

## **Instructions for the *Pitzer in Costa Rica* Supplementary Application**

1. Please review the attached **health information**. Return the signature page with your completed application to indicate that you have read and understood the guidelines. Keep the health guidelines for future reference.
2. Complete the form (both sides) from the **Instituto de Cultura y Lengua Costarricense** included in this document and return to Pitzer with your application.
3. Complete the **Directed Independent Study Project – Initial Proposal** form as a preliminary topic for your independent study project and return with the rest of the application.



**INSTITUTO DE CULTURA Y LENGUA COSTARRICENSE**  
**Host Family's Information Form**

Last Name: \_\_\_\_\_ First Name: \_\_\_\_\_

Flight Information: Date of arrival: \_\_\_\_\_

Airline: \_\_\_\_\_

Flight No: \_\_\_\_\_

Time: \_\_\_\_\_

Departure Date: \_\_\_\_\_

1. Do you smoke? \_\_\_\_\_

2. Do you like pets? \_\_\_\_\_

3. Would you like a family with children? \_\_\_\_\_

4. Do you have any dietary requirements? \_\_\_\_\_

5. Do you suffer from any type of allergies? \_\_\_\_\_

6. Do you have special interests, activities or hobbies? \_\_\_\_\_

7. Do you have any physical or emotional disability we should take into consideration in choosing an appropriate host family for you? \_\_\_\_\_  
\_\_\_\_\_

8. Are you traveling with a companion? **Not Applicable**

9. If the answer to question 8 is yes, would you like you and your companion to be placed in the same host family?

**Not Applicable**

Same Room       Single Room       Single Bed       Full size bed (for two)

10. If not in the same house, would you like to be in the same neighborhood with your companion?

**Not Applicable**

11. If you feel there is anything else we should know in order to best place you with a compatible host family, please indicate so below.

\_\_\_\_\_  
\_\_\_\_\_

**Student's Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

## Health Information for *Pitzer in Costa Rica* Applicants

Note: Acceptance to the Pitzer College in Costa Rica program is not contingent upon completion of immunizations prior to the application deadline. However, students are expected to obtain all "highly recommended" immunizations and prophylactic medicines before participating in the program.

### Immunizations

Costa Rica does not currently require any certificate of immunizations for entry into the country, but other countries along your route may. For this reason, and for your own records, you should have all immunizations recorded in a yellow "World Health" booklet or "International Certificate of Vaccination" that is available from your doctor or health clinic. **Contact your doctor or local county health clinic** to set up a schedule for your shots. Some immunizations come in a series that may take weeks or even months to complete. All of the immunizations recommended below afford partial or full protection against diseases that still occur in Costa Rica. Without an up-to-date immunization, any of these diseases could have serious, potentially life threatening consequences. **Please take these recommendations very seriously.**

**Typhoid:** The oral preventative vaccine is currently very difficult to obtain. If this is still the situation when you go for your immunizations, it will be necessary to get the injection. This vaccination, whether administered orally or by injection, is **highly recommended**.

**Hepatitis A:** Infectious Hepatitis (Type A) is a viral disease of the liver that is transmitted primarily by the fecal-oral route via water or contaminated food. The **Hepatitis A vaccine (Havrix)** is **highly recommended for all students on the *Pitzer College in Costa Rica* program**. The first dose provides adequate protection beginning four weeks after it is administered and lasting six to 12 months. Another dose is recommended six to 12 months after the first to provide long-term protection that will last for at least four years and maybe (as research results come in) much longer. A simultaneous dose of immune globulin is necessary *only* if you travel to a high-risk area *less* than four weeks after your initial dose of the Hepatitis A vaccine, before it becomes completely effective. The best course of action is to get both doses of the Hepatitis A vaccine before you leave. If this is not possible, it makes sense to get your first dose exactly one month before you go abroad so as to assure adequate protection from the time you arrive until the end of your program, without having to take IG. For persons who are allergic to the Hepatitis vaccine or otherwise elect not to receive it, immune globulin (5cc's) is still a viable option. You should get 5cc's of immune globulin just a few days before you leave the US to assure maximum effectiveness and coverage for your entire trip (up to four months). There is some concern that taking immune globulin for Hepatitis A at the same time or too close to some of your other immunizations may reduce their effectiveness. For this reason, if you elect to get IG rather than the Hepatitis A vaccine, we suggest that you complete all of your other immunizations at least one month before the beginning of your program, and then take your immune globulin just a few days before departure.

