Tupper 4pm seminar

Tue, May 24, 4pm speaker will be Russell Lande, University of California, Berkeley
Non-neutral dynamics of a tropical butterfly community

Bambi seminar

Wed, May 25 Bambi speaker will be John Douglas, University of Arizona
Visual motion processing in flies and fiddler crabs -From motion detection to intraspecific signals

Thu, May 26, speaker will be Russell Lande,University of California in San Diego
Rapid sympatric speciation by sex reversal and sexual selection in cichlid fish

Arrivals

Tristan Carland, US, to study Bocas del Toro biodiversity, at Naos.

John Douglas, University of Arizona, to plan a neurobiological research collaboration on fiddler crab visual signaling, at Naos, Galeta and Culebra.

Seirian Sumner , Zoological Society of London, to study the evolution of caste in primitive and advanced wasps, on BCI and Gamboa.

Sagiri Horisawa , University of Texas at Austin, to study the optimal migration in butterflies, on BCI.

Timothy Siok, Boston University, to work with Karen Warkentin, in Gamboa.

Tania Brenes, University of Utah, to study herbivores, ants, secondary chemistry and toxicity in the genus *Inga*: comparison of two Neotropical communities.

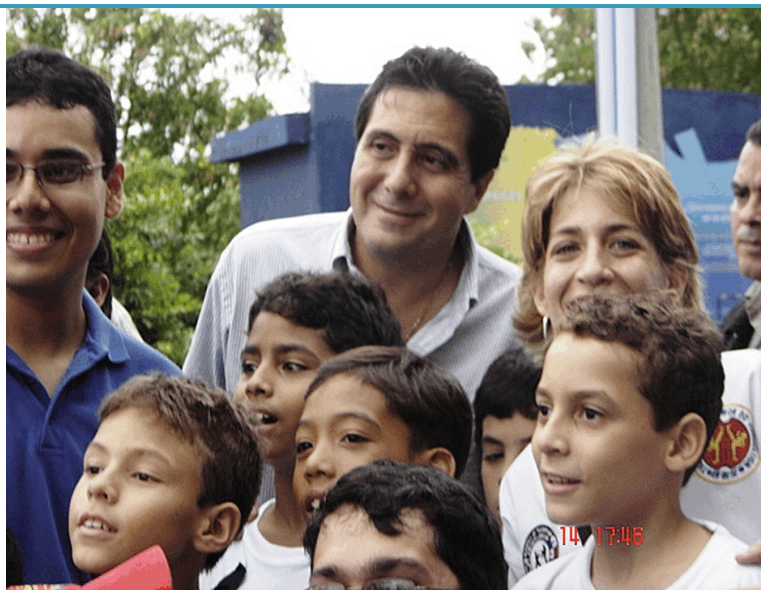
Smithsonian Tropical Research Institute, Panamá www.stri.org May 20, 2005

Surprise visit at Culebra

Panamanian president Martín Torrijos took his two boys Martín and Nicolás with a friend, to visit STRI´s Marine Exhibition Center at Culebra, on Saturday, May 14.

STRI´s Argelis Ruiz, CTPA and Gamboa's manager and former coordinator of Culebra happened to be at the Center, and welcomed the President and his family. All those present at Culebra were surprised and honored that the President chose the Center as a space for an informal and educational afternoon with his children.

OCAPP director Stanley Hecakdon Moreno thanks all of those that attended the party, specially Argelis Ruiz, guides Marco Pittí, Ivonne Peraza amd Rafael Gómez, cashier Ana Tejada and guard Jacinto Ramos. The *STRI news* thanks Adriana Bilgray, for the photo above.



El presidente panameño Martín Torrijos llevó a sus hijos Martín y Nicolás junto con un amiguito al Centro de Exhibiciones Marinas de STRI en Culebra, el sábado 14 de mayo.

Argelis Ruíz de STRI, administradora del CTPA y Gamboa, y ex-coordinadora de Culebra se encontraba en el Centro y le dió la bienvenida al Presidente y a su familia.

Todos los presentes en el Centro estaban sorprendidos y honrado de que el Presidente escogiera al Centro como un espacio para disfrutar de una tarde informal educativa con sus hijos.

El director de OCAPP Stanley Heckadon agradece a todos los que atendieron al grupo, especialmente a Argelis Ruíz, a los guías Marco Pittí, Ivonne Peraza, Rafael Gómez, la cajera Ana Tejada, y el guardia de seguridad Jacinto Ramos. El *STRI news* agradece a Adriana Bilgray por la foto de arriba.

