Tupper 4pm seminar

Tuesday, January 22, 4pm seminar speaker will be Andrew Gonzalez, McGill University

Persistence and stability in changing environments: Lessons from Lilliputian landscapes

Paleo-Talk

Wednesday, January 23 at 4pm, Paleo-Talk speaker will be Hans Larsson, McGill University

Fins to limbs to wings attempting to explain evolutionary characters

Bambi seminar

Please check your e-mails for information on the next Bambi.

Arrivals

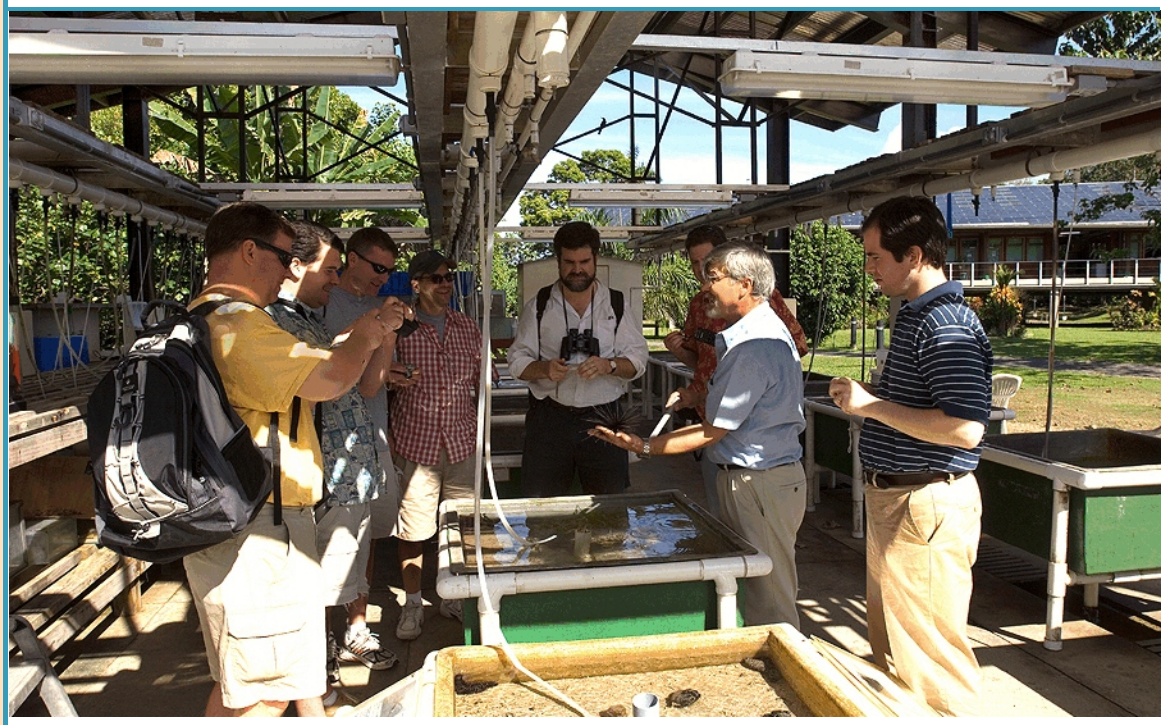
Mauricio Rodríguez, OFEO, Washington DC, to work with STRI colleagues on current design projects.

Robert Hodgkison, University of Ulm, to study echolocation and foraging behavior of neotropical bats, on BCI.

Sarah Crews, Pablo Berea and Rebecca Duncan, University of California at Berkeley, to study the biogeography of *Loxosceles*, *Sicarius* and *Selenops* spiders and molecular evolution of the venoms of sicariid spiders, on BCI and Tupper.

Maria Fernanda Castillo Cardenas, Universidad del Valle, Uruguay, to study the phylogeography of Neotropical mangrove species *Pelliciera rhizophorae*, on BCI.

Smithsonian Tropical Research Institute, Panamá www.stri.org January 18, 2008



Congressional visit to STRI

A group of US Congressional aids visited STRI from January 7-11, to get acquainted with our activities on the Isthmus of Panama. They were hosted by SI acting under secretary for Science and STRI director Ira Rubinoff, acting director Eldredge Bermingham, acting deputy director Haris Lessios (second from the right in the photo above, at Bocas) researchers John Christy, Rachel Collin, Stuart Davies, Carlos Jaramillo, Bill Laurance, Olga Linares, Helene Muller-Landau, Mark Torchin, Mary Jane West- Eberhard, Klaus Winter, Joe Wright, and other members of the STRI community.