**Polio and Diphtheria-Tetanus:** As a general precaution, we **highly recommend** that you update these and any other childhood immunizations for which you haven't received a booster in the last five years.

**Cholera:** A shot is only **recommended** for those with compromised gastric conditions such as ulcers, but **optional** for others due to the very low chance of contacting this disease, and serious doubts about the effectiveness of the vaccination.

**Yellow Fever:** This is a viral infection also transmitted to humans by mosquitoes. Symptoms range from fever, chills, headache, and vomiting to jaundice and kidney failure. There is no specific drug to treat an infection of yellow fever. Prevention, therefore, is very important. Yellow fever is present in endemic areas in Panama. A certificate of yellow fever vaccination may be required for entry into certain countries in the region if you have visited Panama. Therefore, it is **highly recommended** that you get this vaccination if you are traveling to countries in Central America. To meet international vaccination requirements, yellow fever vaccines must be manufactured under approval by the World Health Organization and administered at an approved yellow fever vaccination center. Authorized U.S. vaccination centers can be identified by contacting state or local health departments or by visiting CDC's Travelers' Health website, where there is a listing of current authorized yellow fever vaccination providers in the United States. (<http://www2.ncid.cdc.gov/travel/yellowfever/>).

**Malaria:** Malaria is a serious, potentially fatal disease that occurs in parts of Costa Rica and other areas of Central America. It is spread by the bite of an Anopheles mosquito infected with the parasite. Malaria carrying mosquitoes are usually found in hot, humid lowland areas and are nocturnal – coming out at dusk and disappearing once the sun comes up. There is no vaccine for malaria so drug prophylaxis and protective measures against mosquito bites are highly recommended for all students who will be in a malarial area during the evening, night or early morning hours.

Fortunately, the risk of malaria during the first month of the program (in San José, the city of Alajuela and other areas in the Central highlands of Costa Rica) is extremely low or non-existent and prophylaxis is not considered necessary during this time. During the final three months of the program at the Firestone Center the risk is somewhat higher (since the elevation is lower) but still considered low (see malaria risk map, Appendix E in this book ), and most students, staff and visitors choose not to take a Malaria prophylaxis. Pitzer strongly encourages each student to carefully consider the malaria information provided by the Center for Disease control and consult with their personal physician to develop a preventative plan that they are comfortable with. When staying in an area that has significant risk for malaria, students should take an appropriate malaria prophylaxis as directed by their physician, sleep in well screened rooms or under a mosquito net, and make sure to wear protective clothing (long pants and sleeves) and use mosquito repellent with DEET, if they are out after sunset.

**Hepatitis B:** This type of hepatitis is transmitted through body fluids such as blood and semen and is a much more serious form of the disease than type A (above). While there are compelling cultural, health, and legal reasons for avoiding sexual contact or intravenous drug use in Costa Rica, the need for an emergency blood transfusion is possible for anyone and this vaccination **should be seriously considered** in consultation with your doctor. Three shots are necessary for full protection although partial immunity is acquired after the first two, which are administered one month apart. The third shot is given six months after the first shot. If you cannot complete the series before you leave, you may consider getting the first two shots before leaving and the third shot after your return to the US, or timing the series so that you can get your third shot while you are in San José where it *should be* available.

**Meningitis:** Meningococcal disease (bacterial meningitis) is a bacterial infection in the lining of the brain or spinal cord, which is transmitted through respiratory droplets when an infected person sneezes or coughs on you. There are occasional outbreaks of this disease among college students in the US. Pitzer continues to **highly recommend** a Meningococcal vaccine for students on a study abroad program. Good for one year. (See the CDC web site at <http://wwwn.cdc.gov/travel/content/Diseases.aspx#menin> for additional information.)

**Rabies:** If you might be exposed to wild or domestic animals through work or recreation, a rabies vaccination is recommended.

