

## Tupper 4pm seminar

Tuesday, August 9, 4pm seminar speaker will be Robert Thacker, University of Alabama at Birmingham  
**Sponge-microbe symbioses: integrating molecular, chemical and community ecology**

## Bambi seminars

Monday, August 8, Bambi seminar speaker will be Meredith Blackwell, Louisiana State University  
**TBA**

Thursday, August 11, Bambi seminar speaker will be John Christy, STRI  
**Big male sexual signal - no female preference.**

## At the CTPA

Wednesday, August 10, CTPA 4pm talk speaker will be Christopher Dick, STRI/University of Michigan  
**Evolutionary history of the rainforest tree *Symplocos globulifera*, and the role of immigrants in the assembly of neotropical rainforest tree communities**

## Arriving next week

Alexander Lang and Heiner Roemer, Karl-Franzens-Universität, Austria, and Andrej Cokl, National Institute of Biology, Slovenia, to study environmental gradients in predation by bats and its influence on acoustic communication in Neotropical katydid-Orthoptera: Tettigoniidae, on BCI.

Christina Schweipert and Julian Schnetzer, University of Postdam, Germany, to participate in the soil mapping survey of the Barro Colorado Nature Monument, on BCI.



Smithsonian Tropical Research Institute, Panamá

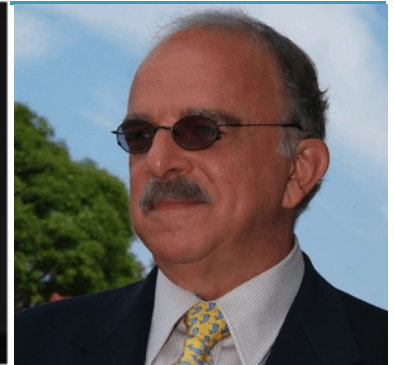
[www.stri.org](http://www.stri.org)

August 5, 2005

## STRI and NSRC sign agreement

STRI's Ira Rubinoff and Sally Shuler, director of the National Science Resources Center (NSRC), signed an agreement of collaboration at 11 o'clock this morning, to join efforts in the development of educational products based on STRI research on tropical biology. STRI agrees to provide content for the products, while NSRC will see that these are appropriate for the destined audience. The agreement, engineered by STRI's Monica Alvarado and OCAPP's education counselor Cecilia Mañosa in Washington DC, supports SI strategic goals outlined by undersecretary for

Ira Rubinoff de STRI y Sally Shuler, directora del Centro de Recursos de Ciencias de EU (NSRC), firmaron un acuerdo de colaboración a las 11 de la mañana de hoy, para unir esfuerzos en la elaboración de productos educativos basados en investigaciones de STRI en biología tropical. STRI se compromete a suministrar contenido para dichas herramientas, mientras que NSRC deberá asegurarse que sean apropiados para la audiencia a la cual se dirigen. El convenio, negociado por Mónica Alvarado de STRI y



Science David Evans, who has committed the Institution to the improvement of science education. Rubinoff and Shuler also signed an agreement for the production of the Smithsonian Series of Biodiversity (SSB), a series of books and posters for elementary school children based on STRI research, a brainchild of Alvarado and Mañosa. The series is also supported by Panama's SENACYT, aiming

Cecilia Mañosa, asesora de educación en OCAPP en Washington DC, apoya las metas estratégicas de SI establecidas por el subsecretario de Ciencias, David Evans, quien ha comprometido a la Institución al mejoramiento de la educación en ciencias. Rubinoff y Shuler también firmaron un convenio para la producción de la Serie Smithsonian de Biodiversidad (SSB), una serie de libros y afiches para estudiantes de escuela primaria basados en investigaciones de STRI, autoría de Alvarado y Mañosa. La serie

to be used by children in Panama, US, Latin America and the globe.

The NSRC is an organization of the SI and the National Academies of the United States of America, established to improve science education throughout the world. This agreement is the first in its kind ever signed among two SI bureaus.

también ha sido apoyada por SENACYT, con la intención de que sea usada por estudiantes en Panamá, EU, Latinoamérica y el mundo.

