

Tupper seminar

Tue, Mar 9, 4pm Tupper seminar speaker will be Alison Jolly, University of Sussex
Can the lemurs save Madagascar

CTFS science talk

Tue, Mar 9, CTFS science talk speaker will be Noelle Beckman, University of Minnesota, Large Meeting Room, Tupper, 10am
Linking interspecific variation in vertebrate seed predation, insect seed predation, and pathogen attack to fruit traits in tropical woody plants

BDG meeting

Tue, Mar, 9, Behavior Discussion Group will meet at 2pm in the Large Meeting Room, with Hermógenes Fernández-Marín, STRI
Title to be announced

Paleo-talk

Wed, Mar 10, Paleo-talk speakers will be Gary Morgan, New Mexico Museum of Natural History and Aldo Rincón, University of Florida. CTPA, 4pm
The new Early-middle Miocene vertebrate fauna from the Panama Canal Expansion Project

Two Bambi seminars

Wed, Mar 10, Bambi seminar speaker will be Peter Chesson, University of Arizona
Quantifying and testing species coexistence mechanisms

Thu, Mar 11, Bambi seminar speaker will be Alison Jolly, University of Sussex
Why ringtailed lemur females are not sweet



Smithsonian Tropical Research Institute, Panamá

www.stri.org

March 5, 2010



'Taking Stock' HSBC Climate Partnership meets at STRI

An international team of scientists met at STRI from March 1-4, to discuss the outputs of the HSBC Climate Partnership (HCP) that studies the impact of climate change on the world's forests. In 2007, STRI, Earthwatch, the Climate Group and WWF agreed to create greener cities to be promoted as models, conduct a large-scale field experiment on the long-term effects of climate change, protect some of the world's major rivers, and create 'Climate champions' worldwide to undertake research and bring back valuable knowledge.

'Taking Stock', co-hosted by STRI and the Earthwatch Institute, marked the

mid-point of this five-year partnership.

Researchers from Earthwatch, STRI, HSBC, Oxford University, SERC, WWF and others described their findings that will directly contribute to the global understanding of forest ecosystems and the management of watersheds to quantify the environmental services—such as water provision, carbon storage, and biodiversity maintenance—that tropical forests provide. The research is built on protocols that have been in place for more than 30 years and the latest analytical and technological advances.

Un equipo internacional de científicos se reunieron en STRI

del 1 al 4 de marzo para discutir los resultados del HSBC Climate Partnership en el estudio del impacto del cambio climático en los bosques del mundo. En 2007, STRI, Earthwatch, the Climate Group and WWF acordaron crear ciudades más verdes para promoverlas como modelos, llevar a cabo un experimento de campo a gran escala sobre los efectos a largo plazo del cambio climático, proteger los ríos más importantes del mundo y crear campeones climáticos alrededor del mundo para participar en la investigación y traer conocimientos valiosos a sus ambientes de trabajo.

'Taking Stock', co-patrocinado por STRI y Earthwatch Institute

Arrivals

Katrina Macht and Lori Clerkin, Montclair State University, to join the Barro Colorado Mammal Census, on BCI.

Charles Kontos, Rutgers University, to join the Barro Colorado Mammal Census, on BCI.

Ricardo Moreno and Aida Bustamante, Yaguará, Investigación y Conservación de Vida Silvestre, Costa Rica, to join the Barro Colorado Mammal Census, on BCI.

Ross Cuning, University of Miami, to participate in a research cruise to study the effects of El Niño on coral reefs.

Eva Kreiss, Emily Baird, Marie Dacke, Samantha Smith and Joshua van Kleef, University of Lund, Sweden, to study "Seeing in the dark: the neural basis for enhanced visual performance in nocturnal insects" on BCI

Robert Fisher, Yijun Xiao, University of Edinburgh, to participate in the ChiRoPing (Chiroptera, Robots, Sonar) project, on BCI.

Herbert Peremans, Universiteit Antwerpen, to participate in the ChiRoPing (Chiroptera, Robots, Sonar) project, on BCI.

Francesco Guarato, Martin Dalgaard Villumsen, Torur Andreassen, and Eloise Rowland, University of Southern Denmark, to participate in the ChiRoPing (Chiroptera, Robots, Sonar) project, on BCI.

Bruce Kendall, SI OFEO director, to visit STRI facilities for the first time. He will visit Bocas with Eldredge Bermingham, Ron Herzig, Fernando Pascal and Rachel Collin.

marcó el punto medio de esta sociedad de cinco años.

