

Tupper 4pm seminar

Tue, Jun 14, 4pm seminar speaker will be Robert Holt, University of Florida, Gainesville

Integrating theories of niche conservatism and evolution with community assembly

Bambi seminar

Thu, Jun 16, Bambi seminar speaker will be Robert Holt **On the "inflationary" impact of temporal variation in sink environments**

Arrived this week

Stephanie Sunderman and Nichole Collins, Eckerd College, to study the ecology and migrations of marine turtles of Bocas del Toro, at Bocas.

Carla Hurt, Scripps Institution of Oceanography, to study the taxonomy and molecular and morphological phylogeny of the shrimp genus *Alpheus* and molecular phylogeny of the family Alpheidae, at Naos.

Luke Bloch, University of Montana, to study the maternal effects and sexual selection in the Heliconia bug (*Leptoscelis tricolor*), on BCI.

Sonja Germer, University of Postdom, Germany, to work on a soil mapping survey Soil Mapping Survey of the Barro Colorado Nature Monument.

Scott Connelly, University of Georgia, to work in the amphibian recovery project, at Tupper and El Copé.

Shawn Graham, Zoo Atlanta, to work in the amphibian recovery project, at Tupper and El Copé.



Smithsonian Tropical Research Institute, Panamá

www.stri.org

June 10, 2005



CTFS gathers important personalities at STRI

The STRI's Center for Tropical Forest Science (CTFS) events this month has gathered important personalities in Panama. The "Tropical Forest Dynamics Research Around the Globe" symposium gathered 120 specialists from 23 countries. Twenty six of them are participating in the Fifth Analytical Workshop that will extend to June 26.

To participate at both events is CTFS member Corneille E.N. Ewango (left), 2005 Goldman Environmental Prize winner. The Goldman award is the world's largest prize for grassroots environmentalists. When the rainforest of the Okapi Faunal Reserve in the Democratic Republic of the Congo became a civil war

battleground, chief botanist Ewango stayed behind to protect his colleagues and the reserve's rare animals and plants. Risking his own life, he repeatedly confronted military commanders to stop rampant poaching, looting, and violence.

Present at the symposium was Elizabeth Losos, CTFS leader for 11 years now president of the Organization for Tropical Studies (OTS). Ewango and colleagues David Kenfack from Nkongsamba, Cameroon and STRI's research associate Duncan W. Thomas just published "*Manilkara lososiana*, a new species of Sapotaceae from Cameroon" naming the plant after Losos (at right, receiving a framed picture of the plant).

Peter M. Ashton from Yale University participated in the symposium, and Robin B. Foster, associated with STRI since 1970 and former staff scientist is also visiting (see photo in next page, guiding a group on BCI).

Foster, with staff scientist Steve Hubbell established the first permanent Forest Dynamic Plot and figured out the methodology used by all CTFS sites. Ashton had the vision to conform the CTFS network based on that methodology to compare tropical forests and better understand how they are and how they work.

The CTFS flourished under Losos' leadership, now with 3,000,000 trees from 6,000 tree species at 18 plots in 14 countries.

Arriving next week

Gerald Urquhart, Michigan State University instructor, with participants of a Field Course to be held in Gamboa and BCI.

Sigmer Quiroga, Shireen Fahey and Larry Harris, University of New Hampshire, to conduct a modern inventory of the polyclad fauna of the Caribbean, at Bocas del Toro.

Joseph Teng, University of Illinois at Montana, to study the diversity, distribution and demographic effects of seed-associated fungi in Neotropical Cecropia, on BCI.

Karen Lips, Matt Whiles and Alex Huryn, Southern Illinois University, to study tropical amphibian decline in streams, in Fortuna and Gamboa.

Patrick Erwin, University of Alabama at Birmingham, to study the incidence, identity, and importance of photosynthetic symbionts in shallow water sponge communities, at Bocas del Toro.

Mark Moffett, SI's National Museum of Natural History, to study the foraging strategies in army ants, on BCI.

Lisa Bennett, Princeton University, to study patterns and controls on nitrogen fixation in a tropical forest, on BCI and Gigante.

