



Smithsonian

# 100 years of science in Panama



Smithsonian Tropical Research Institute, Panamá

STRI news

[www.stri.org](http://www.stri.org)

February 11, 2011

## Gamboa seminar

Monday, February 14, Gamboa seminar series speaker will be Sara Pinzon, SENACYT and STRI postdoctoral fellow  
**Host specificity and evolutionary patterns of seed feeding insects in the Neotropics**

## Tupper seminar

Tuesday, February 15, Tupper 4pm seminar speaker will be Jordi Moya-Laraño, Estación Experimental de Zonas Áridas, Almería, Spain  
**Integrative evolutionary ecology: Biomechanics and encounter rates in ecology and evolution**

## CIFS Science talk

On February 15, 10:30am at the Large Meeting Room, Joe Mascaro, Carnegie Institute of Science will present  
**Carbon landscapes through time in the Barro Colorado National Monument**

## Bambi seminar

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



## SI undersecretary for Science visits STRI

**E**va Pell, Smithsonian Institution undersecretary for Science, visited Panama and STRI facilities and study sites from Friday, February 4, through Friday, February 11. This is the second visit to Panama of undersecretary Pell since she accepted her position at the Smithsonian last year.

Pell and her party visited different sites in Gamboa, where STRI carries on work to establish a new campus that will support advanced research on plant physiology and global climate change, as well as studies on the role tropical forests play in providing ecosystem services such as clean water and carbon storage under changing environmental conditions. In the company of director Biff Bermingham, Joe

Wright, Bob Stallard, Allen Herre and Owen McMillan, Pell toured Barro Colorado Island, its 50-ha plot, was briefed by ecologist Bert Leigh, Meg Crofoot, and had dinner with students, postdocs and visiting scientists.

The Under Secretary for Science visited Fort Sherman on the extreme end of the Panama Canal Watershed's broad precipitation gradient, Panama's BioMuseo site where she was briefed on the construction and exhibits the Smithsonian will contribute, Punta Culebra Nature Center, Bocas del Toro and the Liquid Jungle Lab, Ranchería Island within the Coiba National Park and STRI's Center for Tropical Paleocology and Archaeology (See photo on next page, with Julia Mayo).

The STRI administration and senior members of the staff had a special dinner with undersecretary Pell and friends of STRI on Thursday, February 10, to celebrate the donors and collaborators who have supported the Agua Salud project, and express gratitude for what we have been able to accomplish together. The photo above shows Esteban Saenz, Panama Canal Authority (ACP), Alberto Alemán Zubieta, ACP, Stanley Motta, Fundación Alberto Motta, Eva Pell, Biff Bermingham, Mayu Brizuela de Avila, HSBC, Ira Rubinoff, STRI director emeritus, Frank Levinson, Small World Foundation, Stuart Davies, STRI's Center for Tropical Forest Science, and Peter Miller, Fundación Smithsonian.

## Arrivals

Harry Lagerman, Nancy Lasher, and Anna Mazzaro and Dorothy Stradford, Montclair State University, to participate in the Barro Colorado Island mammal census, on BCI.

Julia Barske, University of California at Los Angeles, to study hormonal and neural control of a sexually dimorphic behavior, in Gamboa.

Thomas Duda, University of Michigan, to study interspecific variation in diets of predatory marine gastropods, at Naos Island Laboratories.

Gretchen Goodbody-Gringley, Mote Marine Laboratory, Florida, to study the effects of micro-grazing invertebrates on the settlement and growth of *Porites asteroides*, at Bocas del Toro.

Veronica Zeus, Technical University of Munich, Germany, to study emerging infectious diseases: Impact of anthropogenic change on the prevalence of blood parasites in Neotropical bats in Panamá, on BCI.

James Leichter, University of California, San Diego, to participate as instructor in the 2011 Three Oceans/North Eastern University, at Bocas del Toro.

Brian Hemuth, University of South California, to participate as instructor in the 2011 Three Oceans/North Eastern University, at Bocas del Toro.

Brian Traw, University of Pittsburgh, to study the last frontier: On the abundance and impact of bacteria on arboreal species within a tropical forest, on BCI.



Eva Pell, subsecretaria para Ciencias del Smithsonian, visitó Panamá y las instalaciones y lugares de estudio de STRI, desde el viernes 4 de febrero hasta el viernes, 11 de febrero. Esta es la segunda visita de la subsecretaria Pell desde que aceptó su posición en el Smithsonian el año pasado.

