

CTFS talk

Tuesday, March 16 at 10am,
Tivoli Meeting Room, CTFS
talk speaker will be María del
Carmen Ruiz-Jaén, McGill
University

**Using diversity and forest
structure to explain the
spatial variation of carbon
stocks**

Tupper 4pm seminar

Tuesday, March 16, 4pm
Tupper seminar speaker will
be Peter Chesson, University
of Arizona

**The emerging multitrophic
diversity maintenance
theory**

Bambi seminar

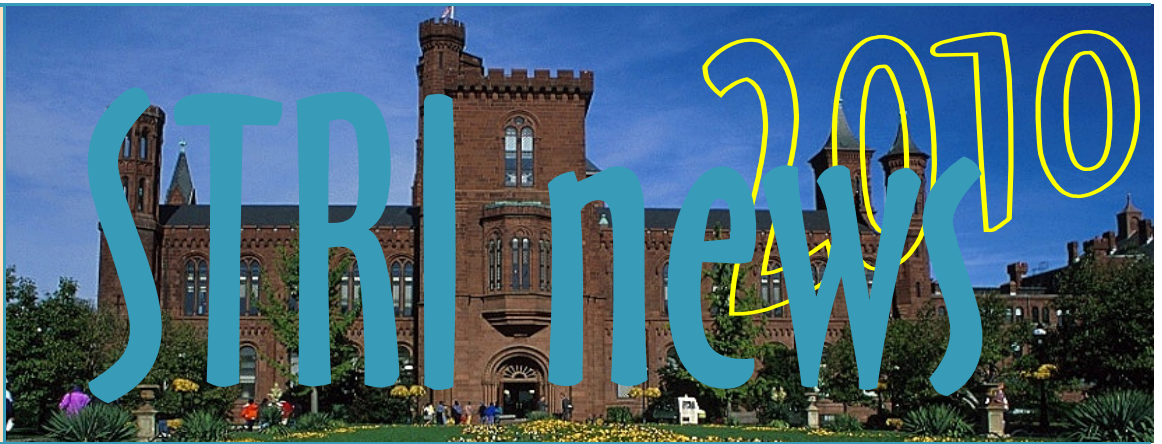
Thursday, March 18, Bambi
seminar speaker will be Susan
Letcher, Organization for
Tropical Studies (OTS).

**Phylogenetic structure of
tropical forests during
succession**

Arrivals

Catharine Milton, University
of California at Berkeley, to
study the factors affecting the
population dynamics of the
Barro Colorado Island howler
monkey (*Alouatta palliata*) with
special attention to generic
diversity and bot fly parasites
Alouattamyia (*Cuterebra*) *baeri*,
on BCI.

Larissa Albrecht, University of
Ulm, to study figs as keystone
species in tropical forests: The
role of *Ficus* as calcium
resource for frugivorous bats
on Barro Colorado Island,
Panamá, on BCI.



Smithsonian Tropical Research Institute, Panamá

www.stri.org

March 12, 2010

Acevedo and Barahona: Smithsonian unsung heroes

Recently, the Smithsonian
announced the Institution's
2010 unsung heroes for all
museums and research centers.

Oris Acevedo, BCI scientific
coordinator, and José
Barahona, Security and Safety
leader, were recognized as this
year's unsung heroes at STRI.

Acevedo has been at STRI for
18 years as BCI scientific
coordinator. She provides
support to some 300 visiting
scientists and students each
year, ensuring that they are able
to do their research on the
Island. Throughout her years of
service, Oris has lived on the
island at least part of the week
and has always gone the extra
mile to support the STRI
mission. Her enthusiasm for
STRI is so contagious that two
STRI donors have worked with
her as volunteers.

"Dependable" and "fully
committed to the institution"
are words that accurately
describe Oris, who has,
through her initiative and
capabilities, contributed to
broadening access to BCI and
to furthering STRI's mission of
tropical research on this island
research station in the middle
of the Panama Canal.

José Barahona joined STRI in
1991 and has always been
interested in emergency
response and rescue activities.

He is a certified paramedic and
has received advanced
paramedic combat training in
the US as part of STRI's
training program. He has
provided much of his own
training himself and is always
ready to give a helping hand to
anyone who might need it.