Updated 1/8/2009

KEEP THIS DOCUMENT FOR FUTURE FOR REFERENCE

## HEALTH INFORMATION ACKNOWLEDGEMENT

I have read and understood the **Health Information for *Pitzer in Costa Rica* Applicants**. I understand that they are Pitzer College's recommendations for my health and safety on this program. It is my responsibility to consult with my personal physician and the Center for Disease Control website <http://cdc.gov/travel> regarding these preventative measures and their applicability to my personal health.

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Student Name Printed

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Signed at (City Name)

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Student Signature

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Date

**SIGN AND RETURN THIS PAGE WITH YOUR APPLICATION**

Return to: Pitzer College Study Abroad  
1050 N. Mills Avenue  
Claremont, CA 91711

# **Pitzer in Costa Rica**

## **Directed Independent Study Project – Initial Proposal**

The Directed Independent Study Project (DISP) is a key component of the educational model of the Pitzer in Costa Rica program. It allows you to take one topic of special interest and explore it in depth through disciplined field research. A successful DISP aims to increase the understanding of the neotropical ecology and/or human ecology of the Firestone Center and surrounding communities. Whenever possible, your DISP should also provide you with an opportunity to utilize and build upon your Spanish language skills and cross-cultural competencies.

To develop local connections and resources for your project and provide you with guidance, we would like you to fill out, scan and email a digital copy of the Initial Proposal form to [studyabroad@pitzer.edu](mailto:studyabroad@pitzer.edu) by the application deadline.

You must pick a topic related to either Tropical Restoration Ecology or Environment, People, and Restoration. If you are interested in doing something along interdisciplinary lines (a topic synthesizing TRE and EPR), please consult with us in the study abroad office, and we'll direct you to faculty for more guidance.

All DISPs must be conducted at the Firestone Center or within neighboring communities, located within a daily commute of your homestays in Platanillo. Please refer to the list of projects the Firestone Center is interested in having students pursue under the guidance of program faculty. Research generated through these projects will be of assistance to establishing important baseline assessments for both TRE and EPR. It could also lead to your papers being published in conjunction with faculty research, depending on the quality of your work. You may, of course, generate a topic of your own, which will be reviewed for feasibility and approval by faculty in either TRE or EPR as well as the program director.

This is an *initial* proposal. After you are in Costa Rica, and especially once your TRE and EPR courses are underway, you will be able to modify your proposal. Your final proposal will be developed in close consultation with the program faculty member you choose to work under and the program director. It will be due near the end of the third month of the program. The culmination of your DISP will be a major paper (in English) submitted in the last week of the program to both the program director and your faculty supervisor/s (by email) and an oral presentation (in Spanish) given to program staff, students and community members during the final seminar of the program. Please note that it is possible to earn an additional half course credit in Spanish if you write your DISP in Spanish as well as in English. The English version is required. The Spanish version is optional.

## **Sample Projects to Forward the Restoration Ecology Vision of the Firestone Center for Restoration Ecology**

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### **1. Use of Leaf Pack Experiments in determining stream health on the Firestone Reserve and surrounding communities**

Leaf litter provides an important ecological role in the structure and function of stream ecosystems. Leaves fall from trees or are blown by the wind and form natural packets in streams. These natural "Leaf packets" provide food and habitat for a multitude of stream macroinvertebrates, mostly immature insects and freshwater shrimp. We can assess the water quality of our streams by observing which macroinvertebrates are thriving in them. This information can be used as an indicator of overall habitat health and as a relative measure of pollution.

We are able to manufacture a Leaf Pack artificially by gathering leaves alongside streams and placing them in mesh bags. In 2- 3 weeks time, the Leaf Packs are collected, and the number and types of macroinvertebrates that colonize the packs are determined. This project also has an interdisciplinary component in that it can be carried out with the help of local elementary school kids from Baru, who can help collect bags, and identify organisms, when supervised by a Pitzer student. The Stroud Water Research Center, who developed the Leaf Packs, is conducting these experiments with school kids all over the world, and has an international database that can be tapped into. For more information, see <http://www.stroudcenter.org/lpn/index.htm>