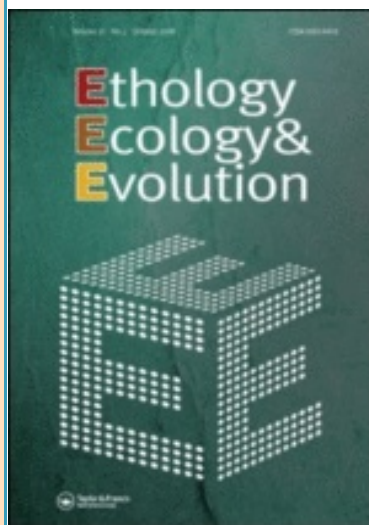
Pell y su grupo visitaron diferentes lugares en Gamboa, donde STRI lleva a cabo trabajos para establecer un nuevo campus que albergará investigaciones avanzadas sobre fisiología vegetal y cambio climático global, así como estudios sobre el papel de los bosques tropicales en suministrar servicios del ecosistemas como agua limpia y depósito de carbono, bajo condiciones ambientales

cambiantes. En compañía del director Biff Bermingham, Joe Wright, Bob Stallard, Allen Herre y Owen McMillan, Pell visitó la Isla de Barro Colorado, su parcela de 50 hectáreas, recibió información del ecólogo Bert Leigh y Meg Crofoot, y cenó con estudiantes, becarios postdoctorales y académicos visitantes.

La Subsecretaria para Ciencias visitó Fort Sherman, a un extremo de la Cuenca del Canal de Panamá, el sitio de construcción del BioMuseo de Panamá donde recibió información sobre las exhibiciones con las que el Smithsonian ha de contribuir, el Centro Natural de Punta Culebra, Bocas del Toro y el Liquid Jungle Lab, Isla Ranchería dentro del Parque Nacional Coiba y el Centro de Paleocología y Arqueología de

STRI (Con Julia Mayo, arriba).

La administración de STRI y científicos del personal tuvieron una cena especial con la subsecretaria Pell y amigos de STRI el jueves, 10 de febrero, para celebrar con los donantes y colaboradores que apoyan el proyecto de Agua Salud y expresar su gratitud por todo lo que hemos logrado juntos. La foto de la primera página muestra a Esteban Saenz, Autoridad del Canal de Panamá (ACP), Alberto Alemán Zubieta, ACP, Stanley Motta, Fundación Alberto Motta, Eva Pell, Biff Bermingham, Mayu Brizuela de Avila, HSBC, Ira Rubinoff, director emérito de STRI, Frank Levinson, Small World Foundation, Stuart Davies, Centro de Ciencias Forestales del Trópico de STRI, y Peter Miller, Fundación Smithsonian.



## Eberhards 'take over' EEE

*Ethology, Ecology and Evolution* (November 2010) brought three different papers authored by the Eberhards. Bill Eberhard authored "Movements and morphology under sexual selection: tsetse fly genitalia" with R. Daniel Briceño L. (leading author), D. Wegrzynek, E. China-Cano and T. Dos Santos Rolo. Mary Jane published "The behavior and

natural history of *Chartergellus*, a little-known genus of neotropical social wasps (Vespidae Polistinae Epiponini)" with L. Chavarria-Pizarro; and their daughter Jessica R. Eberhard publish "Behavioral flexibility and species invasions: the adaptive flexibility hypothesis" with T.F. Wright, E.A. Hobson, M.L. Avery and M.A. Ruseello.

## More arrivals

Liza Comita, University of California, Santa Barbara, to study seedling and small sapling dynamics in the Barro Colorado Island 50 hectare plot, on BCI.

Benjamin Kayatz, University of Postdam, Germany, to join the Agua Salud Project-Hydrologic Studies, on BCI.

Daniel Stanton, Princeton University, to participate as instructor in the 2011 Princeton Field Study course, in Gamboa.

Henry Pollock, University of Illinois, Urbana Champaign, to study characterizing avian movements, habitat selection and physiological tolerances in a tropical moist forest, in Gamboa.

Ana Riesgo, Harvard University, to assess the stress level of the sponge fauna of healthy and damaged coral reefs in Bocas del Toro.

## New publications

Baird, Emily, Kreiss, Eva, Wcislo, William, Warrant, Eric, and Dacke, Marie. 2011. "Nocturnal insects use optic flow for flight control." *Biology Letters* doi:10.1098/rsbl.2010.1205

Baldwin, Carole, Castillo, Cristina, Weigt, Lee, and Victor, Benjamin. 2011. "Seven new species within western Atlantic *Starksia atlantica*, *S. lepicoelia*, and *S. sluiteri* (Teleostei, Labrisomidae), with comments on congruence of DNA barcodes and species." *ZooKeys* 79(1): 21-72.