Investigadores de Erthwatch, STRI, HSBC, Oxford University, SERC, WWF y

Panama and Bocas: Training workshop for teachers

Dynamic link between nature, science and learning 2010

STRI hosted two 40-hour training workshops from January 26 to February 12 with the participation of 55 teachers from the provinces of Panama and Bocas del Toro. The workshop in Panama was held at Punta Culebra Nature Center, Naos Island Laboratories and Barro Colorado Nature Monument. The workshop for Bocas del Toro was held at STRI's Research Station on Colon Island.

The workshops centered on the emergence of the Isthmus of Panama, tropical ecosystems, climate change and biodiversity. Lidia de Valencia used the natural surroundings as a learning tool to promote curiosity-driven capabilities. The teachers participated in various field trips and an

otros, describieron lo que han encontrado que ha de contribuir directamente al conocimiento global de ecosistemas forestales y la administración de cuencas para cuantificar los servicios

ambientales, como la provisión de agua, el depósito de carbono, el mantenimiento de la biodiversidad, que suministran los bosques tropicales.



aquatic tour of different tropical ecosystems typical of their regions.

STRI researchers Anthony Coates, Mark Torchin, Richard Cooke and Juan Maté and visiting scientists Joana Pelletier, Ana Spalding and Ray Gabriel served as instructors in the workshops.

Information and photos by Lidia de Valencia

Enlace dinámico entre naturaleza, ciencia y aprendizaje 2010

STRI organizó talleres de 40 horas entre el 26 de enero y el 12 de febrero donde

participaron 55 docentes de las provincias de Panamá y Bocas del Toro. El taller en Panamá se llevó a cabo en el Centro Natural Punta Culebra, los Laboratorios de Isla Naos y el Monumento Natural de Barro Colorado. El taller para Bocas del Toro tuvo su sede en la Estación de Investigaciones de STRI en Isla Colón.

Los talleres se centraron en el surgimiento del Istmo de Panamá, ecosistemas tropicales, cambio climático y biodiversidad. Lidia de Valencia utilizó la naturaleza como herramienta de aprendizaje para acercar a los participantes a su entorno natural y desarrollar su capacidad de indagatoria. Los docentes participaron de giras de campo y una gira acuática en diferentes ecosistemas tropicales típicos de cada región.

Los investigadores de STRI Anthony Coates, Mark Torchin, Richard Cooke y Juan Maté, así como los expositores visitantes Joana Pelletier, Ana Spalding y Ray Gabriel, fueron los instructores de los talleres.



STRI in the news

"Evalúan flora del mundo" by EFE. 2010. *La Estrella de Panamá*: page 9C, March 4.

"Expertos evalúan en Panamá efectos del cambio climático" 2010. *HoraCero.com*: March 4.

"Medio siglo de ciencia marina en Colón" por Stanley Heckadon-Moreno. 2010. February 28.

"Amenaza en el Caribe: Pez león gana terreno" by Marlene Testa. 2010. *La Estrella de Panamá*, page 9C. March 3.

"Estudio de bosques revela efectos del cambio climático." 2010. *HoraCero.com*: March 3.

New publications

Balunas, Marcy, Linington, Roger G., Tidgewell, Kevin, Fenner, Amanda M., Urena, Luis-David, Togna, Gina Della, Kyle, Dennis E., and Gerwick, William H. 2010. "Dragonamide E, a modified linear lipopeptide from *Lynghya majuscula* with antileishmanial activity." *Journal of Natural Products* 73(1): 60-66.

Baugh, Alexander T., and Ryan, Michael J. 2010. "Mate choice in response to dynamic presentation of male advertisement signals in Túngara frogs." *Animal Behaviour* 79(1): 145-152.

Boyle, Sarah Ann, and Smith, Andrew T. 2010. "Behavioral modifications in northern bearded saki monkeys (*Chiropotes satanas chiropotes*) in forest fragments of central Amazonia." *Primates* 51(1): 43-51.

David Kenfack: New CTFS coordinator of African Program

We are pleased to announce that David Kenfack has recently joined the Center for Tropical Forest Science-Smithsonian Institution Global Earth Observatory (CTFS-SIGEO) to coordinate research and training activities for the African program.

