

Tupper 4pm seminar

Tue, Aug 16, 4pm seminar speaker will be Joe Wright
On the future of tropical forests and their species

Bambi seminars

Mon, Aug 15, Bambi seminar speakers will be Patrick Kelley, University of Washington
Considering the ecological correlates of physiological stress in rainforest birds: current and proposed work
and Noelle Beckman, University of Minnesota
TBA

APANAC symposium

The Asociación Panameña para el Avance de la Ciencia will hold its annual congress from August 17 to 20 at Hotel Crown Plaza, Panama City. See program at:
<http://www.apanac.org.pa/xcongreso/programa/index.html>

Arriving this week

Lisa Barnett, STRI DC, to consult with staff.

Anne Madden, STRI short term fellow, to study the alkaloid variation and its link to diet in the dendrobatid frog, *Dendrobates pumilio*, from the Bocas del Toro region of Panama.

Annemarie Surlyke, University of Odense, Denmark, to study the intensity of bat sonar signals and hearing sensitivity of their insect prey, moths, on BCI.

Roger Linington, Oregon State University, to work with the ICBG project.

James Voirin, US, to study herbivory samples, on BCI.



Smithsonian Tropical Research Institute, Panamá

www.stri.org

August 12, 2005



www.eurekalert.org/pub_releases/2005-08/stri-wet081005.php

STRI staff scientist Mary Jane West-Eberhard was elected to the *Italian Accademia dei Lincei*, the oldest academy of science in the world, created in 1603. The *Accademia* promotes, coordinates, integrates and spreads scientific knowledge in its highest expression, in the unity and universality of culture.

La científica de STRI, Mary Jane West-Eberhard, fue elegida miembro de la *Accademia dei Lincei de Italia*, la academia científica más antigua del mundo, creada en 1603. La *Accademia* promueve, coordina, integra y difunde el conocimiento científico en su más alta expresión, en la unidad y universalidad de la cultura. West-Eberhard es la autora del libro *Developmental plasticity and*

West-Eberhard authored the book *Developmental plasticity and evolution*, published by Oxford University Press in 2003, recipient of the R.R. Hawkins Award of the American Association of Publishers for the "Outstanding Professional, Reference or Scholarly Work of 2003." One reviewer called it "an intellectual blitzkrieg"

evolución [Evolución y plasticidad en el desarrollo], publicado por Oxford University Press en 2003, el cual recibió el premio R.R. Hawkins Award of the American Association of Publishers de EU, por "el trabajo profesional, de referencia o académico por excelencia" de 2003. Un comentarista le llamó una "guerra relámpago intelectual" cuya "magnitud y nivel

West-Eberhard elected to the Italian Accademia dei Lincei

Galileo Gallilei's and the oldest academy of science in the world

whose "scope and scholarship are truly awe inspiring."

Soon after this publication, the American Society of Naturalists presented her with the 2003 Sewall Wright Award, sometimes called "the ultimate recognition in peer review for an established evolutionary biologist."

académico realmente asombrante e inspiran."

Pocos meses después de la publicación de *Developmental plasticity and evolution*, West-Eberhard recibió el Sewall Wright Award, de la American Society of Naturalists de EU, llamado algunas veces "lo último en reconocimiento de colegas para un biólogo evolutivo establecido."

More arrivals

Yvania Ceron-Sousa, University of Puerto Rico, to study dispersal limitations and genetic structure in two mangrove species, at Naos

Christophe Meskens, Université Catholique de Louvain-la-Neuve, Belgium, to study the coevolution study of Hispinae and parasitoids, at Tupper and Naos.

Caroline Schulze, SI, to participate at the Invertebrate Taxonomy Workshop.

Randal Moore, Oregon State University, to study the mechanisms of Avian extinctions in fragmental tropical landscapes, on BCI.

Michael Kaspari, University of Oklahoma, to study the regulation of brown food webs: the ecology of tropical litter food webs, on BCI.

José Carlon Hernández, Universidad de la Laguna, Spain, to conduct an analysis and discuss data on the ecology and population of *Diadema antillarum* present on the Canary Islands, at Naos.

Gregory Herbert and Gregory Dietl, University of South Florida, to study the evolution of predation behaviors in the gastropod family Muricidae: A survey of the muricid fauna in tropical America, at Galeta.

Leaving this week

Ben Turner to Sun Valley, Idaho, to attend the Inositol Phosphates in the Soil-Plant-Animal Continuum conference, and to consult with colleagues at USDA Laboratory in Kimberly.

STRI's Photographic Department launches database

The database of STRI's Photographic Department can be seen at:

<http://photo.stri.si.edu/>
It has a 10% of the slides of the Department. Additions are ongoing. We encourage your cooperation to add information for the entries. Larger resolution photos must be requested from Marcos Guerra or Gian Montufar.

La base del Departamento de Fotografía puede verse en: <http://photo.stri.si.edu/>
Contiene el 10% de las



diapositivas del Departamento. Inclusiones están en progreso. Apreciaremos su cooperación para añadir información sobre las entradas. Pida las fotos en mayor resolución a Marcos Guerra o Gian Montufar.



