

VIEW FROM THE CANOPY

NAPIRE STUDENTS WIN AISES AWARDS

Two NAPIRE (Native American and Pacific Islander Research Experience) students were recognized for their work recently at the 2009 AISES (American Indian Science and Engineering Society) conference in Portland, OR.

Snohomish Indian, Jeremy Rude, received first prize for his presentation of his research **"Tropical Forest Climate Along an Elevational and Edge to Forest Gradients: The Relationship Between Climate and Restoration"** at the AISES. Jeremy currently attends California State University at Humboldt.

This experience has increased my confidence and motivation as a professional student. The mentor/mentee relationship was especially beneficial for me in achieving these skills. After my experience with NAPIRE, I have decided to continue my work with the Organization of Tropical Studies (OTS) Tropical Biology semester in Costa Rica this spring. I am currently in the process of investigating graduate schools and look forward to attending after the completion of my undergraduate degree in Environmental Policy – Jeremy Rude

Lisa Kapon, Hawaiian, tied for third place with her poster **"Cultural effects of habitat fragmentation on the Orange Billed Sparrow, Costa Rica"**. Lisa is a student at the University of Hawaii at Hilo.

Funded by the National Science Foundation, the OTS NAPIRE program provides a unique, intensive opportunity for field research to undergraduate students from the United States and the Pacific Islands.

Congratulations Lisa and Jeremy!



OTS RECOGNIZES DR. JEANNE ROBERTSON WITH 2009 OUTSTANDING STUDENT PAPER AWARD



Members of the OTS Assembly of Delegates met on December 21, 2009 to select a winner for the first student paper prize for excellence in research. The announcement drew a large number of remarkable submissions with wide representation from among OTS consortium members. Selection of the winning submission was based on the following criteria:

- 1 **Quality of research**
- 2 **Relevance of the work to the mission of OTS**
- 3 **Broader impacts, including education and potential benefits to society.**

Deliberations by the committee were protracted, made difficult by the wide range of interests and research approaches of our nominees. In the end, Dr. Jeanne Robertson, a student of Dr. Kelly Zamudio at Cornell University was selected to receive the award. Jeanne's paper, "Discordant patterns of evolutionary differentiation in two Neotropical treefrogs" (Molecular Ecology 18:1375-1395), met all of the selection criteria and her work made use of the extensive resources available through the Organization for Tropical Studies.

Honorable mention awards were given to Dr. Susan Letcher (University of Connecticut) and Dr. Jennifer Stynoski (University of Miami).

On behalf of the Assembly of Delegates Awards Subcommittee, Dr. Kim Smith (Arkansas), Dr. Elisabeth Arevalo (Providence College), Dr. Robert Marquis (University of Missouri - St. Louis), the AoD, and the entire organization, congratulations!



In Memory of
LUIS DIEGO GÓMEZ PIGNATARO

LUIS DIEGO GÓMEZ passed away November 13th, 2009, after fighting leukemia for over two years. Luis Diego was born in San José, Costa Rica in 1944. He grew up in the Atlantic slopes of volcan Turrialba roaming the country side with his nature-loving parents and building his interest in tropical nature and diversity. After obtaining his baccalaureate, he went to Loyola University in Chicago where he obtained his MA, MSc and Ph.D. A disciple of Warren H. Wagner, Luis has traveled the world studying the generic limits of pteridophytes.

In 1970 Luis Diego was appointed Director General of the Museo Nacional, Costa Rica's national museum where he started a renovation that turned the museum into a first class institution. Many projects came to fruition during his tenure, including the rebirth of *Flora Costaricensis*, *Flora Mesoamericana*, and the *Manual de Plantas de Costa Rica*.

In 1986 Luis joined the Organization for Tropical Studies by becoming the Scientific Director of Las Cruces Biological Station and the Robert and Catherine Wilson Botanical Garden in southern Costa Rica, a position in which he served for 21 years. At Las Cruces, Luis played a critical role in renovating and revitalizing the garden after the death of Catherine Wilson and the declining health of Robert Wilson. Later in the 1990s, Luis Diego, along with his wife at the time, Gail Hewson, were instrumental in obtaining two key land holding for the station, the Gamboa Forest and Melissa Meadow. With the fire of 1994 that destroyed the Stanley

Smith Science Center, Luis Diego took the lead in rebuilding the station and improving all of its facilities while Gail was instrumental in helping to raise the necessary funds. With the new Millennium, Luis Diego presided over an effort to establish a six figure endowment for Las Cruces and later, during a period of institutional downsizing, was the interim scientific director at La Selva while continuing his role at Las Cruces. However, perhaps, he would consider his most important accomplishment to be the substantial acquisition of numerous journals and books for the Las Cruces library, the establishment of a significant herbarium reflecting the plants of the station and surrounding area, the acquisition and propagation of endangered tropical plants within the garden and its greenhouses, and the organization and labeling of the plant species throughout in the Garden grounds.

A world expert on fern's taxonomy, Luis Diego's work reached many other areas of the academic and cultural realms in Costa Rica. One of the most distinguished examples of Humboldt-type research, Luis Diego dominated many scientific themes. His love for plants and books was complemented with his interest on fossils and indigenous culture in Latin America. He was a distinguished paleontologist and the first person to do research in this discipline in Costa Rica. He published many articles on paleobotany and vertebrate paleontology in Costa Rica and in international journals. All combined, he wrote more than 100 scientific publications

and was listed in the acknowledgements of countless publications for his collaborations with many different national and international scientists. He was also an ardent promoter of scientific research in Costa Rica; he founded the Costa Rican Science Academy, the Association of the National Biodiversity Institute (Asociación del Instituto Nacional de Biodiversidad) and the scientific journal *Brenesia*.

