DATES: 16 days between May 5th and May 28th, 2015

COSTS: $2,500 per student. The fee covers transportation and module expenses. **Personal expenses, free time spending money and souvenir expenses are not covered.** Although this has not happened before, should airline fares change a great deal an adjustment to the fee may be necessary.

Port of exit and entrance to the US: New Orleans, Houston or Dallas to be determined. Student will be responsible for getting to point of exit and from that point on return.

**DESCRIPTION OF THE COURSE:**
The course will be an analysis of the fauna and flora on a 150 acre finca. It is a working dairy farm surrounded on two of the three sides by a tropical dry forest. The students collect samples of the fauna or flora on the finca and catalog the collection. A special attempt will be made to learn about the natural history of several species to include in the database.

In the spirit of Gaviotis, students will participate in sustainable development projects based on methane generation, solar energy, or other projects.

Lectures on the characteristics and formation of Mesoamerica and Nicaragua will be given. The Holdridge Life Zone System and its application to the tropical dry forest will be an important biological focus. Techniques for the collection, care and preparation of specimens will be taught and used during the module.

Trips to several points of interest will be made during the 15/16 days of the module. Among these will be trips to Granada, Masaya and to a fishing port, La Boquita. Other trips will be to points of biological interests: Lago Nicaragua, Reserva Mombacho, the Pacific Ocean and a tropical dry forest preserve and active volcanoes.

**INTERCULTURAL and SERVICE CREDIT:**
Intercultural credit is possible for those students who interact to a larger degree with the local population. Module students participate in a service project at the local public school. Service credit is available for those desiring service rather than intercultural. The student may choose to get credit for any two of the following: service, learning module or intercultural experience, but not all three.

**COURSE OBJECTIVES:**
The experience will inculcate an appreciation for the diversity of life in the tropics, including a better understanding of a different culture and the relationships of the culture to the environment.

The students will construct hypothesis, collect data and analyze the data as a test of the hypothesis. They will also analyze their observations and interactions with the local human population to gain a better insight of themselves.

They will learn to recognize differences between selected life zones and to identify elements of the fauna and flora.

They will participate as members of a group to learn cooperation and task partitioning.
There will be group discussions of projects, side trips, and lectures to help students focus their knowledge and impressions.

This will be formalized in a paper written by each student on how the trip impacted him or her.

Required readings etc: Several books will be used in the course some for reference and others will be required reading. Those which will be required or have selections from them are indicated with an asterisk.

- Neotropical Companion, Kircher*
- Neotropical Rainforest Mammals, Emmons
- Gaviotas, A Village to Reinvent the World, Weisman*
- The Foraging Strategy of Howler Monkeys, K. Milton*
- Costa Rican Natural History, Janzen*
- Venomous Reptiles of Latin America, Cambpell and Lamar
- A Guide to the Birds of Costa Rica, Stiles, Skutch, Gardner
- Woody Plants of Northwest South America.
- Life Zone Ecology, L.R. Holdridge*
- An Analysis of Factors Influencing the Distribution of Costa Rican Rodents, A. B. McPherson*

**METHOD OF EVALUATION:**

Students will be evaluated on participation, cooperation and contributions to the various projects, journal, presentation and final paper.

**NATURE OF EXPERIENCE:**

This will be a physically and psychologically demanding experience for it is set in a developing third world country. Most of the amenities you normally experience will be lacking.

The food will be prepared by a local Nicaragua woman when at the field station. This will mean a breakfast to start the day, an early afternoon meal—usually the largest—and a light evening meal. There will be refrescos and fruit drinks of several varieties at all times together with local fruit. Food should always be cooked or peeled before eating. The usual protein source is chicken or fish. The field station has bunk beds with foam mattresses. Each bunk bed has mosquito netting to protect you from biting insects at night and during naps. It is important to sleep with the netting to prevent insect bites which may carry tropical disease. **Precaution is the word.**

There is potable water at the station but no electricity which means no hot water for showers. Since the temperature during the day is normally around 85 degrees, after the initial shock a cool shower is pleasant. Cleanliness is important for your well being. This means washing your hands often with soap. Dirty hands in Nicaragua, as everywhere, are a frequent source of bacteria that may cause infection or cholera. There will be filtered water available for drinking and brushing teeth, etc. There is neither a washing machine nor a laundry nearby. Clothes are washed by hand by a local resident. You should not bring clothing that requires special handling.

The transportation to Nicaragua will be by commercial airline. Local transportation will be by commercial vans or buses.

About 5 miles from the field station is a medical clinic for the treatment of minor ailments and injuries. They are good with fractures, cuts, malaria, dengue, parasites, flu and other general maladies. If something more should occur, a trip the Baptist Hospital in Managua or return to the United State might be appropriate. In this case parents would be consulted before a decision is made. Let us hope we do not have at occasion that requires more than a band aid and antibacterial cream.
PREPERATION FOR TRAVEL:

You will need a passport!!! You will need 6 weeks to get one so should start the process soon.

You can go on line and order your passport. All the requirements are listed under the state department site and include photo, proof of birth and citizenship, usually 2 documents and of course a fee.

