

Amigos

Newsletter

No. 92, December 2019



Organization for
Tropical Studies

Wilson Botanical Garden

Las Cruces Research Station

Apdo. 73-8257 San Vito, Coto Brus, COSTA RICA

Who We Are

The Las Cruces Biological Station is one of three field stations owned and operated by the Organization for Tropical Studies (OTS) in Costa Rica. The station was acquired in 1973 and, along with the Wilson Botanical Garden, offers natural history visitors and researchers alike an extraordinary place to visit and conduct research.

Far from the noise and bustle of the country's capital city San José, Las Cruces is located in the remote southeastern corner of the country between Corcovado National Park on the Osa Peninsula, and the enormous La Amistad International Biosphere Reserve (472,000 hectares) that spans south-central Costa Rica and western Panama. In 1983, UNESCO declared Las Cruces and the Wilson Botanical Garden part of the Biosphere Reserve due to its incredible diversity and proximity to La Amistad.

The Wilson Botanical Garden, founded in 1962 by Catherine and Robert Wilson, is arguably the most important botanical garden in Central America and a "must see" stop on the itineraries of plant lovers, birders, and other natural history groups. It is famous for its worldwide collection of tropical plants that include palms, aroids, bromeliads, gingers, marantas, heliconias, and ferns. More than 3,000 exotic species of plants can be found in the 10-hectare (~25-acre) garden, including one of the largest collections of palms in the world.

There is an incredible diversity of animals that inhabit the Las Cruces reserve, and the forest fragments in the immediate surrounding area. The bird list has registered 410 species; close to half the number of birds found in all of Costa Rica. There are also more than 100 species of mammals, of which 60 are bats. Some of the more commonly sighted mammals include agoutis, white-faced capuchin monkeys, kinkajous, olingos, and tayras. Reptiles and amphibians also thrive in this moist, cloud-laden habitat and there is an impressive

diversity of insects, and in particular moths and butterflies.

Las Cruces protects more than 200 hectares of primary forest (home to some 2,000 native plant species) and ~150 additional hectares that are in various stages of forest recovery. The reserve is surrounded by a mosaic of mixed-use agricultural fields and forest patches, and it is this fragmented setting that makes Las Cruces an ideal place to study the effects of forest fragmentation and isolation on animal and plant communities. The landscape surrounding Las Cruces is also ideally suited for research on biological corridors and restoration ecology; key fields of research that are of ever increasing importance. Part of our mission at Las Cruces is to continue to purchase land for reforestation and, in doing so, expand our protected areas and connect some of the isolated forest fragments around the station. For further information on this campaign please visit the Las Cruces website.

At approximately 1,200 meters elevation (3,900 feet), the prevailing temperatures at Las Cruces are cooler than one might expect. Temperatures range from 21-26 °C (70-80 °F) during the day and 15-21 °C (low 60's) at night. Mean annual rainfall is ~4,000 mm (157 inches)! The dry season runs from January – March, and the rainy season from May – November. Most visitors and researchers come during the dry season.

The station is well known for its visitor-friendly amenities: comfortable

private sleeping quarters, excellent meals, knowledgeable and enthusiastic staff, and a well-maintained network of paths and trails. The nearest town is San Vito, the municipal capital of Coto Brus county. It was founded by Italian immigrants in the 1950's and to this day they have a strong presence in the community. For example, a Dante Alighieri Italian-Costa Rican Community Center provides Italian language instruction and Coto Brus is the only county in Costa Rica where Italian forms part of the elementary curriculum! But enough said here! We hope that you will be inspired to come and experience firsthand the splendid tropical diversity of the Las Cruces Biological Station and Wilson Botanical Garden!

Please visit the Las Cruces website at <http://www.tropicalstudies.org/lascruces> for more information or contact us directly by email at lcruces@tropicalstudies.org or telephone at: +506 2773-4004. Postal mail can be sent to: Estación Biológica Las Cruces/Jardín Botánico Wilson; Apdo. 73-8257; San Vito de Coto Brus, Puntarenas; Costa Rica.

Reservations can also be made by contacting the OTS office in San José by email: threepaths.reservaciones@tropicalstudies.org or by telephone +506 2524-0607.

The North American OTS office is located at Duke University, telephone: +1 (919) 684-5774 or email: ots@tropicalstudies.org

The Organization for Tropical Studies is a nonprofit consortium of universities and research institutions in the U.S., Costa Rica, Peru, Mexico, South Africa, and Australia.

Founded in 1963, OTS is dedicated to providing leadership in education, research and the responsible use of natural resources in the tropics. To this end, OTS offers graduate, undergraduate and professional education, facilitates research, participates in conservation activities, conducts environmental education programs and maintains three field stations in Costa Rica: La Selva Biological Station in the Atlantic lowland rain forest; Palo Verde Biological Station in the Pacific deciduous dry forest; and Las Cruces Biological Station in the premontane cloud forest near the Panamanian border.

