

STRI news '99

Smithsonian Tropical Research Institute Weekly Newsletter

Panama, October 8, 1999

Tupper Seminar

Tue, Oct 12, noon seminar speaker will be James Dalling, University of Cambridge

The comparative ecology of pioneer trees: what can seed and seedling traits tell us about species coexistence?

Bambi Seminar

Thu, Oct 14, Bambi seminar speaker will be Marianne Egebjerg Jensen, Odense University of Denmark

The Effect of Clutter on the Detection Success of Pipistrelle Bats

- Bambi attendants are responsible for obtaining Dredging Division permits and transportation reservations through BCI administrator Daniel Millán at 272-2124. Reservations via e-mail to "Bambi" only guarantees the dinner reservation. Please remember to carry your STRI I.D.

Arrivals



- I. Fang Sun, CTFS Asia Program Coordinator, Oct 10-24, to visit STRI and consult with staff.
- Thomas Duda, 3-year postdoctoral fellow from Harvard University, Oct 10 - Sep 30, 2002, to study the adaptive evolution at ecological and molecular scales: evolution of diets and conotoxins of tropical american *Conus*, at Naos.
- James Fullard, University of Toronto, Oct 11-18, to study the defense mechanisms of nocturnal butterflies and moths, on BCI.
- Andrew Kern, STF from Brown University, Oct 15 - Sep 1, 2000, to study the taxon cycles of the lesser Antillean avifauna, at Naos.

The Smithsonian in Panama: 90 Years of Tropical Biology

El Smithsonian en Panamá: 90 años de biología tropical

STRI will participate at the U.S.-Panama Business Council (USPA) "Panama Week" in Washington, D.C., with the exhibit "The Smithsonian in Panama: 90 Years of Tropical Biology", from October 13-15, at the Atrium Hall of the Ronald Reagan Building and International Trade Center. The exhibit features Smithsonian scientists' research on the Isthmus of Panama's natural history and evolution for almost a century.

Conscious of the importance of the Canal transition, USPA has selected "Panama Canal" to be the focus of this year's "Panama Week". The Panama Canal Commission will be the grand host of the conference. Chiquita Brands International and Continental Airlines are also sponsoring the event.

Panamanian president Mireya Moscoso and vice-president Dominador K. Bazán have confirmed their attendance, as well as U.S. former secretary of state Henry Kissinger. U.S. president and vice-president will be invited as "guests of honor". Also invited are U.S. former president Jimmy Carter and senator Robert Bryd. STRI will be represented by director Ira Rubinoff, Elena Lombardo, Georgina de Alba, and Laura Elena Flores ••• STRI presentará la exhibición "El Smithsonian en Panamá: 90 años de biología tropical" en "Panama Week", evento anual del Consejo Empresarial Estados Unidos - Panamá (USPA), que se llevará a cabo en Washington, D.C., del 13 al 15 de octubre. La exhibición describe las investigaciones de los científicos del Smithsonian sobre la historia natural y la evolución del Istmo de Panamá, por casi un siglo.

Conciente de la importancia de la transición del Canal de Panamá, USPA seleccionó como tema central de "Panama Week" de este año al Canal de Panamá. La Comisión del Canal será el anfitrión principal de la conferencia, con el apoyo de Chiquita Brands International y Continental Airlines.

La presidenta de Panamá, Mireya Moscoso y el vice-presidente Dominador K. Bazán, han confirmado su asistencia, así como Henry Kissinger, ex-secretario de estado de los Estados Unidos. El presidente y vice-presidente de los Estados Unidos serán los "invitados de honor". También han sido invitados el ex-presidente Jimmy Carter y el senador Robert Bryd. STRI será representado por el director Ira Rubinoff, Elena Lombardo, Georgina de Alba y Laura E. Flores.

Departures

- Ira Rubinoff, Elena Lombardo, Georgina de Alba and Laura E. Flores, to Washington, D.C., Oct 12-15, to attend the U.S. Panama Business Council "Panama Week".

Our Condolences

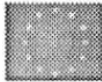
To Fernando Bouche, for the death of his father on Monday, October 4 ••• Nuestro pésame a Fernando Bouche por la muerte de su padre, el lunes de octubre, en David, Chiriquí.

Publications

- Fortunato, Helena.** 1999. "Biogeography and the tempo of speciation in strombinid gastropods." In: *Seventh Congress of the European Society for Evolutionary Biology: Barcelona, Spain, 23-28 August 1999*.
- Jiang, Qinhua and Piperno, Dolores R.** 1999. "Environmental and archaeological implications of a Late Quaternary palynological sequence, Poyang Lake, southern China." *Quaternary Research* 52: 250-258.
- Mueller, Ulrich G., and Wcislo, William T.** 1998. "Nesting biology of the fungus-growing ant *Cyphomyrmex longiscapus* Weber (Attini, Formicidae)". *Insectes Sociaux* 45(2): 181-189.
- Piperno, Dolores R.** 1998. "Paleoethnobotany in the neotropics from microfossils: new insights into ancient plant use and agricultural origins in the tropical forest." *Journal of World Prehistory* 12(4): 393-449.