Sousa gives talk to Galeta guides

Wayne Sousa, from the University of California at Berkeley (photo above) contributed a talk on mangrove forests and their present condition on Galeta Point. This talk was the first in a program of activities to offer training to 10 new nature guides. Benjamín Ordóñez and Liz Hernández organized the program. The program was formally launched on Thursday, August 10

Wayne Sousa, de la Universidad de California en Berkeley (en la foto), dio una charla sobre manglares, y sus condiciones actuales en Punta Galeta. La charla fue la primera de un programa de actividades para entrenar 10 nuevos guías naturalistas. Benjamín Ordóñez y Liz Hernández organizaron el programa, que se inauguró formalmente el 10 de agosto.

New publications

Borrell, Brendan, LaDuc, Travis J., and Dudley, T. Robert. 2005. "Respiratory cooling in rattlesnakes." *Comparative Biochemical Physiology* 140(4): 471-476.

Cambra T., Roberto, and Quintero Arias, Diomedes. 2004. "New species of *Xystromutilla* Andre (Hymenoptera: Mutillidae) and the first illustrated key for the males of the genus." *Transaction of the American Entomological Society* 130(4): 463-478.

STRI in the news

"Dictan normas para proteger corales" by Hermes Sucre Serrano. 2005. *La Prensa*, August 11.

"El paso de las uranias" por Maritza Bonilla. 2005. *El Panamá América*, August 11.

"Ultra-picky female fiddler crab cited in UCSD study" by Bruce Lieberman. 2005. *The San Diego Union Tribune*, August 4.

"Yasun Blues: The IMF, Ecuador and coerced oil exploitation." 2005. *RedNova News Science*, August 5.

"Hémisphère austral - Un milieu tropical encore incompris" by Christian Lévesque. 2005. *Le Devoir*, August 7.

Miscellaneous

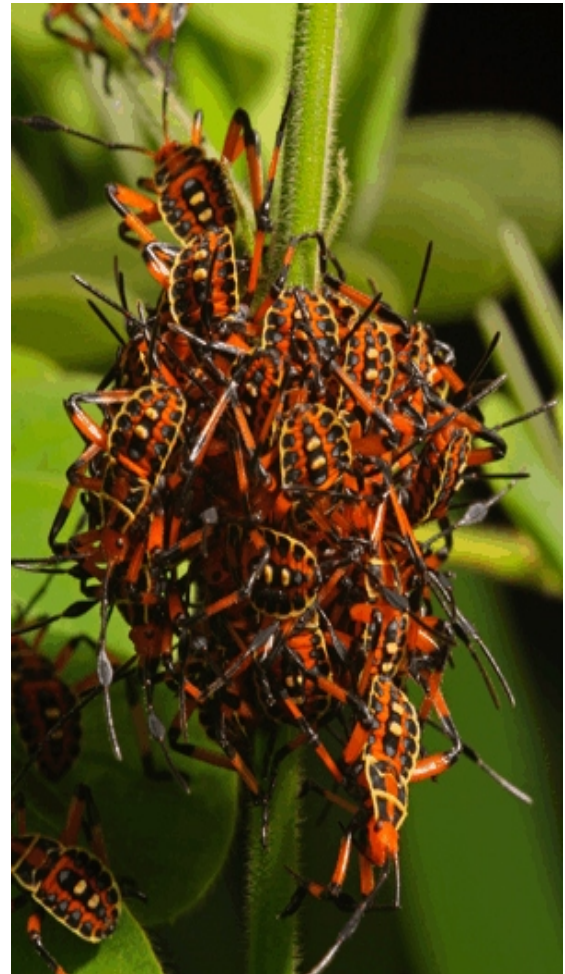
STRI's visiting scientist Ingrid Parker will appreciate the loan of old laptop computers 3 or 4 Wednesdays this fall to train students in experimental design and data analysis. Please contact Ingrid at: parker@biology.ucsc.edu or call her at 314-9262.



STRI arboretum *Hábitat de Vida Silvestre* shows signs of being a “proper habitat”

In the book *Birds of Panama* by Robert Ridgely, Neal G. Smith describes the pheasant cuckoo shown at left, as “uncommon and perhaps somewhat local (though to a large extent merely overlooked) in dense thickets and undergrowth in second-growth woodland and forest borders in lowlands on the Pacific slope... rarely seen but often heard in proper habitat.”

A lot has happened at STRI’s arboretum “*Hábitat de Vida Silvestre*” since comptroller Leopoldo León took upon his shoulders the management of this plot next to the STRI Library on Roosevelt Avenue in the Ancon Hill. But today, the arboretum celebrates this new resident (*Dromococcyx*



phasianellus rifigularis) as well as other winged organisms like monarch and Heliconius butterflies, or colorful bedbug colonies (above, at right). León explains that there are trails to visit the arboretum, however litter fall and broken branches are left in their place, and some new plants have been added to attract wildlife. A family of agouties help to plant more seeds, and natural fertilizers are also used. The best time to visit the arboretum is early morning or late afternoon, but guided

tours can arranged at noon. Contact e-mail: STRIarboret@si.edu

En el libro *Aves de Panamá* de Robert Ridgely, Neal G. Smith describe el cuclillo faisán como “poco común y quizás algo local (aunque en gran medida pasa desapercibido) en espesuras y sotobosque en bosques secundarios y bordes de bosque de las tierras bajas de la vertiente del Pacífico... raras veces se ve, pero a menudo se escucha en el hábitat adecuado.”