STRI in the news

"Indigenous Huaorani Seek Oil Moratorium on Their Amazon Lands" 2005. *Environment News Service*, May 17.
http://www.ens-newswire.com/ens/may2005/2005-05-17-01.asp

"Vampires prey on Panama", by Chris Kraul. 2005. *Los Angeles Times*, May 18.
http://www.latimes.com/news/nationworld/world/la-fg-bats18may18,0,2791908.story?

Tadpole bail out. 2005. *CBC Radio One*. May 14. Listen or download from:
http://www.cbc. ca/quirks/archives/04-05/may14.html#3

Leaving this week

D. Ross Robert to the Bahamas to do collecting and photograph fishes, at the Lee Stocking Island Laboratory.

Mark Torchin to Edgewater, MD, to visit SERC, and then to Washington, DC to use the collections at the NMNH.

New publications

Cooke, Richard G. 2005. "Prehistory of native Americans on the Central American land bridge: Colonization, dispersal, and divergence." *Journal of Archaeological Research* 13(2): 129-187.

Dijkstra, Michiel B., Nash, David R., and Boomsma, Jacobus J. 2005. "Self-restraint and sterility in workers of *Acromyrmex* and *Atta* leafcutter ants." *Insectes Sociaux* 52(1): 67-76.

Fernández, Hermógenes, Zimmerman, Jess K., Wcislo, William T., and Rehner, Stephen A. 2005. "Colony foundation, nest architecture and demography of a basal fungus-growing ant, *Mycocepurus smithii* (Hymenoptera, Formicidae)." *Journal of Natural History* 39(20): 1735-1743.

LaFrankie, James V. 2005. "Lowland tropical rain forests of Asia and America: Parallels, convergence, and divergence." In David Ward Roubik, Shaoko Sakai, and Abang A. Hamid Karim (Eds.), *Pollination ecology and the rain forest*: 178-190. Petra Yala, Malaysia: Springer.

School of International Training course at STRI

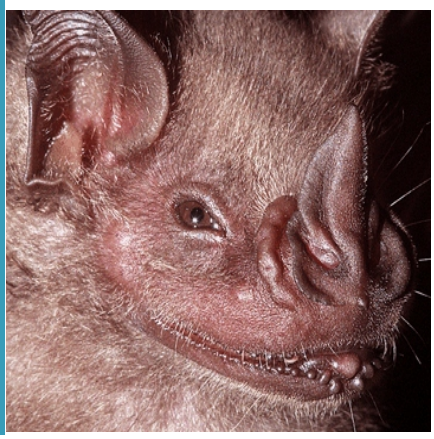
US School of International Training (SIT) with offices at Panama's City of Knowledge offers an undergraduate multi disciplinary program in Panama on conservation and development twice a year. The students are from different universities and different curricula. They spend four months and a half in Panama.

As part of the program, STRI research associate Juan Maté offers a five-day course on Marine Tropical Ecology on Bocas del Toro that includes conferences, laboratory work and visits to the field on coral reef ecology, marine pastures, mangroves, and management of marine resources in Panama´s coastal areas. As a requirement of the course, the participants must carry out a project. The presentations will take place on Thu, May 26 at Tupper Center starting at 8:30am.

La Escuela de EU de Entrenamiento Internacional (SIT) con oficinas en la Ciudad del Saber de Panamá, ofrece un programa de estudios multi-disciplinarios en Panamá sobre conservación y desarrollo dos veces al año. Los estudiantes son de diferentes universidades y diferentes carreras. Los participantes pasan cuatro meses y medio en Panamá.

Como parte del programa, Juan Maté, investigador asociado a STRI, les ofrece un curso de cinco días sobre Ecología Tropical Marina en Bocas del Toro, que incluye clases, laboratorios y visitas al campo enfocado en la ecología de arrecifes coralinos, manglares y la administración de recursos de áreas costeras en Panamá.

Como requisito del curso, los participantes deben realizar un proyecto. Las presentaciones de los proyectos se llevarán a cabo el jueves 26 de mayo en el Centro Tupper, a partir de las 8:30am.



Defending the bats' reputation

A group of STRI researchers on Barro Colorado Island defended the reputation of vampires and bats in general, in an article published by *Los Angeles Times*, on Wednesday, May 18 "Vampires prey on Panama", by Chris Kraul.