Kenfack is no stranger to CTFS. In 1996, he led the establishment of the Korup 50-hectare plot in Cameroon. He then went on to PhD studies at the University of Missouri, St. Louis, where he worked on the systematics and ecology of *Carapa* (Meliaceae), describing a series of species new to science. Following the completion of his PhD. in 2008, he spent a year as a postdoctoral fellow at the University of Michigan, Ann Arbor.

In addition to taxonomic expertise on the flora of Central and West Africa, Kenfack has extensive experience in tropical forest ecology and data management. During his career, he has assembled botanical collections and carried out forest inventories in more than ten tropical countries.

Kenfack will be based at the CTFS-SIGEO office at the Arnold Arboretum of Harvard University.

By Stuart Davis

Es un placer anunciar que David Kenfack se unió recientemente al Centro de Ciencias Forestales del Trópico/Observatorios



Globales de la Tierra del Smithsonian (CTFS/SIGEO) para coordinar las investigaciones y actividades educativas para el programa de África.

Kenfack ha estado afiliado al CTFS en el pasado. En 1996, lideró el establecimiento de la parcela de 50 hectáreas de Korup en Cameroon. Luego viajó a los EU para obtener su doctorado en la en la Universidad de Missouri, St. Louis, donde trabajó en la sistemática y ecología de *Carapa* (Meliaceae), y describió una serie de especies nuevas para la ciencia. Al terminar su doctorado en 2008, pasó un año como becario postdoctoral en la Universidad de Michigan, en Ann Arbor.

Aparte de su experticia en la flora de África central y occidental, Kenfack tiene una experiencia extensa en bosques y ecología tropical así como en la administración de datos. Durante su carrera ha producido colecciones botánicas y llevado a cabo inventarios de bosques en más de diez países tropicales. Kenfack trabajará desde las oficinas de CTFS/SIGEO en el Arnold Arboretum de la Universidad de Harvard.

More publications

Caldwell, Michael S., McDaniel, J. Gregory, and Warkentin, Karen Michelle. 2010. "Is it safe? Red-eyed treefrog embryos assessing predation risk use two features of rain vibrations to avoid false alarms." *Animal Behaviour* 79(2): 255-260.

Cardona, Agustin, Chew, David M., Valencia, V.A., Bayona, German, Miskovic, Aleksandar, and Ibanez-Mejia, M. 2010. "Grenvillian remnants in the Northern Andes: Rodinian and Phanerozoic paleogeographic perspectives." *Journal of South American Earth Sciences* 29(1): 92-104.

De Leon, Luis Fernando, Bermingham, Eldredge, Podos, Jeffrey, and Hendry, Andrew P. 2010. "Divergence with gene flow as facilitated by ecological differences: Within-island variation in Darwin's finches." *Philosophical Transactions of the Royal Society B: Biological Sciences* 365(1543): 1041-1052.

Gaither, Michelle R., Bowen, Brian W., Toonen, Robert J., Planes, Serge, Messmer, Vanessa, Earle, John, and Robertson, D. Ross. 2010. "Genetic consequences of introducing allopatric lineages of Bluestriped Snapper (*Lutjanus kasmira*) to Hawaii." *Molecular Ecology* 19(6): 1107-1121.

Gonzales, Eva, Hamrick, James L., Smouse, Peter E., Trapnell, Dorset W., and Peakall, Rod. 2010. "The impact of landscape disturbance on spatial genetic structure in the Guanacaste tree, *Enterolobium cyclocarpum* (Fabaceae)." *Journal of Heredity* 101(2): 133-143.

More publications

Heckadon-Moreno, Stanley. 2009. "Armagedón Hartmann: recuerdos de la Expedición del Smithsonian a Isla Coiba, 1956." *"Épocas"* Tercera Era (Supplement to *El Panamá América*) 24(12): 2-3.

Heckadon-Moreno, Stanley. 2010. "Armagedón Hartmann: la Expedición del Smithsonian a Isla Coiba, 1956." *"Épocas"* Tercera Era (Supplement to *El Panamá América*) 25(2): 2-3.

Hou, Chen, Kaspari, Michael, Vander Zanden, Hannah B., and Gillooly, James F. 2010. "Energetic basis of colonial living in social insects." *Proceedings of the National Academy of Sciences* 107(8): 3634-3638.