Steven Bellan, Princeton University, to study the reproductive behavior and ecology of the fiddler crab *Uca terpsichores* at Naos and Culebra.

Christine Miller, University of Montana, to study maternal effects and sexual selection in the Heliconia bug (*Leptoscelis tricolor*), on BCI.

Los eventos de este mes del Centro de Ciencias Forestales del Trópico de STRI (CTFS) ha reunido personalidades importantes en Panamá. El simposio "Investigaciones de dinámica de bosques tropicales alrededor del globo" reunió a 120 especialistas de 23 países; 26 de ellos participan en el Taller Analítico, hasta el 26 de junio.

Participando en ambos eventos se encuentra Corneille E.N. Ewango, miembro del CTFS y ganador del Premio Ambiental Goldman, 2005 (foto izquierda en página anterior). El premio Goldman es el mayor premio para ambientalistas de campo. Cuando el bosque lluvioso de la Reserva Okapi de Fauna en la República Democrática del Congo se convirtió en un campo de batalla durante la reciente guerra civil, Ewango, director botánico, se quedó para proteger a sus colegas y a los animales y plantas raros de la reserva. Arriesgando su propia vida, se enfrentó repetidamente con los comandantes militares para evitar la cacería, el saqueo y la violencia.

Presente en el simposio estuvo Elizabeth Losos, directora del CTFS por 11 años, hoy día presidenta de la Organización de Estudios Tropicales (OET). Ewango y colegas David Kenfack de Nkongsamba, Cameroon y el investigador asociado a STRI

SENACYT awards Jaramillo

Along with other STRI members, biologist César Jaramillo was also granted an award by SENACYT, for scientific events.

Jaramillo will present "The phylogeny and molecular systematics *Eleutherodactylus*



Duncan W. Thomas acaban de publicar "*Manilkara lososiana*, una especie nueva Sapotaceae de Cameroon" bautizando la planta en honor de Losos (foto derecha en página anterior).

Peter M. Ashton de Yale University participó en el simposio, y Robin B. Foster, asociado a STRI desde 1970 e investigador permanente por muchos años también se encuentra en Panamá.

Foster y el científico de STRI Steve Hubbell establecieron la primera Parcela de Dinámica de Bosques e idearon la metodología que se usa en todos los sitios de la red de CTFS. Ashton tuvo la visión de conformar la red del CTFS basada en esa metodología para comparar bosques tropicales y comprender mejor cómo son y cómo funcionan.

El CTFS floreció bajo el liderazgo de Losos, y hoy día tiene 3,000,000 de árboles de 6,000 especies en 18 parcelas en 14 países.

frogs in Central America: An analysis of the variation and genetic speciation based on mitochondrial DNA" at the VII Latin American Congress of Herpetology, at Universidad Autónoma del Estado de Morelos in Mexico.

More arrivals

Justin McAlister, University of North Carolina, to study the effect of environmental variation on the evolution of developmental plasticity of the trophic structures of echinoderm larvae, at Naos, Bocas del Toro and Galeta.

Lukas Cizek, Czech Academy of Science, to work in the project "Investigating the Biodiversity of Soil and Canopy Arthropods (IBISCA) on BCI and Ft. Sherman.

Katherine Milton, University of California at Berkeley, to study the genetics of the BCI spider monkey population, on BCI.

Carolina Puerta, Spain, to study tropical seed dispersal in a multi-trophic context: an automated radio-telemetry study, on BCI.

Leaving this week

Ira Rubinoff to Kenya, to attend the Mpala Wildlife Foundation board meeting, and the Mpala Science Advisory committee meeting, and to visit the Mpala Research Station.

Héctor Guzmán to Venezuela on vacation and to meet with colleagues at the Universidad Simón Bolívar.

New publications

Bergenius, Mikaela A.J., McCormick, Mark I., Meekan, Mark G., and Robertson, D. Ross. 2005. "Environmental influences on larval duration, growth and magnitude of settlement of a coral reef fish." *Marine Biology* 147: 291–300(2): 147: 291–300.