More publications

Laurance, William F., Oliveira, Alexandre A., Laurance, Susan G., Condit, Richard G., Dick, Christopher W., Andrade, Ana C.S., Nascimento, Henrique E.M., Lovejoy, Thomas E., and Ribeiro, Jose E.L.S. 2005. "Altered tree communities in undisturbed Amazonian forests: A consequence of global change?" *Biotropica* 37(2): 160-162.

Moeser, Andrew A., and Bermingham, Eldredge. 2005. "Isolation and characterization of eight microsatellite loci for the Neotropical freshwater catfish *Pimelodella chagresi* (Teleostei: Pimelodidae)." *Molecular Ecology Notes* 5(2): 363-365.

Perdices, Anabel, Doadrio, I., and Bermingham, Eldredge. 2005. "Evolutionary history of the synbranchid eels (Teleostei: Synbranchidae) in Central America and the Caribbean islands inferred from their molecular phylogeny." *Molecular Phylogenetics and Evolution* Online

Roubik, David Ward. 2005. "Honeybee in Borneo." In David Ward Roubik, Shaoko Sakai, and Abang A. Hamid Karim (Eds.), *Pollination ecology and the rain forest*: 89-103. Petra Yala, Malaysia: Springer.

Sakai, Shoko, Momose, Kuniyasu, Yumoto, Takakazu, Nagamitsu, Teruyoshi, Nagamasu, Hidetoshi, Hamid Karim, Abang A., Nakashizuka, Tohru, and Inoue, Tamiji. 2005. "Plant reproductive phenology and feneral flowering in a mixed dipterocarp forest." In David Ward Roubik, Shaoko Sakai, and Abang A. Hamid Karim (Eds.), *Pollination ecology and the rain forest*: 35-50. Petra Yala, Malaysia: Springer.

"Blood-sucking bats take a bite out of cattlemen's profits, but scientists say the creatures are too valuable to wipe out" highlights the article. While ranchers in Tonosí, Panamá complained about the "little devils" Stefan Klose, postdoctoral fellow from the University of Ulm not only stuck up for the most common vampire bat, but described the animals as boons to humanity. The development of sonar, anticoagulant drugs that prevent heart attacks are just the beginning.

Sabine Spehn, who did research on BCI recently also highlights the nice things about bats like insect control and seed and pollen dispersion.

Rachell Page, also with Elisabeth Kalko´s group of bat researchers talks about them with great admiration: only a few animal species demonstrate altruistic behavior being capable to regurgitate blood to share with other bats unsuccessful to get their daily blood dose.

Klose find bats as intelligent as dogs: "man´s fear to vampires only reflects our primal fear of being someone else´s food object..." His advise? "Get over it!"

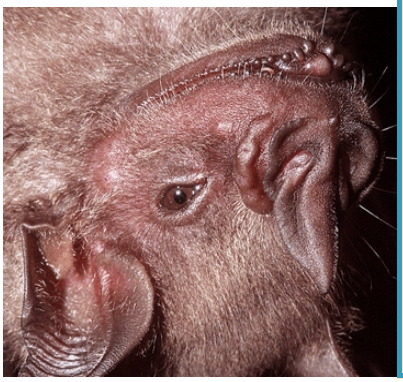
Un grupo de investigadores en la Isla de Barro Colorado defendieron la reputación de los vampiros y murciélagos en general en un artículo publicado por *Los Angeles Times* el miércoles 18 de mayo, "Vampires prey on Panama" [Vampiros depredan en Panamá], por Chris Kraul.

"Los murciélagos que succionan sangre se toman un bocado de las ganancias de los ganaderos, pero los científicos dicen que las criaturas son demasiado valiosas para hacerlas desaparecer" destaca el artículo. Mientras los ganaderos en Tonosí, Panamá se quejan de los "pequeños diablos", Stefan Klose, becario posdoctoral de la Universidad de Ulm no solamente defendió al vampiro más común, sino que los describió como una bendición para la humanidad. El desarrollo del sonar y drogas anticoagulantes que previenen ataques cardíacos son solamente el principio.

Sabine Spehn, quien hizo estudios recientes en BCI también subrayó lo positivo sobre los murciélagos como el control de insectos y la dispersión de semillas y polen.

Rachell Page, también con el grupo de investigadores que trabajan con Elisabeth Kalko, habla de ellos con gran admiración: pocos animales de-muestran un comporta-miento tan altruista, siendo capaces de regurgitar sangre para compartirla con otros vampiros que no han podido encontrar su dosis necesaria de sangre.