Barahona's choices and
cool-headedness have won him
a reputation as a real hero: he
once saved the life of a Mexican
researcher who had been
attacked by Africanized bees.
He realized that she was
developing anaphylaxis and
administered epinephrine from
his personal first aid kit. They
were at least 50 minutes away
from the nearest hospital or
ambulance. On another
occasion, José noticed a
co-worker experiencing a
cerebral ischemic event, and his
wise and immediate response
saved her from probable
permanent disability. José has
gone many extra miles to help
the STRI community during
emergency and non-emergency
situations.

"He has backpacked uncharted
trails, accompanied researchers
in drug runners' areas of
operations, combated forest
fires, provided first aid services,
accompanied the STRI cashier
to make big deposits, etc. He is
definitely a hero to many of us"
states his nomination for



Oris Acevedo

unsung hero at the
Smithsonian.

We are honored to work with
people like Oris and José.
Congratulations to you both!

Recientemente, el Smithsonian
anunció los "Héroes tras
Bastidores" de la Institución
para 2010, de todos los museos
y centros de investigación.

Oris Acevedo, coordinadora
científica de la Isla de Barro
Colorado y José Barahona, líder
de Seguridad y Salud Industrial
fueron reconocidos como
héroes tras bastidores de STRI.

Acevedo ha estado en STRI
durante 18 años como
coordinadora científica en BCI.
Ofrece apoyo a alrededor de
300 científicos visitantes y
estudiantes al año, asegurándose
que todos puedan llevar a cabo

More arrivals

Annemarie Surlykke, University of Southern Denmark, to join the ChiRoPing (Chiroptera, Robots, Sonar) project, on BCI.

Grace Chen, Michigan State University, to study the effects of biotic interactions and abiotic stress on plant adaptation in the tropics, in Gamboa and BCI.

Daniella Schweizer, University of California in Santa Cruz, to study the phylogenetic signal in the performance and health of tree species in mixed plantations, in Gamboa and Naos Island Laboratories.

Vicente Jaramillo and Federico Rodríguez, Universidad de Panamá, to study the factors affecting the population dynamics of the Barro Colorado Island howler monkey (*Alouatta palliata*) with special attention to generic diversity and bot fly parasites *Alouattamyia* (Cuterebra) baeri on BCI.

Garzon, Carol, University of Groningen, to study the determinants of the spatial distribution of tree recruitment in a Neotropical rainforest, on BCI.

Sofia Gripenberg, University of Oxford, to study seed predation by insects in tropical forests – a quantitative food web approach, on BCI.

Daniel Stanton, Princeton University, to redefine nutrient limitation in lowland tropical forests, at Tupper.

Owen Lewis, Oxford University, to study seed predation by insects in tropical forests – a quantitative food web approach, on BCI.



José Barahona

sus investigaciones en la Isla. A través de los años Oris ha vivido en Barro Colorado, por lo menos parte de la semana y siempre ha superado las expectativas de su trabajo para dar apoyo a la misión de STRI.

Su entusiasmo por STRI es tan contagioso que dos donantes de STRI han trabajado con ella como voluntarios. “Responsable” y “totalmente comprometida” con la institución son las expresiones que describen con exactitud a Oris, quien ha contribuido con su iniciativa y habilidad a ampliar el acceso a BCI y ayudar a mejorar la misión de STRI en la investigación tropical en esta estación de investigaciones en la mitad del Canal de Panamá.

José Barahona se unió a STRI en 1991, y siempre ha estado interesado en la respuesta a urgencias y las actividades de rescate. Es paramédico certificado y ha recibido entrenamiento avanzado como paramédico de combate en EU, como parte del programa de entrenamiento de STRI. Una gran parte su entrenamiento ha

sido provisto por él mismo, y siempre está listo para dar una mano al que lo necesite.

Las decisiones y calma de Barahona le han ganado su reputación como un verdadero héroe: una vez le salvó la vida a una investigadora mexicana quien había sido atacada por abejas africanizadas. Reconoció los síntomas de una anafilaxis y le suministró epinefrina de su maletín personal de primeros auxilios. Se encontraban por lo menos a 50 minutos de un hospital o servicio de ambulancia. En otra ocasión, José también reconoció los primeros síntomas de una isquemia cerebral en una de sus compañeras y su inmediata respuesta la salvó de una posible lesión permanente.

