

Tupper 4pm seminar

Tuesday, July 26, 4pm seminar speaker will be Julia Velasquez *Bosques, paisajes, cosmología y conservación entre las indígenas Wounaan del este de Panamá*

Bambi seminar

Thursday, July 28, Bambi seminar speaker will be Omar López

Title to be announced

Feria de la Salud

A Heath Fair will be held at the Tupper Center Exhibit Hall on Thursday, July 28 from 2-5pm.

La Feria de la Salud se llevará a cabo en el Salón de Exhibiciones del Centro Tupper el jueves 28 de julio, de 2 a 5pm.

Arrived this week

Paula Mejia, University of Florida, to study the geological history of the Neotropical forest, at the CTPA.

Justin Niedzialek, University of Connecticut, to study water, energy, and biogeochemical budgets in the humid tropics, on BCI and Gamboa.

Arriving next week

German De La Parra, Colombia, to study the biostratigraphy of the Neotropics, at the CTPA.

Terra Theim, University of Wisconsin, to study the gene flow and genetic differentiation in *Psychotria*, on BCI.



Smithsonian Tropical Research Institute, Panamá

www.stri.org

July 22, 2005



Members of the Panama Canal Authority's Department for Safety, Environment and Security visited STRI on Tuesday, July 19, to present their on-going projects and get acquainted with the staff of the Office for Communications and Public Programs, Security personnel and the Office of External Affairs.

Based on work done by the Panama Canal Commission during the last century, the ACP's Department for Safety and Environment works to maintain Panama and the communities inside the Panama Canal Watershed

(PCW) informed of their development plans and long-term conservation strategies; has invested important resources to certify propriety rights to historical owners inside the PCW; is involved in reforestation efforts with STRI's Project for Reforestation with Native Species (PRORENA); monitors the quality of water for both consumption and operation of the Canal; and is committed to improve the quality of life of the PCW residents and the education of their children.

The ACP's Department for Safety and Environment invited STRI to maintain former levels

of inter-institutional partnership and build new bridges of communication and collaboration. The ACP issues *Cocuyo*, a bi-monthly newspaper that focuses on efforts to promote sustainable projects and education among the inhabitants of the Panama Canal Watershed.

The photo shows (from the left) OCAPP's Lidia de Valencia, Cecilia Mañosa, OCAPP deputy director Mónica Alvarado and director Stanley Heckadon Moreno, Juan Héctor Díaz, director of ACP's Department for Safety and Environment, and other members of ACP and STRI staff.

More arrivals

Christian Gelpke, Princeton University, to work with the Automated Telemetry System (ARTS), on BCI.

Christian Ziegler, STRI communication associate and Robert Horan, from the University of Georgia, to work on several articles covering research activities at STRI

Departures

Eldredge Bermingham to Manaus, Brazil, to attend the BDFFF Management Committee meetings, then to Boston to consult with colleagues at Harvard, and to Belize to work at the SI Carrie Bow Key station.

Todd Capson to Corvallis, OR, to attend the American Society of Pharmacognosy workshop.

Ira Rubinoff to the US to meet with various donors, to Boston to meet with officials at Harvard University, and to Washington DC on official business at SI.

S. Joseph Wright to Uberlandia, Brazil, to attend the ATBC meetings.

New publications

Beebe, K., Bentley, G.E., and Hau, Michaela. 2005. "A seasonally breeding tropical bird lacks absolute photorefractoriness in the wild, despite high photoperiodic sensitivity." *Functional Ecology* Online.

Benfield, Sarah L., Guzman, Hector M., and Maira, James M. 2005. "Temporal mangrove dynamics in relation to coastal development in Pacific Panama." *Journal of Environmental Management* 76(3): 263-276.

Miembros del Departamento de Seguridad y Ambiente de la Autoridad del Canal de Panamá visitaron STRI el martes, 19 de julio para presentar sus proyectos actuales y familiarizarse con el personal y el trabajo de la Oficina de Comunicaciones y Programas Públicos de STRI, personal de Seguridad y la Oficina Asuntos Externos.

Basados en trabajo dejado por la Comisión del Canal de Panamá durante el pasado siglo, el Departamento de Seguridad y Ambiente de la ACP trabaja para mantener a Panamá y a las comunidades dentro de la Cuenca del Canal de Panamá informados sobre sus planes de desarrollo y estrategias de conservación a largo plazo; han invertido recursos importantes para otorgar títulos de propiedad a los dueños históricos de las tierras dentro de la Cuenca del Canal, están trabajando junto con los esfuerzos de reforestación del Proyecto de Reforestación con Especies Nativas del STRI

(PRORENA); monitorean la calidad del agua tanto para el consumo como para las operaciones del Canal; y están comprometidos en la tarea de elevar la calidad de vida de los habitantes de la Cuenca del Canal y la educación de sus hijos.