The Congressional visitors were toured to important sites in Panama, including the Panama Canal, STRI facilities in Gamboa, BCI, Bocas del Toro, the Tupper Center, CTPA, where they were briefed on STRI research projects like the CTFS and PRORENA with Davies, Jefferson Hall and Javier Mateo, the Santa Cruz facilities where the Plant Physiological Project was described by Winter (at right in photo on next page), the Automated Radio-Telemetry Project with Roland Kays, and other on-going projects.

Bermingham addressed the visitors on the future of STRI and the plans to develop a state-of-the-art campus in Gamboa that will enhance our research capabilities in the most accessible tropical forest, characterized by its biodiversity and rich ecosystems, next to the Panama Canal, the Panama Canal Railroad, a major hotel complex, and minutes from both the Pacific Ocean and the Caribbean Sea.

Un grupo de funcionarios del Congreso de los EU visitaron STRI del 7 al 11 de enero para familiarizarse con nuestras actividades en el Istmo de Panamá. Fueron atendidos por el director de STRI y sub secretario encargado para las

More arrivals

Carolina Barriga Diaz and Camilo Salazar Clavio, STRI postdoctoral fellow, Universidad de Los Andes, to study hybrid speciation in *Heliconius* butterflies: the history of the gene regions controlling color pattern differences between *H. heurippa*, *H. melpomene* and *H. cydno*, on BCI.

Nurfazliza Kamarulbahrin, University of Putra, Malaysia, to study if lianas cause chronic disturbance and alter successional trajectories in tropical forests, on BCI.

Gregory Willlis and Jacalyn Giacalone, Montclair State University, to conduct the Barro Colorado Island mammal census, on BCI.

Andrew Kratter, University of Florida, to study Neotropical fish and bird collections, in Gamboa.

Javier Luque, Universidad Nacional de Colombia, to study the reproductive timing under variable environmental conditions: Implications for metacommunity fynamics, at Bocas.

New publications

Ferraz, Goncalo, Marinelli, Carlos E., and Lovejoy, Thomas E. 2008. "Biological monitoring in the Amazon: Recent progress and future needs." *Biotropica* 40(1): 7-10.

Gochfeld, Deborah J., Schloeder, Carmen, and Thacker, Robert W. 2007. "Sponge community structure and disease prevalence on coral reefs in Bocas del Toro, Panama." *Porifera Research: Biodiveristy, Innovation and Systainability* 2007: 335-343.

Ciencias de SI, Ira Rubinoff, el director encargado de STRI, Eldredge Bermingham el subdirector encargado Haris Lessios (segundo desde la derecha en página anterior), los investigadores John Christy, Rachel Collin, Stuart Davies, Carlos Jaramillo, Bill Laurance, Olga Linares, Helene Muller-Landau, Mark Torchin, Mary Jane West-Eberhard, Klaus Winter, Joe Wright, y otros miembros de la comunidad de STRI.

Los funcionarios del Congreso tuvieron la oportunidad de visitar importantes sitios en Panamá incluyendo el Canal de Panamá, las instalaciones de STRI en Gamboa, BCI, Bocas del Toro, el Centro Tupper, CTPA, donde conocieron de primera mano proyectos de investigación como el CTFS y PRORENA con Davies, Jefferson Hall y Javier Mateo, las instalaciones de Santa Cruz donde Winter describió el Proyecto de Fisiología Vegetal (a la derecha en la foto de arriba), el Sistema de Radio-Telemetría Automatizada con Roland Kays, y otros proyectos que se adelantan en Panamá.

Bermingham se dirigió a los visitantes y les habló sobre la historia y el futuro de STRI y los planes para desarrollar un nuevo campus de clase mundial en Gamboa para mejorar nuestras capacidades de investigación en un bosque tropical accesible, caracterizado por su riqueza en biodiversidad y ecosistemas, bordeando al Canal de Panamá, el ferrocarril transístmico del Canal de Panama, un complejo hotelero importante, y a minutos de ambos el Océano Pacífico y el Mar Caribe.