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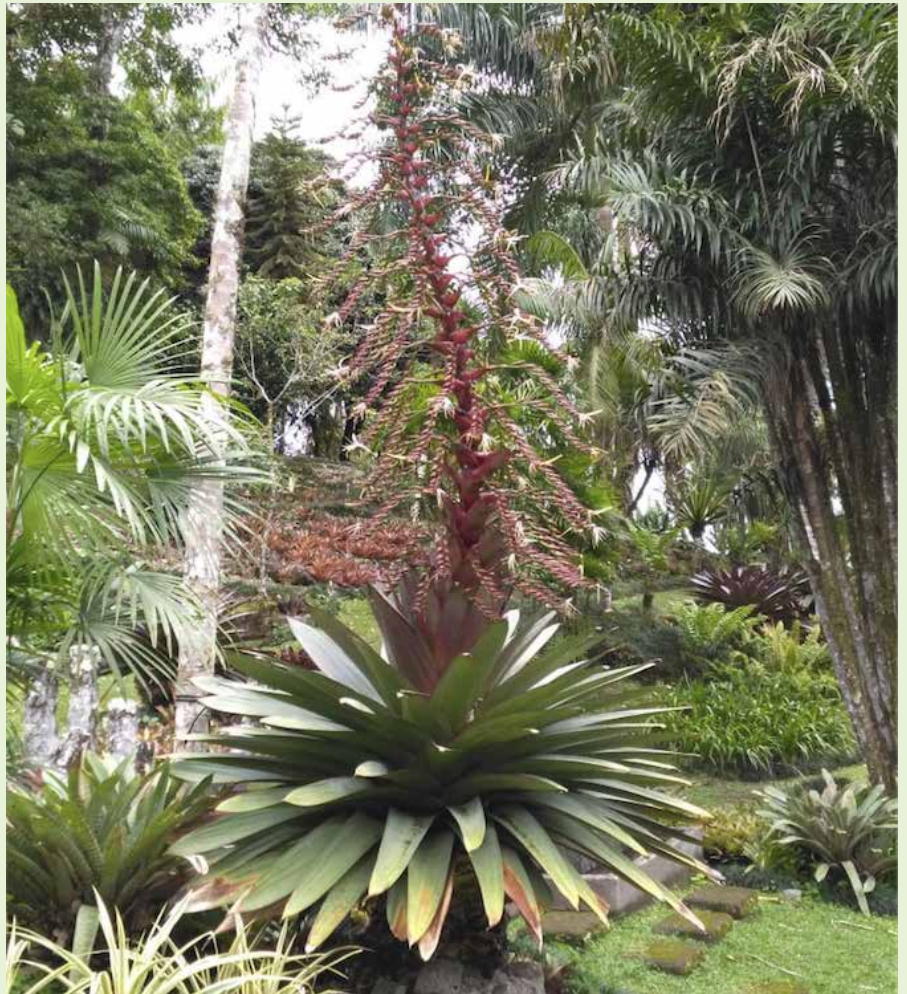
Front Cover: A close-up of a female cone of the monkey puzzle tree (*Araucaria hunsteinii*), taken at the Wilson Garden with a drone during the OTS Tropical Plant Systematics course for Spanish speaking students. Photo by Mauricio Bonifacino.

Back Cover: The OTS Tropical Plant Systematics students at the Las Cruces forest observation tower. Photo by Mauricio Bonifacino.

Editorial Committee: Rodolfo Quirós F., Emilce Ramírez

What's New at Las Cruces?