José ha excedido las expectativas de su posición para ayudar a la comunidad de STRI en situaciones de urgencia y no urgencia. “Él ha explorado caminos inescrutados en mochila, acompañado a investigadores en áreas controladas por traficantes de drogas, ha combatido fuegos

More arrivals

Juan Junoy and Ana Riesgo, Harvard, to participate as instructor, in the 2010 Harvard field course "Organismic and Evolutionary Biology 51: Biology and Evolution of Invertebrate Animals" on Bocas del Toro.

Claire Dell, Keri Goodman, Georgia Institute of Technology, to study the regulation of macroalgal communities via sea urchin grazing: density-dependent factors and algal palatability, on Bocas del Toro.

Jaime Andrés Corredor Herrera, Universidad Nacional de Colombia, to study the Geology of Panama, at the CTPA.

Andrew Chen, Rachel Hawkins, Elizabeth Schold and Daniel Wallach, Harvard University, to participate in the 2010 Harvard field course "Organismic and Evolutionary Biology 51: Biology and Evolution of Invertebrate Animals" on Bocas del Toro.

Departures

Owen McMillan to North Carolina State University in Raleigh, Durham, to work with students and collaborators on the research project "The Genomic Architecture of Adaptation in *Heliconius*", then to Cambridge and London to participate in the *Heliconius* Genome Consortium meeting.

Edgardo Ochoa to Honolulu, Hawaii, to participate in the 2010 American Academy of Underwater Sciences Symposium and a diving workshop.

More departures

Ben Turner to Malaysia, to conduct fieldwork at Pasoh and Lambir Hills, a Center for Tropical Forest Science (CTFS) plot. Also, to give a seminar at the Malaysian Forestry Institute.

New publications

Armitage, Sophie A.O., Boomsma, Jacobus J., and Baer, Boris. 2010. "Diploid male production in a leaf-cutting ant." *Ecological Entomology* 35(2): 175-182.

Azpuruá, Jorge, De La Cruz, Dianne, Valderama, Anayansi, and Windsor, Donald. 2010. "Lutzomyia sand fly diversity and rates of infection by Wolbachia and an exotic Leishmania species on Barro Colorado Island, Panama." *PLoS Neglected Tropical Diseases* 4(3): e627.

Brown, Jason L., Maan, Martine E., Cummings, Molly E., and Summers, Kyle. 2010. "Evidence for selection on coloration in a Panamanian poison frog: a coalescent-based approach." *Journal of Biogeography* Online.

Collin, Rachel, and Salazar, Maricela Z. 2010. "Temperature-mediated plasticity and genetic differentiation in egg size and hatching size among populations of *Crepidula* (Gastropoda: Calyptraeidae)." *Biological Journal of The Linnean Society* 99(3): 489-499.

Dechmann, Dina K. N., Kranstauber, Bart, Gibbs, David, and Wikelski, Martin. 2010. "Group hunting--A reason for sociality in molossid bats?" *PLoS ONE* 5(2): e9012.

forestales, suministrado primeros auxilios, acompañado a cajeros cuando transportan grandes cantidades de dinero para hacer depósitos, etc. Él es, definitivamente un héroe para muchos de nosotros" se lee en

BCI & Alan Smith fellowships

Fellowships to conduct research on Barro Colorado Island for a bachelor's thesis in Biology or related areas of science are offered every year.

Candidates must submit a proposal before May 3, 2010, for the Alan Smith and the BCI fellowships, including a budget of no more than \$1,500. For more information, please call Adriana Bilgray at 212-8031, Office of Academic Programs or contact Oris Acevedo at acevedo@si.edu

su nominación para "héroe tras bastidores" del Smithsonian.

Nos sentimos honrados de trabajar con personas como Oris y José. ¡Nuestras felicitaciones a ambos!

Becas para llevar a cabo investigaciones en la Isla de Barro Colorado con miras a completar tesis de licenciatura en Biología o áreas afines se ofrecen todos los años.