## Princeton celebrates 13 years at STRI

Photo: Yves basset, Campana, 2011

This year is Princeton University and STRI's 13th year of collaboration in teaching Princeton undergraduates. In 1999, the first group of 16 students arrived, bug spray and *Rite in the Rain* notebooks in hand, to study the ecology of Panama and the behavior of its many species, including a course on native inhabitants.

That first spring, five courses were taught: Pre-Columbian People of Tropical America and their Environments by Dolores Piperno; Marine Invertebrate Zoology by Penelope Barnes; Tropical Biology and Tropical Conservation Biology by Steve Hubbell; Biology of Coral Reefs by Steve Pacala. Now, the program has settled into four courses: Tropical Biology, Biology of Coral Reefs, Vertebrate Tropical Ecology, and Pre-Columbian Peoples of Tropical American and Their Environments. Instructors this year include Yves Bassett, Steve Pacala, Meg Crofoot, Anthony Coates, Aaron O'Dea, Julia Mayo and Andrew Ugan.

Making use of STRI's field stations and sites, the new group of 18 students, all majors in the Department of Ecology and Evolutionary Biology, travel the country, taking in its two coastlines and outlying reefs, the dry forest of the Azuero Peninsula, and the rain forest on Barro Colorado Island.

*Adapted from Lolly O'Brian, Princeton*



Este es el 13avo año en que Princeton University y STRI colaboran en la enseñanza de estudiantes de licenciatura de esta universidad. En 1999, el primer grupo de 16 estudiantes llegaron con repelente contra los mosquitos y sus libretas de notas para todo clima en mano, para estudiar la ecología de Panamá y el comportamiento de sus especies, incluyendo un curso sobre sus habitantes nativos.

La primera vez que vinieron se dieron cinco cursos: Gente precolombina de América tropical y sus ambientes por Dolores Piperno; Zoología de invertebrados marinos por Penelope Barnes; Biología tropical y Biología de la conservación por Steve Hubbell, Biología de arrecifes coralinos, por Steve Pacala. Hoy día el programa se ha establecido con cuatro cursos: Biología tropical, Biología de arrecifes coralinos, Ecología de vertebrados tropicales, y Gente precolombina de América tropical y sus ambientes. Los instructores de este año incluyen a Yves Bassett, Steve Pacala, Meg Crofoot, Anthony Coates, Aaron O'Dea, Julia Mayo y Andrew Ugan.

Aprovechando las instalaciones y estaciones de STRI, este nuevo grupo de 18 estudiantes, todos del Departamento de Ecología y Biología de la Evolución, viajarán dentro del país, aprovechando sus dos costas y sus arrecifes coralinos, el bosque seco de la Península de Azuero y el bosque lluvioso de Barro Colorado.

## New publications

Briceno L., R. Daniel, Wegrzynek, D., Chinea-Cano, E., Eberhard, William G., and dos Santos Rolo, T. 2010. "Movements and morphology under sexual selection: tsetse fly genitalia." *Ethology Ecology & Evolution* 22(4): 385-391.

Chavarría-Pizarro, L., and West-Eberhard, Mary Jane. 2010. "The behavior and natural history of *Chartergellus*, a little-known genus of neotropical social wasps (Vespidae Polistinae Epiponini)." *Ethology, Ecology and Evolution* 22(4): 317-343.

Donoso, David A., Johnston, Mary K., and Kaspari, Michael. 2010. "Trees as templates for tropical litter arthropod diversity." *Oecologia* 164(1): 201-211.

Kilburn, Vanessa, Ibanez D., Roberto, Sanjur, Oris, Birmingham, Eldredge, Suraci, Justin P., and Green, David M. 2011. "Ubiquity of the pathogenic chytrid fungus, *Batrachochytrium dendrobatidis*, in anuran communities in Panamá." *EcoHealth* doi: 10.1007/s10393-010-0634-1

McDonald, Kathryn A., and Vaughn, Dawn. 2010. "Abrupt change in food environment induces cloning in *Plutei* of *Dendroaster excentricus*." *Biological Bulletin* 219(1): 38-49.

