Tupper seminar

Tuesday, October 15, noon
seminar speaker will be
Adolfo Borges, Central
University of Venezuela
The molecular systematics of Neotropical scorpions in the genus *Tityus*: evolutionary implications for toxin diversity

Bambi seminar

Thu, Oct 17, Bambi seminar
speaker will be Matthew
Gilbert, South Africa
An introduction to Fynbos: the 6th global floral kingdom, and also the smoke-related physiological adaptations of a Fynbos daisy

Departures

Cristián Samper, Oct 8-20, to Cartagena, Colombia, to attend the Latin American Botanical Congress.

Mireya Correa, Gisele Didier, Rafael Aizprúa, Clementina Chung, Nayda Flores, Carmen Galdames, Mirna Samaniego, Maria Staff and Juan C. Villareal, Oct 13-20, to Cartagena, Colombia, to attend the Latin American Botanical Congress.

Richard Condit, Oct 14-31, to Washington DC, to meet with Elizabeth Losos regarding the CTFS. He will take some vacation time before the meetings.

Nélida Gómez, Oct 14-17, to Guatemala, to attend a workshop on science and technology, hosted by Universidad Rafael Landívar.

William F. Laurance, Oct 17-23, to Manaus, Brazil, to attend the annual meetings of the Biological Dynamics of Forest Fragments Project.

Smithsonian Tropical Research Institute, Panamá www.stri.org October 11, 2002

Gehrig concludes first phase of the Panamanian Clusia gene tree project

STRI postdoctoral visiting scientist Hans Gehrig left Panama on Friday, October 11, after completing the first phase of his research on the genus Clusia, with staff scientist Klaus Winter, head of STRI's Plant Physiology Program (PPP), Aurelio Virgo and Jorge Aranda, STRI, John Cushman from the University of Nevada (Reno), and Barry Hammel from the Missouri Botanical Garden. The genus Clusia is a fascinating group of tropical woody plants which represent a great diversity of life forms (small shrubs, epiphytes, tall trees) that grow in a wide range of habitats from lowland to montane tropical forests. Species of Clusia are particularly interesting due to their highly flexible photosynthetic physiology, some species are regular day CO_2 fixers, but others are able to fix atmospheric CO_2 at night via the CAM pathway which is an adaptation to water stress. Winter and collaborators established a gene tree of Panamanian Clusia to learn more about the evolutionary origins of the CAM photosynthetic pathway. The project was mainly funded by the Andrew W. Mellon Foundation. In the first photo are (from the left) Virgo, Aranda and Gehrig collecting a species of Clusia in Summit Gardens. In the second photo, Gehrig holds the gene tree at the PPP lab, with Virgo, Aranda and Winter (right).

El becario postdoctoral de STRI Hans Gehrig, dejó Panamá el viernes 11 de octubre, luego de concluir la primera fase de sus investigaciones sobre el género Clusia con Klaus Winter, director de Programa de Fisiología Vegetal de STRI, Aurelio Virgo y Jorge Aranda de STRI, John Cushman, de la Universidad de Nevada (Reno) y Barry Hammel de los Jardines Botánicos de Missouri. El género Clusia es un grupo fascinante de plantas leñosas que representan una gran diversidad de formas de vida (pequeños arbustos, epífitas, árboles altos) que crecen en una amplia gama de hábitats, desde bosques de tierras bajas hasta en bosques tropicales montanos. Las especies de Clusia son particularmente interesantes debido a la gran flexibilidad de su fisiología fotosintética, algunas son regulares y fijan su CO_2 durante el día, pero otras son capaces de fijar el CO_2 durante la noche, usando la vía CAM, una adaptación a la falta de agua. Winter y sus colaboradores establecieron un árbol genético de la Clusia panameña, para aprender más sobre los orígenes evolutivos de la vía de fotosíntesis CAM. El proyecto fue financiado en su mayor parte por la Fundación Andrew W. Mellon. En la foto arriba están (desde la izquierda), Virgo, Aranda y Gehrig colectando una especie de Clusia en Summit Gardens. En la foto abajo, Gehrig sostiene el árbol genético de Clusia en el laboratorio del Programa de Fisiología Vegetal, con Aranda, Virgo y Winter (derecha).

Condolences

To Carlos Espinosa in Fortuna, for the loss of his father Alfredo Espinosa, on Monday, October 7, in David, Chiriquí.

Congratulations

To Oscar Gabriel López Chong and Isaías Ramos González, for obtaining a bachelor's degree in Biology at the University of Panama with the thesis "*Distribucion horizontal y vertical de vertebrados en un ecosistema de manglar en Isla Galeta, Colón*". The fieldwork for the thesis was conducted at Galeta, with an Elektra-STRI fellowship.

