend a whale watch as a part of their program.

My main objectives prior to the start of the internship were to become more familiar with whales and feel comfortable educating others and answering questions, to become better at identifying different whale species and behaviors, and lastly to be comfortable speaking on the microphone during whale watch trips. Throughout the summer my objectives were met. I was able to familiarize myself with a variety of whale species and not only was I able to identify different species, but also individual humpback whales. I was very comfortable talking to passengers, especially children, answering their questions and bringing around the various teaching tools that were used on the boat. Throughout the duration of the summer I also gained more confidence in public speaking. By the end of the summer I was capable and comfortable enough to speak on the microphone and to tell people what was going on during the entire trip.

My internship with Ocean Alliance was an incredibly valuable learning experience. I've never had any experience working with whales and this was the perfect opportunity. Not only did I have a chance to learn about whales, but I also got to pass my knowledge along by talking with passengers on the boat. This internship also allowed me to learn about different aspects of the marine environment and conservation efforts towards marine mammals. This experience was very helpful in preparing for my senior integrative project. Our weekly meetings allowed interns to share environmental/marine-related interests. This was helpful because it expanded my awareness of environmental problems and made me want to learn more about them and to find out if there was anything that I could do or change in my own life to make a difference.

For my senior project I would like to write a proposal for Cape Ann Whale Watch to convert their current whale watch vessel, Hurricane II, into a more environmentally friendly boat. For this project I would provide the information for the owners of Cape Ann Whale Watch on how they could become friendlier towards the environment. This would include the use of biodiesel, biodegradable products and increasing local support for the company. I would also like to conduct a survey with actual whale watchers to find out if the general public would be interested in a "green" boat.