

# MONTEVERDE INSTITUTE INTERNSHIP PROGRAM



## Internships

The Monteverde Institute offers internships for those interested in contributing to the Monteverde community and who want to gain tools to advance sustainability in their own lifestyles, home communities and academic studies.





## MONTEVERDE INSTITUTE INTERNSHIP PROGRAM

The Monteverde Institute was founded in 1986 to guide community development and encourage the positive aspects of a growing international tourism-based economy in a small community with a fragile environment. Place-based academic programs, applied research, and community initiatives interact to highlight sustainability lessons learned in the Monteverde experience and create spaces for cross-cultural exchange fostering peace, justice, and collaboration.

The mission of the Monteverde Institute Internship program is to provide unique opportunities that allow in-depth participation in community initiatives. Each intern holds a specific role in a selected project that results in a positive contribution to the Monteverde community. We do this while providing solid support in academics, theory, methods and communication.

Interns with the Monteverde Institute work with local experts involved in a variety of community and environmentally based initiatives that investigate or contribute to solutions to local issues. Students receive background information and the skill sets necessary to accomplish their tasks. Additionally, throughout the internship, we provide multiple levels of supervision and expertise to ensure that the intern has the most authentic and beneficial experience possible. All projects are presented publicly. So all internships end with accountability to, and feedback from, the community. All completed work is documented and cataloged in our digital, publicly accessible database for use by future generations. These learning internships help the MVI promote its mission *to advance sustainable living at the local and global level through place-based education, applied research and collaborative community programs.* 

#### Internship format

The internships listed in this document are all available on-site and some of them are available in a virtual format. For more details on the **internship format**, please see the internship description. We hope anyone who completes a virtual internship will visit us, this could be through an extension to, or the completion of, your virtual internship, participation in one of our academic programs, an educational family vacation, or Spanish classes with homestay to get to know the community in person. Ask about discounts or other incentives for your in-person visit to Monteverde.

MVI internships range from 2-12 weeks, requiring 15-20 hours per week of supervisor meetings and independent project work, plus Spanish class time, if applicable. The exact schedule of your internship will be determined in conjunction with your supervisor.

If you wish to include <u>Spanish classes</u>, MVI recommends one credit hour for every 15 hours of class. In addition to Spanish classes, we have a list of virtual cultural activities to promote a stronger sense of connection to Monteverde.

Need academic credit? Please specify when you apply so we make sure requirements are met.



#### Service Internships

Most of the internships described in this catalog are academic in nature, involving a close working relationship with, and oversight by, an expert in the field. In some cases, students receive credit or other recognition toward their degree from their home institution. **Service internships** contribute to the more urgent needs of MVI projects, may require more advanced skills, and involve more independent work. Due to the greater commitment by the intern, and the reduced supervision, the cost of these internships are lower. If you are interested in one of the service internships listed, please contact us for more information.

If you have any questions about our Internship opportunities or an idea for a study abroad course through your university, please contact Lilliam Zuñiga <u>lzuniga@mvinstitute.org</u>.

#### **General Intern Responsibilities**

Interns and supervisors hold regular meetings followed by independent work on the project. The independent work may involve literature review, internet research, mind mapping, data entry, data analysis, visual presentation of results, translation, graphic design, writing, etc. The meeting schedule, expectations, specific responsibilities and final products of the internship will be clearly defined between the intern and supervisor in the first week. Interns commit to engaging in all scheduled meetings, respecting confidentiality and proprietary use of data if relevant, providing the agreed-upon final product to the supervisor and MVI, and presenting the final product to the Monteverde community in a format accessible to the target audience (e.g., Facebook Live video presentation, written scientific report, or presentation to stakeholder group). All projects will provide proper credit to participants and resources and be available as open access in our digital and/or physical library.



## **Internship Descriptions**

#### MVI offers the following internships in six focus areas:

#### 1. Environment and Conservation

- a. Biological Sciences Data Analysis and Results Dissemination
- b. Bat Ecology and Conservation Data Analysis and Results Dissemination
- c. Wildlife Caught on Tape: Camera Trap Data Analysis
- d. Watershed Management Plans for Drinking Water Springs
- e. Interpreting Echolocation Calls of Leaf-nosed Bats
- f. Seed Germination Treatments for Selected Species of Tropical Trees (only On-site)
- g. The Effect of Herbivory on Tropical Tree Seedlings Planted in Reforestation Efforts (On-site)
- h. Three-Wattled Bellbird Territory Use, Description, Locations, and Abundance (Onsite)
- i. Density and Spatial Distribution of Tropical Tree Genera *Ocotea* and Cinnamomum in Primary and Secondary Premontane Forest (only On-site)
- j. Adopt-a-Stream Citizen Science Program (only On-Site)
- k. Watershed Management Plans for Drinking Water Springs

#### 2. Geographic Information Systems

- a. Supporting Connections: GIS Viewer Design and Implementation
- b. Connecting Local Consumers and Producers: Interactive Map Design
- c. Sustainability Virtual Tour: Interactive Map Design

#### 3. Community Health

- a. Community Health Program (only On-site)
- b. Assessing Water Conditions on a Community Scale (only On-site)
- c. Greywater Treatment Systems, Water Conservation, and Community Outreach (only On-Site)
- d. Food Security Program Evaluation
- e. Climate Change, COVID-19 and Food Insecurity in the Bellbird Biological Corridor
- f. Enfermedades Infecciosas: El Conocimiento Es Poder

#### 4. Sustainability and Resilience

- a. Social Permaculture: Designing for Community
- b. Sustainable and Efficient Production Planning
- c. Establishment, Management and Impacts on Home Gardens Pre- and during-COVID-19
- d. Medicinal Herbalism: Plants and Practices (only On-Site)



- e. The Future of Tourism Post-COVID-19: Opportunities for Innovation and Survival from Economic Adversity
- f. Using Statistics to Build Resilient Communities during the COVID-19 Pandemic
- g. Evaluating Success on Local Initiatives developed as a response to the COVID-19 Pandemic
- h. Circular Economy at La Tilichera

#### 5. Communications

- a. From Monteverde to the World: Community Organization Communications
- b. Communications for a Productive Water Treatment Plant
- c. Ecology and Natural History Media: Educational Video Production

#### 6. **Arts**

a. Art, Education and Communications

We also offer virtual Spanish classes and cultural activities.