The Giant Bromeliad, Alcantharea imperialis, in Bloom

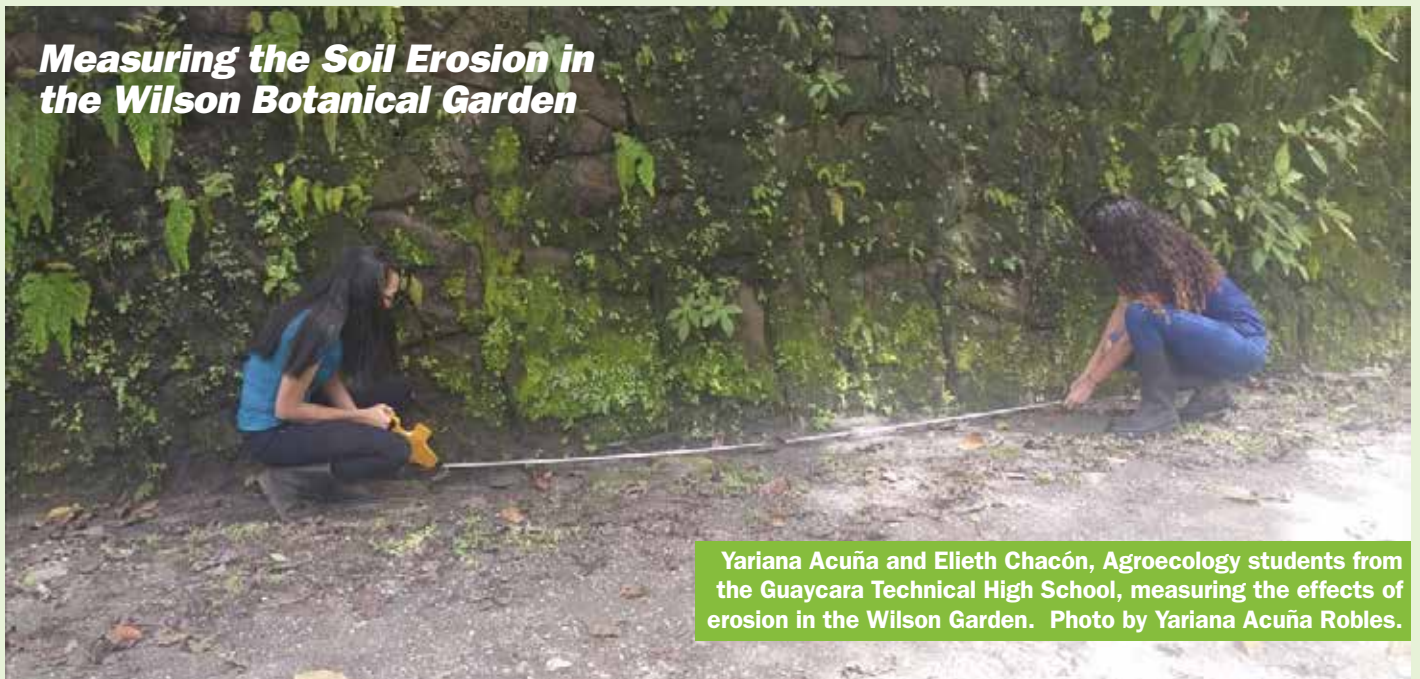


In early August, we discovered with great pleasure and admiration that our giant bromeliad, *Alcantarea imperialis*, began its once-in-a-lifetime flowering process. The plant in bloom in the Wilson Garden has more than 25 years of age, and during its 10 first days of growth of its inflorescence, it grew nearly 50 cm, and started developing its racemes of flowers. By early November, the inflorescence was nearly 5 meters (15 ft.) tall. It is known from other places to have a flowering period of up to 5 months, and we hope that now the plant is producing the fruits. In our next Amigos we hope to tell you if

this was successful.

This bromeliad is native from Brazil; it lives in cracks in rocks of the cliffs where the organic nutrients are very low. They make their own micro-habitat by the accumulation of organic matter, lichens and mosses around their roots, providing moisture for its growth. As the bases of the leaves are very tight to the stem, rainwater accumulates in them, which creates a complex micro-ecosystem. The rich soil and the organic matter we add to it at the Wilson Garden allowed the plant to grow with no environmental stress, taking such a long time to bloom.

Measuring the Soil Erosion in the Wilson Botanical Garden



Yariana Acuña and Elieth Chacón, Agroecology students from the Guaycara Technical High School, measuring the effects of erosion in the Wilson Garden. Photo by Yariana Acuña Robles.

With the help of two Agroecology students from the Guaycara Technical High School of Río Claro, an inventory of the problems caused by soil erosion in the garden has been carried out for the first time. Erosion is natural or induced wear or degradation that occurs in the soil, and is caused by agents such as water, wind, or human action.

In the assessment of the terrain, a large number of areas were observed where soil particles have been removed by the direct action of rain, as well as small slides in places with slopes. Areas with more trees have less soil coverage because of the shade, and have more removal of soil particles by pounding raindrops. Consequently, these particles accumulate in the ditches, causing water to accumulate in the trails.

The students measured sections of the trails that presented problems, such as muddy or wet sections or filling of the ditches with soil. In short, about 585m² of trails present some problem and 340m of ditches have lost their functionality in the 10-hectare garden.

Each year, Las Cruces hosts several students from the region's technical high schools requiring the completion of their professional practice before graduation. They work on different activities, not only practicing their acquired knowledge during the three previous years, but also learning new concepts and skills.

New Devices to Lower Our Carbon Footprint

As part of the environmental sustainability efforts, the station started installing LED lamps in the common area of the Wilson House, where course students have their rooms. This building is the one that uses the largest amount of energy to illuminate the access, classroom and common areas, thus the importance to reduce the electricity bill by reducing the consumption.

We have also replaced the hand towels with paper dispensers in most of the

public bathrooms. This substitution helps reducing the use of water for washing the cloth towels, and at the same time the dispensers make a better use of the paper towels, and reduce the use of electricity as they operate on a rechargeable battery.

These changes have been possible thanks to donations given to the station. Let us know if you are interested in supporting our sustainability efforts to keep bringing the station towards our greening goals.



After the Fire in the Pasture...



In our previous Amigos Newsletter, we reported that on Thursday March 7th a fire in one of the station's properties consumed 3 hectares (7.5 acres) of open field. The burning of the area caused frustration among the staff as this pasture area, annexed to the station in 2015 with the purpose of restoring it through natural



regeneration, was to be available for research and for monitoring the changes as it regenerates.

We also talked in our previous newsletter about the process of producing seedlings of native trees to use them for reforestation of different places, not only belonging to the station but also in properties owned by our neighbors. We decided to use a good number of these trees to plant in that burned area.

With the help of several groups of volunteers, we set up five planting sessions and planted a total of 400 trees. We had volunteers from Berry College from Georgia,

USA, who had some free time in between their course activities; a group of tourism students from the Sabalito Technical High School; two groups from the Coto Brus Cycling Club; volunteers from the San Vito Branch of the Red Cross; personnel from the Coto Brus Municipality, and from the Health Ministry office in Coto Brus.

Eventually, we will learn about their performance after planting them in the field as this can be seen as a research project to document their growth rates.