Agradecimiento

PRADEPESCA
UNION EUROPEA-OSPECA



Ministerio de Desarrollo Agropecuario
Coordinación Nacional Panamá

Panamá, 30 de septiembre de 1999

Estimado Doctor Rubínoff:

Con sumo placer acuso recibo de la valiosísima obra "*Peces del Pacífico Oriental Tropical*".

Sólo el Instituto Smithsonian de Investigaciones es capaz de ditar un libro de esa excelente categoría y sobre todo, en idioma castellano.

Las fotografías, su impecable color, y la excelente calidad de la edición hacen del libro "*Peces del Pacífico Oriental Tropical*" una obra de incalculable valor, fundamentalmente para todos los estudiosos de la fauna ictiológica de nuestro Océano Pacífico.

Reciba mis más sinceros agradecimientos por el envío del citado libro, ocasión que aprovecho para remitirle mis nuestras de consideración y aprecio.

Volke Morales Q.
Coordinadora Nacional

Miscellaneous

- Se vende cachorro dálmata de manchas chocolates, 8 semanas, desparasitado y vacunado. Interesados, favor llamar América Staff al 687-4367 ••• For sale: 8-week liver spotted dalmatian, all shots. Interested call America Staff at 687-4367.
- Car for sale: 95 Suzuki, excellent condition, 20,000 miles, new battery and tires \$6500 or best offer. Call Dolores Piperno a.w.h. at 214-6426.

From Other Sources

Photosynthesis: Stealing the limelight on the forest floor
by Peter D. Moore

"By only opening their stomata—the pores in their leaves through which carbon dioxide enters and water leaves—at night, and thus achieving a temporary carbon dioxide fix using the enzyme phosphoenol pyruvate carboxylase, so-called CAM plants are able to minimize water loss. Not surprisingly, they are typically associated with arid environments. But a question mark hangs over certain bromeliads (members of the pineapple family) that grow in the deeply shaded understory of Central American rainforests. Such moist, low-light environments seem inappropriate for CAM plants, but the work of John Skillman et al. has shown that they occupy a niche in which high light tolerance and drought resistance have unexpected advantages (*Ecology* 80, 1584-1593; 1999). Most of the CAM plants in rainforests are epiphytes, growing perched on the branches of trees. Here, without access to groundwater, CAM metabolism helps them to survive occasional hot, dry spells. But there are also CAM plants growing in the shady understory. *Aechmea magdalenae*, pictured here, is a ground-dwelling bromeliad that

grows in a range of habitats in Central America, from well-drained, open locations to moist, shaded sites on the forest floor. Skillman and Winter previously found that *Aechmea* is capable of high photosynthetic rates under bright light (*Plant Physiology* 113, 441-450; 1997). But how can it compete in the shade—particularly as CAM plants are less efficient photosynthesizers than 'C3' plants (the most widespread form of plant metabolism) where light levels are low?

One possible explanation is that *Aechmea* is particularly adept at exploiting the occasional patches of high-intensity sunlight ('sunflecks') that penetrate the dense canopy of the forest. Using chlorophyll fluorescence, which records the energy-trapping stage of photosynthesis, Skillman et al. found that experimental artificial sunflecks produced a much stronger response in *Aechmea* than that found in C3 plants from the same habitat, accompanied by a shorter lag phase for the plant to adjust to the new light conditions.

They also found that *Aechmea* allocates less energy to root formation, and grows more slowly, than associated C3 plants. But it can gain an advantage over other plant species during the dry season. When soil water becomes scarce, the water conservation properties of the bromeliad, resulting from its tough leaves and its capacity to keep its stomata closed in the daytime, ensure survival and continued growth. *Aechmea* grows best during the dry season, whereas the C3 plants grow best in the wet season. Although the forest floor is generally shady and moist, there is clearly a niche here for a plant that can take advantage of brief periods of high light and low water availability. Even among shade plants, there are some destined to grab the limelight."

7 October 1999
Nature 401, 541

Charla en Culebra

El domingo 24 de octubre a las 4pm, Juan Maté, de STRI, presentará una charla en el Centro de Exhibiciones Marinas, abierta al público

Corales y Arrecifes de Panamá

Reminder

Nov 3-5 (Wed-Fri), Wed, Nov 10 and Sun, Nov 28 are all national holidays in Panama. It is possible that the Nov 10 holiday will be celebrated on Mon, Nov 8th and Nov 28 on Mon, Nov 29th. Check local news.