#### **Environment and Conservation**

#### **Biological Sciences Data Analysis and Results Dissemination**

**Description:** Monteverde is home to incredible biodiversity that is the subject of study for many scientists. Research is supported by, and informs, the Monteverde Institute's academic programs and community initiatives. The objective of this internship is to convert raw data into results usable for publication, informing conservation priorities, educating diverse local, national, and international audiences, and laying the groundwork for further research and conservation. This internship can contribute to research in areas such as neotropical migratory bird conservation, tropical habitat restoration, comparative forest integrity, bat distributions, water quality, and meteorological monitoring. Under the guidance of an MVI researcher, you will learn how to prepare and analyze scientific data, interpret results, and prepare the information for distribution to a wider audience (possibly including publication). Microsoft Excel proficiency and prior knowledge of statistics are preferable but not strictly required.

This can be either an academic or service internship.

**Intern responsibilities:** Exact responsibilities will be defined with the supervisor and will depend on the specific research project, and could include literature review, data entry, data analysis and presentation (e.g., creation of graphs), writing, etc.

**Final products:** Final products could include visual presentation, manuscript for publication, blog content, reports for funding agencies, etc.

**Duration:** 2-6 weeks (+)

Requirements: Computer, basic knowledge of MS Excel

Supervisor: MVI researcher or research affiliate

Internship Format: Virtual and On-site



**Environment and Conservation** 

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#### Bat Ecology and Conservation Data Analysis and Results Dissemination

**Description:** The ecological and economic importance of bats cannot be understated. Pest control, crop pollination, seed dispersal and facilitation of plant response to climate change are just a few of the important roles that bats play. The objective of this internship is to convert raw data from decades of bat research in Costa Rica into results usable for publication. This will inform conservation priorities, educating diverse local, national and international audiences and lay the groundwork for further research and conservation. Under the guidance of two bat researchers, you will learn how to prepare and analyze scientific data, interpret results and prepare the information for distribution to a wider audience (possibly including publication). Microsoft Excel proficiency and prior knowledge of statistics are preferable but not strictly required.

**Intern responsibilities:** Exact responsibilities will be defined with the supervisor and will depend on the specific research project, and could include literature review, data entry, data analysis and presentation (e.g., creation of graphs), writing, etc.

**Final products:** Final products could include visual presentation, manuscript for publication, blog content, reports for funding agencies, etc.

Duration: 10-12 weeks

**Requirements:** Computer skills, basic knowledge of MS Excel

**Supervisor:** Richard LaVal, PhD, Monteverde Bat Jungle founder, and Vim de Backer, biologist **Internship Format:** Virtual and On-site









## **Environment and Conservation**

#### Interpreting Echolocation Calls of Leaf-nosed Bats

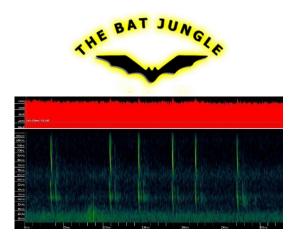
**Description:** Until recently, ultrasonic recording equipment was not capable of recording the calls of phyllostomid bats, often called whispering bats, because of the low intensity of their calls. Since these are the bats responsible for much of the fruit dispersal from tropical plants, and for the pollination of many species, we need to understand how these bats use echolocation to locate their food. With state-of-the art equipment, we have begun to record these calls, which is easily done with captive bats in the 18-meter-long enclosure at the Bat Jungle. We are also beginning to record with wild, hand-released bats in the cloud forest. We use Kaleidoscope Pro software to view the calls, but our files are difficult to interpret compared to those of high-intensity emitting insectivorous bats. **Intern responsibilities:** The intern should be experienced in the use of Kaleidoscope or similar software. They would sort, analyze and compare calls of as many species as possible, with the goal of putting the information into a published scientific paper, with illustrations. They are expected to do extensive literature searches and consult by email with active researchers in this field. The intern could be, of course, one of the authors of any published paper.

**Final products:** Supply useful data, information, and analyses to the principal investigators (Richard LaVal and Vin de Backer)

Duration: 6-12 weeks

**Requirements:** Computer and software skills (Kaleidoscope or similar), background in biological sciences, search engine pro skills.

**Supervisor:** Richard LaVal, PhD, bat researcher and Monteverde Bat Jungle founder **Internship Format:** Virtual and On-site







#### Wildlife Caught on Tape: Camera Trap Data Analysis

**Description:** This internship will give an introduction to the use of camera traps to collect relevant data about medium- to large-sized mammals, review questions that can and cannot be answered with camera trapping, provide an overview of applications in the field with selected case studies and teach the basics of camera trapping (placement, uses, limitations, etc.). The intern will gain appreciation for the limits and biases inherent in analyzing and reporting camera capture rates and the understanding of considerations for cost-effective monitoring of population trends.

**Intern responsibilities:** Review camera trap footage for mammal identification, data entry, analysis, and interpretation; produce a written report.

Final products: Analysis and interpretation of the data results in a written report.

Duration: 2-4 weeks

**Requirements:** Strong interest and basic knowledge of ecology, conservation, and research; basic knowledge of mammal identification; previous experience with data entry and a detail-oriented person. Additionally, for the on-site option, physical fitness and willingness to get dirty.

**Supervisor:** Ernest Minnema, naturalist guide and biologist and Sofía Arce, biologist and educator **Internship Format:** Virtual and On-site



## **Environment and Conservation**

#### Seed Germination Treatments for Selected Species of Tropical Trees



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**Description:** This internship is designed for a self-motivated individual to conduct formal research on germination success and rates through efficiency of direct seeding versus the use of germination beds. Skills learned throughout this internship include seed identification, nursery techniques and data collection. This internship will provide basic information regarding germination techniques for several species of tropical trees.

**Intern responsibilities:** Design an experiment with limited variables (different techniques or natural conditions) and with sufficient sample size per species, methodology, and selected analysis method, seed collection, data collection and entry, analysis, and interpretation.