Luis Diego left an indelible mark on the natural heritage and scholarship of Costa Rica, but nowhere more so than at Las Cruces Biological Station and the Wilson Botanical Garden. For more than 20 years, his vision, hard work, mentorship, and friendship shaped Las Cruces and OTS into the institutions that they have become. He will be missed by many. Our thoughts and prayers go out to his wife, Rebeca Brenes Roldán, his children and the hundreds of friends around the world.

Luis Diego was, above all else, a naturalist, explorer, observer of nature, and culture lover; he was a man with a vast knowledge on a diversity of themes that made him a real neo-renaissance person. He was distinguished, in large part, by his sensibility and his high standards. All who benefited from his knowledge, wonderfully dry sense of humor, and his quirky and charming mannerisms—his co-workers, students, research peers, friends and of course the communities near the stations, in particular indigenous territories—will remember him with gratitude and affection.

LIANA I. BABBAR, DIRECTOR GENERAL, OTS



In Memory of
LUIS DIEGO GÓMEZ PIGNATARO
 PERSONAL REMEMBRANCES



Luis Diego Gómez was friends to many and somewhat of an enigma to all. His eclectic interests brought him into contact with an incredibly wide array of personalities from the gardeners and cooks at Las Cruces, to the education and research programs and people of OTS, Museo Nacional

and the Universidad de Costa Rica, to the rich, famous and cultured of Costa Rican society. These interactions were mainly very personal, for Luis was a very private individual operating in a very public forum. When he was director of the Wilson Botanical Garden/Las Cruces Biological Station he relished the isolation and opportunity to be with nature. He loved his plants, particularly ferns, and enjoyed taking groups on nature walks around the garden. At the same time, he was part of the administrative hierarchy of OTS, and thus subject to the bureaucracy of a complex management hierarchy, involving many oversight committees. We used to joke that Luis was like Lewis Carroll's Cheshire cat "appearing and disappearing at will."

My own interactions date back to his days as director of the Museo Nacional when he was dealing in higher politics and finances in an effort to build a new wing for the herbarium. On a shared air flight we had a chance to discuss the appropriateness of inviting the Museo to join OTS as an institutional member. Later, when he was director of Las Cruces, we had a very fruitful relationship regarding the upkeep and development of the Garden, and when the catastrophic fire of 1994 destroyed the dormitory, kitchen, living room, library and laboratory, and all personal belongings (!)—leaving only the concrete block shell of the lab—the entire OTS enterprise shifted into a new heady-level of fundraising. In recent years when Luis was interim director of La Selva, his botanical expertise was put to good use in working with the "Flora of La Selva" team to "treat" the 2,000+ species of vascular plants.

While we corresponded sporadically over the years, our last serious engagement occurred in April of 2008 when we mounted a minor

*"expedition" to Golfo Dulce to relocate a missing link in the distribution of black walnut (section *Rhysocaryon*) that ranges from the U.S. south to northern Argentina, except for unexplained absences in Costa Rica and Panama. The discovery a couple of years ago of a million-year old fossil walnut across from Golfito brought out the renaissance man in Luis and boosted adrenalin sufficiently for him to make the three-day journey down south. While we were unsuccessful in locating additional fossil material, there had been talk of trying it again this coming spring. But this is not to be now, so the joy of success will forever be diminished.*

DON STONE,
 EXECUTIVE DIRECTOR OF OTS, 1976-1996

Early in his education Luis Diego learned Latin and Greek as well as other languages from his mother (Italian), and his father (English and French). He was able to speak, read and write German, Portuguese, Latin, Greek, English, Italian, French, and Spanish. He also studied medicine and at time studied in a monastery. He was an exceptional pianist. He married twice; with the first wife he had a son, who is very different from him. He has two nieces and a number of grandchildren.

REBECA BRENES ROLDÁN,
 ING. FORESTAL SIG & ECONOMÍA ECOLÓGICA

Tal vez luego, Luis Diego

Estoy estremecido, consternado, muy dolido. Aunque tenía más de 20 años de no ver a Luis Diego, sobre todo porque durante un largo período él vivió en San Vito y Sarapiquí, y yo en Turrialba, el acceso a internet nos permitió mantenernos en contacto, y siempre supe que del otro lado de la línea tenía a mano al colega gentil y colaborador, de cuyas abundantes enseñanzas pude nutrirme.

Ahorita lo evoco como una figura mítica y casi fantasmal, en mis días de estudiante primerizo de Biología, pues se hablaba mucho de él pero nunca se le veía. Y es que, además, se le consideraba "l'enfant terrible" de la academia, a lo cual contribuía su aspecto infantil, con su breve estatura y sus facciones de güila genio; por cierto, hay una foto de él en un folleto conmemorativo del entonces Departamento de Biología, de 1966, en la que parece un colegial colado entre

el grupo de estudiantes universitarios. Se decía que, a pesar de su sobresaliente inteligencia y dedicación a la ciencia, nunca quiso graduarse como biólogo, pues se negaba a tomar cursos de matemática, física, química y otros, que a él le parecían requisitos superfluos para su formación.