El Departamento de Seguridad y Ambiente de la ACP invitó a STRI a mantener los antiguos niveles de cooperación inter-institucional y a construir nuevos puentes de comunicación y colaboración. La ACP publica el periódico bi-mensual *Cocuyo* que destaca los esfuerzos para promover proyectos de desarrollo sostenible y de educación para los residentes de la Cuenca

La foto muestra (desde la izquierda) a Lidia de Valencia y Cecilia Mañosa de OCAPP, la subdirectora de OCAPP Mónica Alvarado y el director Stanley Heckadon Moreno, Juan Héctor Díaz, director del Departamento de Seguridad y Ambiente de la ACP, y otros miembros del personal de la ACP y STRI.



Perez leaves STRI

José Manuel Pérez, deputy director of STRI's Project for Reforestation with Native Species serving as acting

director until recently, left his position in order to dedicate full time to his own business.

More publications

Condit, Richard G., Aguilar, Salomon, Hernandez, Andres, Perez, Rolando, Lao, Suzanne, and Pyke, Christopher R. 2005. "Spatial changes in tree composition of high-diversity forests: How much is predictable?" In: Eldredge Bermingham, Christopher W. Dick, and Craig Moritz (Eds.) *Tropical rainforests: Past, present, and future*. 271-294. Chicago and London: University of Chicago Press.

Davis, Charles C., Webb, Campbell O., Wurdack, Kenneth J., Jaramillo, Carlos A., and Donoghue, Michael J. 2005. "Explosive radiation of Malpighiales supports a Mid-Cretaceous origin of modern tropical rain forests." *American Naturalist* 165(3): E36-E65.

Diaz, M.C., Van Soest, R.W.M., Rutzler, K., and Guzman, Hector M. 2005. "*Aplysina chiriquiensis*, a new pedunculate sponge from the Gulf of Chiriquí, Panamá, Eastern Pacific (Aplysinidae, Verongida)." *Zootaxa* 1012: 1-12.

Forsman, Z.H., Guzman, Hector M., Chen, Chaolun Allen, Fox, G.E., and Wellington, Gerard M. 2005. "An ITS region phylogeny of *Siderastrea* (Cnidaria: Anthozoa): is *S. ghyminiendangered* or introduced?" *Coral Reefs* 24: 343-347.

Hubbell, Stephen P. 2005. "Large-scale diversity and species-area relationships in tropical tree communities under the neutral theory." In: Eldredge Bermingham, Christopher W. Dick, and Craig Moritz (Eds.) *Tropical rainforests: Past, present, and future*. 41-71. Chicago and London: University of Chicago Press.

More publications

Lafferty, Kevin D., Smith, K.F., Torchin, Mark E., Dobson, Andrew P., and Kuris, A.M. 2005. "The role of infectious diseases in natural communities: What introduced species tell us." In: Dov F. Sax, John J. Stachowicz, and Steven D. Gaines (Eds.) *Species Invasions: Insights into Ecology, Evolution and Biogeography*. Sunderland, Massachusetts: Sinauer.

Leigh, Jr., Egbert Giles, and Rubinoff, Ira. 2005. "Understanding and conserving tropical diversity: perspectives from Barro Colorado Island." In: Eldredge Bermingham, Christopher W. Dick, and Craig Moritz (Eds.) *Tropical rainforests: Past, present, and future*. 223-250. Chicago and London: University of Chicago Press.

Mora, Camilo, and Robertson, D. Ross. 2005. "Causes of latitudinal gradients in species richness: A test with fishes of the tropical eastern Pacific." *Ecology* 86(7): 1771-1782.

Moritz, Craig, Dick, Christopher W., and Bermingham, Eldredge. 2005. "From the past to the future: evolution, ecology, and conservation of tropical rainforests." In: Eldredge Bermingham, Christopher W. Dick, and Craig Moritz (Eds.) *Tropical rainforests: Past, present, and future*. 1-3. Chicago and London: University of Chicago Press.

Moritz, C, Dick, C.W., and Bermingham, Eldredge. 2005. "Overview: Processes, people, and prospects for tropical rainforests." In: Eldredge Bermingham, Christopher W. Dick, and Craig Moritz (Eds.) *Tropical rainforests: Past, present, and future*. 529-531. Chicago and London: University of Chicago Press.

Pérez started working for STRI in November 2004, joining an interdisciplinary team of researchers working for the development of socially, ecologically and economically viable strategies of reforestation. We wish him the best.

José Manuel Pérez, subdirector del Proyecto de Reforestación con Especies Nativas (PRO-RENA), quien

fungía como director encargado, dejó su posición para dedicarse tiempo completo a sus negocios.

Pérez empezó a trabajar en STRI en noviembre de 2004 uniéndose a un equipo multidisciplinario de investigadores que trabajan en el desarrollo de estrategias para la restauración forestal que sean social, ecológica y económicamente viables. Le deseamos lo mejor.



New species of sponges

Staff scientist Héctor M. Guzmán and collaborators discovered a new species of sponge (see various specimens in the photo). They described the new species in the article "Aplysina chiriquiensis, a new pedunculate sponge from the Gulf of Chiriquí, Panamá, Eastern Pacific (Aplysinidae, Verongida)" in the journal *Zootaxa* (vol. 1012: 1-12). The species was first seen near Coiba, but it is very abundant on coral reefs in 15-35 m depth in all Panama, the Galapagos Islands, Costa Rica and the Pacific coast of Colombia.

