

Tupper 4pm seminar

Tuesday, August 29, 4pm
seminar speaker will be Steve Paton, STRI

The Office of Bioinformatics, no past, our present and what's in store for the future

Bambi seminar

There is no Bambi seminar scheduled for this week. If you wish to give a Bambi, please contact Adam Roddy at

roddya@si.edu

Arriving next week

David Watson and Matthew Hering, Institute for Landwater and Society, to conduct an integrative study on mistletoe-animal interactions in a lowland - tropical rainforest, on BCI.

Fernanda Oyarzun, University of Washington, to study Panama: the southern limit of a polychaete with alternative reproductive modes, at Naos.

Andia Chaves-Fonnegra, Universidad Nacional de Colombia, to study the Mechanisms of cellular death in competitive interactions between the encrusting excavating sponge *Cliona delitrix* and reef corals, at Bocas.

Jean Pol Vigneron, of University of Namur, to study the Natural History of Panamanian Cassidine beetles, on BCI.

Lainy Day, University of California in Los Angeles, to study hormonal control of an avian neuromuscular system, in Gamboa.

Departures

Adriana Bilgray, to STRI, Washington DC, to replace Mark Brady until August 30.



Smithsonian Tropical Research Institute, Panamá

www.stri.org

August 25, 2006

STRI showcased in Panamanian museums

The new facilities of Museo Antropológico Reina Torres de Arauz (MARTA), located in Llanos de Curundú, Panama City, was dedicated by first lady Vivian de Torrijos on Monday, August 21. For its inauguration, México's Soumaya Museum loaned 32 sculptures of Auguste Rodin, until November. Visits to the museum are free of charge to all until October 15.

The Salón de Oro [Gold Room] exhibit includes historical photographs (see Marcela Camargo, Ira Rubinoff, Reina Torres de Araúz, Adela Gómez and others in the photo below), gold pieces and artifacts from Panamá's Barriles site, Gran Darién, El Gran Coclé and a sample of gold and ceramic pieces and other artifacts found at Cerro Juan Díaz by STRI archaeologist Richard G. Cooke and his team (see photo above). Cooke contributed in the production of the text with archaeologist Tomás Mendizábal (photo in page two), director of MARTA, who holds a Ph.D. from the University of London.

Digitalization of the collections, an archaeology laboratory, a specialized library, a research center to study Panamá's history and pre-history and art classes are among the up-coming phases of museum development.



The roofed area of 2,500m² houses spacious showcases, an auditorium, an amphitheater, plus 3,500m² for outdoors activities, access for the handicapped, adjacent to six hectares of dry tropical forest. The museum also plans to conduct sample archaeological excavations and offer guided tours into the forest in the near future.

Local designers also invited the STRI community to visit the *Panamá Gráfico 06* at Museo de Arte Contemporáneo, a few blocks from STRI headquarters.

The exhibit showcases STRI's Biennial Report 2002-2003, designed by Orosmán de la Guardia.

Las nuevas instalaciones del Museo Antropológico

Reina Torres de Araúz (MARTA), localizado en Llanos de Curundú, ciudad de Panamá, fue inaugurado por la primera dama, Vivian Fernández de Torrijos, el lunes, 21 de agosto. Para su inauguración, el Museo Soumaya de México prestó 32 esculturas de Auguste Rodin hasta noviembre. Las visitas al MARTA son gratuitas para todos hasta el 15 de octubre.

El Salón de Oro incluye fotos históricas (vea a Marcela Camargo, Ira Rubinoff, Reina



Congratulations!



To parents Anabelle Arroyo & Luis Lezcano, grandparents Mercedes and Baby Arroyo and the rest of the family, for the birth of David Ignacio Lezcano on Monday, August 21. He weighed 8.5lb and measured 50cm!

To Helene Muller-Landau and S. Joseph Wright, for the birth of their son Isaac Joseph Wright-Muller, on Tuesday, August 22, in Panama City. He weighed 8 pounds 6oz, and measured 55 cm!