Sin embargo, recién me he enterado de que todo eso era infundado, pues a los 22 años ya poseía un doctorado de la Universidad de



Loyola, en España, y que después de eso completó la carrera de Biología e incluso cursó tres semestres en la de Geología. Eso sí, insatisfecho con aprender teoría en la academia, quería sentir la biología en el mundo real. Como evidencia fehaciente de tales afanes, con fondos propios, más el apoyo de la Sociedad Sigma Xi y el Field Museum of Natural History, se aventuró a explorar solo la remota isla del Coco, para estudiar la biota de ese desconocido paraje durante cuatro meses, de enero a abril de 1970; tiempo después la prensa informaba de manera amplia sobre tan singular expedición, para envidia de quienes anhelábamos ser biólogos de campo y no de escritorio.

Había escuchado también que, al concluir la secundaria en el colegio Saint Francis, ingresó a un monasterio en Minnesota. Auténtico políglota, además de leer y escribir griego y latín

In Memory of LUIS DIEGO GÓMEZ PIGNATARO

-lengua en que años después se cartearía a veces con su mentor Rafael Lucas Rodríguez-, en su acervo idiomático moraban a plenitud el inglés, italiano y francés, y leía con fluidez el alemán. Y, por si no bastara, desde niño había estudiado música, y era un excelente pianista.

saliámos por ahí cerca a comer algo rápido, pero una noche de verano de 1974 apareció Luis Diego quien, espontáneo y espléndido, nos invitó al restaurante Alpino. Fue una velada memorable, pues por fin pude conocer y tratar a tan huidizo personaje, de carácter algo tímido y reservado

pero afable, hablar reposado, refinados modales, gran don de gentes, inteligente humor, notable erudición, y conversación ingeniosa y estimulante. Al instante me percaté de que estaba ante un ser humano excepcional, es decir, un científico humanista y enciclopedista, así como un genuino hombre renacentista.

Desde entonces mantuvimos una amistad cálida, aunque nos viéramos poco. Autoridad mundial en helechos, al

igual que en otras plantas y hongos, en realidad era un auténtico naturalista. Por ejemplo, recuerdo que descubrió y describió una relación de mutualismo muy curiosa, entre hormigas y el "helecho de papa" (Solanopteris brunei), y con gentileza me prestó su manuscrito inédito, para un seminario que yo debía dar. Otra vez me mostró un detallado manuscrito, con abundantes ilustraciones suyas -pues también era un hábil dibujante-sobre animales fósiles, campo que le apasionaba y sobre el que hizo originales aportes, del cual me dijo que nunca lo publicaría, pues le faltaba calidad. No le creí, pero lo entendí, pues ya sabía cuán perfeccionista era.

Invitado por él, y gracias a su estímulo, en 1976 hice mi primera publicación científica, con un artículo sobre murciélagos, en la revista Brenesia, creada por él para honrar al botánico ramonense Alberto Brenes Mora, a quien tanto admiraba; yo lo embromaba diciéndole que más bien debía llamarse Gomezia pues, aparte de que no tenía Comité Editorial, muchos artículos eran de su autoría. En ella publicaría otros tres artículos, incluyendo uno derivado de mi tesis de licenciatura, sobre la polinización por moscas de la flor de "patito" (Aristolochia grandiflora). En ésta se interesó tanto que se ofreció a revisarme un borrador, el cual me regresó con observaciones inquietantes y de gran hondura intelectual, y hasta me conseguiría unos reactivos para efectuar

continued from page 3

unas pruebas que, por fortuna, serían esclarecedoras y confirmatorias de lo que yo argumentaba.

Poco después de que llegué a residir a Turrialba, me enteré de sus raíces locales. Nieto de don Juan Gómez Álvarez -gran impulsor del cantonato en 1903, dueño de la hacienda Guayabo y naturalista intuitivo-, y primo del también botánico turrialbeño Jorge Gómez Laurito, fue hijo único de un hogar de raigambre italiana, formado por Francisco (Pico) Gómez De Bernardi y Adelaida Pignataro Granata. Aunque nació en San José, vivió allá parte de su infancia, lo cual afianzaría su afecto y devoción por la naturaleza. Por cierto, en una reseña del libro "One river", de Wade Davis, en 1998 aludiría a ello, al recordar con grato vértigo "lugares que visité regularmente en compañía y de la mano de mi padre, reincidente alcabuela de mi interés por la Naturaleza".