Klose encuentra que los murciélagos son tan inteligentes como los perros: "el temor de los humanos hacia los vampiros sólo refleja un temor primario al ser alimento de alguien más...¿su consejo? "¡Supérenlo!"



More publications

Santos-Granero, Fernando. 2005. "Arawakan sacred landscapes. Emplaced myths, place rituals, and the production of locality in western Amazonia." In Ernst Halbmayer, and Elke Mader (Eds.), *Kultur, Raum, Landschaft: Zur Bedeutung des Raumes in Zeiten der Globalität*: 93-122. Franfkurt am Main: Brandes and Apsel.

Turner, Benjamin L., Cade-Menunb, Barcara J., Condronc, Leo M., and Newmand, Susan. 2005. "Extraction of soil organic phosphorus." *Talanta* 66(2): 294-306.

Villelsen, Palle, Mueller, Ulrich G., Schultz, Ted R., Adams, Rachelle M.M., and Bouck, Amy C. 2004. "Evolution of ant-cultivar specialization and cultivar switching in Apterostigma fungus-growing ants." *Evolution* 58(10): 2252–2265.

Wake, David B., Hanken, James, and Ibanez D., Roberto. 2005. "A new species of big black *Bolitoglossa* (Amphibia: Caudata) from Central Panama." *Copeia* 2005(2): 223-226.

Worsfold, Paul J., Gimbert, Laura J., Mankasingh, Utra, Ndukaku Omaka, Omaka, Hanrahan, Grady, Gardolinski, Paulo C.F.C., Haygarth, P.M., Turner, Benjamin L., Keith-Roach, M.J., and McKelvie, Ian D. 2005. "Sampling, sample treatment and quality assurance issues for the determination of phosphorus species in natural waters and soils." *Talanta* 66(2): 273-293.

Miscellaneous

science in progress:

Asking the big questions with small animals

I: Parting a great ocean

Information: Aaron O´Dea
Edition: M Alvarado & ML Calderón
Photo: MA Guerra, Bocas del Toro

What happened when the Isthmus of Panama divided an open ocean into two very different marine ecosystems? Today, the Pacific coast has upwelling, lowering temperatures and increasing nutrients each year. Good for algae but no good for corals. The Caribbean is low in nutrients and algae, but coral reefs thrive.

By studying microscopic cupuladriid bryozoans, postdoctoral fellow Aaron O'Dea, working with Jeremy Jackson and Tony Coates at STRI's Center for Tropical Paleoecology and Archeology, has developed a technique to investigate the environmental effects of the formation of the Isthmus of Panama.

Cupuladriids record seasonal upwelling in their calcified skeletons similar to the growth rings of a tree. O´Dea reads these records in fossil cupuladriids from Panama and Costa Rica to reconstruct changes over the last ten million years.

Caribbean conditions that we know today emerged around four million years ago as the isthmus finally closed. The change did not coincide with widespread extinctions that occurred some two million years later, as previously thought. The lack of a direct link between environmental and evolutionary change has generated yet another big question that these little animals may help to solve.

Read about it next week.

Para grandes preguntas, pequeños organismos

I: División de un gran océano

¿Qué ocurrió cuando el surgimiento del Istmo de Panamá dividió un océano en dos ecosistemas marinos tan diferentes? Las costas del Pacífico tiene un afloramiento que baja las temperaturas y aumenta los nutrientes cada año. Este proceso es positivo paras la supervivencia de las algas pero pone en riesgo a los corales. Por otro lado, el Mar Caribe es bajo en nutrientes y algas, pero los arrecifes coralinos prosperan.

Al estudiar fósiles de pequeños organismos marinos— briozoarios cupuládridos—el becario graduado del Instituto Smithsonian de Investigaciones Tropicales Aaron O´Dea del Centro de Paleoecología y Arqueología, ha desarrollado una técnica para investigar los efectos ambientales de la formación del Istmo de Panamá.

O´Dea lee los registros estacionales grabados en fósiles de cupuládridos en Panamá y Costa Rica para reconstruir cómo ambos océanos han cambiado en los últimos 10 millones de años. Los cupuládridos registran el afloramiento estacional en sus esqueletos calcificados igual que los anillos de un árbol.

Las condiciones ambientales actuales del Caribe emergieron hace cuatro millones de años, cuando se completó el surgimiento del Istmo. Sin embargo, este cambio no coincide con grandes extinciones que sucedieron dos millones de años después. La falta de un enlace directo entre los cambios ambientales y evolutivos han generado otra gran pregunta que estos diminutos animales pueden ayudar a resolver.

Léalo la próxima semana.