### **2. Stream health in primary versus secondary rainforest systems at the Firestone Center**

Large and small lowland neotropical streams and rivers are being studied increasingly because of their enormous ecological and economic importance. Rivers and streams provide necessary water, not only to organisms living in them, but also to organisms that live nearby and depend on them regularly. In southwest Costa Rica, for the Baru River, near Dominical, this includes human use as well. These waterways provide transport of nutrients to various sectors of the ecosystem as streams run into rivers and rivers run toward estuaries, and eventually enter the ocean. A preservation area of southwest Costa Rica, known as the Path of the Tapir Biological

Corridor (PTBC) is recognized as part of the Mesoamerican Biological Corridor, established to link critical habitats from Mexico to Panama in order to preserve biodiversity. The PTBC region is valuable in preserving both Costa Rican and Central American biodiversity (ASANA 2004). This preservation operates in the face of increasing water use by humans, as development in the Dominican area increases. This makes watershed areas of this region especially vulnerable to misuse and pollution.

The objective of this study is to assess stream quality along two watercourses, one, in a relatively undisturbed primary rainforest system, on Hacienda Baru, and the other, Quebrada Cacao, in a secondary forest ecosystem, on the Firestone Reserve. We will compare physical, chemical, and biological properties between the two streams and then measure these parameters at the Baru River, where these two watercourses meet. We will compare these measurements with those taken in the estuary, near the entrance to the ocean. A longer-term objective is to set up a sampling regime where the same stations are monitored each semester and summer, to provide a long-term dataset for comparison of changes in the condition of stream and river health.

### **3. Avian species richness and community composition on the Firestone Reserve**

This project would work well for anyone keen on bird identification. The three primary objectives of this project are to estimate species richness (how many species), determine community composition, and to estimate density of some of the more common species on the Firestone property. We will use a protocol developed by the TEAM Initiative (Tropical Ecology, Assessment, and Monitoring) which comprises an effort to standardize methods of data collection of species in tropical environments. The protocol relies on a combination of using standardized transects and point count methods to determine presence of different species of birds. Four to six plots will be established across vegetation types on the property (secondary forest, stream, pasture, and bamboo). Transects and point counts will be taken within the 1km<sup>2</sup> plots. Species richness will be determined by plotting species accumulation curves. Density estimates of particular species will be made from point counts using DISTANCE software which can be downloaded from the internet.

### **4. Tree nursery work**

The main objective will be to identify endangered tree species and/or plant species that are an important source of food for wildlife in the region to raise them in the FCRE nursery. This project will contribute to the FCRE's goals of development restoration alternatives for the Baru area. This will be an ongoing project including with at least 2 students or more collecting, germinating, and managing the tree nursery. Students also have to be in charge of the plastic bags where the seedlings will be transplanted from the nursery banks. At present, there are a few species in the tree nursery, mainly fruit trees. Species like Mahogany and other endangered species will be a plus in the project, especially for enrichment planting in the degraded secondary forests. I will have a general section in the tree nursery.

### **5. Tree plantings/Enrichment plantings/Arboretum**

One of the main problems on degraded lands is when the natural regeneration of abandoned lands does not provide the desirable species from the region because site-specific features (e.g. current soil properties, seed bank, seed dispersal, previous land use, landscape matrix). Following the FCRE's objectives this project will include planting several native species in pure and mixed plantations in abandoned pastures assigned to those purposes within the FCRE's property. In addition, enrichment plantings will be established in the degraded secondary and primary forests, bamboo plantations, tree plantations and other habitats available if possible. The expected result of this project is to develop the information of the species that can be used for reforestation/restoration/ enrichment planting in the Baru region (See as example Piotto 2007).

### **6. Assessment of the hardwood plantations**

For this project, 1 or 2 students are going to re-assess 9 permanent sampling plots (4 x 4 trees) that were established in 2007 by Alan Chiu and Sarah Snow in order to monitor the tree plantations in the long term. The first objective will be to assess the performance of the original planted trees (i.e., mortality, dbh, height, density, basal area, volume, growth). The second objective will be to compare the FCRE plantations to other tree plantations in the region or in the country (e.g. Leopold et al 2000; Redondo-Brenes and Montagnini 2006; Streed et al 2006; Redondo-Brenes 2007; Calvo-Alvarado 2007). Because the tree plantations were established with restoration purposes, students have to assess a group of wildlife or natural regeneration as new contribution to this on going project.