Hace pocos años supe que, tras unos 20 años de muy meritoria trayectoria como director e investigador en las estaciones biológicas de Las Cruces y La Selva, de la Organización de Estudios Tropicales (OET), se acogió a la jubilación. Me contó cuán ilusionado estaba con sus proyectos, sobre todo como autor científico. Inconforme aún con su muy fecunda obra, de más de 300

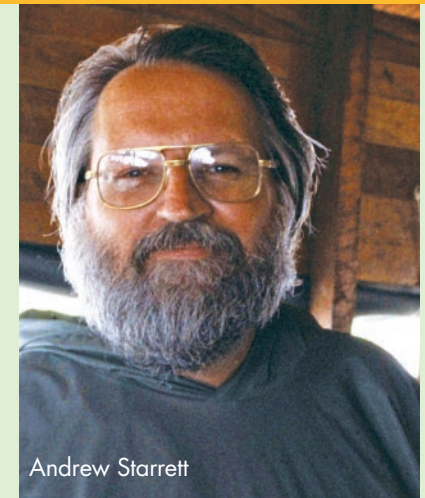
continued on page 8

MEETING THE MELLON CHALLENGE:

OTS FRIENDS PROVIDE LEADERSHIP FOR EDUCATION ENDOWMENT BUT THE CAMPAIGN CONTINUES



Joan Slatkin Barton



Andrew Starrett

OTS is establishing an education endowment with the help of the Andrew W. Mellon Foundation through a \$1.5 million challenge grant. To date, gifts from the estate of Joan Slatkin Barton, the Rowe Family, and the Andrew Starrett Memorial Trust, as well as from several key individuals – plus the match from the Mellon Foundation – have generated approximately \$2 million for this new endowment which focuses on strengthening the organization's core programs and providing scholarships for U.S., Latin American, and South African students. At this critical juncture, \$500,000 remains to be matched before the June 30, 2011 deadline established by the foundation.

The A.W. Mellon Foundation has been a long-standing supporter of OTS' educational programs. For nearly three decades the Foundation helped sponsor OTS' graduate program. In the mid-1990s, the Mellon Foundation helped OTS initiate its first undergraduate semester abroad program in Costa Rica and later provided logistical and financial support for a second semester abroad program in South Africa. More recently, the Mellon Foundation has helped OTS provide scholarships for South African students and U.S. students under-represented in the sciences.

In 2007 the Andrew W. Mellon Foundation kicked off the new education endowment by awarding OTS a \$1.5 million challenge grant. For every dollar OTS raises for the endowment, the Foundation will match it with a second dollar, with the goal of having a \$3 million dollar endowment in place June 2011.

In 2008 Rebecca Rowe, an alumna of OTS' 2001 graduate fundamentals course, provided the initial gift to meet the Mellon

Challenge. Rebecca and her family have been sponsors of the OTS graduate program for nearly a decade, funding research fellowships and scholarships for students in need. With the Mellon Challenge, the family established a named endowment that will support students for years to come. In fact, \$24,000 will be distributed to OTS students this spring. "We are thrilled with Becca's support," said Dr. Elizabeth Losos, OTS president and CEO. "Given how poorly the financial markets were fairing when this gift was made, it represented a tremendous belief in our organization and the importance of the endowment. We are making awards already due to the markets' recovery and will be grateful forever to Becca and her family."

Another significant gift to meeting the Mellon Challenge was received in November 2009 from Joan Slatkin Barton through her estate. Joan Slatkin Barton was a member of the OTS Board of Visitors from 1994 until 2004, when she resigned due to declining health. In November 2008, Joan passed away leaving her entire estate to five charities, including OTS. Joan was an active OTS board member and had established a graduate research fellowship endowment as a lasting memorial to her parents, Lillian and Murray Slatkin. Robert Slatkin, Joan's brother, in acknowledging the most recent gift to OTS, said, "Joan was a tremendous believer in OTS and its mission. In fact, my family has all been involved at one time or another due to her enthusiasm. We are delighted to see OTS use her gift for such an important endowment, and the Mellon match will double the impact she intended her gift to have!"

Through Joan's involvement, OTS was introduced to her cousin and close friend, Daniel Kemper, who established a scholarship

endowment in 2008 by naming OTS in an irrevocable charitable remainder trust. Danny and his wife, Joanna, are active sponsors of OTS and created the charitable remainder trust to help the organization in the future while also lowering their taxes and receiving a yearly distribution. "OTS has benefited from our relationship with Joan and her extended family in so many ways," said Dr. Losos. "We cannot be more pleased to see this continue!"

The family of Andrew Starrett also has participated in the Mellon Challenge. After their father died in 2008, the children used part of their inheritance to establish the Andrew Starrett Memorial Scholarship Endowment. Andy was an active biologist and coordinator of the original field courses in Costa Rica offered jointly by the University of Costa Rica and the University of Southern California in 1961-62. These courses were precursors to the formation of OTS and the "Fundamentals" courses. "This gift," said Dr. Losos, "is extremely important as it shows how our founders can be recognized while helping the organization lay the foundation for future generations of students."

"The next few months are going to be critical," stressed Losos. "If you would like to establish a named scholarship or make a leadership gift to the education endowment, please contact Jonathan Giles, our Vice President for Development, or me. We acknowledge the wonderful opportunity the Andrew W. Mellon Foundation has given us, and, again, are most grateful for the leadership gifts that we have received to date. However, it is absolutely critical we continue to address the challenge before us and put into place a \$3 million education endowment by June of next year."

INTRODUCING STUDENTS TO SOUTH AFRICA

BY LAWRENCE KRUGER

On August 25, twenty-five exhausted, jetlagged students arrived in South Africa for a semester-long immersion into South African Ecology & Conservation. The group consisted of four South African and 21 American students; some were strict biologists, others environmental majors, whilst others were history students with an interest in the environment. This diversity made for an interesting course with all the students providing input from their particular perspectives.

Shortly after their arrival, we whisked them off to Nylsvley, our first site to the north of Pretoria. There we prepared the students for their upcoming 3 ½ month semester program and covered all the introductory lectures. The site is ideally suited for this purpose as Nylsvley is free of large predators and other dangerous large mammals (elephants and buffalo) and students can roam free during their time off.