To Aaron O'Dea, from STRI's Center for Paleoecology and Archaeology, who won a National Geographic Research and Exploration Grant to collect fossils from the North coast of Panama (using the *R.V. Urraca*) and from the Gatun area under the project "Extending the fossil record of Panama."

STRI in the news

"Crafting the pieces of the diversity jigsaw puzzle" by R. L. Kitching. 2006. *Science* 313 (August 25): 1055-1057.

"Ecology then and now" edited by Stella Hurtley and Phil Szuromi. 2006. *Science* 313 (5790): 1016.

Torres de Araúz, Adela Gómez y otros en la foto inferior de la primera página) piezas de oro y artefactos del sitio Barriles de Panamá, el Gran Darién, el Gran Coclé y una muestra de piezas de oro, cerámica y otros artefactos encontrados en Cerro Juan Díaz por el arqueólogo de STRI, Richard G. Cooke y su equipo (ver foto superior en la primera página). Cooke contribuyó con la elaboración del texto junto con el director del MARTA, el arqueólogo Tomás Mendizábal (foto a la derecha), quien obtuvo su doctorado en la Universidad de Londres.

Futuras fases del museo incluirán digitalización de imágenes de las colecciones, un laboratorio de arqueología, una biblioteca especializada, un centro de investigaciones sobre historia y pre-historia de Panamá y clases de arte.

Canopy Biology Program launches new web page

STRI's construction cranes lift researchers above the forest in a small gondola and then lower them at desired study sites within the canopy. The cranes allow safe, easy and three-dimensional access to the forest. The crane operator, who receives instructions by radio from researchers on where to position the gondola, controls the crane movements. The gondola can easily accommodate up to four researchers, including heavy equipment, for hours at a time. This week the Canopy Biology Program team, lead by Yves Bassett launched their new site (22 pages) at: <http://www.stri.org/english/research/facilities/terrestrial/cranes/index.php>

These pages present new material and considerable updated information on the cranes and the program, useful



El área techada de 2,500m² cuenta con áreas espaciosas para exhibiciones, un auditorio, anfiteatro, más 3,500m² para actividades al aire libre, facilidades para discapacitados, contiguas seis hectáreas de bosque tropical seco. El museo también planea llevar a cabo muestras de excavaciones arqueológicas y visitas guiadas en el bosque en un futuro cercano.

Diseñadores gráficos locales también invitaron a la comunidad de STRI a visitar la exhibición Panamá Gráfico 2006 en el Museo de Arte Contemporáneo, a unas cuadras de la sede de STRI.

Entre las muestras exhibidas se encuentra el Informe Bienal de STRI 2002-2003, diseñado por Orosmán de la Guardia.

information for the users, Image gallery, fees and a web camera site.

Las grúas de construcción de STRI elevan a los investigadores sobre el bosque en una pequeña góndola y luego los bajan a sus puntos de estudio dentro del bosque.

De esta forma, las grúas permiten acceso seguro, fácil y tri-dimensional al bosque. El operador de la grúa, que recibe instrucciones por radio de los investigadores sobre dónde quieren posicionarse, y controla los movimientos de la grúa. La góndola puede acomodar fácilmente hasta cuatro investigadores, incluyendo su equipo, durante horas. Esta semana, el equipo del Programa de Biología del Dosel, liderado por Yves Bassett, puso en línea su nuevo sitio de internet (22



páginas) en: <http://www.stri.org/english/research/facilities/terrestrial/cranes/index.php>

Estas páginas presentan material reciente e información actualizada sobre las grúas y el programa, información útil para los usuarios, galería de imágenes, costos y un nuevo sitio con cámara de web.