**Final products:** Analysis and interpretation of the data results in a written report and presentation. **Duration:** 4-12 weeks

**Requirements:** The ideal intern demonstrates an interest in ecology, experimental design, and data entry. Attention to detail and good organization skills are a must. Previous research experience is recommended but not required.

Supervisor: Lorenzo Vargas Internship Format: On-site





## **Environment and Conservation**

The Effect of Herbivory on Tropical Tree Seedlings Planted in Reforestation Efforts



**Description:** There is a lack of information on variables that may affect seedling survival and growth, including herbivory. The results of the intern's research and the intern's recommendations at the end of the project will help further habitat restoration efforts in the Bellbird Biological Corridor. Herbivory occurs at a significant rate on newly planted seedlings, sometimes resulting in complete defoliation. In addition to leaf cutter ants, there are numerous other insects feeding on young growth. This internship is designed for a self-motivated individual to conduct formal research on the effects of herbivory on plant survival, growth and general health. Skills learned over the duration of this internship include tree identification, insect identification and data collection.

**Intern responsibilities:** Design a study with limited variables with sufficient sample size per species, methodology, and selected analysis method to compare, and correlate herbivorous insect species, levels of leaf damage and tree species growth/survival.

**Final products:** Analysis and interpretation of the data results in a written report and public presentation.

Duration: 4-6 weeks

**Requirements:** Self-motivation and an interest in reforestation is a must. Previous independent research experience is preferred. The ideal intern should be willing to handle insects, if necessary. **Supervisor:** MVI staff

Internship Format: On-site



## **Environment and Conservation**

#### Three-Wattled Bellbird Territory Use, Description, Locations, and Abundance

**Description:** The intern will be required to walk several different transects in order to locate threewattled bellbirds (*Procnias tricarunculatus*), take data about the birds and their perches. Throughout this internship, the intern will learn how to identify bellbirds, assess their age, dialects, perch and territorial patterns, and natural history. The intern will also utilize a GPS to mark the perches of these



birds. In-depth analysis of a bellbird's territory, which males defend from specific calling perches, has not been updated since Barbara Snow's study completed in the early 1970s. Comparison of previous territory positions, quantities and descriptions will lend further insight into the natural history of the bellbird, as well as its population status.

**Intern responsibilities:** Daily field census observations and data collection. Mapping of territories. Data analysis and interpretation.

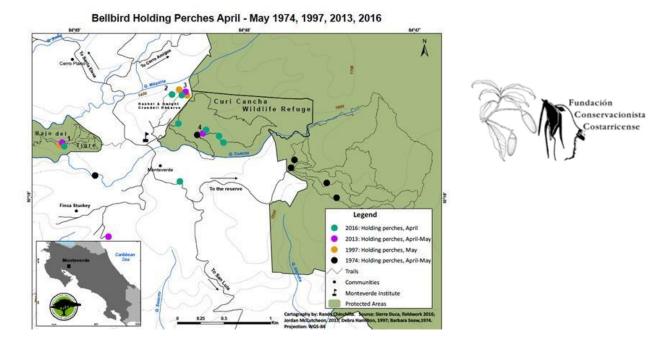
**Final products:** Literature review, updated map of territories distribution, final report and presentation.

Duration: 4-10 weeks (April-August)

**Requirements:** A general knowledge of ornithology, good observation skills, and stamina to hike extensively through transects are all required. Knowledge of GPS and ArcGIS is recommended but not necessary.

Supervisor: MVI staff

Internship Format: On-site



## **Environment and Conservation**

#### Density and Spatial Distribution of Tropical Tree Genera *Ocotea* and *Cinnamomum* In Primary and Secondary Premontane Forest

**Description:** This internship is a preliminary assessment of *Ocotea* and *Cinnamomum* tree's spatial distributions throughout the Bellbird Biological Corridor. Eventually, the data will be used in future studies to investigate differences in forest composition, phenology, and density and spatial distribution over different scales (local and landscape).



Initial assessment will involve locating, measuring, and taking GPS points and mapping all individuals with  $a \ge 2$  cm DBH, on at least six 20 x 50-meter plots. Interns will learn Lauraceae family characteristics and will be actively involved in tree identification for this study. Key questions include: What is the density of species found in these genera within these transects? Where are these trees located within each transect? Does recruitment vary by forest type or tree species?

**Intern responsibilities:** Field data collection, data entry, statistical analysis and interpretation. **Final products:** Literature review, final report and presentation.

#### Duration: 4-10 weeks

**Requirements:** Interest in forestry and getting dirty, stamina for fieldwork, data collection and scientific article research skills.

Supervisor: Randy Chinchilla or MVI Staff Internship Format: On-site



## **Environment and Conservation**

#### Adopt-a-Stream Citizen Science Program

**Description:** The main objective of the Monteverde Institute's Adopt-a-Stream (AAS) internship is to provide support to the various aspects that this citizen science program encompasses. This program reaches out to 9<sup>th</sup> and 10<sup>th</sup> graders at Monteverde's three high schools. It provides them with education about water ecosystems and related issues, and experiential learning in the field. Each of the schools "adopts a stream" and monitors water quality indicators on a monthly basis. When schools are not in session, MVI staff must still obtain monthly data at these stream sites,



which may include calling upon other community members for support. For this internship, site lists and sampling periodicity may be expanded in order to obtain a greater data set.

**Intern responsibilities:** Field data collection, macroinvertebrate identification with the use of field guides. Data entry and analysis.

Final products: Literature review, final report and presentation.

Duration: 4-10 weeks

**Requirements:** No prior experience necessary. Intern must be willing to get wet and muddy and should have stamina for fieldwork. Enthusiasm is a key personality trait for this internship. **Supervisor:** Luisa Moreno, MVI Program Coordinator.

Internship Format: On-site



## **Environment and Conservation**

#### Watershed Management Plans for Drinking Water Springs

**Description:** The main aqueduct for the Monteverde Municipal District is supplied by a series of freshwater springs, each with its own unique set of circumstances and protection requirements. A number of risks and mitigation actions have been proposed. However, they have not been evaluated or documented for a systematic plan to be agreed upon. This project will contribute to the articulation, in concise terms, of the unique challenges presented, and actions to be pursued, for each spring. This project will require the intern to first conduct a literature review to identify the common elements of a watershed protection plan, then through dialogue with the environmental



manager, determine a concise/brief format for the plans to be utilized (and populated) for each respective spring within the system.