At Nylsvley, with the assistance of Dr Fred Kruger, we covered all the basics of savanna ecology, introducing students to some of the important factors influencing vegetation dynamics, e.g. the role of fire and herbivores as ecosystem engineers, and the influence of soil, nutrients, and water availability. As part of the introductory phase Dr. Kruger guided the students through a workshop on approaches to science. An understanding of the philosophy of science provides an important foundation for the rest of the independent research they will undertake during the course.

To reinforce some of the basics of savanna ecology and get to know Nylsvley a bit better, Karen Vickers, a resident lecturer, adopted a novel approach to teaching and set up an adventure race around the entire reserve. Students were issued with challenges and could only progress further by completing the task at hand. What resulted

was a riotous afternoon of grappling with ecological concepts, stubborn GPS units, obscure answers to tricky questions, and a great deal of galloping through the nether regions of swampy Nylsvley.

The mood ranged from suspended disbelief (how could she do that to us!), exhausted resignation (10kms, really?), resolute determination (yes, 10kms), jubilation (the GPS does actually work) and gratification at the end of the race.

Aside from watching the students wade manfully through the swamp to get to the finish, the war cries at the end of the evening were very amusing indeed. All in all, a fun way to get to know each other.

Shortly after, Professor David Bunn, co-ordinator of the History and Culture course, and Dr Lara Allen joined us to introduce their course. As part of the course, students were guided through the history of South Africa, with particular reference to

the last 50 years. We covered advent of Apartheid, the resistance years, the miracles around the peaceful change to democracy in 1994, and the Truth and Reconciliation Commission. Dr. Allen, an ethnomusicologist, guided us through an interesting series of lectures that traced the changes in culture (particularly music!) which track the socio-political changes from the 1940s to present day and the insidious effect Apartheid has had on South Africans. Dr Melissa McHale, an academic from North Carolina State University, who is interested in collaborating extensively with our course in the coming years, also joined us for two weeks.

The first few days of the program are always intense as people grapple with new, at times challenging, subject matter, whilst at the same time making sense of their new social milieu. To relax, many went for long runs, played soccer, took walks, and, to help this process along, we introduced students to the South African tradition of sundowners: find a place to watch the sun go down and salute the end of another good day.

The semester includes four courses, namely Savanna Ecology, Conservation and Biodiversity management, Field Skills and History and Culture of South Africa. These courses incorporate field and classroom instruction to provide an integrated analysis of the amazing diversity of South Africa's ecosystems. Furthermore, the History and Culture course provides much-needed socio-economic context for all the ecological and conservation work done. By the end of the semester, the students had developed understanding of a deeper appreciation of not only how challenging life can be in rural Africa, but also the amazing resilience of the people. However, the students also make a substantial contribution in that they continue to forge good relationships between visitors and the communities.

For more information about the OTS Undergraduate Course in South Africa, please visit our website at www.ots.duke.edu.

SUPPORT THE FUNDAMENTALS OF TROPICAL BIOLOGY GRADUATE COURSE



Since 1964, the Organization for Tropical Studies has offered the fundamentals of Tropical Biology graduate level course, one of the most prestigious and successful programs promoting graduate students in the pursuit of tropical research. This is a "hands-on" field course with a broad scope of tropical biology. Therefore, the implementation of numerous field projects requires a wide variety of materials. Because of the number of courses and frequency with which they are run, the equipment at the students' disposal can quickly become rundown. OTS is committed to offering this course for many years to come, so we ask you to consider supporting this extraordinary effort by making a donation of any extra new or gently used lab and/or field supplies that you may have in your own lab. Our students will greatly appreciate your support. If you would like to make a donation, please go to www.ots.duke.edu write to Barbara Lewis at barbara.lewis@ots.ac.cr.

SUPPLIES:

bait or dip nets
calipers
capillary tubes: all sizes
centrifuge tubes: 15ml
colanders/sieves
collecting or glassine envelopes
compass
entomological pins
filter paper: 50, 90mm #1/box
flagging tape
fluorescent powder, all colors
forceps: entomological, eye or fine point
graduated cylinders: 100, 250 and 1000ml
hummingbird feeders
insect aspirators
kimwipes cleaning tissue: box
latex gloves: M and L / box
leather gloves: pairs
magnifying hand lens
meter tape: 10, 30 and 50m
microscope slide cover slips
microscope slides
mist nets: 6m, 12m
string for mist nets
modeling clay
nalgene bottles: 125ml
oil burners
Pesola scales: any
petri dishes: 100 x 15mm
pH indicator strips: 0 - 14
plastic dropping/transfer pipettes: 0.5, 1ml

plastic serological pipette: 1, 5, 10ml
pruning shears
soil porosity and permeability kit
soil sampler: 1 x 10 inches
soil sieve: 2mm
spray bottles: 100-500ml
tupperware: 2L
water thermometer

OFFICE SUPPLIES

acrylic paint
brushes: small/fine
coin envelopes
glue sticks
index cards
masking tape
pencils
rulers
sharpies

EQUIPMENT

audio recorder
i buttons (temp and/or humidity data loggers)
pH meter
portable electronic balance:
600g x 0.01g or similar
range finder
water conductivity meter
light sensor

The Nylsvley Amazing Race...
Bobby leading the charge.
Not all short cuts are worth it!