NSRC es una organización del Smithsonian y las Academias Nacionales de los EU, establecida para mejorar la educación en ciencias en EU y alrededor del mundo. Este convenio de colaboración es el primero en su género firmado entre dos centros del Smithsonian.

## More arrivals

John Haagensen, University of Aberdeen, Scotland, to study herbivory in the canopy of Panama, at Parque Natural Metropolitano.

## Leaving next week

Richard Condit to Montreal, Canada, to attend the Ecological Society of America meetings, and then to Cairns, Australia, to attend the meetings of the International Union of Forestry Research Organizations.

## New publications

Basset, Yves, Springate, Neil D., and Charles, Elroy. 2005. "Folivorous insects in the rain forests of the Guianas." In: David S. Hammond (Ed.) *Tropical Forests of the Guiana Shield: Ancient forests in a modern world*. 295-320. Wallingford: CABI Publishing.

Dick, Christopher W., and Wright, S. Joseph. 2005. "Tropical mountain cradles of dry forest diversity." *Proceedings of the National Academy of Sciences* 102(31): 10757-10758.

Eizek, Lukas, and Hauck, David. 2005. "Jeóaby v pralese: Stžkou technikou do korun stromù." *Vesmír* 84: 38-43.

Novotny, Vojtech, Miller, Scott E., Basset, Yves, Cizek, Lukas, Darrow, Karolyn, Kaupa, Borenke, Kua, Joseph, and Weiblen, George D. 2005. "An altitudinal comparison of caterpillar (Lepidoptera) assemblages on *Ficus* trees in Papua New Guinea." *Journal of Biogeography* 32(8): 1303-1314.

## PNAS: Tropical mountain cradles of dry forest diversity

Tupper post-doctoral fellow Chris Dick and Joe Wright published a commentary in this week's *Proceedings of the National Academy of Sciences* (102: 10757-10758) which provides an overview and critique of a study by Judith Becerra on the origin of dry forests in Mesoamerica. Tropical dry forests, which may be found in the Pacific coast of Panama, occur where relatively fertile soils, annual rainfall <1600 mm, and strong seasonal drought coincide, and they are characterized by their deciduousness during the dry season. Mexico has the greatest species diversity and endemism of the Mesoamerican dry forests, and is the center of diversity of the dry forest tree genus *Bursera*.

## Patrizia Pinzon leaves STRI

After four years at STRI, Patrizia Pinzón, administrative assistant at STRI's Office of Communications and Public Programs (OCAPP), leaves STRI to pursue personal business. Patrizia joined STRI in 2001 at the Visitor's Services Office and in 2003, with the creation of OCAPP, she accepted her present position. Patrizia has a bachelor's degree in Business Administration and Tourism and a master's degree in Business with a minor in Marketing from ULACYT. At OCAPP, she was in charge the administration of the BCNM Public Program. Patrizia established a highly successful relationship with travel



Becerra used a time-calibrated phylogeny to track the diversification of Mexican *Bursera* clades and found that the timing of episodic speciation tracked the uplift of the Sierra Madre Occidental (34-15 million years ago) and the Neovolcanic axis (23-2.5 Mya). The rising mountains, through their influence on regional climate, permitted dry forests to take hold in Mexico and to spread into Central America.

While recognizing the importance of Becerra's

phylogenetic result, Dick and Wright questioned a few of the study's key assumptions. For example, while the date of separation of Africa and South America (95-100 Mya) was used to date divergences in the Burseraceae phylogeny, Dick and Wright pointed to alternative, much younger scenarios, and discuss alternative mechanisms of diversification associated with tropical mountains.

—The article was distributed by staff scientist Neal G. Smith.



agencies and tourism operators thus consolidating the financial base of the BCNM program. In addition, she efficiently managed funds for OCAPP and became the central management person for all four public programs. Patrizia also provided support the Office of Public Information and all OCAPP operations. We will miss her unbreakable efficiency, poise

and warmth. The photo shows Patrizia and partner Kayes Harding, with STRI co-workers during a farewell Bar-B-Q at Culebra.