More publications

Berger, Silke, Martin, Lynn B., Wikelski, Martin C., Romero, L. Michael, Kalko, Elisabeth K.V., Vitousek, Maren, and Rodl, Thomas. 2005.

"Corticosterone suppresses immune activity in territorial Galápagos marine iguanas during reproduction."

Hormones and Behavior 47(4): 419-429.

Collin, Rachel, McLellan, Michelle, Gruber, Karl F., and Bailey-Jourdain, Catherine. 2005. "Effects of conspecific associations on size at sex change in three species of calyptraeid gastropods."

Marine Ecology Progress Series 293(1): 89-97.

Emlen, Douglas J., Marangelo, Jennifer, Ball, Bernard, and Cunningham, Clifford W.

2005. "Diversity in the weapons of sexual selection: horn evolution in the beetle genus *Oonthophagus* (Coleoptera: Scarabaeidae)." *Evolution* 59(5): 1060-1084.

Feitoza, Bertran, Rosa, Ricardo, and Rocha, Luiz A. 2005. "Ecology and zoogeography of deepreef fishes in Northeastern Brazil." *Bulletin of Marine Science* 76(3): 725-742.

Kenfack, David, Ewango, Corneille E.N., and Thomas, Duncan W. 2005. "*Manilkara lososiana*, a new species of Sapotaceae from Cameroon." *Kew Bulletin* 59(4): 609-612.

Novotny, Vojtech, and Basset, Yves. 2005. "Host specificity of insect herbivores in tropical forests." *Proceedings of the Royal Society (London)* B Online.

Odegaard, Frode, Diserud, Ola H., and Ostbye, Kjartan. 2005. "The importance of plant relatedness for host utilization among phytophagous insects." *Ecology Letters* 8(6): 612-617.

Junto con un grupo de miembros de STRI, el biólogo César Jaramillo también fue seleccionado por el programa de incentivo a investigadores de SENACYT, para presentar una conferencia.

Jaramillo presentará "Filogenia y sistemática molecular de

ranas *Eleutherodactylus* en Centroamérica: un análisis de la variación y divergencia genética basado en ADN mitocondrial" en el VII Congreso Latinoamericano de Herpetología en la Universidad Autónoma del Estado de Morelos, México.



Whale watching workshops

STRI marine scientist Héctor Guzmán offered three eight-hour workshops in La Esmeralda, Pedro González and Saboga Islands of the Las Perlas Archipelago, on May 30, 31 and June 1, to groups of 20 local fishermen each.

The workshops offered basic information on whales, different species, and safety measures necessary for whale watching, offering these communities an alternative way to make a living.

Guzmán also organized a four-hour whale watching workshop (photo above) for officials and decision makers of the civil society, Panama's Environmental Authority Institute for Tourism, the Marine Service Authority, the University of Panama and non-government organizations including PROMAR, ANCON, AVESPA, Fundación Natura, CEASPA, Albatros Media, MarViva, and others. This workshop was held at STRI's Marine Exhibition Center at Culebra, on Friday, June 3.

Héctor Guzmán, científico marino de STRI ofreció tres talleres de ocho horas en las islas La Esmeralda, Pedro González y Saboga del Archipiélago de las Perlas, el 30 y 31 de mayo, y el 1ro de junio, a grupos de 20 pescadores locales, cada uno.

El taller suministró información básica sobre ballenas, las diferentes especies, y medidas de seguridad necesarias para el avistamiento de ballenas, ofreciendo a estas comunidades una fuente alternativa de trabajo.

Guzmán también organizó un taller de cuatro horas (foto arriba) sobre avistamiento de ballenas para funcionarios y administradores de la sociedad civil, ANAM, IPAT, la Universidad de Panamá y organizaciones no gubernamentales incluyendo PROMAR, ANCON, AVESPA, Fundación Natura, CEASPA, Albatros Media, MarViva, y otros. Este taller se llevó a cabo el Centro de Exhibiciones Marinas de STRI en Culebra, el viernes 3 de junio.