In Memory of
LUIS DIEGO GÓMEZ PIGNATARO

artículos en revistas, más varios libros, tenía nuevos y ambiciosos planes, incluyendo una reedición del libro "Vegetación de Costa Rica; apuntes para una biogeografía costarricense" (UNED, 1986), tan extraordinario y original en sus enfoques y planteamientos, que se agotó pronto. Lamentablemente, cuando Luis Diego alcanzaba la plenitud de su vida intelectual, le fue detectada una leucemia, que lo postró por unos dos años.

En estos últimos tiempos nos acercó el interés mutuo por el estudio de la historia de nuestra biología de campo. En realidad, él y Jay Savage habían dado la pauta, con una reseña publicada en el libro "Historia natural de Costa Rica", editado por Daniel Janzen. Asimismo, la biografía que escribiera sobre el botánico alsaciano Carlos Wercklé es una joya en este campo, no solo por la prolijidad de la investigación documental, sino por su pluma fluida y amena, realmente exquisita.

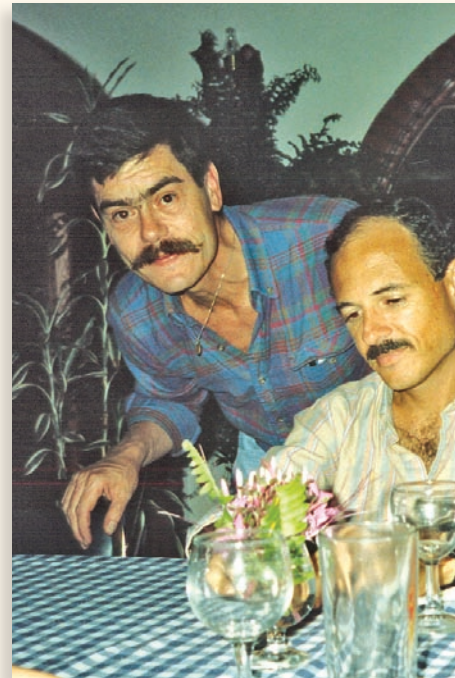
Se alegró mucho al enterarse del libro que escribo actualmente sobre los naturalistas alemanes que exploraron Costa Rica en el siglo XIX, y su agobiante enfermedad no era obstáculo para responder a mis ocasionales consultas. Asimismo -siempre por internet- estuvimos interactuando con otros investigadores, como el arquitecto y orquideólogo Carlos Ossensbach y el ornitólogo Horace Burke, para dilucidar aspectos inciertos de las vidas de Agustín Endrés y Austin Smith, respectivamente.

Tal era su pasión por estas cuestiones, que no permitía que el infame cáncer le impidiera acometerlas. Así, a inicios de este año, tras revisar el voluminoso borrador del texto "Orchids and orchidology in Central America. 500 years of history", de Carlos -aparecido recientemente como un número especial de la revista Lankesteriana-, en su última página consignó: "Terminé la lectura de este manuscrito a las 4:00 a.m. del 12 de marzo de 2009 en la cama 221 del Hospital San Juan de Dios". Meses después, un día nos dijo que aprovecharía la ida a una sesión de quimioterapia -yo quedé estupefacto!- para luego buscar en los archivos hospitalarios información sobre la causa de muerte de Smith. Pues..., sí. ¡Ese era Luis Diego!

Nuestro último intercambio de correos ocurrió en junio, cuando le solicité un mapa de 1883, elaborado por el botánico alemán Helmuth Polakowsky. Pocos días después respondió: "Creo que lo tengo por ahí, pero estoy tan débil e incapacitado que no sabría ni podría ponerme a buscar. Tal vez luego". Aunque tiempo antes me habían contado que estaba luchando con inusitado empeño y que había esperanza de recuperación, en tan lacónica respuesta capté signos ominosos, que se confirmarían la noche del 13 de noviembre, con su muy lamentable deceso.

Es posible que pueda conseguir dicho mapa por otro medio pero, tristemente, ahora consciente de que no habrá ese "luego" que me daba la ilusión de reencontrarnos después, para compartir

continued from page 4



con fruición los nuevos hallazgos y conocimientos mutuos en este campo. Como una manera simbólica de reparar ese diálogo que nos quedó irremediadamente trunco, así como un tributo a su trayectoria de naturalista y su grata memoria, he decidido -ahorita mismo-dedicarle mi libro.

Como amigo, me duele mucho que sufriera así, junto con los suyos -aunque sé que sobrellevó su padecimiento con determinación y verdadero estoicismo-, en años tan importantes para la vida familiar. Como biólogo, me laceró el infausto hecho de que hayamos perdido, con apenas 65 años de edad y quizás unos 25 años más de actividad -ahora que se acercaba al clímax de su producción intelectual-, a quien por acucioso, brillante, erudito y prolífico, considero como el más grande naturalista que ha dado Costa Rica en toda su historia

Ojalá tan fecunda vida sirva de inspiración a los futuros biólogos, para que traten de emularlo. Difícilmente habrá quién lo supere, por sus diversos, vastos, originales y ricos aportes, pero estoy seguro de que, desde donde esté, se sentiría muy contento de ver que alguien sobrepasó su robusta marca. Porque así era Luis Diego, humilde, noble y generoso, como todo auténtico sabio.