New publications

Corbara, B., Basset, Y. & Barrios, H. 2006. IBISCA: a large-scale study of arthropod mega-diversity in a Neotropical rainforest. In: *Tropical biodiversity: science, data, conservation. Proceedings of the 3rd GBIF Science Symposium, Brussels, 18-19 April 2005* (Eds Segers, H., Desmet, P. and Baus, E.): 61-64. Brussels: Belgian Biodiversity Platform.

Curletti, G., Aberlenc, H..P. and Basset, Yves. 2006. "Progetto IBISCA in Panama: considerazioni sul genere *Agrilus* Curtis, 1825." *Rivista Piemontese di Storia Naturale* 27: 339-348.

Desjardin, Dennis E., & Ovrebo, Clark L. 2006. "New species and new records of *Marasmius* from Panamá." *Fungal Diversity* 21(1): 19-39.

Novotny, Vojtech, Drozd, Pavel, Miller, Scott E., Kulfan, Miroslav, Janda, Milan, Basset, Yves, Weiblen, George D. 2006. "Why are there so many species of herbivorous insects in tropical rainforests?" *Science* 313: 1115-1118

Miscellaneous

For rent furnished apartment in Santa Cruz, Gamboa, telephone, electricity, hot water and internet, \$375. It includes cleaning every two weeks. Interested please call Mario Santamaría at 65-98-87-53 or e-mail to: santamam@si.edu

**Safety number
212-8211**

Mpala Research Center seeks Director

The Mpala Wildlife Foundation invites applications for the position of Director for the Mpala Research Center in Laikipia, Kenya. The Director will be responsible for continuing to make the center into a leading research organization in Africa. To do this the Director will foster a community of scholars, facilitate the research of visiting scientists and conservation professionals while carrying out his or her own research program, be faithful to the Center's mission of developing a program for the integrated study of arid lands, its wildlife and people and provide insights into their conservation and sustainable management.

The Director must have conservation experience and will coordinate the center's activities with local landowners and conservation organizations

in and around Laikipia and with many Kenyan government and international environmental agencies. The Director should have a Ph.D., interact easily with people and have management experience since he/she will oversee the activities of the following permanent staff: a resident scientist who organizes monitoring activities and coordinates all research on center lands and those of Mpala ranch; an IT/GIS coordinator; a center manager who is responsible for all living arrangements and the support staff; and institutionally supported 'Fellows'. It is expected that the Director will split his/her time between research, development and administration. Experience in Africa is highly desired.

Applicants should submit a Curriculum Vitae and a statement that outlines their

vision and illustrates their plans for building a community of scholars by supporting the studies of colleagues and supervising institutional research while carrying out their own investigations, in addition to raising funds, leading the center's management team and in general, continuing to move the Mpala Research Center forward. Applicants should apply online at: <https://jobs.princeton.edu> to requisition number 0601152.

Applicants should also arrange to have three confidential letters of recommendation sent electronically to Amy Bordvik at amyb@princeton.edu. Screening of applications will begin 15 October 2006, but the position will remain open until filled. Salary and other forms of compensation will depend on experience.

STRI exhibit wins prize at the International Convention of Central American Garden Clubs Fair

The International Convention of Central American Garden Clubs awarded STRI in recognition of our participation in the First International Expoflora of Panama at ATLAPA, on Sunday, August 13. STRI's stand showcased an exhibit on research and activities in Panama and the world, and books and merchandise from the Corotú Bookstore.

"Puente Biológico de las Américas" public program promoted by the fair included a keynote presentation by Stanley Heckadon-Moreno. Congratulations to everybody who made this possible.

La Convención Internacional de Clubes de Jardinería Centroamericana otorgó a STRI un reconocimiento por



nuestra participación en la Primera Expoflora Internacional de Panamá en ATLAPA, el domingo 13 de agosto. La exhibición de STRI presentó información sobre nuestras investigaciones y actividades en Panamá y el mundo, así como libros y

mercancía de la Librería El Corotú. El programa público "Puente Biológico de las Américas" promovido por esta feria incluyó una presentación por Stanley Heckadon-Moreno. Felicidades a todos aquellos que hicieron esto posible.

