Tupper 4pm seminar

Tue, Apr 4, seminar speaker will be Jed Sparks, Cornell University

Soil emissions of nitrogen trace gases in the Mojave Desert under elevated CO2: implications for regional tropospheric chemistry

Bambi seminar

Thu, Apr 6, Bambi seminar speaker will be Jed Sparks

Ozone, ants and clouds: Organisms matter to global air quality and climate

Arrived this week

Gerhard Zotz, University of Basel, to study growth limitation of vascular epiphytes, at Tupper and Fortuna.

Arriving next week

Jennifer Petersen, University of California at Davis, to study the geographic origin and recruitment patterns in Chrysophyllum, in Gamboa and the Pipeline Road.

Wesley Chun, University of California in Los Angeles, to study the phylogeography and speciation in the Dactyloid Anoles (Dactyloa: Polychrotidae) of trans-Andean Central and South America, in Fortuna.

Kelly Elschot, University of Groningen, to study poachers, seed dispersal and seed predation in two palm species, on BCI.

Andrew Nottingham, University of Cambridge, to assess the importance of litterfall for tree growth and nutrient dynamics by a large scale litter removal experiment in tropical deciduous forest in Panama, on the BCNM.

Smithsonian Tropical Research Institute, Panamá www.stri.org March 31, 2006

UK grants funds to continue with Darwin Initiative in Las Perlas

Tourism minister Ruben Blades, British consul and first secretary in Panama David Andrews, members of the Darwin Initiative, STRI officials, researchers, media representatives, tourism developers and the civil society met at the Tupper Center on Wednesday, March 29, to attend the inauguration of the workshop "Marine Resources Conservation and Management in Las Perlas, Panama: An area of Special Management." The event, a joint activity of the UK Darwin Initiave, Heriot-Watt University of Scotland and STRI, began with welcoming remarks by STRI´s Hector Guzman and David Andrews. Ana Báez, president of *Turismo & Conservación Consultores de Costa Rica* was the keynote speaker of the talk "Sustainable tourism is good business for all."

Twenty-five participants from the US, UK and Latin American countries attended the three-day workshop, sharing information on achievements in similar projects by the Darwin Initiative in Colombia, Ecuador and Panama, to promote the creation of protected areas using information resulting from scientific and sociologic studies.

At the inauguration, Andrews praised the excellent work done by Héctor Guzmán and colleagues following the agenda of the Darwin Initiative in Las Perlas, and announced the extension of funding to continue with the project for two more years.

In the past three years the Darwin Initiative has granted three full scholarships to Panamanian students carrying out studies on marine resources management and have actively promoted a law designating Las Perlas Archipelago as special management zone, in collaboration with Panama´s Marine Authority and STRI.

El ministro de Turismo Ruben Blades, David Andrews consul y primer secretario del Reino Unido en Panamá, miembros de la Iniciativa Darwin, funcionarios de STRI, investigadores, representantes de los medios, promotores de turismo y la sociedad civil, se dieron cita en el Centro Tupper el miércoles 29 de marzo, para participar en la inauguración del taller "Manejo y Conservación de Recursos Marinos en la Zona Especial de Manejo de Las Perlas, Panamá". El evento, una actividad conjunta entre la Iniciativa Darwin del Reino Unido, la Universidad Heriot-Watt de Escocia y STRI, dió inicio con las palabras de bienvenida de Héctor Guzmán, de STRI y David Andrews. Ana Báez, presidenta de Turismo &

More arrivals

Niels Rattenborg, Max Planck Institute for Ornithology, to study the sleep in flying frigatebirds, on Isla Iguana.

Raymond Leslie Gabriel, University of Oxford, to study Theraphosinae of the Republic of Panama, on Bocas del Toro.

Martin Burd, Monash University, to study the individual behavior and collective order: the traffic dynamics of ants, on BCI.

Samuel Diaz, University of California at Berkeley, to assess indirect and direct fitness benefits of alloparental care in male rufous-naped tamarins (*Saguinus geoffroyi*), on BCI, Gamboa and Tupper.

Lachlan Wilmott, Syracuse University, to study signal evolution and speciation in bearded manakin (*Manacus* spp.), in Gamboa and Bocas del Toro.

Condolences

To Mireya Correa and her family, for the loss of her mother, Olga Arroyo de Correa, on Tuesday, March 28 in Panama City.

New publications

Hu, Xin-Sheng, He, Fangliang, and Hubbell, Stephen P. 2006. "Neutral theory in macroecology and population genetics." *Oikos* Online.

Martin II, Lynn B., Hasselquist, Dennis, and Wikelski, Martin C. 2006. "Investment in immune defense is linked to pace of life in house sparrows." *Oecologia* 147(4): 147: 565–575.