### **7. Assessment of the effect of "landuse" on wildlife presence.**

A student will be doing surveys of a group or groups of animals (i.e. birds) at different habitats in the Firestone property. The main goal will be to assess the presence of wildlife in the different habitats at the FCRE and how this may affect management of the different components of the FCRE.

## 8. A study of biodynamic theory in bamboo harvest.

An analysis of the water content, starch, and sugar content of bamboo harvested at different times during the month. This would involve cutting sets of 5 culms of *Guadua Atlantico* once a week for a month (full moon, new moon, and the 2 half moons) at the same time each day and the cutting of five additional culms every 6 hours for 24 hours at full moon. From each sample, the researcher would remove “the 4<sup>th</sup>” (or some consistent) internode, measure water content, and extract some sap from the remaining culm for sugar analysis.

**Environments, People, and Restoration: For more guidance or options, please contact Professor Melinda Herrold-Menzies (Pitzer College), Professor Juan Araya (Pomona College), or Professor Paul Faulstich (Pitzer College).**

1. Policies and Issues on Land Ownership and Use in the Baru/Dominical Area
2. The Conservation, Recording, and Interpretation of Petroglyphs at the Firestone Center
3. Design and Installation of Visitor Displays Addressing Archaeological, Cultural, or Human Ecological Issues.
4. A Life History Analysis of a Local Resident in Relation to Issues of Environmental Restoration or other Topics in Human Ecology
5. Water Politics of the Baru/Dominical Area
6. Policies and Issues of Local Protected and Conservation Areas
7. Development and Implementation of Collaborative Environmental Education Partnerships
8. Oral Histories about Land Use, Ownership and Change
9. Wildlife - Oral Histories about Changes in Populations
10. Hunting - Changes over Time
11. Fishing - Changes over Time
12. Farming/Cattle ranching - Changes over Time
13. Foods Consumed – Changes over Time (wild products, turtle eggs, game birds, food grown or bought)
14. Perceptions of Environmental Quality – Changes over Time
15. Employment/Occupations – Changes over Time (from farming/ranching to service industry) and why
16. Attitudes toward *Gringos* – Comparisons between Areas, Age, Gender, Occupation, etc.
17. Income – Changes in Income and Source of Income – Impacts on Consumption
18. Immigration to the Area over Different Periods (where coming from, why, when)
19. Local Costa Ricans Working in the US
20. Social Changes (changes in norms or social mores, marriage customs, dating, drinking, drug use, gender roles)
21. Longer-term Residents vs. Newcomers (differences in practices, beliefs, attitudes toward some subject)
22. Women's Occupations – Changes over Time (differences between women who work outside the home and those who are housewives)
23. Changes in Family Structure over Time (number of children one has or is expecting to have, number of children parents had, marriage age, divorce rates)

**Pitzer in Costa Rica**  
**Directed Independent Study Project – Initial Proposal**

Name \_\_\_\_\_ Email Address \_\_\_\_\_

College \_\_\_\_\_ Major \_\_\_\_\_

**Topic**

What focused research question would you like to explore? Your scope should be relatively narrow to allow in-depth study. How could your project forward the notion of restoration or diversity within the context of neotropical or human ecology?

**Methodology**

What methods will you use to gather information? Please be as specific as possible.

### **Relevant Background**

What previous coursework, lab, internship or research experience has prepared you for conducting this project?

### **Bibliographic References**

What bibliographic sources have you identified that will provide context, research methods, or content knowledge for your project? Please list at least three (title, author, date published, title of article, book, or chapter, etc.). Will you be able to access these and other pertinent resources while in Costa Rica?

### **Ethical Considerations**

Are there ethical concerns or considerations you must address in relation to research you are proposing? Consider areas such as research with human subjects, animals, cultural artifacts (like the petroglyphs on the property), and environmental impact. If you will be conducting research with human subjects, will you be able to avoid physical and psychological harm to your subjects? Do you need to address any issues of privacy?

### **Safety Considerations**

Can you think of any risks to your safety or others (human and animal) involved in carrying out your project?