LUKO HILJE Q., PROFESSOR EMERITUS, CENTRO AGRONÓMICO TROPICAL DE INVESTIGACIÓN Y ENSEÑANZA (CATIE).

continued on page 10



Tropical Biology
Fall 2010 Costa Rica
for Undergraduates

Aug 23 – Dec 7~16 Credit Hours

Mangrove swamps, tropical rain forest, cloud forest, paramo—Costa Rica contains a stunning diversity of ecosystems within a compact geographic area. This is a nation committed to conservation, with fully one-quarter of its land set aside as a protected area or national park. Yet Costa Rica is also experiencing rapid urbanization and climate change, the latter threatening the survival of the country's famous biodiversity.

Student research is part of the growing movement in support of conservation in the tropics. OTS' long-standing ownership of three biological field stations in Costa Rica offers our students an advantage not provided by competing programs. Students will have access to large data sets and cutting-edge equipment, as well as protected settings to conduct independent research.



Sites Visited

OTS students spend time at a variety of sites representing a diversity of ecosystems. These sites include three biological field stations owned and operated by OTS—La Selva, Las Cruces, and Palo Verde. La Selva is one of the world's premier tropical field stations and

encompasses 1,600 hectares of lowland forest alive with birds, monkeys, sloths, and peccaries. La Selva has been a leader in research of neotropical plants, animals, and ecosystem processes. Las Cruces is an important site for research on the dynamics of forest fragmentation and restoration ecology, and is also a popular destination for birders. Palo Verde, located within Palo Verde National Park, supports extensive marsh that is an internationally recognized habitat for nesting waterfowl. It is one of only two areas in Central America that protects neotropical dry forest, including one of the last remaining areas of uncut primary dry forest. Additional site visits usually include the city of San Pedro, the Monteverde cloud forest, and the unique paramo and tropical oak forest of Cerro de la Muerte.

Students in the program are enrolled in the following courses and receive the equivalent of four semester hours for each course.

Fundamentals of Tropical Biology (BIO 134)

Environmental Science and Policy of the Tropics (ENV 129)

Field Research in Tropical Biology (BIO 135)

Culture and Language in Costa Rica (SP 62)

APPLICATION DEADLINE: APRIL 1, 2010 For more information, email us at otsadmissions@duke.edu

OTS GRADUATE COURSES
IN COSTA RICA 2010-2011

Nothing can replace the hands-on experience of a field-based course in the tropics! This is what the Organization for Tropical Studies (OTS) offers through its broad range of Tropical Biology and Ecology graduate level courses in Spanish or English in Costa Rica. OTS graduate courses are open to students enrolled in graduate degree programs, with preference given to students at OTS member institutions.

Traditional Courses

Tropical Plant Systematics 2010-9

June 10 – July 13, 2010
*Application Deadline: February 15, 2010+

Ecología Tropical y Conservación 2011-2

(in Spanish)
January 14 – February 23, 2011
*Application Deadline: June 15, 2010

Sistemática de Plantas Tropicales 2011-18

(in Spanish)
June 8 – July 11, 2011
*Application Deadline: November 5, 2010+

Tropical Biology: An Ecological Approach 2011-3

early June – late July, 2011
*Application Deadline: March 4, 2011+

Specialty Courses

Tropical Butterfly Ecology

May 14-28, 2010
*Application Deadline: February 1, 2010+

Inquiry in Rainforests: an In-Service Program for Teachers

July 15-28, 2010
*Application Deadline: April 9, 2010+

Biodiversity of True Bugs (Hereroptera)

August 8-21, 2010
*Application Deadline: March 10, 2010+

Embedded Sensor Networks in Tropical Ecology

August 16-31, 2010
*Application Deadline: March 15, 2010+

For more information, please visit us online at www.ots.duke.edu.

In Memory of
LUIS DIEGO GÓMEZ PIGNATARO



His human warmth enwrapped all of us who had the pleasure of knowing him. A strong defender of his independence, he opposed protocol and social activities. He was, however, a friend of all. He felt comfortable talking with dignitaries and humble people. His sensibility and love for life he expressed at his walks in the forest, playing piano or cooking exotic plates for his friends. We lost a scientist... we lost a friend.

JORGE JIMENEZ, DIRECTOR GENERAL MARVIVA

Under his direction the station expanded its protected areas, grew to receive and accommodate many more visitors and researchers, and evolved into the internationally known facility that it is today. His passing has been a huge shock to all of us at the station. Many worked for years with Luis and we are all hugely saddened by this loss. In his honor, the next Las Cruces Amigos newsletter will be fully dedicated to his life work and commitment to the station.

ZAK ZAHAWI, DIRECTOR LAS CRUCES BIOLOGICAL STATION

Don Luis Diego fue un excelente investigador y una persona muy dedicada a su trabajo. Es una gran pérdida para nuestra país y para la comunidad científica en particular. Que Dios conforte a sus familiares y amigos.

ING. LETICIA DURAN M., DEPARTAMENTO DE INDICADORES DE CIENCIA Y TECNOLOGÍA

I delighted in his friendship for years. I have lost yet another naturalist and dog man (Schnauzers). Talk about looking like your dog, look at Luis's face. I raise Standard Poodles (black). Draw your own conclusions.

Luis had been ill for sometime with a malady similar to the one that I beat. This makes me all the sadder.