Conservación Consultores de Costa Rica ofreció la conferencia magistral "El turismo sostenible es un buen negocio para todos."

Veinticinco participantes de siete países incluyendo EU y el Reino Unido asistieron al taller de tres días cuyo objetivo fue compartir información y logros de proyectos similares bajo la Iniciativa Darwin en Colombia, Ecuador y Panamá, para promover la creación de áreas protegidas utilizando resultados de estudios científicos y sociológicos.

Durante la inauguración, Andrews destacó el excelente trabajo realizado por Héctor Guzmán y sus colegas siguiendo la agenda de la Iniciativa Darwin en Las Perlas, y anunció la extensión de los fondos para continuar con el proyecto por dos años más.

Durante los tres últimos años, la Iniciativa Darwin en Panamá ha otorgado tres becas completas para panameños llevando a cabo estudios sobre manejo de recursos marinos y ha promovido activamente una ley que designaría al Archipiélago de Las Perlas como zona de manejo especial, en colaboración con la Autoridad Marítima de Panamá y STRI.

Jackson: "open your eyes"

Jeremy B.C. Jackson, STRI staff scientist and leading voice and face in efforts to save the oceans from plague and decay, presented "Océano en Peligro" to government officials, STRI officials, researchers and the community at the Tupper Center, on Wed, March 29.

"The first thing we should do is open our eyes... accept the changes that have already occurred" states Jackson. The development of useful strategies by politicians, grand-scale experiments to be conducted by scientists, and "probably a miracle" may help stop what seems to be an irreversible future for marine ecosystems.

Attending the talk was vicepresident Ruben Arosemena (second from the right), administrator of Panama´s Marine Authority and George Novey, from Marine Resources. Arosemena acknowledged Jackson´s commitment to the oceans and Panama, and highlighted the importance of the oceans to Panama, not only for its waterway, but as an important resource for present and future generations.

Jeremy B.C. Jackson, científico de STRI y voz y rostro líder en esfuerzos para salvar a los océanos de plagas y exterminio, presentó "Océano en Peligro" a funcionarios gubernamentales y de STRI, investigadores y la comunidad en el Centro Tupper, el miércoles 29 de marzo. "Lo primero que debemos hacer es abrir los ojos... y aceptar los cambios que ya han ocurrido" aseguró Jackson. El desarrollo de estrategias útiles por los políticos, experimentos a gran escala llevados a cabo por los científicos, y "probablemente un milagro" podrían evitar lo que parece ser un futuro irreversible para los ecosistemas marinos.

El vicepresidente Rubén Arosemena (segundo desde la derecha), administrador de la Autoridad Marítima Nacional y George Novey de Recursos Marinos asistieron al evento. Arosemena reconoció el compromiso de Jackson con los océanos y Panamá, y destacó la importancia de los océanos para Panamá, no sólo por su Canal, sino como un recurso importante para generaciones presentes y futuras.

Does tropical biodiversity increase during global warming?

"Plant diversity seems to increase when tropical forests cover large areas. Shrinking ecosystems may experience biodiversity loss lasting for millions of years." STRI´s Carlos Jaramillo and colleagues Milton J. Rueda from the Colombian Petroleum Institute and Germán Mora, from Iowa State University, seek explanations for the longest Central and South America pollen record, published in today´s issue of *Science*.

Jaramillo *et al.* used cores drilled through 5km of rock in eastern Colombia and western Venezuela to get at the fossil pollen record in a sequence of samples representing 10 to 82 million years before present (mybp). Then they correlated pollen diversity with global temperature estimates for the middle part of that sequence (20-65 mybp).

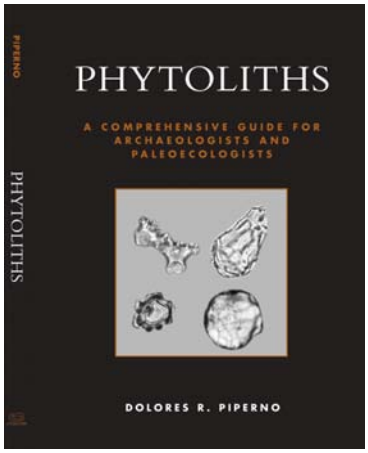
"We found that pollen diversity tracks global temperature through time over millions of years. Diversity increases as the planet warms and decreases as it cools. The mystery is that even when global temperatures vary enormously, average temperatures in the tropics don't change much, so why do we see global temperature patterns reflected in tropical plant diversity?" Jaramillo proposes that changes in area drive speciation and extinction in the tropics.