Los candidatos deben presentar una propuesta antes del 3 de mayo de 2010 para ambas becas, que incluyan un presupuesto no mayor a \$1500. Para mayor, llame Adriana Bilgray al 212-8031 o envíe un correo a Oris Acevedo: acevedo@si.edu



Show your creativity and participate, by yourself or in teams, in the Centennial Logo and Slogan Contest commemorating SI's first scientific expedition to Panama.

In addition to the prize, the winner's logo and slogan will be the official designs for all related Centennial events.

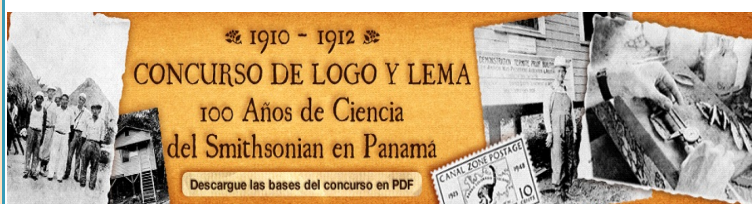
To download the logo and slogan contest guidelines, click: http://stri.org/english/PDFs/ENG_logo_Slogan.pdf

Despliega tu creatividad y participa, solo o en pareja, en el

Concurso de Logos y en el Concurso de Lemas alusivos al Centenario de la Primera Expedición Científica del Smithsonian Institution en Panamá.

Además de premios, el logo y el lema ganador serán los diseños oficiales de todos los eventos para conmemorar este Centenario.

Para descargar las bases del concurso, haga click en el siguiente enlace: http://stri.org/espanol/PDFs/Concurso_de_Logotipo_Celebracion_del_centenario.pdf



More publications

Dent, Daisy H. 2010. "Defining the conservation value of secondary tropical forests." *Animal Conservation* 13(1): 14-15.

Estrada-Villegas, Sergio, Meyer, Christoph F.J., and Kalko, Elisabeth K.V. 2010. "Effects of tropical forest fragmentation on aerial insectivorous bats in a land-bridge island system." *Biological Conservation* 143(3): 597-608.

Ferraz, G., Sberze, M., and Cohn-Haft, Mario. 2010. "Using occupancy estimates to fine-tune conservation concerns." *Animal Conservation* 13(1): 19-20.

Guerrieri, Emilio, Huigens, Martinus E., Estrada, Catalina, Woelke, Jozef B., de Rijk, Marjolein, Fatouros, Nina E., Aiello, Annette, and Noyes, John S. 2010. "*Ooencyrtus marcelloi* sp. nov. (Hymenoptera: Encyrtidae), an egg parasitoid of *Heliconiini* (Lepidoptera: Nymphalidae: Heliconiinae) on passion vines (Malpighiales: Passifloraceae) in Central America." *Journal of Natural History* 44(1): 81 - 87.

Sberze, M., Cohn-Haft, Mario, and Ferraz, Goncalo. 2010. "Old growth and secondary forest site occupancy by nocturnal birds in a Neotropical landscape." *Animal Conservation* 13(1): 3-11.

Taerum, Stephen J., Cafaro, Matias J., and Currie, Cameron R. 2010. "Presence of multiparasite infections within individual colonies of leaf-cutter ants." *Environmental Entomology* 39(1): 105-113.

Story: Richard Cooke
Edited by M Alvarado
and ML Calderon
Maps: Google
Photo next page:
Steve Paton

Advancing archaeology in the Pearl Islands....

Part one of five: Colonists and species

Smithsonian Tropical Research Institute, March 12, 2010



before Europeans arrived. A lack of firearms did not prevent these colonists from wiping out many species, often endemic ones due to the remoteness of the islands. Dogs and rats arriving in the boats joined in the destructive fray.

Archaeologists and ecologists have documented how human colonists behaved when they first arrived on uninhabited islands—cutting down forests, decimating terrestrial faunas, impacting coastal ecology and fighting with each other for the control of rapidly diminishing resources.

The rapid extinction of the flightless dodo on Mauritius in the seventeenth century was the work of European seafarers. But many islands were first colonized long

Panama's many islands are a magnet for tourist and residential development. Large projects are underway including several on the Pearl Islands (map). Glossy brochures lure investors and visitors with promises of virgin forests, coral reefs, clear blue waters and a wide variety of wild life. But island ecosystems are notoriously fragile.

warriors to despoil coastal Darién villages attacking them with flotillas of dugout canoes.