Trematode parasites in tropical mangrove habitats

Parasites are an invisible but pervasive part of many communities. Often undetected by the casual observer, parasites can play a critical role in the ecology of free-living organisms- driving population dynamics and structuring communities.

Mangroves and rocky shores in the Bay of Panama often support high densities of cerith snails (*Cerithium stercusmuscarum*) which serve as first intermediate hosts to several species of parasitic trematodes. These utilize several different hosts throughout their life cycle. The larval stages of the parasites asexually reproduce in snails, castrating their molluscan hosts. Free-swimming larvae are released from castrated snails and infect either molluscs, crustaceans or fishes where they encyst and await being eaten by a final vertebrate host.

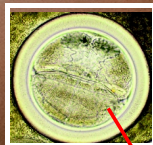
Here, Aileen Terrero and Emily Thompson, interns working in with STRI marine biologist Mark Torchin, collect shore crabs (*Pachygrapsus transverses*) at Punta Culebra to examine the potentially fatal role these parasites play in the behavior of the crabs.

Crabs that are heavily infected by cysts of one trematode species, appear to die more frequently than uninfected crabs, perhaps due to increased predation by their final bird hosts. In

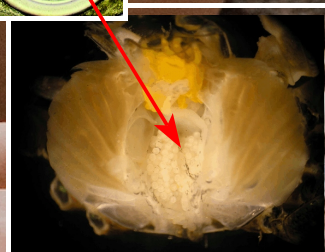
addition to examining how these parasites might modify the crab's behavior making them more susceptible to predation, their research examines what factors make snails prone to infection, how parasites chose their hosts and, the extent to which parasitic castration reduces the abundance of snail hosts in nature.



Shore crab, *Pachygrapsus transverses*
Cangrejo de orilla



Dissected shore crab infected with hundreds of trematode cysts. Inset: enlarged cyst



Cangrejo de orilla disecado con cientos de quistes de tremátodos. Recuadro: quiste ampliado.

Story: Mark Torchin
Edited by M Alvarado
and ML Calderon
Photos: MA Guerra and
M Torchin

tremátodos parasíticos. Los tremátodos utilizan hospederos diferentes a través de su ciclo de vida. Los estadios larvales de estos parásitos se reproducen asexualmente en caracoles, y castran a sus hospederos moluscos. Las larvas que nadan libres salen de los caracoles castrados e infectan a otros moluscos, crustáceos o peces, se enquistan y esperan a que se los coma un hospedero vertebrado.

Aquí, Aileen Terrero y Emily Thompson, pasantes que trabajan con el biólogo marino de STRI, Mark Torchin, colectan cangrejos de la orilla (*Pachygrapsus transverses*) en Punta Culebra, para examinar el papel potencialmente fatal que estos parásitos juegan en la conducta de los cangrejos.

Los cangrejos que se infectan intensamente con quistes de una especie de tremátodo, parecen morir con más frecuencia que los no infectados, quizás debido a un aumento en la depredación por parte de sus hospederos finales, las aves. Además de examinar cómo estos parásitos pueden modificar la conducta de los cangrejos haciéndolos más susceptibles a la depredación, los estudios del equipo de Torchin examinan qué factores hacen a los caracoles más propensos a la infección, cómo los parásitos escogen sus hospederos y, hasta dónde la castración parasítica reduce la abundancia de caracoles hospederos en la naturaleza.

Los parásitos son una parte invisible pero dañina de muchas comunidades. En muchos casos pasan inadvertidos para el observador casual, y pueden jugar un papel crítico en la ecología de organismos libres, al conducir la dinámica de poblaciones y estructurar comunidades.

Con frecuencia Las orillas rocosas y los manglares de la Bahía de Panamá mantienen con frecuencia altas densidades de caracoles *Cerithium stercusmuscarum* que hacen de primer hospedero intermediario de varias especies de