El biólogo de STRI, Héctor Guzmán y colaboradores descubrieron una nueva especie de esponja (vea varios especímenes en la foto). Los investigadores describieron la nueva especie en el artículo "Aplysina chiriquiensis, a new pedunculate sponge from the Gulf of Chiriquí, Panamá, Eastern Pacific (Aplysinidae, Verongida)" en la revista *Zootaxa* (vol. 1012: 1-12). La especie fue vista por primera vez cerca de Coiba, pero es abundante en arrecifes coralinos en todo Panamá a una profundidad de 15-35 m, en Costa Rica, las Islas Galápagos y en la costa Pacífica de Colombia.

More publications

Oboh-Ikuenobe, Francisca, Obi, Chuku G., and Jaramillo, Carlos A. 2005. "Lithofacies, palynofacies, and sequence stratigraphy of Palaeogene strata in Southeastern Nigeria." *Journal of African Earth Sciences* 41(1): 79-101

Tieleman, B. Irene, Williams, Joseph B., Ricklefs, Robert E., and Klasing, Kirk C. 2005. "Constitutive innate immunity is a component of the pace-of-life syndrome in tropical birds." *Proceedings of the Royal Society (London) B Online*.

Turner, Benjamin L. 2005. "Storage-induced changes in phosphorus solubility of air-dried soils." *Soil Science Society of America Journal* 69: 630-633.

Wright, S. Joseph. 2005. "The El Niño Southern Oscillation influences tree performance in tropical rainforests." In: Eldredge Bermingham, Christopher W. Dick, and Craig Moritz (Eds.) *Tropical rainforests: Past, present, and future*. 295-310. Chicago and London: University of Chicago Press.

Miscellaneous

For sale: 2003 Nissan Sentra B13, 16,000km, CD player, \$7500. One owner. Interested please contact: minakousui@pa.inter.n from the Japanese Embassy.

For sale: Double bed, box spring and mattress, Antique mahogany table and four chairs, Orbitreck exercise machine never used. Wooden bookshelves, cedro espino, mountain bikes. Best offer. Interested please call Mónica Alvarado at 264-1435. Available on July 29.

science in
progress:

Looking for the perfect cocktail

(three of three)

In addition to research and reforestation activities, PROENA is also committed to offering opportunities for the new generation of biologists, with large experimentation sites. Undergraduate interns assist PROENA staff and graduate students in plantation and ecological research projects, and have time to complete independent projects.

Dylan Craven, graduate student from Yale University (in the photo), uses plant canopy analyzers LAI-2000 (LICOR) to quantify environmental luminosity in broad sunlight, and under 22 species of trees planted in Soberania National Park and Rio Hato, in 2003.

Soberania and Rio Hato represent different precipitation levels. Some species are expected to behave differently according to precipitation, characterized by leaf area index (LAI). LAI is the ratio of the foliage area to the ground area, the measure of plant growth.

Craven conducts 18 measurements in each plot to broaden statistical comparisons and add an element of spatial analysis. At the end of the day in the field, he interpolates the data from both analyzers and generates the LAI for each plot. These measurements will provide data for experiments to control *Saccharum spontaneum* or Canal grass, that dies under shadow.

Presently, PROENA seeks two more graduate students, one to examine the relative socio-economic impacts of reforestation projects vs intensive agriculture and cattle ranching; and another to analyze the impact of reforestation incentive laws in Central America, suggesting incentive structures most likely to promote widespread reforestation, sound forest management, and participation by broad segments of society.

Además de investigar y reforestar, PROENA también está comprometido con la capacitación de la nueva generación de biólogos

y ofrece extensos sitios de experimentación. Pasantes de pregrado asisten al personal y estudiantes graduados de PROENA en proyectos ecológicos y de plantación, y tienen tiempo para completar sus propios proyectos.

Dylan Craven, estudiante de maestría de la Universidad de Yale (en la foto) utiliza analizadores de plantas del dosel LAI-200 (LICOR) para medir la luz ambiental al sol y a la sombra de 22 especies de árboles plantados en el Parque Nacional Soberanía y en Río Hato en 2003.

Soberanía y Río Hato representan diferentes niveles de precipitación. Algunas especies difieren en comportamiento de acuerdo a la precipitación, caracterizadas por el índice de superficie foliar (LAI, por sus siglas en inglés). LAI es la tasa de superficie foliar por área de suelo, o sea, la medida de crecimiento de la planta.

Craven hace 18 mediciones en cada parcela para ampliar las comparaciones estadísticas y añadir un elemento de análisis espacial. Al final del día, extrapola los datos de los analizadores y genera el LAI para cada parcela. Estas medidas suministrarán información necesaria para los experimentos de control de la paja canalera, que muere bajo la sombra de los árboles.

Actualmente PROENA busca dos estudiantes graduados más: uno para examinar impactos socio-económicos de proyectos de reforestación vs. agricultura y ganadería intensiva; y otro para analizar el impacto de leyes de incentivo en Centroamérica, y sugerir estructuras que promuevan la reforestación, administración sólida de bosques, y amplia participación en la sociedad.