**Intern responsibilities:** Collect guidance documents and copies of management plans to identify common elements. Create a bibliography and work with the environmental manager to create a format to be used in Monteverde.

Final products: Bibliography, plan framework/format, initial drafts of plans.

Duration: 3-6 weeks

Requirements: Basic Spanish, strong independent research skills.

**Supervisor:** Monteverde District ASADA (Aqueduct Administration Association) staff **Internship Format:** Virtual and On-site





## **Geographic Information Systems**

#### Supporting Connections: GIS Viewer Design and Implementation

**Description:** Map viewer development is a widely applicable and fast-evolving area of Geographic Information Systems (GIS), as evident by the number of applications to display, and the different types of data to visualize. The Bellbird Biological Corridor extends from the cloud forests of Monteverde, down the pacific slope to the Nicoya Gulf mangroves, creating biological connectivity and supporting community well-being. The objective of this internship is to support informed public and private decision-making processes through the generation of accessible, useful, current and reliable georeferenced geographic information for the Bellbird Biological Corridor. The Monteverde region hosts an important scientific and student community that requires information and geodata. This project aims to make geographic information for the Bellbird Biological Corridor easily accessible to the general public through a GIS viewer.

#### This is a service internship.

**Intern responsibilities:** Verify information and data veracity, check metadata and attribute tables (.shapefile information: owner, creator, publication year, description, etc.) and check for topology errors (e.g., separated riverlines, overlaid polygons).

**Final products:** A GIS viewer of the Bellbird Biological Corridor with geographic information in .shp format. Data to be initially included in the viewer: 1990-2001-2020 land use, river network, road network, communities, contour lines, life zones and sub-corridors.

#### **Duration:** 6 weeks (+/-)

**Requirements:** Advanced GIS knowledge (ArcGIS, QGIS), open-source GIS web application development knowledge (ESRI, Carto, Mapbox, Google Maps).

Supervisor: Randy Chinchilla, MVI GIS coordinator

Internship Format: Virtual and On-site





## **Geographic Information Systems**

#### **Connecting Local Consumers and Producers: Interactive Map Design**

**Description:** Where is the food you consume produced? This is an important question anywhere, and the final product of this internship will help people in Monteverde answer it. The Monteverde Institute works to connect local producers and consumers in the Monteverde zone, to promote food security and a resilient local economy that respects the natural environment. This interactive map gives consumers access to information about local producers of vegetables, fruits, meats, dairy, and value-added products. The objective of this internship is to develop an interactive map of local, regional and national producers for the Monteverde zone.

#### This is a service internship.

**Intern responsibilities:** Verify information and data veracity and collect product information through producer interviews. Additionally, for the on-site option, conduct field work.

**Final products:** A map displaying the location of producers, which contains information about the producer or company and the products they sell. The map should also show the path of the product to the final consumer.

#### Duration: 4 weeks (+/-)

**Requirements:** Advanced GIS knowledge (ArcGIS, QGIS), open-source GIS web application development knowledge (ESRI, Carto, Mapbox, Google Maps), basic reading comprehension of Spanish preferable

**Supervisor:** Randy Chinchilla, geographer and MVI GIS coordinator **Internship Format:** Virtual and On-site







## **Geographic Information Systems**

#### Sustainability Virtual Tour: Interactive Map Design

**Description:** Interactive maps are a simple, informative way to represent a territory. These maps can include a wealth of geographic, physical, political and social data, as well as support content with photos, videos and audio. The objective of this internship is to develop a navigable, interactive map for the MVI website, with information about the organization, the Rachel & Dwight Crandell Memorial Reserve, and campus sustainability initiatives. The desired final product is the publicly accessible interactive map. If you are interested in generating content for the interactive map and virtual tour, see the Community Organization Communications internship description below. *This is a service internship.* 

**Intern responsibilities:** Verify information and data veracity, check metadata and attribute tables (.shp information: owner, creator, publication year, description, etc.), and review/update information on each of the sustainability projects (including photos, videos, graphics, and data).

**Final products:** Interactive map of the MVI campus, which communicates information about our sustainability initiatives and programs, and introduces the staff and their roles and responsibilities within the organization.

#### Duration: 6 weeks (+/-)

**Requirements:** Graphic and web design knowledge, geolocation application knowledge (Carto, Mapbox, etc.), open-source GIS web application development knowledge (ESRI, Carto, Mapbox, Google Maps).

**Supervisor:** Randy Chinchilla, geographer and MVI GIS coordinator **Internship Format:** Virtual and On-site



## **Community Health**

## Monteverde Institute Instituto Monteverde

#### Community Health Program

**Description:** The overall objective of this internship is to provide support to the various activities that the Monteverde Institute Health Program provides to the local community. International courses focused on themes related to health and medicine. The health program is coordinated by Jenny Peña. It consists of several different facets, including doing academic field courses (nursing, anthropology, environmental engineering, and public health, among others), and assisting in Monteverde in Motion, which is a community fitness program. The goal is to enhance awareness of general nutrition and preventative health issues among target populations

**Intern responsibilities:** Coordinate with internship supervisors during first days of internship to identify priority tasks/locations and to schedule weekly update meetings; literature review; data collection; data entry, analysis, and interpretation; prepare final report; and prepare and deliver a presentation.

**Final products:** Developed and executed program activities, educational and preventative material for participants. Final report and presentation.

Duration: 4-12 weeks

**Requirements:** Resume or curriculum vitae must demonstrate that the prospective intern studies or has experience in two or more of the following fields: public health, medicine, physical therapy or education and/or activity (including Zumba, aerobics, dance and sports instruction), nutrition, recreation, art, psychology, nursing, anthropology, environmental engineering, leadership development, grant writing, or program coordination. An advanced level of Spanish is required, bilingual preferred (please write your letter of interest in Spanish; a Skype interview may also be required). Must have completed at least two years of university at time of application. Self-directed personality preferred.