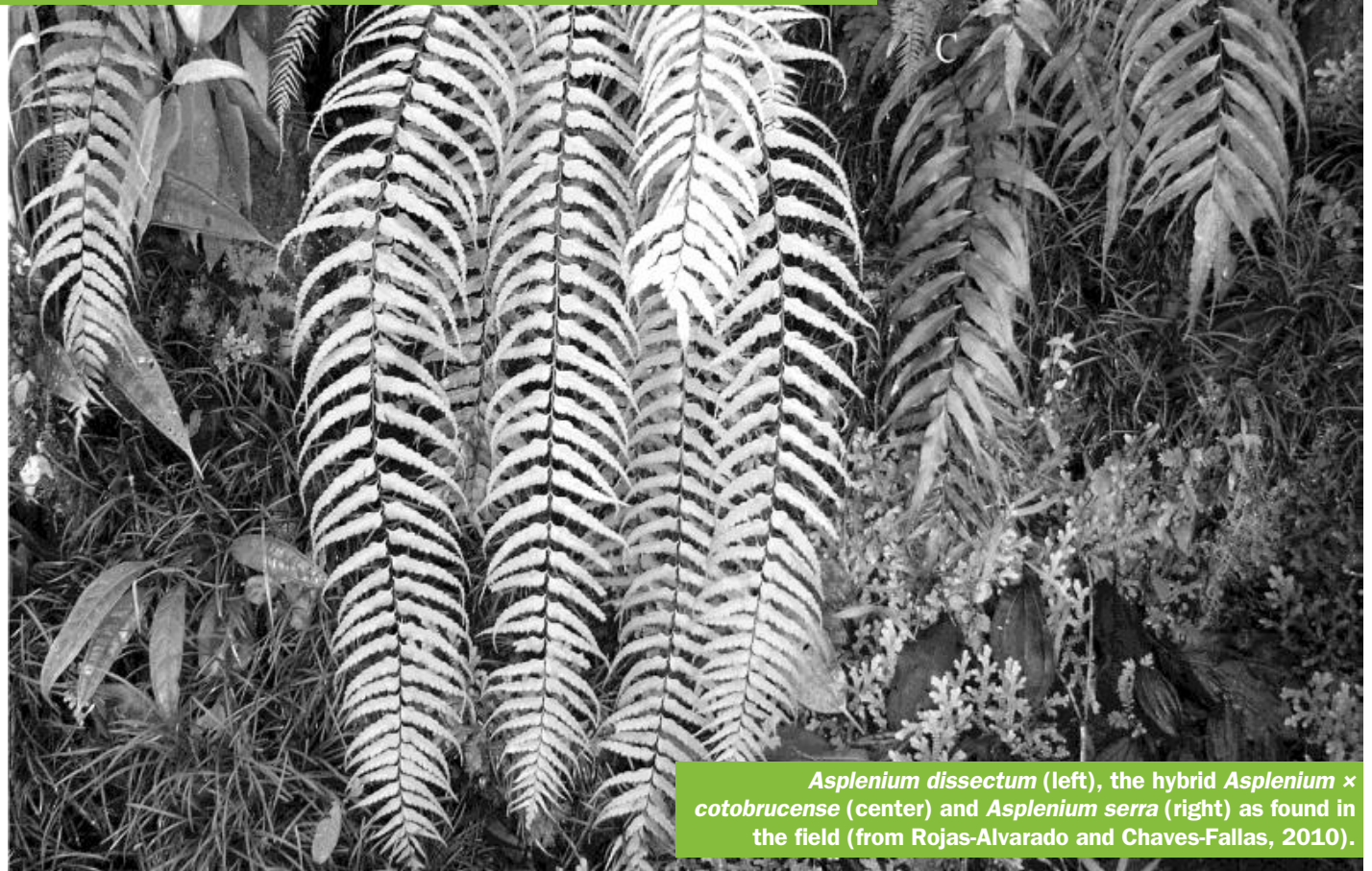
Our deepest *Thank you!* to all the people who voluntarily helped us recover this piece of land.

New Ramp to Enter the Visitor's Center



An all-access ramp has been installed on the back porch of the conference room of the Visitor's Center. This ramp was much needed for a quick access to the building, not only by students and naturalists who have their lectures there, but also by other visitors who needed an easier access to the building. The ramp is part of our subscription to implement Costa Rican law No. 7600, which seeks to provide equal access opportunities to all persons, particularly those with physical disabilities.

Flora and Fauna



Asplenium dissectum (left), the hybrid *Asplenium* × *cotobrucense* (center) and *Asplenium serra* (right) as found in the field (from Rojas-Alvarado and Chaves-Fallas, 2010).

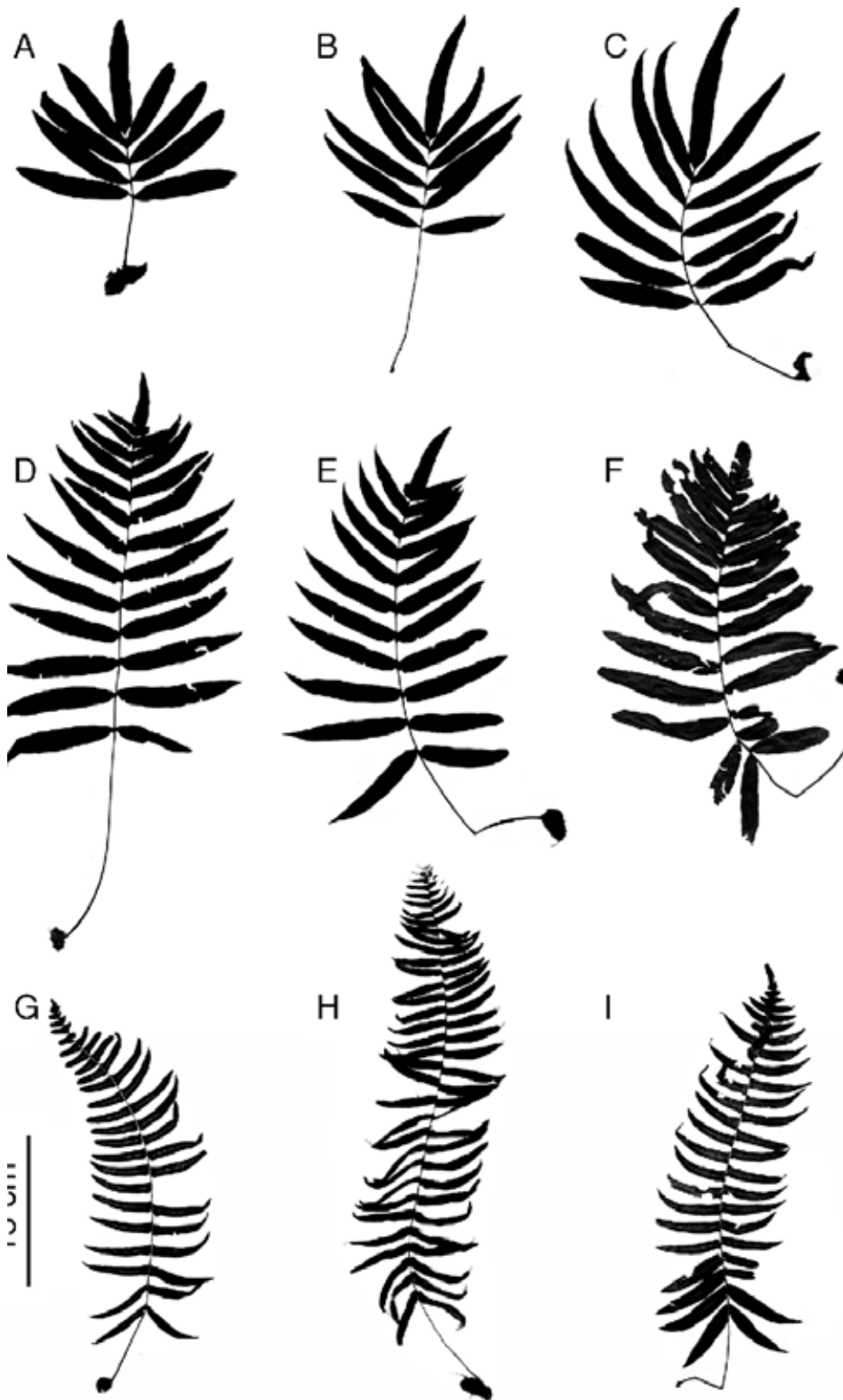
Fern Hybrids from Around the Wilson Garden