We exchanged OTS stories to our mutual delight. He said that I had won when I described the meeting that I had not been invited to in which Mr. Wilson and his lawyer negotiated to turn over of the Wilson Garden to the OTS. Mr. Wilson who I knew from various visits was quite drunk... I couldn't get out of the room... well the rest you can imagine...

NEIL SMITH, STAFF SCIENTIST EMERITUS, SMITHSONIAN TROPICAL RESEARCH INSTITUTE

continued from page 8

Luis Diego Gómez was my mentor in the spring of 2003 when I participated in the Associated Colleges of the Midwest (ACM) Off Campus Study Program. His strong connections with the community facilitated my access to local coffee farms and allowed me to work with farmers to conduct a study on the pollination of coffee plants. His was encouraging and supportive of my work. He helped me to locate the materials I needed for the study by doing things such as driving me to town to get cloth to make insect enclosures. Mr. Gómez encouraged me to pursue science and told me that I held promise in this field. His words have encouraged me to pursue science.

He also gave a PowerPoint presentation at Las Cruces that had a strong impression on me. The presentation sent the message that it was unethical to use botanical knowledge from indigenous communities for economic gain in the pharmaceutical industry. This was one of my first introductions to the idea of distributive justice.

Finally, in addition to professional development, Luis Diego Gómez extended himself to make me feel welcome. He hosted a dinner at his house for my friends and me on my 21st birthday. He made my birthday away from home quite special.

I know Mr. Gómez will be remembered by many people for many different reasons. I want to sincerely thank him for his insight, his encouragement, and his kindness.

GEORGIA M. HART, DOCTORAL STUDENT, COLUMBIA UNIVERSITY



SUPPORT OTS! Payment Information

- CHECK ENCLOSED MASTER CARD VISA or DONATE ONLINE at www.ots.duke.edu
- In Memory of Luis Diego Gómez

CARD NUMBER _____ EXP DATE _____

NAME ON CARD (PLEASE PRINT) _____

SIGNATURE _____

NAME _____

ADDRESS _____

CITY/STATE/ZIP _____

EMAIL _____

Mail this with your check or credit information to
Organization For Tropical Studies Box 90630, Durham NC 27708-0630
 Phone: (919) 684-5774 | www.ots.duke.edu | ots@duke.edu

Direct my gift: Where needed most La Selva Las Cruces Palo Verde

Membership levels:

- Heliconia \$1,000+ Quetzal \$500+
- Macaw \$250+ Tanager \$100+
- Motmot \$50+ Other \$ _____

Please choose your OTS gift:

(Gifts of \$50 or more)

For gifts of \$100 or more, please choose two gifts.

- OTS Neck tote
- OTS Calendar
- OTS Bag
- OTS T-shirt: S M L XL XXL

Please send information on:

- Planned Giving
- OTS Travel Programs

REC _____

CHECK NUMBER _____

CHECK DATE _____ VFC0210

Organization for Tropical Studies

OTS LAUNCHES ONLINE STORE!

Now you can show off your commitment to the tropics with signature OTS gear! Just go to <http://www.cafepress.com/otshop> to purchase your OTS gear today.

What image will adorn the next OTS T-shirt?



VIEW FROM THE CANOPY

IN THIS ISSUE



- In Memory of Luis Diego Gómez
- 2009 Outstanding Student Paper Award
- South Africa Orientation
- NAIPRE Students Honored
- The Mellon Challenge
- Upcoming Courses



**Organization for
Tropical Studies**

North American Headquarters
Box 90630
Durham, North Carolina 27708-0630 USA

Presorted Standard
US Postage
PAID
Durham NC
Permit No. 60

PLANT-ANIMAL INTERACTIONS IN THE TROPICS



OTS welcomed 2010 with a new two-week specialty graduate course in *Plant-Animal Interactions in the Tropics*. This course was conceived to build an intellectual basis for the integration of the study and theories of organismal interactions in temperate and tropical environments as well as a modern consolidation of natural history observations, experimental approaches and chemical ecology. The course was a full success thanks to six engaging faculty: Anurag Agrawal, Rodolfo Dirzo, Andre Kessler, Katja Poveda, Robert Raguso, Jennifer Thaler and the participation of 22 excellent students from seven countries. Through field work, discussion sessions, and bioassay and analytical chemistry workshops, the group tried to identify innovative ways of applying experimental tools and theoretical frameworks for plant animal interactions to tropical systems to overcome the strong bias towards temperate zone

"Thank you to the wonders of the rainforest, and more importantly thank you to all of you who made our experience so enlightening, memorable, and enjoyable."

"It was a great pleasure to learn, discuss ideas, and chat with such a group of renowned scientists."

systems in this research field. La Selva was the ideal venue for this endeavor and provided an intellectually vibrant and creative atmosphere. Students as well as faculty shared a number of transformative experiences which shed new lights on species interactions in tropical ecosystems.

About OTS



OTS is a non-profit consortium of over 60 research institutions, colleges and universities from the United States, Latin America, Africa and Australia. OTS' mission is to promote education, research, and the responsible use of natural resources in the tropics.

The View from the Canopy is produced by the OTS Development Office. To receive it electronically, or to submit comments or news items, please contact Cathleen Lemoine at 919-684-6969 or via e-mail at cathleen.lemoine@duke.edu.