Several airlines fly into Managua, Nicaragua the 2 most common from the US are Continental and American Airlines. Other airlines are affiliated or have flights. These include Delta, Northwestern, and Taca among others. From Shreveport Continental and American are the best choices. American leaves Shreveport for Miami and then from Miami to Managua. Continental leaves Shreveport for Houston and from Houston to Managua.

On the flight you will get a couple slips of paper to fill out. You will need these for entry and customs. You should have a pen or pencil available.

We can arrange to meet the flight or one may rent vehicles on line before arriving. We generally arrange for a local van for small groups for this gives a sense of the local color and one can rent the vehicle only for the time actually needed. Depending on the length of the trip and the number of people we can use the truck at the finca.

Upon arrival at the airport you will go through customs. At the first line you will show your passport and pay $10 (the fee in October but this may change) for which you will get a slip of paper and a stamp (your visa) in your passport. You should save the slip of paper they give you for this will make your exit from the country easier. This visa is good for 90 days should you so desire to remain that long. After getting your visa you will exit to the right into the luggage claim area. Once you have your luggage you will go to the exit. There you will encounter a podium with a red and green light. If not waived through you may have to touch the button to see if you get a green light; in which case you proceed, or a red light in which case you have to have your luggage checked.

You will exit into a blast of hot air as you leave the airport where you will find us waiting for you, if you have so arranged. We will quickly load and make the hour drive to the finca. When we arrive there will be no light so a small flashlight, conveniently packed before hand for easy access, is useful. We will start the generator on arrival for getting settled for the night.

OPPORTUNITIES:

There exists the option of side trips from the Finca to points of interest. These include: Volcanoes, Montane Cloud Forest, Lake Managua boat trip, National Parks and Reserves, Pacific Sea Coast, Artesian Markets and the colonial City of Granada. Side trips to these locals can be arranged but have additional fees. These include entrance and transportation fees and some trips need to be prearranged for groups.

Bird watching at the finca is good but one will probably see most species in 2-3 days. There is a check list for the finca but it is by no means complete. There exist the opportunity to add additional species to the list. The Montane Cloud Forest offers a very different habitat and a chance to see additional species. It is about 30 minutes from the farm and reservations must be made because there are limited seats on the truck to the top. The lake Managua Boat trip offers the opportunity to see aquatic bird species and visit Granada, the oldest city in Central America. The Pacific Sea Coast offers the opportunity to see Magnificent Frigate Birds, Pelicans and Gulls and visit a very dry tropical forest habitat with a wide variety of wildlife. The Massay Volcano National Park offers
the opportunity to add other species while looking into the crater of an active volcano. There is no active lava flow but the volcano does belch from time to time and gaseous emissions are more or less constant. **If one has respiratory problems the fumes can be challenging.**

**Side trips can be planned if your desires are known ahead of time.**

If planning a trip to Nicaragua and you are internet savvy you should check out the internet and comments about the country. You can check with the state department, tourist agencies, and independent comments and for health related issues the CDC.

From my experience of the past 6 years in Nicaragua I would paint this picture. It is a very poor country, the second poorest in the hemisphere. Consequently there is considerable begging in the country from children, handicapped and the elderly. Unemployment is high and salaries are low. Expenses are high for many items yet there are good buys. This leads to considerable petty theft. One needs to be on guard against theft at all times when at restaurants, or in crowds. Use extra care when approached by strangers. On the other hand I find people to be friendly and accepting of visitors into their country. They are learning about tourism so facilities are not what you might expect in the US, they are developing, you are in a different culture and a different language is spoken. These cause a little stress but relax and enjoy for good times, good food, good people, good climate, and good experiences are yours to be had.

**TROPICAL DISEASE AND DANGERS:**

Without a doubt the most dangerous organism in the tropics is the mosquito. If may carry malaria, yellow fever, or dengue fever. This would include day and night biting mosquitoes. It is important to sleep under netting and to bring a mosquito spray containing DEET. Cholera is an often occurring disease in third world countries which can be prevent with good personal hygiene. Washing hands well prevents this and will also deter a variety of other problems including intestinal parasites. I have traveled for 8 years in the tropics and have never had anything more serious than mild diarrhea. **Cleanliness is the key.**

Even some plants are dangerous with some having fine hairs and spines that can inflict pain or produce a rash. These are common in the tropical dry forests where we will be spending most of our time. Caution will prevent a problem from these plants.

**MEDICAL:**

I would recommend that you be current with you immunizations including Hepatitis B and tetanus. If you are allergic to stings, dusts or pollens bring appropriate medication. You will need to bring any medication you take on a regular basis. Bring a mosquito spray containing DEET. With these precautions you will be prepared for a more enjoyable trip. For more information contact your personal physician or the CDC for safe traveling suggestions. The US State Department site also comments on foreign travel.

**ALERT:**

If you have not realized by now this will be a rugged experience. Be so informed! It might be summed up by the phrase: Conditions will be a little better than a camping trip. Students who have participated in past years have all had a positive experience.