Luego de cuatro años en STRI, Patrizia Pinzón, asistente administrativa de OCAPP deja STRI para dedicarse a sus negocios personales. Patrizia empezó a trabajar con STRI en

la Oficina de Visitantes y en 2003, con la creación de OCAPP, aceptó su posición actual. Patrizia tiene una licenciatura en Administración de Empresas y Turismo y una maestría en Administración y Mercadeo de ULACYT. En OCAPP, estuvo a cargo de la administración del Programa Público de BCNM. Patrizia estableció una relación muy

## Staff from migration services visit BCI

A group of migration officers and members of the staff of Panama's General Directorate for Migration and Naturalization services led by deputy director Dixa de Méndez (where is she in the photo?) visited Barro Colorado Island on July 23, with Celideth de Leon from STRI's Office of External Affairs (second from the right). This is the first time that migration personnel visit BCI at STRI's invitation, strengthening their understanding of STRI's mission in Panama. Historically, migration services in Panama have allowed STRI to maintain an uninterrupted flow of students, fellows and visiting scientists, as well as resident scientists and their families, providing safe passage in this country, and greatly contributing to the study of tropical biology.

During their visit to the Island, scientific coordinator Oris Acevedo, visiting scientist James Dalling, ICBG's Rafael Aizprúa, research assistants Luis Ramírez and Adalberto Gómez from Herre's Lab, and naturalist guide Arturo Morris briefed the group about STRI programs and research projects conducted on BCI. Méndez mentioned that a new immigration law proposal is pending at Panama's National

exitosa con las agencias de viajes y operadores de turismo, consolidando así la base financiera del programa de BCNM. Además, administró eficientemente los fondos de OCAPP, y se convirtió en el centro administrativo de los cuatro programas públicos. Patrizia también ofrecía apoyo a la Oficina de Divulgación de



Assembly, and STRI visitors may be considered as a special case to ease their immigration movements. She also expressed their appreciation for the tour and their interest to be invited to other STRI facilities in the future.

Un grupo de funcionarios de la Dirección General de Migración y Naturalización de Panamá, liderados por su subdirectora, Dixa de Méndez (donde está en la foto) visitaron Barro Colorado el 23 de julio con Celideth de León de la Oficina de Asuntos Externos (segunda desde la derecha), el 23 de julio. Esta es la primera vez que el personal de migración visita BCI por invitación de STRI, reforzando así su conocimiento sobre la misión de STRI en Panamá. Históricamente, Migración de Panamá ha permitido que STRI mantenga un fluido ininterrumpido de estudiantes, becarios y académicos visitantes así como

STRI y a todas las operaciones de OCAPP. Extrañaremos su inquebrantable eficiencia, aplomo, y don de gente. La foto en la página anterior muestra a Patrizia y su socio Kayes Harding, con compañeros de STRI, durante una barbacoa de despedida en Culebra.

científicos permanentes y sus familias, ofreciendo la entrada segura en este país, y de esta forma contribuyendo al estudio de la biología tropical.

Durante su visita a la Isla, la coordinadora científica Oris Acevedo, el científico visitante James Dalling, Rafael Aizprúa del ICBG, los asistentes de investigación Luis Ramírez y Adalberto Gómez de los laboratorios de Allen Herre, y el guía naturalista Arturo Morris les dieron una introducción sobre los programas y proyectos que se llevan a cabo en BCI. Méndez mencionó que hay una propuesta de ley pendiente en la Asamblea Nacional, y que los visitantes de STRI podrían ser considerados como un caso especial para agilizar sus entradas y salidas. También expresó su agradecimiento por la visita y su interés en conocer otras instalaciones de STRI.

## More publications

Ribeiro, S.P., and Corbara, Bruno. 2005. "Dossel florestal: a fronteira desconhecida." *Ciencia Hoje* 217: 54-58.