HSBC will donate STRI additional $340,000 to create GEO in Brunei

Backing tropical forest research in support to preserve the heart of Brunei

According to a press release issued on January 12 by HSBC Holding plc, UK, this group plans to donate $340,000 to support a tropical research to be held in Brunei Darussalam dubbed as a Global Earth Observatory. The project will be jointly run by STRI and Universiti Brunei Darussalam (UBD). The new 25-hectare research plot will be established in Kuala Belalong, Temburong. Researchers aim to use the site to monitor tropical, forest eco-systems and how they respond to global climate change.

While celebrating the bank's 60th anniversary in the sultanate, HSBC group chairman Stephen Green said that climate change is one of the biggest challenges the world is currently facing, and added that the success of doing business depends on a stable environment. "The Smithsonian Tropical Research Institute has the scientific research experience to help us understand how our global environment is changing. This partnership will significantly improve our knowledge of how climate change affects one of the Earth's most fragile ecosystems."

More publications

Lasso, Eloisa. 2008. "The importance of setting the right genetic distance threshold for identification of clones using amplified fragment length polymorphism: a case study with five species in the tropical plant genus *Piper*." *Molecular Ecology Resources* 8(1): 74-82.

Leather, Simon R., Basset, Yves, and Hawkins, Bradford A. 2008. "Insect conservation: finding the way forward." *Insect Conservation and Diversity* Online.

Meskens, Christophe, Windsor, Donald M., and Hance, Thierry. 2008. "A comparison of hispine beetles (Coleoptera: Chrysomelidae) associated with three orders of monocot host plants in lowland Panama." *International Journal of Tropical Insect Science* 27(3/4): 159-171.

Missa, Oliver, Basset, Yves, Alonso, Alfonso, Miller, Scott E., Curletti, Gianfranco, De Meyer, Marc, Eardley, Connal, Mansell, Mervyn W., and Wagner, Thomas. 2008. "Monitoring arthropods in a tropical landscape: relative effects of sampling methods and habitat types on trap catches." *Journal of Insect Conservation* Online.

Turner, Benjamin L. 2008. "Soil organic phosphorus in tropical forests: an assessment of the NaOH-EDTA extraction procedure for quantitative analysis by solution 31P NMR spectroscopy." *European Journal of Soil Science* Online.

Vargas, Sergio, Guzman, Hector M., and Breedy, Odalisca. 2008. "Distribution patterns of the genus *Pacifigorgia* (Octocorallia: Gorgoniidae): track compatibility analysis and parsimony analysis of endemicity." *Journal of Biogeography* 35(2): 241-247.

The additional funds aim to ensure the long-term conservation of the area, enabling STRI to expand the existing research capability of its Center for Tropical Forest Science (CTFS) into a coordinated Global Earth Observatory system, increasing the quality of scientific data across 20 large-scale research plots in the forests of 17 countries. The new site in Brunei, the Kuala Belalong Field Studies Center, will provide this network with an important addition, by representing the most diverse and pristine forests in Southeast Asia.

The project is HSBC's latest commitment to support STRI's initiative to combat global climate change. In May last year, HSBC announced a five-year, US$8 million environmental partnership with STRI as part of the HSBC Climate Partnership.

De acuerdo a un comunicado de prensa de HSBC Holding plc Reino Unido, este grupo donará $340,000 para apoyar investigaciones que se llevarán cabo en Brunei Darussalam para establecer un Observatorio Global de la Tierra. El proyecto se administrará en conjunto, entre STRI y la Universidad de Brunei Darussalam (UBD). La nueva parcela de 25 hectáreas se establecerá en Kuala Belalong, Temburong. Los investigadores tienen como objetivo usar este lugar para monitorear los ecosistemas tropicales y cómo responderán al cambio climático global.

Al celebrar el 60o aniversario del Banco en el sultanato, Stephen Green director del Grupo HSBC dijo que el cambio climático es uno de los retos más grandes que el mundo enfrenta actualmente, y añadió que el éxito de los negocios depende de un ambiente estable. “El Instituto Smithsonian de investigaciones Tropicales tiene la experiencia científica para ayudarnos a entender cómo nuestro ambiente global está cambiando. Esta asociación mejorará significativamente nuestros conocimientos de cómo el cambio climático afecta uno de los ecosistemas más frágiles de la Tierra.”