More publications

La Marca, Enrique, Lips, Karen R., Lotters, Stefan, Puschendorf, Roberto, Ibanez D., Roberto, Rueda-Almonacid, Jose Vicente, Schulte, Rainer, Mary, Christian, Castro, Fernando, Manzanilla-Puppo, Jesus, Garcia-Perez, Juan Elias, Bolanos, Federico, Chaves, Gerardo, Pounds, Alan, Toral, Eduardo, and Young, Bruce E. 2005. "Catastrophic population declines and extinctions in Neotropical harlequin frogs (Bufonidae: Atelopus)." *Biotropica* 37(2): 190-201.

Pearson, Georges A. 2005. "Late Pleistocene megafaunal deposits on the Isthmus of Panama and their paleoenvironmental implications." *Caribbean Journal of Science* 41(1): 1-13.

Santiago, Louis S., and Mulkey, Stephen S. 2005. "Leaf productivity along a precipitation gradient in lowland Panama: patterns from leaf to ecosystem." *Trees* 19(3): 349-356.

Suh, Sung-Oui, McHugh, Joseph V., Pollock, David D., and Backwell, Meredith. 2005. "The beetle gut: a hyperdiverse source of novel yeasts." *Mycological Research* 109(3): 261-265.

Miscellaneous

For sale: Nissan Bluebird 1992 automatic transmission (new) Good condition. \$3,200 Interested please contact Ricardo Mallarino at mallarino@si.edu

Moving sale: 4-door Volkswagen Vento 1996. 120K. Runs great! \$3,500 (negotiable) If interested call 649-9455 or 317-1910.

science
in progress:

Bats, stress and immune responses

more at: <http://www.skvv.del>

Stefan Klose, doctorate student from the University of Ulm in Germany, studies physiological life-history trade-offs in the common fruit-eating bat, *Artibeus jamaicensis*, with Elisabeth Kalko, on BCI.

Their studies show that reproduction elevates the glucocorticoid stress response in females. His experiments assess whether this change affects their immune response, and how much energy they require to maintain it at different stages of reproduction and in different seasons.

“For energetically tightly constrained fruit-eating bats, an immune response is very costly”, explains Klose. “While elevated stress sensitivity in pregnant bats may help protect fitness by risk avoidance, costs may result from a suppression of immune capacity.” During this field season Klose found that reproduction does lead to a severe depression in the immune function in female bats. Hormone analysis will now reveal whether this is a stress-hormone modulated process.

A novel approach, free-ranging bats are caught and tested for stress hormone levels, immune capacity and metabolism. In order to understand how trade-offs work in this ecological keystone group, Klose plans to expand to study sites in Australia. His work is funded by an Animal Behavior Society Student Research Grant and the Boehringer Ingelheim Fonds for Basic Research in Medicine.

Stefan Klose, estudiante doctoral de la Universidad de Ulm, estudia los trueques fisiológicos de la historia natural del murciélago fructífero *Artibeus jamaicensis*, con Elisabeth Kalko, en BCI.

Sus estudios muestran que la reproducción eleva la respuesta al estrés glucocorticoideo en hembras. Sus experimentos estudian si este cambio afecta su respuesta inmunológica y qué tanta energía requieren en las diferentes fases de la reproducción y en diferentes estaciones.

“Para murciélagos frugívoros con recursos energéticos limitados, la respuesta inmunológica es costosa” explica Klose. “La sensibilidad elevada puede ayudarlas a evitar riesgos, pero el costo puede resultar de la supresión de la capacidad inmunológica.” Durante esta jornada de campo, Klose encontró que la reproducción sí conlleva una depresión severa en su inmunidad. Análisis de hormonas revelarán si es un proceso modulado de las hormonas de estrés.

Mediante una forma novedosa, murciélagos se capturan al azar y se examina su nivel de hormonas de estrés, su capacidad inmunológica y su metabolismo. Para entender cómo los trueques trabajan en este grupo ecológicamente tan importante, Klose hará más experimentos en Australia con fondos Boehringer Ingelheim para Investigaciones Básicas en Medicina y una beca para Investigaciones de la Sociedad de Comportamiento Animal.