New publications

Andresen, Ellen. 2002. "Primary seed dispersal by red howler monkeys and the effect of defecation patterns on the fate of dispersed seeds." *Biotropica* 34(2): 261-272.

Dudley, Robert. 2002. "Mechanisms and implications of animal flight maneuverability." *Integrative and Comparative Biology* 42: 135-140.

Laurance, William F. 2002. "World's biggest rainforest reserve." *Trends in Ecology and Evolution* 17(11): 500.

Laurance, William F. 2002. "Rampant logging in Cambodia." *Trends in Ecology and Evolution* 17(11): 500.

Laurance, William F. 2002. "Australia: an environmental 'renegade'?" *Trends in Ecology and Evolution* 17(11): 500-5001.

Still ploting: *Inside CTFS*

In this year's *Inside CTFS*, recently published by STRI's Center for Tropical Forest Science, we have a number of articles by STRI staff and CTFS associates. The issue features CTFS' second analytical workshop held in Gamboa; island ecology: A post-hurricane census in Puerto Rico and new species found in the Philippines; a Panama chapter: What we have learned and where we are going 22 years after the establishment of BCI´s 50-ha plot, and the next level: Sampling below 1cm at breast high (DBH or 1.33m). Also in the Panama chapter, Richard Condit and collaborators authored an article on native species reforestation trials, and Christopher Dick, STRI fellow working at Bermingham's molecular laboratories published "Genetic relationships of plants in the CTFS network." Cristián Samper contributed with "From the clouds" reporting preliminary findings from the La Planada forest dynamic plot in Colombia. News from Thailand, Mudumalai, Korup, Yasuni, Fushan (the newest addition to the CTFS network) Pasoh, Sinharaja and Lambir are also included in this issue of *Inside CTFS* 2002. If you want a copy of *Inside CTFS* 2002, please contact Lidia de Valencia at 212-8144/8170.

New submarine sonde at Galeta

Last month, the STRI's Marine Environmental Science Program installed a new submarine sonde at STRI's Galeta Island Marine Laboratory, in Colon. The sonde was anchored underwater, in a channel near the fringing reef and mangroves surrounding the Laboratory. The new sonde will enhance Galeta's capacity to monitor the Caribbean entrance to the Panama Canal providing automatic readings, every 15 minutes, of sea water salinity, temperature, dissolved oxygen, turbidity and chlorophyl. Also involved in this effort were staff scientist Luis D'Croz and Héctor Guzmán, as well as Ricardo Thompson, Aníbal Velarde from Naos Marine Lab, and members of the Galeta team.

El mes pasado, el Programa de Ciencias Ambientales Marinas de STRI instaló una nueva sonda submarina en el Laboratorio Marino de Galeta en Colón. La sonda se ancló bajo el agua, en un canal cerca del borde del arrecife y los manglares que rodean el Laboratorio. La nueva sonda aumenta la capacidad de Galeta para monitorear la entrada del Caribe del Canal de Panamá, suministrando, cada quince minutos, lecturas automáticas de la salinidad del agua, temperatura, oxígeno disuelto en el agua, turbiedad y clorofila. En este esfuerzo también colaboraron los científicos Luis D'Croz y Héctor Guzmán, así como Ricardo Thompson y Aníbal Velarde de los Laboratorios de Isla Naos, y miembros del equipo de Galeta.

Nueva sonda submarina en Galeta

More publications

Lessios, Harilaos A. 2002. "Patterns of binding evolution in different genera of sea urchings: Can they be explained by reinforcement?" *Sixth International Congress of Systematic and Evolutionary Biology*: 244. Patras, Greece.

Pierce, Simon, Winter, Klaus, and Griffiths, Howard. 2002. "Carbon isotope ratio and the extent of daily CAM use by Bromeliaceae." *New Phytologist* 56(1): 75.

Stuntz, Sabine, Simon, Ulrich, and Zotz, Gerhard. 2002. "Rainforest air-conditioning: the moderating influence of epiphytes on the microclimate in tropical tree crowns." *International Journal of Biometeorology* 46: 53-59.

Ventocilla, Jorge. 2002. "La arañita de las esquinas" *La Prensa* (October 6): 5B

Ziegler, Christian, and Ueberschaer, Katja. 2001. "In the court of the cutter queen." *BBC Wildlife* 19(12): 24-32.

Zotz, Gerard. 2002. "Categories and CAM - blurring divisions, increasing understanding?" *New Phytologist* 156(1): 4.

Miscellaneous

Se vende: apartamento exonerado en Marbella, 140 metros de construcción, por $92,500. Interesados favor ponerse en contacto con Mercedes Denis en: denism@naos.si.edu

Se vende Lada Niva 4x4, 1994, de cambios, buenas condiciones $500 negociables. Interesados ponerse en contacto con Renate Sponer de Naos al tel. 602-2219 ⊠ sponerr@naos.si.edu