Los fondos adicionales tienen como objetivo asegurar la conservación del área a largo plazo, haciendo posible que STRI expanda la capacidad de investigación de su Centro de Ciencias Forestales del Trópico (CTFS) hacia un sistema de Observatorios Globales de la Tierra, aumente la calidad de la información científica de las 20 parcelas de investigación a largo plazo en los bosques de 17 países. El nuevo lugar en Borneo, el Centro de Estudios de Campo de Kuala Belalong será una importante adición a la red al representar los bosques más diversos y prístinos del sureste de Asia.

Este proyecto es el más reciente de los compromisos del HSBC para apoyar la iniciativa de STRI para combatir el cambio climático. En mayo del año pasado, el HSBC anunció una sociedad ambiental con STRI como parte del Climate Partnership del HSBC.

More publications

West-Eberhard, Mary Jane. 2007. "Dancing with DNA and flirting with the ghost of Lamarck [Review of: Evolution in Four Dimensions, Eva Jablonka and Marion J. Lamb, 2005, MIT Press, Cambridge, Massachusetts]." *Biology and Philosophy* 22(3): 439-451.

STRI on TV

A one-minute infomercial about STRI´s Punta Clebra Nature Center will start to air in the Panama Travel Channel on January 25, from Monday to Sunday for a period of three months. It will air in Channel 54, Chorrera, 41, Coronado, 28 at Bocas, 67 in the central provinces and 175 in Cable

Photography: cost-effective to science

Story: P Jansen,
S Bohlman,
C Garzon-Lopez,
H Olff, H Muller-Landau
& J Wright
Edited by M Alvarado
& ML Calderon
Photo: MA Guerra

Fruit abundance is crucial for ecological studies of tropical forest animals and plants, but difficult to measure at large spatial scales.

Researchers at STRI Patrick Jansen, Stephanie Bohlman (in the photo, while supervising the aerial photography), Carol Garzon-Lopez, Han Olff, Helene Muller-Landau and Joe Wright are estimating spatial variation in fruit abundance on a relatively large area using low altitude, high-resolution aerial photography. (*Econography*, Online Early Articles, doi: 10.1111/j.2007.0906-7590.05151.x)

They measured the fruit production for 555 individuals of the arborescent palm *Astrocaryum standleyanum* across 25 has on Barro Colorado Island by visually counting fruits from the ground. Then they compared the numbers with high-resolution aerial photographs of the sun-exposed crowns of the palms in the same 25 has.

The scientists verified that the fruit crop size of individual trees was related to both the crowns and the visible crown area on aerial photographs.

Although representing just one third of all individuals in the study area, the spatial density of photo-detected crowns predicted spatial variation in fruit abundance equally well as did the spatial density of ground stem measures.

The study indicates that aerial photography of crowns can be a reliable and cost-effective method for estimating spatial variation in fruit abundance across large areas for highly distinctive canopy species.

La abundancia de frutos es de gran importancia para estudios ecológicos sobre plantas y animales, pero difícil de medir en grandes extensiones.

Investigadores en STRI Patrick Jansen, Stephanie Bohlman (en la foto, mientras supervisaba las tomas fotográficas), Carol Garzon-Lopez, Han Olff, Helene Muller-Landau y Joe Wright calculan la variación espacial de la abundancia de frutos en una área relativamente amplia usando fotografía aérea de alta resolución tomada a poca altitud. (*Econography*, Online Early Articles, doi: 10.1111/j.2007.0906-7590.05151.x)

El grupo de autores usó medidas de la producción de frutos de 555 especímenes de la palma *Astrocaryum standleyanum* en 25 has en la Isla de Barro Colorado obtenidas visualmente desde la superficie. Luego compararon las cantidades con las de fotografías aéreas de alta resolución de las coronas de las palmas expuestas al sol, en las mismas 25has.

Los científicos verificaron que el tamaño de la cosecha de frutos en árboles individuales está relacionada con tanto la presencia de las coronas, como con el área visible de éstas en las fotos aéreas.

Aunque sólo representaron un tercio de todos los individuos en el área de estudio, la densidad espacial de las coronas foto-detectadas predijeron la variación espacial de la abundancia de frutos con la misma precisión que el conteo de los tallos desde la superficie.

El estudio demuestra que la fotografía aérea de las coronas puede ser un método confiable y económico para estimar la variación espacial de la abundancia de frutos en áreas extensas para especies de dosel altamente reconocibles..