MacFadden, Bruce J., Kirby, Michael X., Rincon, Aldo, Montes, Camilo, Moron, Sara, Strong, Nikki, and Jaramillo, Carlos 2010. "Extinct peccary *Cynorca*" *occidentale* (Tayassuidae, Tayassuinae) from the Miocene of Panama and correlations to North America." *Journal of Paleontology* 84(2): 288-298.

Moreno, Ricardo, and Bustamante, Aida. 2009. "Datos ecológicos del ocelote (*Leopardus pardalis*) en Cana, Parque Nacional Darién, Panamá; utilizando el método de cámaras trampa." *Tecnociencia* 11(1): 91-102

Muller-Landau, Helene C. 2010. "The tolerance fecundity trade-off and the maintenance of diversity in seed size." *Proceedings of the National Academy of Sciences* 107(9): 4242-4247.

PNAS: Big, but few vs. many, but small

Helene Muller-Landau has developed a new theory explaining why some plant species produce a small number of large seeds while others produce a large number of small seeds. She demonstrated that plants having different size seeds can coexist when regeneration sites vary in stressfulness, in the article "The tolerance fecundity trade-off and the maintenance of diversity in seed size" of the *Proceedings of the National Academy of Sciences* published on March 2.

Species that produce large seeds, like coconuts, have the advantage under stressful conditions such as drought or shade, while plants that produce large numbers of small seeds, such as fig species have the advantage in areas with adequate water and light. The article can be obtained from calderom@si.edu

Helene Muller-Landau desarrolló una teoría nueva que explica por qué algunas especies de plantas producen un pequeño número de semillas grandes mientras que otras



producen un gran número de semillas pequeñas. Demostró que las plantas con semillas de diferentes tamaños pueden coexistir cuando los lugares de regeneración varían en el nivel de estrés, en el artículo "The tolerance fecundity trade-off and the maintenance of diversity in seed size" en el número de 2 de marzo de *Proceedings of the National Academy of Sciences*.

Las especies que producen semillas grandes como los cocos, tienen ventajas durante las sequías y la sombra, mientras que las plantas que producen un gran número de semillas pequeñas como los higuerones, tienen ventajas en áreas donde hay agua y luz adecuada.

STRI in the news | International

"Arboles crecen más en zonas templadas y menos en trópico por cambio climático" 2010. *ADN.ES*: March 4.

"Los bosques, otro dolor de cabeza" 2010. *Elciudadano.web.com*: March 4.

"Calentamiento modifica crecimiento de árboles." 2010. *Lavozdelmichocan.com.mx*: Mar 4.

"Científicos detectan crecimiento irregular de árboles" *Vanguardia.com.mx*: March 4.

"Fresh attempts to remove toxic chemical from Clipperton Island ship." 2010. *Australia Network News*: March 5.

More publications

Oelmann, Yvonne, Potvin, Catherine, Mark, Timo, Werther, Lisa, Tapernon, Simone, and Wilcke, Wolfgang. 2010. "Tree mixture effects on aboveground nutrient pools of trees in an experimental plantation in Panama." *Plant and Soil* 326(1-2): 199-212.

Peretti, Alfredo V., and Eberhard, William G. 2010. "Cryptic female choice via sperm dumping favours male copulatory courtship in a spider." *Journal of Evolutionary Biology* 23(2): 271-281.

Rivadeneira, Marcelo M., Hernaez, Patricio, Baeza, Antonio, Boltana, Sebastian, Cifuentes, Mauricio, Correa, Cristian, Cuevas, Alejandra, Valle, Erasmo del, Hinojosa, Ivan, Ulrich, Niklas, Valdivia, Nelson, Vasquez, Nelson, Zander, Anke, and Thiel, Martin. 2010. "Testing the abundant-centre hypothesis using intertidal porcelain crabs along the Chilean coast: Linking abundance and life-history variation." *Journal of Biogeography* 37(3): 486-498.

Robertson, D. Ross, and Smith-Vaniz, William F. 2010. "Use of clove oil in collecting coral reef fishes for research." *Marine Ecology Progress Series* 401(2010): 295-302.

Sane, Sanjay P., Srygley, Robert B., and Dudley, Robert. 2010. "Antennal regulation of migratory flight in the Neotropical moth *Urania fulgens*." *Biology Letters* Online.

Zimmermann, Beate, Zimmermann, Alexander, Lark, Richard Murray, and Elsenbeer, Helmut. 2010. "Sampling procedures for throughfall monitoring: A simulation study." *Water Resources Research* 46: W01503-W01503.