Merrill, Richard M., Gompert, Zachariah, Dembeck, Lauren M., Kronforst, Marcus R., McMillan, W. Owen, and Jiggins, Chris D. 2011. "Mate preference across the speciation continuum in a clade of mimetic butterflies." *Evolution* doi:10.1111/j.1558-5646.2010.01216.x

# One-day Symposium: Forest Dynamics Research at SIGEO/CTFS

February 22, 2011

**The Smithsonian Institution New long-term projects in the Global Earth Observatories US, Panama, Ecuador and (SIGEO) and the Center for Puerto Rico will be described, Tropical Forest Science and new research directions (CTFS) research on forest ecology and conservation to the public and will be will be the focus of a one-day broadcasted online. Scientists symposium at the Tupper outside SIGEO are welcome Center, STRI. to join discussions.**

## Program

- 8:15am** **Stuart Davies: Introduction**
- 8:30** **Helene Muller-Landau: Quantifying the maintenance of diversity using tree plot data.**
- 9:00** **N. Rüger: Fundamental axes of life-history variation in tropical tree species**
- 9:30** **Geoffrey Parker: Seasonal growth assessed with manual band dendrometers.**
- 10:00** **John Kress: The research potential of bar-coding all tree species in SIGEO/CTFS plots**
- 10:30** **Break**
- 10:45** **T. Brenes: Rainfall gradients in herbivory and pathogen attack**
- 11:15** **J. Parker: Predicting forest response to deer herbivory and exotic plants**
- 11:45** **Joe Wright: Long-term variation in seed production across SIGEO/CTFS plots**
- 12:15** **Liza Comita: Seasonal and supra-annual drought effects on BCI forests**
- 12:45** **Lunch**
- 2:00** **Patrick Jansen: Vertebrate population studies across SIGEO/CTFS plots**
- 2:30** **Ben Turner: Soil research across SIGEO/CTFS plots**
- 3:00** **J. Calabrese: Population dynamics of lyme disease and its tick host**
- 3:50** **Break**
- 4:00** **J. Thompson: The influence of development, logging, and climate change on forest dynamics**
- 5:00** **Snacks**

## New publications

Peltzer, Duane A., Wardle, David A., Allison, Victoria J., Baisden, W. Troy, Bardgett, Richard D., Chadwick, Oliver A., Condron, Leo M., Parfitt, Roger L., Porder, Stephen, Richardson, Sarah J., Turner, Benjamin L., Vitousek, Peter M., Walker, Joe, and Walker, Lawrence R. 2010. "Understanding ecosystem retrogression." *Ecological Monographs* 80(4): 509-529.

Peppe, Daniel J., Royer, Dana L., Cariglino, Barbara, Oliver, Sofia Y., Newman, Sharon, Leight, Elias, Enikolopov, Grisha, Fernandez-Burgos, Margo, Herrera, Fabiany, Adams, Jonathan M., Correa, Edwin, Currano, Ellen D., Erickson, J. Mark, Hinojosa, Luis Felipe, Hoganson, John W., Iglesias, Ari, Jaramillo, Carlos A., Johnson, Kirk R., Jordan, Gregory J., Kraft, Nathan J. B., Lovelock, Elizabeth C., Lusk, Christopher H., Niinemets, Ulo, Penuelas, Josep, Rapson, Gillian, Wing, Scott L., and Wright, Ian J. 2011. "Sensitivity of leaf size and shape to climate: global patterns and paleoclimatic applications." *New Phytologist* doi:10.1111/j.1469-8137.2010.03615.x

Seid, Marc, Castillo, Armando, and Wcislo, William T. 2011. "The allometry of brain miniaturization in ants." *Brain, Behavior and Evolution* doi: 10.1159/000322530

Taylor, Ryan C., Klein, Barrett A., Stein, Joey, and Ryan, Michael J. 2011. "Multimodal signal variation in space and time: how important is matching a signal with its signaler?" *Journal of Experimental Biology* 214(5): 815-820.

# Conversaciones en el Smithsonian *Ciclo de Conferencias Centenario*

es parte del programa de actividades organizado para celebrar  
los Cien Años de Ciencia del Smithsonian en Panamá y reconocer  
el apoyo que hemos recibido de millares de panameños a través de los años.

*Peristeria elata* Hook., descrita en 1831.



## Historia de las Colecciones Botánicas en Panamá

Profesora Mireya Correa

Entrada Libre  
Auditorio del Centro Earl Tupper  
Instituto Smithsonian  
23 de febrero de 2011  
5:30 p.m.

Información: 212-8111, 212-8000 ext. 0

 Smithsonian



100 años  
de ciencia en Panamá

A partir de enero de 2011, investigadores del Smithsonian  
presentarán charlas mensuales sobre la historia de la relación centenaria  
entre el Smithsonian y Panamá y sobre la investigación científica  
que el Smithsonian adelanta desde Panamá para el mundo.