Supervisor: MVI Community Health Program Coordinator Internship Format: On-site



## **Community Health**

#### Assessing Water Conditions on a Community Scale



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**Description:** The purpose of this internship is to assess the current conditions of water resources along the Bellbird Biological Corridor. It is essential to know the main problems that affect it, specifically in terms of water supply, protection, use and disposal. This type of research and analysis would make it possible to develop a comprehensive approach based on the anthropological characteristics of each community throughout the entire basin. It would also facilitate a second stage to propose concrete solutions that would allow for the sustainable management and use of water resources.

**Intern responsibilities:** Coordinate with internship supervisors during first days of internship to identify priority tasks/locations and to schedule weekly update meetings. Visit a selected community to assess environmental and social conditions, conduct interviews with water authorities and apply surveys to local residents. Literature review; data collection; data entry, analysis, and interpretation; prepare final report and presentation.

**Final products:** General diagnosis of the micro-watershed, list of main water management issues detected in the community, list of community leaders and local authorities that work on water management and protection. Final report and presentation.

#### Duration: 4-10 weeks

**Requirements:** The intern must be interested in working with local communities, managing qualitative and quantitative data. The project will require office time and field work to collect data from environmental conditions and the community's cultural practices. A strong knowledge of Spanish could be relevant.

**Supervisor:** Anibal Torres L., MVI Sustainable Futures Program Coordinator **Internship Format:** On-site



## **Community Health**

#### Greywater Treatment Systems, Water Conservation, and Community Outreach

**Description:** This internship will be focused on developing interpretive and teaching materials based on the knowledge that the intern gains about the situation of water in Costa Rica and Monteverde, as well as how greywater treatment systems function. The intern will use these Apdo. 69-5655, Monteverde, Puntarenas, Costa Rica / 011-506-2645-5053 / <u>mvi@mvinstitute.org</u>

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materials for the development and implementation of workshops in order to inform the community about the importance of water treatment and conservation. Through observation and surveys for the Monteverde Network of Environmental Management of Residual Waters, the intern may be involved in researching other opportunities to improve greywater treatment in red-zoned areas.

Intern responsibilities: Field visits to greywater treatment systems around Monteverde and surrounding communities, MVI biogarden measurements and periodic maintenance. Development of interpretative and curricular material for MVI and for workshops; literature review; data collection; data entry, analysis, and interpretation; prepare final report and presentation.

**Final products:** Well-documented personal and critical reflections of field experiences as well as workshop experiences: agendas/itineraries, dates, locations, references, photo documentation, people, etc. Interpretive material (sign(s) and/or poster(s) and curriculum). Workshop(s) and/or tour of the MVI biogarden for students. Final report and presentation.

#### Duration: 4-10 weeks

**Requirements:** The intern must have a strong interest in improving the quality of water discharged to streams and rivers. Basic knowledge and understanding of ecology, freshwater biology, water quality and treatment wetlands is helpful. The intern must have a strong background in teaching and curriculum development. A strong knowledge of Spanish could be relevant. Supervisor: Anibal Torres L., MVI Sustainable Futures Program Coordinator Internship Format: On-site



**Community Health** 

## Food Security Program Evaluation

**Description**: Through this internship, participants will learn how to conduct a program evaluation. Interns will assist in evaluating regional initiatives and programs that have been developed to ensure food security and well-being in the context of the Covid-19 pandemic. Programs to be evaluated could include (but are not limited to), Huertas Monteverde (Monteverde Home Gardens), Disfrutable (sharing fruit plants), and the Banca de Alimentos (Food Bank). Program evaluation involves applying research methodologies. Interns will learn how to collect and analyze qualitative and



quantitative data and will use Dedoose analysis software. Interns will also learn how to present findings to various stakeholders, such as program developers, program participants, funders and the general community. This is a social science research assistant internship. \*\*\*

**Intern responsibilities:** Coordinate with internship supervisors during first days of internship to identify priority tasks/locations and to schedule weekly update meetings; literature review; data collection (participant survey, participant focus group, stakeholder interviews, and stakeholder survey, existing secondary data sources); data entry, analysis, and interpretation; prepare final report; and prepare and deliver a presentation.

**Final products:** Stakeholder presentation, stakeholder report (with policy recommendations), community presentation, community report (with policy recommendations), and visual representation of findings.

Duration: 4-6 weeks

Requirements: Basic Spanish

**Supervisor:** Dr. Allison Cantor, medical anthropologist and MVI research affiliate **Internship Format:** Virtual and On-site

\*\*\*The above description is geared toward students in anthropology and/or public health, as this internship satisfies public health core competencies. The programs to be evaluated cover a wide range of disciplines, and will benefit from the work of interns in diverse fields of study.



## **Community Health**

#### Climate Change, COVID-19, and Food Insecurity in the Bellbird Biological Corridor

**Description**: This research explores the relationship between climate change, COVID-19, and food insecurity in the Bellbird Biological Corridor (BBC) in Costa Rica. Small-scale food producers were already struggling with the effects of climate change in the region, and now the COVID-19 pandemic has impacted them further. The main research question is: how have small-scale food producers adapted to these changes and how do these adaptations impact food insecurity in the BBC? Interns will participate in various components of research, which may include conducting interviews and using other methods (e.g., focus groups, photovoice, free listing, etc.) to gather data on food insecurity, Covid-19 and climate change. Interns will also gain skills in data management, data



collection, data analysis and community-based participatory research. This is a social science research assistant internship. \*\*\*

**Intern responsibilities:** Coordinate with internship supervisors during first days of internship to identify priority tasks/locations and to schedule weekly update meetings; conduct literature review; data collection, entry, analysis, and interpretation; prepare final report; and prepare and deliver a presentation.

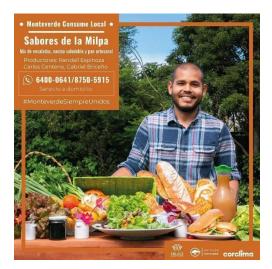
**Final products:** Community presentation, final report, infographic on small-scale food producers and food insecurity, and infographic showing analysis of regional climate change data. **Duration:** 4-6 weeks

**Requirements:** Basic Spanish

Supervisor: Dr. Allison Cantor, medical anthropologist and MVI research affiliate

Internship Format: Virtual and On-site

\*\*\*The above description is geared toward students in anthropology and/or public health, as this internship satisfies public health core competencies. This project is interdisciplinary and will benefit from the work of interns in diverse fields of study, so if the overall project is of interest to you, please apply or request more information!