Miguel Chaves / chamiguel@gmail.com

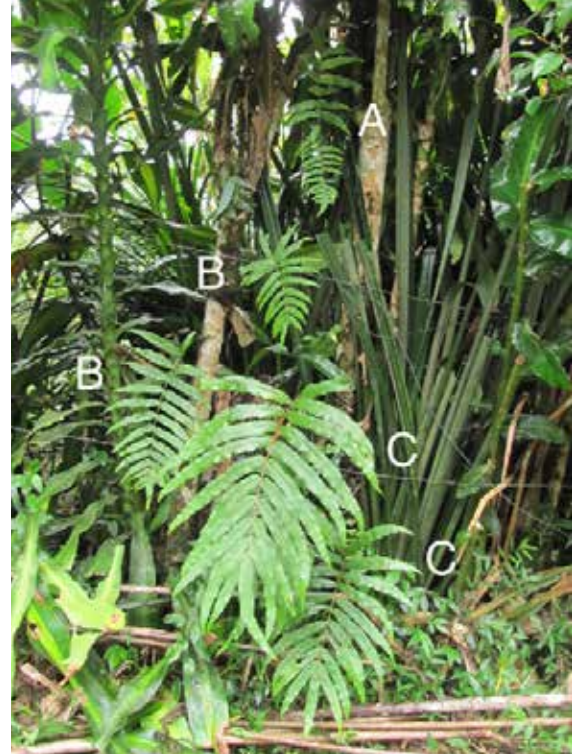
A hybrid is the product of a natural cross between individuals of two different species that are presumably closely related to each other. The resulting individual usually shows morphological characteristics that are intermediate between their parental species. Another condition of hybrids is that in many cases, they have a large proportion of aborted spores and therefore are sterile, in other words, they cannot sexually reproduce. Many hybrids can be ephemeral and not retained over time, however, some fern hybrids can reproduce asexually or even sexually. When a hybrid reproduce, it can “start” a new lineage trajectory that could result in emergent new species.



The fronds of the hybrid *Serpocaulon* × *sessilipinnum* and the two parental species *Serpocaulon fraxinifolium* and *Serpocaulon ptilorhizon* shown as they look in the field. Photo by José Miguel Chaves



Comparison of the fronds of the two parent species *Serpocaulon triseriale* (A–C) and *Serpocaulon dissimile* (G–I), and their hybrid *Serpocaulon xrojasianum* (D–F). Visible differences include the number, size, form and position of the leaflets (from Chaves-Fallas, Moran and Oviedo-Brenes, 2015).



Serpocaulon xrojasianum and its parents on a fence post at the Wilson Botanical Garden: *Serpocaulon dissimile* (A, top), *Serpocaulon xrojasianum* (B, middle), and *Serpocaulon triseriale* (C, bottom). Photo by José Miguel Chaves. (from Chaves-Fallas, Moran and Oviedo-Brenes, 2015).

Three fern hybrids have been discovered around the Wilson Botanical Garden as part of the inventory of plants native to the Coto Brus Valley by the Luis Diego Gómez Herbarium (see references below). While we were collecting, we were struck that, in all three cases, we found three different individuals located very close to each other on fence trunks. In each case, we decided to collect the three individuals because something told us that there was some interesting relationship between them. When we examined each case to identify them, we found that two of the samples corresponded to two defined species and the third sample had intermediate traits between the other two. We found a hybrid!