Mucho ha pasado en el arboreto de STRI “*Hábitat de Vida Silvestre*” desde que el contralor Leopoldo León decidió encargarse de la administración de esta parcela contigua a la Biblioteca de STRI en la Avenida Roosevelt del Cerro Ancón. Pero hoy, el arboreto celebra el nuevo residente (*Dromococcyx phasianellus rifigularis*), así como otros organismos alados como las mariposas monarcas y Heliconias, o coloridas colonias de chinches (derecha). León

explica que hay un camino para visitar el arboreto, sin embargo las hojas caen, las ramas caídas se dejan en su lugar, y que se han incluido nuevas plantas para atraer más vida silvestre. Una familia de ñeques ayuda a sembrar más semillas y también se usan fertilizantes naturales. Las mejores horas para visitar el arboreto es temprano en la mañana y tarde en la tarde, pero las visitas guiadas se pueden arreglar para mediodía. Póngase en contacto por e-mail con: STRIarboret@si.edu



Deserved recognition

Juan Murillo (at right) from the Tupper Center, received a “Spot Award” for his loyalty towards STRI. On July 19, Murillo found a wallet with a very large sum of money and immediately notified the appropriate persons so the wallet could be returned to the owner. The photo also shows Murillo’s supervisor Audrey Smith.

Juan Murillo (a la derecha) recibió un “Spot Award” [Premio al Instante] por su lealtad hacia STRI. El 19 de julio, Murillo encontró una billetera con una fuerte suma de dinero, e inmediatamente notificó a las personas apropiadas para regresar la billetera al dueño. En la foto también su supervisora, Audrey Smith.

“Forest of the roots”

III: To regenerate

There is no shortage of untested theory concerning the processes that structure mangrove forests.

Wayne Sousa uses his pattern data gathered from long-term monitoring of natural stands on Galeta, to refine these ideas into testable hypotheses relevant to his study forests. With replicated field manipulations, he tests hypotheses that zonation is controlled by: selective predation on mangrove propagules by crabs; differential dispersal and establishment of propagules; hierarchical, but spatially contingent, interspecific competition among juvenile mangroves; or selective herbivory, especially by caterpillars and stem-boring beetles.

Unfortunately, the persistence of these important and distinctive coastal ecosystems is gravely threatened by a plethora of human-caused environmental perturbations. In recent decades, mangrove habitats have suffered dramatic declines in area due to coastal development, non-renewable resource exploitation (e.g. clear cutting, mining, and aquaculture), pollution, high rates of sedimentation, and alterations of hydrology. It has been estimated that as much as a third of the world's mangrove forest have been lost in the past 50 years, threatening human coastal populations and their marine resources.

In the Caribbean, the rate of mainland mangrove deforestation is 1.4-1.7% annually, comparable to rates for threatened tropical rainforests. The information Sousa and colleagues collect on natural patterns of mangrove regeneration is critical to management and conservation of these unique habitats.

“El bosque de las raíces”

III: La regeneración

Hay muchas teorías sobre los procesos que estructuran los manglares. Wayne Sousa utiliza información compilada por él y sus estudiantes sobre formaciones boscosas de Galeta, en la costa de Colón para refinar ideas y convertirlas en hipótesis que puedan probarse en los bosques que estudian.

Al repetir manipulaciones de campo, Sousa pone a prueba la hipótesis de que la zonificación es controlada por: depredación selectiva de los nuevos plántones, por cangrejos; dispersión diferencial y establecimiento de plántones; contingencias jerárquicas (ventajas) de acuerdo al espacio; competencia interespecífica entre manglares juveniles, o herbivorismo selectivo, especialmente por orugas y escarabajos que prefieren alimentarse de los tallos.

Desafortunadamente, la conservación de estos importantes ecosistemas costeros tan distintivos está gravemente amenazada por una gama de cambios antropomórficos. En décadas recientes, estos hábitats han sufrido una disminución dramática debido al desarrollo costero, la explotación no renovable (corte, minería y acuicultura), contaminación, altas tasas de sedimentación y alteraciones hidrológicas. Se estima que un tercio de los manglares del mundo se ha perdido en los últimos 50 años, lo que pone en peligro las poblaciones humanas costeras y los recursos marinos de los cuales dependen.

En el Caribe, la tasa de deforestación en tierra firme es de

1.4-1.7% anual, comparable a las tasas de los bosques lluviosos tropicales. La información que Sousa y sus estudiantes compilan sobre patrones naturales de regeneración de manglares es crítica para el manejo y conservación de estos hábitats únicos.

Information: Wayne Sousa
Edition: M Alvarado & ML Calderón
Photo: MA Guerra

More information:
Mayor información:
wpsousa@Berkeley.EDU
or/ó alvaradm@si.edu