## **Community Health**

#### Enfermedades Infecciosas: El Conocimiento Es Poder

(This internship is offered in Spanish.)

**Descripción:** Justificación: Las enfermedades infecciosas constituyen una de las primeras causas de morbi-mortalidad en Costa Rica, razón por la cual es esencial conocerlas adecuadamente. Por medio de clases virtuales con la doctora supervisora de esta pasantía, el/la pasante conocerá la etiología de las enfermedades infecciosas que representan problemas de salud en Costa Rica, podrá explicar los mecanismos patogénicos de los microorganismos que explican la producción de enfermedades infecciosas, conocerá las principales características epidemiológicas de cada enfermedad, podrá describir la respuesta inmunológica del hospedero cuando hay enfermedades infecciosas, y conocerá las medidas de prevención y control de las enfermedades infecciosas. Este conocimiento se aplicará a la elaboración de materiales educativos para diversos públicos.

Responsabilidades del/la pasante: Recopilar información sobre enfermedades infecciosas



relevantes en Costa Rica, sintetizar recursos existentes y resumir recomendaciones oficiales, elaborar materiales educativos en formatos fáciles de entender y que llamen la atención de diferentes sectores de la población costarricense.

**Productos finales:** Materiales informativos sobre diferentes enfermedades infecciosas (por ejemplo: infográficos, panfletos, afiches).

Duración: 10-12 semanas

**Requisitos:** Nivel avanzado de español, conocimientos básicos de biología, manejo de Microsoft Office, conocimientos básicos de diseño gráfico.

Supervisora: Dra. Kristinne Bellorín, médico independiente

Internship Format: Virtual and On-site





## Sustainability and Resilience

#### Social Permaculture: Designing for Community

**Description:** Think globally, act locally. Permaculture is a holistic design methodology that draws upon the wisdom and experience of traditional indigenous knowledge and modern science. It is applied via 12 design principles that can be utilized to create conscious and regenerative systems. The goal of permaculture practitioners is to design systems that maximize the welfare of humanity and the living world in a sustainable way. This work will support the design of resilient and regenerative communities and community-driven organizations. The internship is very flexible in terms of the focus the intern is interested in pursuing. The internship can focus on either traditional permaculture site design (home-scale, community garden or farm-scale) or social permaculture (holistic systems design for communities, organizations or programs). The mentor will guide the intern through the basics of permaculture design (ethics, principles, site analysis, design process, etc.) and how to apply it to a project that fits the above criteria.

This can be either an academic or service internship.

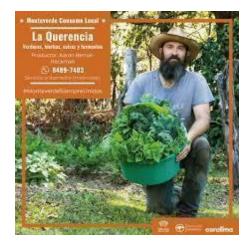
**Intern responsibilities:** Generate a permaculture design addressing community needs, including GIS data entry, basic mind mapping, conduct and compile stakeholder interviews, and prepare a written report.

**Final products:** Two to three-week internships will produce a short permaculture-based assessment with recommendations for the selected client. Longer-term interns will produce a more comprehensive assessment and permaculture design for the selected client.

Duration: 2-6 weeks

**Requirements:** Access and ability to use Google Drive, knowledge in design, basic mind mapping, and basic GIS. The intern must follow the three ethics of permaculture: 1) Care for Earth 2) Care for people 3) Fair share

**Supervisor:** Aaron Bernal-Hockman, anthropologist and regenerative systems designer **Internship Format:** Virtual and On-site





## Sustainability and Resilience

#### Sustainable and Efficient Farm Production Planning

**Description:** This project will be working with selected farms along the Bellbird Biological Corridor to analyze surface features (land use, contour, water derange, water bodies), to research about how to incorporate new design principles in to the current farm activities and to develop, with the farm owner, a master plan proposal that could boost productive landscapes, improving agricultural and forestry efficiency.

**Intern responsibilities:** Periodic meetings with the supervisor, literature review, interview with farm owners and/or local experts, and data collecting and processing, interpretation/generation of masterplan and a final report.

**Final products:** Orthomosaic and digital elevation models by farms, land use and coverage map, surface water drainage map, farm master plan, written report and presentation.

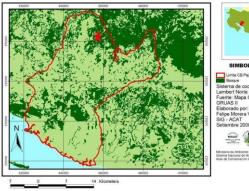
#### Duration: 6-8 weeks

**Requirements:** Knowledge in GIS (ArcGIS or QGIS), landscape architecture, permaculture, land use planning and Spanish is preferable but not mandatory.

**Supervisor:** Randy Chinchilla, MVI GIS Program Coordinator, Anibal Torres, MVI Sustainable Futures Program Coordinator

Internship Format: Virtual and On-site

#### CORREDOR BIOLOGICO PAJARO CAMPANA COBERTURA BOSCOSA





## Sustainability and Resilience



#### Establishment, Management, and Impacts of Home Gardens Pre- and during COVID-19

**Description:** This internship will help assess the economy and food security. The intern will document strategies and impacts of local home gardens, pre- and during COVID-19, in the Monteverde zone. Other activities can include elaboration of educational materials.

**Intern responsibilities:** Periodic meetings with the supervisor, literature review, interview local people/organizations, and data processing.

**Final products:** A socio-economic assessment of home-gardens (report and presentation) and didactic materials for the Monteverde community.

Duration: 3-4 weeks

Requirements: Intermediate Spanish

Supervisor: Elena Florian, MVI collaborator

Internship Format: Virtual and On-site





## **Sustainability and Resilience**

#### **Medicinal Herbalism: Plants and Practices**



## MONTEVERDE INSTITUTE INSTITUTO MONTEVERDE

Description: This internship involves ethnobotanical research and education on native and nonnative medicinal plants conducive to growth in Monteverde. The intern will visit several community medicinal plant garden initiatives and learn how to identify medicinal plants by their scientific and common names. With this gained knowledge, the intern will be capable and responsible for choosing medicinal plants for expanding existing community gardens, and/or locating an area in the community for the design and installation of a new medicinal plant garden. Interns may also develop educational presentations and materials about medicinal plants for the community; as well as contribute to the current database of the local community's medicinal plant knowledge.