The three hybrids are:

Asplenium × *cotobrucense* and its parents *Asplenium dissectum* and *A. serra*

Serpocaulon × *sessilipinnum* and its parents *Serpocaulon fraxinifolium* and *S. ptilorhizon*

Serpocaulon × *rojasianum* and its parents *Serpocaulon dissimile* and *S. triseriale*

Rojas-Alvarado, Alexander Francisco and José Miguel Chaves-Fallas, 2010. Un nuevo híbrido de *Asplenium* (Polypodiales: Aspleniaceae) para Costa Rica. *Revista Guatemalensis*. 13 (1): 44–53
 Rojas-Alvarado, Alexander Francisco and José Miguel Chaves-Fallas, 2014. A new hybrid of *Serpocaulon* (Polypodiaceae) from Costa Rica. *American Fern Journal*. 103 (3), 175–181.
 Chaves-Fallas, José Miguel, Robbin C. Moran and Federico Oviedo-Brenes, 2015. *Serpocaulon xrojasianum* (Polypodiaceae): A new fern hybrid from Costa Rica. *Brittonia*. 67 (3), 185–190.

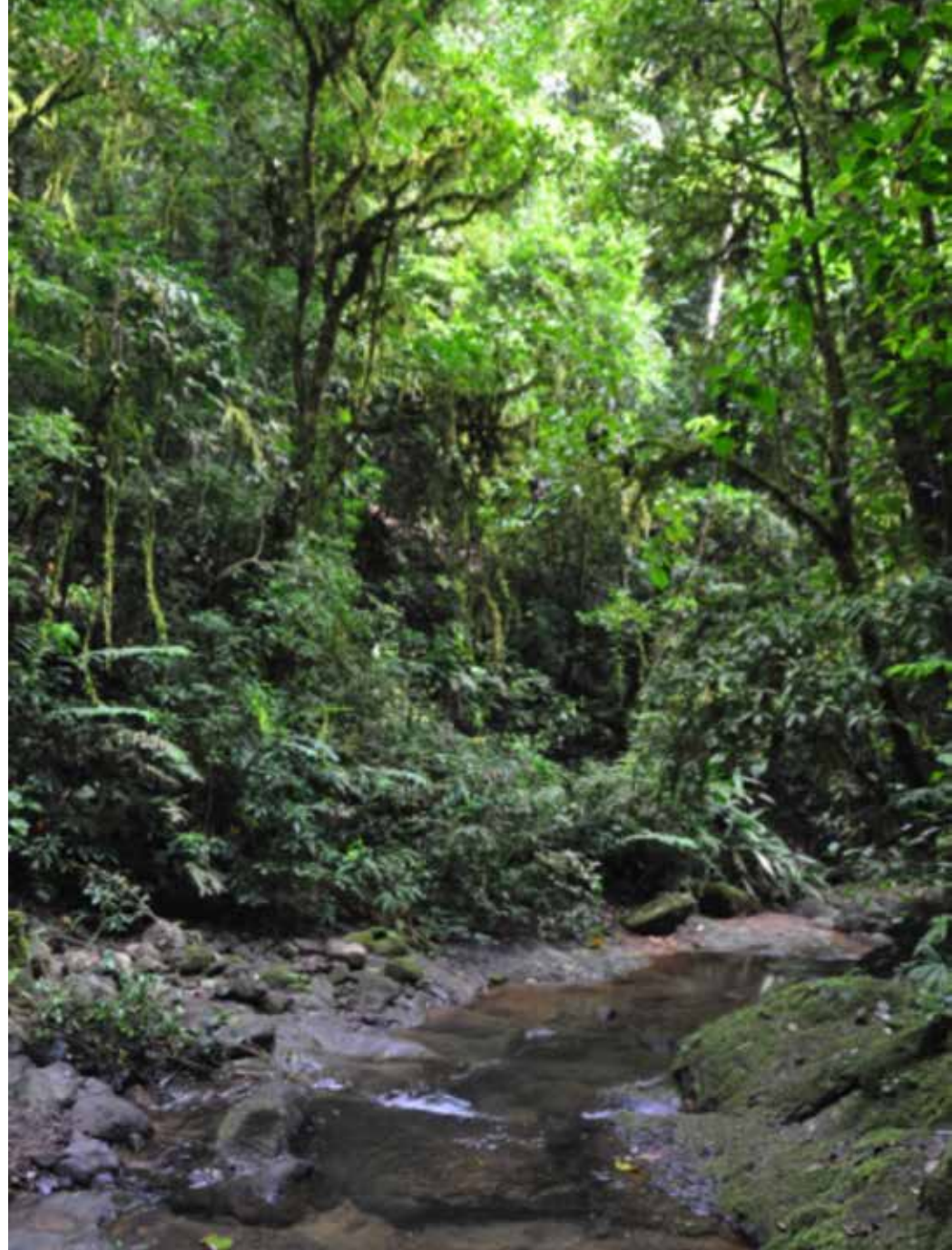
The Glass Frogs of Las Cruces: Is second-growth good enough?

Richard Lehtinen / rlehtinen@wooster.edu

Tropical rainforests are Earth's storehouses of biodiversity, rivalled only by coral reefs in terms of the number of species that they support. Old-growth tropical rainforests in particular are the core of these biological treasure chests. But this storehouse is under threat and huge swaths of rainforests around the world are being destroyed daily. What is sometimes less well appreciated is that in many cases, after "resources" have been "harvested", the land is frequently abandoned and will typically revert to a second-growth forest. From a conservation standpoint, it is critically important that we understand how much biodiversity second-growth forests can support. Data strongly suggest that there will be less and less old growth forest and more and more second growth forest going forward. So, are second-growth rainforests a poor substitute for old growth, as is often assumed?

That is the question that my students and I set out to address. What was clear at the outset is that the answer will be different, depending on the particular focal group of organisms. A second-growth rainforest might be excellent habitat for one group of organisms but completely unsuitable for another. To get a good sense of the conservation value of second-growth forests in general, we need these old-growth / second-growth comparisons for as many groups of organisms as possible. One group of organisms that have not been studied in this regard are glass frogs (family Centrolenidae) and these are the focal group of organisms for our work.