Schmidl, Jurgen, and Corbara, Bruno. 2005. "IBISCA – Artenvielfalt der Boden- und Baumkronen-Arthropoden in einem tropischen Regenwald (San Lorenzo NP, Panama)." *Entomologische Zeitschrift* 115(3): 105-108.

## Miscellaneous

For sale - 1997 Chevy S-10 pick-up truck in very good condition. 78K miles, gasoline engine, 5-speed standard transmission, great AC. I'm moving and have to sell. \$3500 neg. Call Gwen at 607-9667 or 212-8851.

For sale: 2001 Honda CRV, 4WD, great condition. \$10,500 or best offer. Call Chris at 590-1189, or [dickc@si.edu](mailto:dickc@si.edu)

For sale: double bed: box spring and mattress, Orbitreck exercise machine never used, wooden bookshelves, cedro espino, wooden chest of drawers (six), solid wood desk. Interested please call Mónica Alvarado at 264-1435.

For sale: 100 gal electric water heater, good conditions. Best offer. Interested please call Marcos Guerra at 212-1341.

**Safety number  
212-8211**

science

in progress:

## “Forest of the roots”

(two of three)

In the Caribbean, *Rhizophora mangle*, *Avicennia germinans*, and *Laguncularia racemosa* are differentially distributed with distance from the shoreline. Pure stands of *Rhizophora* grow at the water's edge, while *Avicennia* dominates inland basin forests. The white mangrove (*Laguncularia racemosa*) is often mixed with red mangrove in the low intertidal zone, but can also dominate the canopy in some inland areas, particularly at the edge of upland *terra firma* vegetation.

Wayne Sousa and his students from the University of California at Berkeley survey a 50 x 50m permanent plot within a low intertidal, mixed-species stand of *Rhizophora* and *Laguncularia* on the edge of Laguna Margarita, within the Punta Galeta protected area. All trees 1cm DBH or more are individually marked and measured, and then periodically recensused.

Seedling recruitment, growth, and survival are monitored in replicate 1m<sup>2</sup> sub-quadrats randomly positioned across the plot. A variety of edaphic conditions (soil

salinity, pH, redox potential, hydrogen sulfide concentrations) and resources (light and nutrient availability) are also monitored in the plots. Such descriptive data provide a necessary foundation for experimental tests of mechanisms hypothesized to account for mangrove distributions and dynamics.

Por lo general en el Caribe, *Rhizophora mangle*, *Avicennia germinans* y *Laguncularia racemosa* se diferencian en su distribución de acuerdo a su posición respecto a la línea costera. Formaciones puras de *Rhizophora* crecen a lo largo de la costa, mientras que *Avicennia* domina los bosques más adentro, cerca de tierra firme. El mangle blanco (*Laguncularia racemosa*) frecuentemente se mezcla con mangle rojo en la zona baja de entremareas, pero también puede dominar el dosel en ciertas áreas más adentro, especialmente en el borde de la vegetación de tierra firme.

Wayne Sousa y sus estudiantes de la Universidad de Berkeley, estudian una parcela permanente de 50x50m dentro de la zona baja de entremareas, una formación boscosa mixta de *Rhizophora* y *Laguncularia* en el borde de la Laguna Margarita, dentro del área protegida de Punta Galeta. Todos los árboles con un diámetro de un cm DAP (1.33m) o más se marcan y miden individualmente, y se vuelven a censar periódicamente.

El reclutamiento de plántulas, crecimiento y sobrevivencia se monitorean en sub-cuadrantes localizados al azar a través de la parcela. Una variedad de condiciones edáficas (salinidad del suelo, pH, redox potencial, concentraciones de sulfato de hidrógeno) y recursos (luz y disponibilidad de nutrientes) también se monitorean en las parcelas. Esta información descriptiva suministra una base necesaria para pruebas experimentales sobre hipótesis de mecanismos responsables sobre la distribución y dinámica de manglares.

Information: Wayne Sousa