Intern responsibilities: Periodic meetings with the supervisor, literature review, data collection, entry, analysis, and interpretation.

Final products: Interpretive materials on medicinal plants. Preparation of medicinal infusions, decoctions, tinctures, salves and syrups. Educational presentation and/or brochures for a local community group or school. Ethnobotanical survey about current medicinal plant use in the Monteverde region. Final report and presentation.

#### **Duration:** 4-8 weeks

Requirements: Interest in medicinal plants and herbalism, gardening and landscape design, community education, and ethnobotanical research

Supervisor: Carla Willoughby, biologist, educator and artist.

Internship Format: On-site



## Sustainability and Resilience

The Future of Tourism Post-COVID-19: **Opportunities for Innovation and Survival from Economic Adversity** 



## MONTEVERDE INSTITUTE INSTITUTO MONTEVERDE

**Description:** As a global economic recession takes place in the midst of the COVID-19 pandemic, it's not surprising that the tourism industry has experienced a decline in bookings and increase in cancellations, which is negatively impacting Monteverde's local economy. This project focuses on documenting the impact post-COVID-19 in the local tourism industry and identifying local/national/international strategies that countries, like Costa Rica, are implementing to make local tourist enterprises more resilient.

**Intern responsibilities:** Possibly conduct interviews, process data, and write a final report. **Final products:** Final report and presentation (e.g., PowerPoint).

Duration: 3-4 weeks

**Requirements:** Intermediate Spanish, data processing ability, and report writing. **Supervisor:** Elena Florian, climate change mitigation specialist and MVI collaborator **Internship Format:** Virtual and On-site







## Sustainability and Resilience

#### Using Statistics to Build Resilient Communities during the COVID-19 Pandemic

**Description:** The statistics and census sub-commission of the community-driven Monteverde COVID-19 emergency response team (Comisión de Enlace / Liaison Commission) is seeking interns to help with data management, analysis and presentation of findings from ongoing work. Interns will manage survey data sets in Google Drive as well as conduct data analysis using Excel. This work directly supports the work of the Monteverde COVID-19 emergency response team, as they are still collecting data to better understand how to help our community adapt to the drastic changes that have occurred as a result of the COVID-19 global pandemic.

**Intern responsibilities:** The intern will attend two regularly schedule weekly meetings with the subcommission; be responsible for meeting with the advisor and creating a work schedule; update the databases weekly as new survey responses are collected using Google Sheets; conduct descriptive and inferential statistics using Excel; and describe the results in Spanish in written and visual form. At the end of the internship, the intern will also help to create materials used for presentations at the local municipality as well as within the broader community.

**Final products:** Written report (English), infographic presenting findings (Spanish and English), final presentation (.ppt in Spanish and English).

Duration: 2-12 weeks

**Requirements:** Spanish: intermediate to advanced; knowledge of statistical methods (e.g., taken intermediate statistics, biostatistics, epidemiology, etc.); use of statistical analysis software (e.g., Excel, SPSS, SAS, R, JMP, etc.).

**Supervisor:** Dr. Allison Cantor, medical anthropologist and MVI research affiliate and Anibal Torres, MVI Sustainable Futures program coordinator

Internship Format: Virtual and On-site



## Sustainability and Resilience



## Evaluating Success on Local Initiatives Developed as a Response to the COVID-19 Pandemic

**Description:** Given the need to reactivate the local economy and generate some income for families during the pandemic of COVID-19, a large number of new entrepreneurships and local initiatives have been developed. This includes moving towards economic diversification as well as developing new business models in order to market, sell, and exchange services and goods. This internship aims to identify and measure the impact and "success" of these models, projects and businesses. Interns will learn skills related to monitoring and evaluation as well as data analysis and interpretation.

**Intern responsibilities:** Periodic meetings with the supervisor, literature review, research on local initiatives, interviews with business owners or initiative representatives. Write a final report. **Final products:** Inventory and database of new local initiatives, evaluation of impact and success from new local initiatives, final written report and presentation.

#### Duration: 6-8 weeks

**Requirements:** Skills in statistics, excel or other data management software, economics, social research and Spanish is preferable but not mandatory.

**Supervisor:** Dr. Allison Cantor, medical anthropologist and MVI research affiliate and Anibal Torres, MVI Sustainable Futures program coordinator

Internship Format: Virtual and On-site





## Sustainability and Resilience

#### **Circular Economy at La Tilichera**



MONTEVERDE INSTITUTE INSTITUTO MONTEVERDE

**Description:** La Tilichera is a bartering and upcycling center that launched in October 2020 in response to a lack of cash flow during the pandemic. It is a community center where people can pass on what no longer serves them in exchange for what they need. While no cash is traded in the bartering center, there are some cash expenses for electricity, cleaning supplies etc. Products made from denim and other materials are sold to cover the costs of the bartering center. The intern will learn more about upcycling in a circular economy and will support the project by developing and improving designs of upcycled products attractive to a broad market.

**Intern responsibilities:** The intern will work with the women in La Tilichera team to develop, improve and produce quality products made with used denim and other materials. The intern will also interact with business owners interested in selling these products for these products to get feedback on how to refine and improve the products.

**Final products:** Develop and help to make new upcycled products. Create materials to help market these products, both physical and online. Final presentation.

Duration: 4-12 weeks.

**Requirements:** The ability to communicate in Spanish, experience in using a sewing machine (preferable). Designing skills.

Supervisor: A member of the CORCLIMA (Monteverde Commission for Resilience to Climate Change)/Tilichera Team

Internship Format: On-site





## Communications

#### From Monteverde to the World: Community Organization Communications

**Description:** The Monteverde Institute interacts with diverse partners: communities in the Monteverde zone; stakeholders in the Bellbird Biological Corridor; academic, research, and service partners throughout Costa Rica; international students, faculty, and researchers; and



potentially anyone in the world with an interest in sustainability and access to social media. Internal communication at such a dynamic organization is also interesting and important. This internship supports the work of the MVI communications department in a wide variety of tasks, such as website maintenance, social media, graphic design, community surveys, script preparation, video and photo editing, weekly local announcements, supporting on-site and virtual academic programs, creating blog and newsletter content, and creating infographics and other educational materials. The final products of this internship will depend on the organization's current needs, and the intern's strengths and interests. For example, content for the MVI campus interactive map and sustainability virtual tour could be a final product of this internship. *This is a service internship*.