During global warming, tropical areas expand and diversity goes up, the opposite happens during global cooling. If this is the case, fragmentation of modern tropical forest could be equated to a global cooling period, because forested areas are shrinking dramatically, resulting in plummeting diversity in the forests that remain." Taken from *Eurekalert*

New STRI book by Piperno

Phytoliths: A comprehensive guide for archaeologists and paleoecologists, by Dolores R. Piperno, was just published by Altamira Press. "The study of phytoliths—inorganic silica remnants plants leave behind when they die and decay—has developed dramatically over the last twenty years. New publications have documented a diverse array of phytoliths from many regions around the globe, while new understandings have emerged as to how and why plants produce phytoliths. Together, these developments make phytoliths a powerful tool in reconstructing past environments and human uses of plants." "Dolores Piperno and phytolith analysis are nearly synonymous..." writes Vaughn Bryant from Texas A&M University. "Her new book includes a vast array of new information, techniques, keys, and a bibliography that will guide students and professionals alike for decades to come."

Altamira Press acaba de publicar *Phytoliths: A comprehensive guide for archaeologists and paleoecologists* [Fitolitos: una guía exhaustiva para arqueólogos y paleoecólogos] por Dolores R. Piperno. "El estudio de fitolitos —residuos de sílice inorgánico que quedan de las plantas una vez mueren y se descomponen —se ha desarrollado dramáticamente durante los últimos veinte años. Nuevas publicaciones han documentado una diversa gama de fitolitos de muchas regiones alrededor del globo, mientras emergen nuevos conocimientos sobre cómo y por qué las plantas producen fitolitos. Juntos, estos avances hacen de los fitolitos una



herramienta poderosa para reconstruir ambientes pasados y el uso que el hombre le ha dado a las plantas." "Dolores Piperno y el análisis de los fitolitos son casi sinónimos..." escribe Vaughn Bryant de la Universidad de Texas A&M. "Su nuevo libro incluye una vasta gama de información nueva, técnicas, llaves y una bibliografía que guiará a estudiantes y profesionales por igual, durante décadas.

More publications

Wright, S. Joseph. 2006. "Response to Lewis et al.: The uncertain response of tropical forests to global change." Trends In Ecology & Evolution *Online*.

STRI in the news

Does tropical biodiversity increase during global warming? 2006. **mongabay.com**

April birthdays

Sabina Walker de Guy	1
Diomedes Abrego	1
Ricardo E Jaén	1
Nelson Hernández	1
Axel Calderón	2
Mercedes Denis	3
Stuart Davies	3
Luis Moreno	7
Dolores Piperno	7
Rafael Gordon	9
Nelly Flores	9
Myriam Venegas	9
Apolonio Valdéz	10
Marcela Paz	10
Ricardo Chong	11
Indira Martínez	11
Efrain Domínguez	12
Joana Madera	13
Adriana Sautu	14
America Staff	14
Laura Geyer	23
Rubén Gall	26
Marcos Guerra	27
Jeannette Egger	28

Miscellaneous

For sale: Land Rover Discovery 4x4, 1996. $5,600. Interested please call Stephanie Belliveau at 212-8224 or or 314-9316.

For rent: Furnished house in Albrook, 2 bed/s $650. Please call Isabel at 315-0158.

science in progress:

E.T. impacts and tropical vegetation

Story:
Felipe De La Parra
& Carlos Jaramillo
Edited: ML Calderon
Photos: MA Guerra

Sixty five million years ago a meteorite impacted the Yucatan Peninsula. This episode, know as the Cretaceous-Tertiary boundary (KT boundary) is associated with the extinction of nearly 60% of the species, including dinosaurs.

The paleobotanical record from mid latitudes shows 30% extinction among temperate plant species. But the effects on tropical vegetation are unknown. Was it more resilient than temperate forests? Did it recover faster?

Intern Felipe De La Parra and Carlos Jaramillo, from the Smithsonian Tropical Research Institute in Panama, study the palynological record of a 2200-feet rock core drilled in the Cesar-Rancheria basin in northern Colombia, that shows how tropical vegetation was 65 millions years ago.

Initial results suggests that the floral change was dramatic with a major turnover of the of the palynoflora.

Hace 65 millones de años, un meteorito impactó la Península de Yucatán. Este episodio, conocido como Límite Cretácido Terciario (o KT) se asocia con la extincción de cerca de 60% de las especies, incluyendo los dinosaurios.

Los registros paleobotánicos de latitudes medias muestran una extincción de 30% de las plantas de zonas templadas. Pero los efectos en la vegetación tropical son desconocidos. ¿Fueron más resistentes? Se recuperaron a mayor velocidad?

El interno Felipe De La Parra y Carlos Jaramillo, del Smithsonian Tropical Research Institute en Panamá, estudian el registro palinológico en un núcleo de 2200 pies de roca obtenida en la cuenca de César Ranchería al norte de Colombia, que muestra cómo estaba la vegetación hace 65 millones de años.

Los resultados iniciales muestran que los cambios florales fueron dramáticos con una gran rotación de la palinoflora.