The Spanish soldiers told Pietro Martire (the Italian official chronicler of the Castilian court) that there were so many "deer and rabbits" on Isla del Rey that they could shoot them with their crossbows from the native houses. A tall story? Maybe! Rabbits (*Sylvilagus brasiliensis*) can still be found on Isla del Rey but not on other islands.

There are no deer there today. A small deer species, however,

deer (*Odocoileus virginianus*) were recently introduced from the mainland to Contadora and San José islands.

The only other large mammals on the archipelago are Old World feral pigs (*Sus scrofa*), introduced after Spanish contact, which look and behave like wild boars. In fact, there are only nine native mammal species on the islands now. The most widespread is the agouti (*Dasyprocta punctata*), which the islanders call "rabbit". Spiny rat (*Proechimys semispinosus*) lives

on several islands. Green iguanas (*Iguana iguana*) are very abundant in spite of their being hunted mercilessly with dogs. The largest predator is the boa (*Boa constrictor*).

Read the second part of this story in the STRI news' issue of March 19.

Progreso de la arqueología en el Archipiélago de las Perlas...

Primera entrega: Los colonizadores y las especies



Las muchas islas de Panamá son un imán para el desarrollo turístico y residencial. Se están realizando grandes proyectos de desarrollo inclusive en el Archipiélago de Las Perlas. Los brochures en papel brillante atraen a los inversionistas y turistas prometiendo selvas vírgenes, arrecifes coralinos, aguas cristalinas y una variada vida silvestre. Sin embargo, los ecosistemas de las islas son frágiles.

Los arqueólogos y ecólogos ya han documentado como se comportaron los inmigrantes humanos al llegar a islas deshabitadas – talando los bosques, diezmando las faunas terrestres, impactando la ecología de las costas y peleando entre sí por el control de los recursos cada vez más escasos.

La rápida extinción del dodo incapacitado para volar en la isla de Mauricio en el siglo XVII fue obra de

los navegantes europeos.

No obstante, muchas islas fueron colonizadas por grupos humanos mucho tiempo antes de que los europeos llegasen allí. La falta de armas de fuego no fue un impedimento para la extinción de muchas especies, incluyendo aquellas que eran endémicas por lo apartadas que estaban las islas.

Las islas en el Archipiélago de Las Perlas abarcan un tamaño que va desde pequeños farallones hasta Isla del Rey (250 km²) cuyo líder fue Terarequí en el año 1515, cuando las tropas de Gaspar de Morales llegaron allí. Se cree que el poderío de este cacique se estableció gracias a la abundancia de nácar y perlas, productos importantes para el trueque prehispánico. Terarequí era capaz de reunir suficientes guerreros como para saquear las aldeas de la costa del Darién atacándoles con flotillas de cayucos.

Los soldados españoles le contaron a Pedro Mártir (cronista oficial de la corte de Castilla) que era "tal la abundancia de ciervos y conejos" en Isla del Rey, " que los nuestros podían desde sus casas traspasar con las flechas cuantos deseaban".

¿Puro cuento? ¡Tal vez! Todavía se encuentran conejos lagomorfos (*Sylvilagus brasiliensis*) en esta isla pero no en las demás. Allí no existen venados hoy día. Sin embargo, una especie muy pequeña de venado permanece en Isla San José. Al parecer, es el corzo gris (*Mazama gouazoubira*) que no se encuentra en otras zonas de la América Central aunque tiene una amplia distribución en el continente suramericano.

Recientemente se introdujo el venado de cola blanca (*Odocoileus virginianus*) en las islas de Contadora y San José. Los únicos

otros mamíferos grandes en el archipiélago son puercos salvajes del Viejo Mundo (*Sus scrofa*) introducidos después del contacto español, cuyo comportamiento es parecido al de los jabalíes. En efecto, sólo nueve especies de mamíferos autóctonos se encuentran en las islas de Las Perlas hoy día. De éstos el más ubicuo es el ñeque (*Dasyprocta punctata*) al que los isleños le dicen "conejo." Los mocangués (*Proechimys semispinosus*) habitan en varias islas. Las iguanas verdes (*Iguana iguana*) son muy abundantes pese a que los isleños las cacen sin misericordia con perros. El depredador de mayor tamaño es la boa (*Boa constrictor*).