Having worked at five other locations in Costa Rica over the last five years, Las Cruces was a perfect place to continue our project, not only because it contains old



View of the Rio Java near the main trail crossing. Photo by R. Lehtinen.

and second-growth forests of various ages but because of its world-class facilities. Two undergraduate students and I spent two weeks sampling the streams at Las Cruces, since that is where glass frogs live and breed. Most of our time was spent in streams at night, since that is when glass frogs are most active and males are calling for mates (and thus can be detected and counted by us).

The Emerald glass frog (*Espadarana prosoblepon*) was particularly abundant at Las Cruces. This species is widely distributed in Costa Rica, but on the Caribbean side of the country tends not to

be one of the more common species. At Las Cruces, we found it on every stream we sampled. The maximum abundance we recorded was 53 individuals on 200 m transect; that is more than one every 4 meters! Why this species is so abundant at Las Cruces is not yet clear but our surveys should provide a good baseline for future monitoring efforts.

The Cusingo River was another interesting sampling area for us, as it is surrounded by a very young second growth forest. This area was acquired by OTS in 2009 and was formerly cattle pasture and thus the forest there is only about 10

years old. Nonetheless, we found a similar diversity and abundance of glass frogs on the Cusingo River as compared with streams in older second growth and old growth forest at Las Cruces. This was not altogether surprising, as our results from other study sites have suggested similar patterns. What was more surprising is that we found a glass frog species (the powdered glass frog, *Teratohyla pulverata*,) that had not previously been reported from the station.

A good number of herpetologists have worked at Las Cruces over the years and while it is certainly possible that it had just been overlooked by others, it is also possible that this species may be moving upslope in response to climatic warming. Being a mostly lowland species, the previous maximum known elevation reported from the literature was 960 m. In Ecuador, it is only known up to 400 m. On the Cusingo River (the only river or stream at Las Cruces where we heard it), we found it at approximately 1,120 m, one of the lowest points on the Las Cruces property but a new high elevation record for the species.



Male Emerald glass frog (*Espadarana prosoblepon*) perched on a streamside leaf along the Río Gamboa. Photo by R. Lehtinen.

Glass frogs (at least in Costa Rica and at least at the study sites we have worked at) seem to do equally well in old and second growth rainforests. From a conservation standpoint, this is good news. While not all species will fare well in second-growth forests (and there are,

of course, other threats to worry about), it seems likely that most glass frogs will still be singing away along the rainforest streams of the future. It is also good to remember that, if protected, the second growth forests of today are the old growth forests of tomorrow.



Male and female powdered glass frogs (*Teratohyla pulverata*) in amplexus. Note eggs visible through the body wall of the female. Photo by R. Lehtinen.



Photo by Randall Jiménez

The Rufous-crested Coquette... Rediscovered

Jeisson Figueroa / jeisson.figueroa@tropicalstudies.org

The Rufous-crested Coquette (*Lophornis delattrei*) is a very difficult species of hummingbird to observe: for more than 100 years it was not seen in Costa Rica. Three years ago, a female was rediscovered in Turrialba, and now, near San Vito, a male was seen with its splendid plumage by Alex Baltodano, a bird enthusiast and member of the Grupo Pajareros del Sur. Without a doubt a great event for bird lovers of our country.

The news about this sighting has

motivated many bird enthusiasts and scholars from around the country to come to our region to spot it and try to take pictures for their records. People mistakenly think they have seen this species very often in different places; we have received comments about how common this species is in the area, but this is not true. In Costa Rica, there are three species of coquettes, hummingbirds of the genus *Lophornis*. All three have different distribution in the country. Here are some notes to distinguish them.



Black-crested Coquette (*Lophornis helenae*). It is distributed from southern Mexico to Costa Rica, where it can be seen on the Caribbean slope, between 300 and 1200 m from the Cordillera de Guanacaste south to the Reventazón River basin; sometimes it has been observed in the inshore of the Caribbean at 100 m. It is occasional in the Pacific sector of the upper Central Valley.

White-crested Coquette (*Lophornis adorabilis*). Undoubtedly it is one of the flagship species of the Southern Zone, as it is endemic to the South Pacific of Costa Rica and western Panama. It can be seen from sea level to 1400 m, from western Panama to its northernmost distribution which is the Central Cordillera of Costa Rica, and occasionally passing to the Caribbean part by the Central Valley. It can be easily observed at the Wilson Botanical Garden between the months of December to May, and we have even managed to observe nesting females and active males during the day. The photo of this species shown here was taken in the pollinator garden of the Wilson Garden.



Rufous-crested Coquette (*Lophornis delattrei*). It is distributed from Costa Rica to northern Colombia and eastern Bolivia. It is one of the fashionable species at the time, as in our country it went unnoticed for more than 100 years, having records of only 4 specimens collected in the Central Valley between 1892 and 1906, and of a female reported in the Rancho Naturalista near Turrialba (2016, 2018). This species can be observed at this time in the vicinity of San Vito. In general, its range of distribution in the country is unclear, and some researchers do not understand why it has been unnoticed for such a long time.

We are thankful to Henry Sandí and Randall Jiménez for facilitating the pictures.