STR I celebrates Panamanian independence day on Wed, Nov 3. Thu, Nov 11 is Veteran's Day, and Thu, Nov 25 is Thanksgiving. If you need a permit of any kind, or "paz y salvo" to travel, please submit your requests with sufficient time ••• El 3, 4 y 5 de noviembre (miércoles a viernes), el miércoles 10 de noviembre, y el domingo 28 de noviembre son fiestas patrias en Panamá. Es posible que la fiesta del 10 de noviembre se celebre el lunes 8 de noviembre, y la del 28 se celebre el lunes 29 de noviembre. Esté atento a las noticias locales. STRI celebra el día de independencia de Panamá el 3 de noviembre. El jueves 11 es Día del Soldado Caído y el 25 es Día de Acción de Gracias. Si necesita algún tipo de permiso o un "paz y salvo" para viajar, haga sus solicitudes a tiempo.

Miscellaneous

Se vende apartamento en San Francisco, cerca del Hotel Ceasar Park. Tres recámaras y dos baños, 100m². Cinco años de construcción. Seguridad 24 horas. \$63,500 negociable. Para mayor información llame a Gabriela Etchelecu al tel 226-2491 después de horas de trabajo.

Transición a partir del 1ro de octubre hasta nuevo aviso. Coordinará todos los aspectos de la transición en colaboración con el Contralor, la Consejera Legal y la Oficina de Recursos Humanos y reportará directamente al Director y Subdirector. Alvarado ha participado activamente desde el principio en el proceso de transición para poner en ejecución los cambios laborales estipulados por la ley panameña y los principios del Smithsonian. Agradeceré brinden toda su cooperación a Mónica Alvarado y a su equipo de transición.

New at the Photo-Department

Adquisición del Departamento de Fotografía

A high quality film processor was purchased at STRI for \$15,000 and set up at the Photo Department at Tupper this past week. It processes all types of negatives and slides, including black and white. The purpose of this new resource is to provide in-house service for the STRI community. It will be available for use on starting Wednesday, October 27. For more information please contact Marcos Guerra or Raineldo Urriola ••• STRI adquirió un nuevo procesador de películas de alta calidad por \$15,000, e instalado en el laboratorio de fotografía en Tupper la semana pasada. Procesa todo tipo de negativos y diapositivas, incluyendo blanco y negro. El propósito de este nuevo recurso es suministrar el servicio de revelado a la comunidad de STRI dentro del Institute. La máquina se pondrá en funcionamiento a partir del miércoles 27 de octubre. Para mayor información favor ponerse en contacto con Marcos Guerra o Raineldo Urriola.

New STRI Publications

Díaz P., Claudia P. 1999. Estudio Bioantropológico de Rasgos Mortuorios de la 'Operación 4' del Sitio Arqueológico Cerro Juan Díaz, Panamá Central. Tesis de Licenciatura. Santafé de Bogotá: Universidad de los Andes, Departamento de Ciencias Sociales, Departamento de Antropología.

Goldstein, Guillermo, Andrade, José Luis, Meinzer, Frederick C., Holbrook, N.Michele, Cavelier, Jaime, Jackson, P. and Celis, A. 1998. "Stem water storage and diurnal patterns of water use in tropical forest canopy trees." *Plant, Cell and Environment* 21: 397-406.

Matuse, I.T., Lim, Y.a., Hattori, M., Correa, Mireya and Gupta, Mahabir P. 1999. "A search for anti-viral properties in Panamanian medicinal plants. The effects on HIV and its essential enzymes." *Journal of Ethnopharmacology* 64: 15-22.

Padlock on Pipeline Road

Cerradura en el Camino del Oleoducto

A padlock will be installed at the main gate on Pipeline Road, Parque Nacional Soberanía, on Monday, October 25. The key to open the padlock is the same used before. Researchers that need a key to access the Pipeline Road can obtain one for \$5 deposit with Maria Leone, Visitor's Office. Please remember to always carry your collecting/research permit in the field, as the ANAM game wardens will request it at any time ••• Una nueva cerradura se instaló en la entrada principal del Camino del Oleoducto en el Parque Nacional Soberanía, el lunes 25 de octubre. La llave para abrir esta cerradura es la misma que se usaba antes. Los investigadores que necesiten llave pueden obtenerla por \$5 de depósito con María Leone, Oficina de Visitantes. Recuerden portar consigo siempre su permiso de colecta e investigación de la ANAM, ya que los guardaparques se lo pueden pedir en cualquier momento.

iAproveche el baratillo anual del "bookstore" del 25 de octubre al 5 de noviembre. Descuento 20% (artesanías 10%)!