Lea la segunda parte de esta historia el 19 de marzo en el *STRI news*.

FELLOWS AND INTERNS SYMPOSIUM

March 19, 2010

- 9:00 am Neotropical birds show a humped distribution of within-population genetic diversity along a latitudinal transect**
by Matthew Miller, SI Molecular Evolution Postdoctoral Fellow
- 9:15 am Evolutionary history of the dim-light foraging bee genus *Megalopta***
by Simon Tierney, STRI Tupper 3YEAR Postdoctoral Fellow
- 9:30 am Thermally contingent defenses: how natural temperature variation affects development, risk, and plasticity in *Dendropsophus ebraccatus* tadpoles**
by Justin Touchon, STRI Postdoctoral Visiting Scientist
- 9:45 am How does asexual propagation interfere with mating patterns? A case study in *Piper cordulatum***
by Eloisa Lasso, SI Postdoctoral Fellow
- 10:00am Large Cordilleran fans in Central Colombia: The record of glacial-melt and catastrophic drainage of the Bogota lake**
by Natalia Hoyos, STRI Postdoctoral Visiting Scientist
- 10:15 am Intergroup conflict in white-faced capuchins (*Cebus capucinus*): explaining the home-field advantage**
by Magaret (Meg) Crofoot, STRI Postdoctoral Visiting Scientist
- 10:30 am Genetic diversity in invasive *Saccharum spontaneum* across Panama**
by Kristin Saltonstall, SI Postdoctoral Fellow
- 10:45 am BREAK**
- 11:00 am *Heliconius melpomene* wing color polymorphism and speciation**
by Luana Maroja, STRI Postdoctoral Visiting Scientist
- 11:15 am Swimming development and functional difference in planktotrophic calyptraeid larvae**
by Katherine McDonald, STRI Tupper 3YEAR Postdoctoral Fellow
- 11:30 am Negative plant-soil feedbacks predict relative species abundance in a tropical forest**
by Scott Mangan, STRI Postdoctoral Visiting Scientist
- 11:45 am Hybridization and introgression in Neotropical mangroves *Rhizophora* (Rhizophoraceae)**
by Ivania Ceron-Souza, SI Postdoctoral Fellow
- 12:00 pm LUNCH**
- 1:30 pm Food and brood care: Dual use of cultivated fungus by attine ants**
by Hermógenes Fernández-Marin, STRI Tupper 3YEAR Postdoctoral Fellow
- 1:45 pm Disentangling pre-and post colonization processes operating in a simple insect community associated with a spatially patchy resource**
by Myra Hughey, EOL Predoctoral Fellow
- 2:00 pm Extreme cache theft and re-caching leads to long term seed dispersal by Central American agoutis**
by Ben Hirsch, STRI Postdoctoral Visiting Scientist
- 2:15 pm Seed rain into forest gaps and understory**
by Carolina Puerta, STRI Postdoctoral Visiting Scientist
- 3:00 pm Digitization of the Alan Graham Palynological collection**
by Vernie Sagun, STRI Postdoctoral Visiting Scientist
- 3:15 pm BREAK**
- 3:30 pm Speciation, gene flow, and pairing dynamics**
by Oscar Puebla, SI Marine Science Network Postdoctoral Fellow
- 3:45 pm Variation of carbon stocks across different land-use types in a tropical rural**
by Michiel van Breugel, STRI Postdoctoral Visiting Scientist
- 4:00 pm Forest regrowth at Agua Salud: Sponge effect or not?**
by Beate Zimmerman, STRI Postdoctoral Visiting Scientist
- 4:15 pm Why do some trees have high density wood? Problems with the traditional explanation, a new hypothesis, and implications for understanding variation in forest carbon stocks**
by Markku Larjavaara, STRI Postdoctoral Visiting Scientist
- 4:30 pm POSTER SESSION**
- 6:00 PM BBQ – CLOSING OF EVENT**