**Intern responsibilities:** Collect information from diverse sources (books, interviews, etc.), compose summaries of key information, create multi-media scripts, review and refine communication materials, etc.

**Final products:** Blog articles on a diversity of topics of interest for MVI, e-learning scripts, and essays or other documents suitable for internet publication for local and international audiences. **Duration:** 2-12 weeks

**Requirements:** Strong skills in internet research, writing, and summarizing information. **Supervisor:** MVI communications coordinator

Internship Format: Virtual and On-site





## Communications

#### **Communications for Productive Water Treatment Plant**

**Description:** Our community water system has become a lead model for other neighboring communities. One of our provisional work sites in Cañitas serves not only as a testing ground for productive treatment technologies that will serve as the cornerstone of a "circular economy," but also as an educational opportunity to show firsthand decision-makers, investors and other stakeholders the value and process of scaling-up. We currently have a series of posters in English that need to be translated into Spanish before they can be displayed at the newly constructed composting plant. Once translated, the information can also be reformatted to be included in an updated version of an informational dossier that serves to communicate the larger vision and up-to-date progress of the Environmental Technology Park initiative.

Intern responsibilities: Translating texts, editing basic graphics layout.

Final products: Series of translated posters and digital booklet.

Duration: 2-3 weeks

**Requirements:** Intermediate Spanish, and some proficiency with Microsoft Office or Google equivalents.

**Supervisor:** Monteverde District ASADA (Aqueduct Administration Association) staff **Internship Format:** Virtual and On-site







#### Ecology and Natural History Media: Educational Video Production

**Description: Since we have** so much information to offer in ecology and natural history just within the Monteverde area, we would like to design bilingual, educational content in various media. As an intern, you could work on video editing; participation in, and elaboration of, original videos; social media marketing and outreach to support the growth of a channel based on teaching science, ecology, natural history; and raising awareness about the importance of conservation, by connecting people to nature in a way that is unique and engaging.

Sample video: <u>https://www.youtube.com/watch?v=qv3BLnJk-t4</u>.

**Intern responsibilities:** Edit videos, participate in content design, and publish educational and marketing materials.

**Final products:** At least one educational video about an ecological or natural history theme of the intern's preference, increased viewing of videos and publications.

Format: Virtual

Duration: 2-6 weeks

**Requirements:** Experience with video editing and social media such as Facebook, Instagram, and YouTube.

Supervisor: Alexa Stickel, naturalist guide and educator

Internship Format: Virtual and On-site





## Monteverde Institute Instituto Monteverde

**Description:** This interdisciplinary, creative project seeks to motivate and attract interns with artistic skills who would like to develop and use their skills to create a final product that serves a greater educational and/or communications purpose in the areas of ecology, conservation, health, medicinal plants or sustainability. The intern will work closely with the supervisor to decide on a final product based on their artistic strengths or desired areas of improvement. The intern will be introduced to a variety of conservation and sustainability projects occurring locally in Monteverde, Costa Rica, as well as ecological highlights of the area. Together, the intern and supervisor, will map out a series of experiences and research avenues that will allow the intern to gain a more in-depth understanding of the topic of choice, and to inform the art-making process, the final product and the target audience. Typically, students who engage in this internship come from a visual arts background, however other art mediums are welcomed. The final art product will support local institutions in their educational and communications objectives.

**Intern responsibilities:** Internet research, identify target audience and final product in conjunction with the supervisor, complete all artistic projects, create a final presentation video showcasing artistic process and final art product, and submit the final product to the benefitting target audience or organization.

**Final products:** Final products will depend on the intern's interest and artistic medium, and virtual vs. on-site internship format. Past examples of products include: a published Zine about bioluminescence, an art activity for local students about insect illustration and mandalas, watercolor "Forest Bathing" digital cards for a local reserve; nature prints of local, medicinal plants; environmental education lesson plans with an art component; ink drawings to identify saplings of reforestation species; creative blog writing about experiences with medicinal plants; and interactive games/exhibits for a children's nature interpretive center.

#### Duration: 4-8 weeks

**Requirements:** For virtual internships, art materials and any related software will need to be supplied by the intern. For on-site internships, some art materials are accessible locally, but not all. Spanish is helpful, but not required. An interest in exploring nature and sustainability themes through art. A desire to be guided and held accountable for one's own artistic development through a project-based initiative. Self-discipline and creativity required, especially for the virtual environment.

Supervisor: Carla Willoughby, biologist, educator and artist

Internship Format: Virtual and On-site



## Internship Pricing (USD)

nternship Ouration: 2 weeks	3 weeks	4 weeks	6 weeks	8 weeks	10 weeks	12 weeks
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On Site	\$1.087	\$1.416	\$1.794	\$2.501	\$3.208	\$3.915	\$4.622			
Virtual Internship	\$590	\$685	\$780	\$1.030	\$1.280	\$1.530	\$1.780			
Spanish Classes	\$20 per hour up to 20 hours; \$19.50 per hour if 20 or more (see flyer at end)									
Cultural Activities	Ask us about options to get to know the Monteverde community virtually!									
Registration Fee	\$50									

\*Includes homestay with a local family (single room, 3 meals per day, laundry service), project transportation, MVI shirt. Prices include all administrative fees, taxes, supervision and a contribution to the project related to the internship. Discount available for MVI alumni.

International wire transfer instructions will be included with the invoice once the application is accepted.

## To Apply

In order to be considered for an internship with the Monteverde Institute, please complete the following:

- MVI Internship Application
- Curriculum vitae or resume, including:
  - Academic awards, honors, scholarships, or fellowships
  - o Internship, volunteer, and employment history
  - Significant international travel experience (dates, duration, purpose)
- Two letters of recommendation

Submit the documents to Lilliam Zuñiga Izuniga@mvinstitute.org

#### Thanks for your interest in the Monteverde Institute, our community, and the internship program!

## If you have any questions, please contact Lilliam Zuñiga Izuniga@mvinstitute.org or +506-2645-5053 ext.111

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