The “Vinegar Dog” Spotted in the Talamanca Mountains

Rodolfo Quirós / rodolfo.quirós@tropicalstudies.org

“Probably the first observation in Costa Rica of *Speothos venaticus* from the family Canidae”, reads the introductory sentence of a short story of how a couple of natural history visitors, while sitting on a bench in one of the corners of the botanical garden near the forest, saw this strange animal slowly passing close to them. After consulting the mammal books at the library, and conferring with the scientific personnel, they figured that this was an encounter with the “bush dog”, which, known from Panama and south, is one of only two tropical rainforest dogs in the world. The short note closes with “further confirmations of this observation are a must.” (Amigos Newsletter No. 40, 1994, p. 18).

In 2018, I received a request by some researchers that they had known of this note and if I could look it up and send it to them. They had found the bush dog in the Talamanca Mountains, not far from our area, and they wanted to include that historical report.

Recently, in June 2019, a note appeared in the CAMPUS magazine from National University, reporting the sighting of the bush dog, called also “vinegar dog” because of the odor of their urine, in three different locations in the Talamanca mountain range. Various teams of researchers from National University documented the dogs with camera traps located along trails in the primary forests at Barbilla and La Amistad National Parks (CAMPUS, June 2019, p. 10). The pictures, included in that report, show what appears to be an adult female with two young individuals.

The question of what has happened during 25 years with this species comes to mind as no other reports have been made during that



“It is a very difficult animal to observe. They like forests of good quality, with little contact with humans. They hunt other mammals, such as pacas and agouties, attacking them in groups”, says Carolina Sáenz, researcher at ICONVIS, National University.



The vinegar dog is a mammal with short legs and brown fur. Measure between 50 and 70 cm (20 to 28 in) in height, and weights 5 to 10 kilos (10 to 20 pounds). They always live in groups. ICONVIS, National University.

time. The researchers are now trying to determine if this species is moving north from its natural distribution, thus enlarging its range of distribution, or if the case is of a recovering population that can now be registered with the technology available. The places where they have been recorded carry similar prey species, as well as similar competitors, as found in the Amazonian region where the dogs are common.



De la Comunidad

The 2019 Open House Day

Costa Rica celebrates the Environment during June every year. Las Cruces Biological Station and the Wilson Botanical Garden started this month-long celebration with its already traditional Open House Day on Saturday, June 1st. This was a day full of visitors, having guided tours on natural history and learning about birds and the use of binoculars, there were lectures on various subjects, such as native plants, and the wetlands of Coto Brus; the researchers had exhibits on their field projects, and there were workshops, tree donations, and we had a market of local products. Members of the San Vito School of Music were in charge of the closing concert. This is a way of maintaining the contact with the communities around the station, and letting them know what we do to minimize our impact on the environment.



Station personnel and volunteers ready for the Open House Day



Environmental Sustainability Corner

In preparing for the annual environmental sustainability reports that the station has to present to the Programa Bandera Azul Ecológica (PBAE; Ecological Blue Flag Program), a quick review of the use of water, electricity and fuel during the last four years (2015 to 2018) was made to determine the general tendency in those areas. In general, the net water saving was of 5%, 20% in electricity and 24 % in fuel (gasoline and diesel) for vehicles and other equipment. Compared to the usage of electricity and fuels, which in general show a tendency to reduce them, the water usage has been fluctuating between years. Data for 2019 are still incomplete, and we will know the results for the year in January 2020.

Since 2009, Las Cruces has been participating in the Ecological Blue Flag Program in two of the categories: Protected Natural Areas, and Climate Change. This is a way to compromise in aspects such as regulating the usage of water, electricity, fuel, paper, disinfectants and other resources needed for the everyday functioning of the station. We also have the community participate in environmental education activities, thus promoting conservation and the best use of the natural resources so they can follow our steps.

In order to reduce our consumption of resources, some of the actions that we are doing include changing equipment, such as washing and drying machines, that save water or use reduced amounts of energy; collecting rain water to use in the laundry, and change traditional toilets and urinals for those that use less or no water; using biodegradable products for personal use or clothes washing; change incandescent light bulbs for more efficient fluorescent ones or LED panels; installing solar heaters for hot water in the cabins. There are more actions, but the list is still not complete. We



need help to reach our greening objectives. If you are interested in knowing how you can help us, please write to our manager, Emilce Ramírez (emilce.ramirez@tropical-studies.org).



25 Years Ago: The Saddest Episode of The Wilson Garden



I never forget my mother's cry when she got the news.
Lucre González

Wow, so many years ago! I remember that we, the students of the nocturnal high school in San Vito of that time, ran to try to help in what we could. A situation like this is seldom seen in San Vito, however, there are great changes and many improvements in the garden through time, treasure of Coto Brus!
Alcides Jiménez

Each year, during November, we recall the saddest episode in the history of Las Cruces Biological Station and the Wilson Botanical Garden. On November 23, 1994, a fire destroyed the Stanley Smith Science Building. This building housed all the academic and scientific infrastructure of the biological station: laboratory, herbarium and collections of insects and fungi, information from plant collections, library, and classrooms, offices, dormitories and service areas.

The pictures, showing the remains of the building, were taken 25 years ago. After that, the reconstruction of the facilities involved not only the reorganization of the infrastructure, but also a campaign to collect the necessary money to rebuild and maintain it. Nowadays, the station is prepared, with devices and trained personnel, to combat any fire, and other disasters, that may arise and affect the infrastructure. We invite you to help us maintain this gem, dedicated to conserving plants, animals and their natural relations, and to educate locally and globally to support our environment. Remember, any monetary contribution is tax deductible, and with it you are more than just maintaining a station.



Impressive how the years have passed! In addition, a thousand changes have been made... 25 years later it is still, albeit more modern, a treasure for our county.
Yorleny Lara Fonseca

As always, a big **THANK YOU** to you all!

Las Cruces Donors through November 2019

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