

Tupper 4pm seminar

To be confirmed:

Tuesday, September 8, 4pm seminar speaker will be Scott Mangan, University of Wisconsin, Milwaukee

Strength of negative plant-soil feedback predicts relative species abundance in a tropical forest

Special conference

STRI is pleased to invite you to a conference on Wednesday, September 9, at 3pm, Tupper Center Auditorium

Learning through objects and collections: A strategy for teaching small children

Aprendizaje a través de objetos y colecciones: Una estrategia para enseñar a niños pequeños

by Sharon Shaffer, executive officer at Smithsonian Early Enrichment Center. English with simultaneous translation into Spanish.

Bambi movie night

Caragol Wells Productions for Smithsonian Channel:

Stories from the Vaults, Season II

on Thursday, September 10, on BCI

Arrivals

Tiffany Troxler, Florida International University, to quantify relationships between resource heterogeneity and plant community structure in a coastal freshwater swamp of Panama, on Bocas del Toro.

Oscar Puebla, STRI postdoctoral fellow, to continue studies on the hypothesis of ecological speciation in coral reef fishes, on Bocas del Toro.



Smithsonian Tropical Research Institute, Panamá

www.stri.org

September 4, 2009

Roads: nuke 'em all!

One of Brazil's most respected scientists, Eneas Salati, expressed his frustration saying that "The best thing you could do for the Amazon is to bomb all the roads." Thomas Lovejoy, a leading American biologist and a STRI research associate, is equally emphatic: "Roads are the seeds of tropical forest destruction."

STRI staff scientist William Laurance published an "Opinion" in *New Scientist* (August 30): "Roads are ruining the rainforest." In it, he encapsulated many of the frustrations conservationists and scientists are expressing about new roads in the last surviving tropical frontiers.

"Scientists like Salati and Lovejoy are quite right" insists Laurance. "Roads are rainforest killers. Without rampant road expansion, tropical forests around the world would not be vanishing at a rate of 50 football fields a minute, an assault that imperils myriad species and spews billions of tons of greenhouse gases into the atmosphere each year. We will never devise effective strategies to slow rainforest destruction unless we confront this reality."

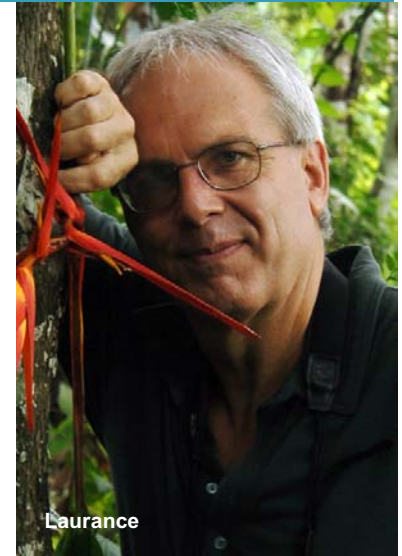
Tropical forests have a unique complex structure that sustains many species, which in turn help the forest thrive. New roads open a Pandora's box of

illegal logging, mining, colonization, agribusiness and land speculation. In Brazilian Amazonia, 95% of all deforestation and fires occur within 50 kilometers of roads. In addition, frontier roads imperil many indigenous peoples trying to live in limited contact with outsiders, with the proliferation of new oil, gas and logging roads into their territories. Gold miners and ranchers often subjugate the indigenous peoples.

And there are deadly new diseases. Infections such as malaria, dengue fever and HIV have all been shown to rise sharply after new roads are built. "A proposed highway between Colombia and Panama, for example, would expose one of the world's most biologically important areas, the Chocó-Darién wilderness, to rampant destruction."

In the "Opinion" section of *New Scientist*, readers can submit their own opinions of support or rejection. Laurance's opinion received some immediate support, to the point that one reader wondered if perhaps Eneas Salati just "got it right".

Others, however, accused "the rest of the world" of trying to claim an essential global resource without paying for it. They expect "Brazil and other similar countries not to develop in the way they are doing



Laurance

themselves... countries like Brazil are forced to do the only thing to pursue their own interests..."

A blog editor offered to "sponsor" a few acres of Amazonian rainforest... but with a webcam to supervise. Finally, "Steve" writes: "And what gives Brazil et al. the right to make decisions about resources essential for the survival of mankind? Why do they get to hold hostage the entire globe?"

Many believe that Laurance has hit the nail on the head. For better or worse, we have to confront the reality that the only way to really conserve tropical nature is simply to have some areas that are not penetrated by roads.

Eneas Salati, uno de los científicos más respetables de Brasil, expresó su frustración diciendo que "Lo mejor que podríamos hacer por el

More arrivals

Myriam Morneau, Quebec, Canada, to work with Oscar Puebla as volunteers, on Bocas.

Levitan, Don, Florida State University, to study coral spawning in *Montastraea annularis* complex, on Bocas.

Barbara Christine Hoekenga, SI's National Museum of Natural History, to study coral spawning in *Montastraea annularis* complex, on Bocas.

Kylee Pawluk, University of Victoria, Canada, to join the study of coral spawning in *Montastraea annularis* complex, on Bocas.

Anna Strimaitis, Florida State University, to join the study of coral spawning in *Montastraea annularis* complex, on Bocas.

Harriet F. ("Rae") Beaubien and Ainslie Harrison, Smithsonian Museum Conservation Institute, to collaborate in El Caño Archaeological Project, at the CTPA.

Megan Gambino, Smithsonian Magazine, to visit the project of coral spawning in *Montastraea annularis* complex, on Bocas.

Dustin Kemp, University of Georgia, to study the regulation of macroalgae communities via sea urchin grazing: density-dependent factors and algal palatability, on Bocas del Toro.

Departures

Ben Turner to Gainesville, Florida, to attend the Annual Soils Symposium and Meeting, with STRI fellow Lucy Ngata.

Amazonas es bombardear todas las carreteras." Thomas Lovejoy, un líder en biología de los EU fue igual de enfático: "Las carreteras son la semilla de la destrucción de los bosques tropicales."

El científico de STRI, William F. Laurance, publicó una "Opinión" en *New Scientist* (30 de agosto): "Roads are ruining the rainforests" [Las carreteras están arruinando los bosques tropicales]. En el artículo, Laurance resume muchas de las frustraciones que los conservacionistas y científicos expresan sobre nuevas carreteras en las últimas fronteras de los bosques tropicales.

"Científicos como Salati y Lovejoy tienen la razón" insiste Laurance. "Las carreteras son los asesinos del bosque tropical." Sin no fuera por la expansión descontrolada de las carreteras, los bosques tropicales alrededor del mundo no estarían desapareciendo en una medida de 50 canchas de fútbol por minuto, un asalto que pone en peligro una amplia gama de especies y que libera billones de toneladas de gases de invernadero en la atmósfera cada año. Nunca podremos planear estrategias efectivas para disminuir la destrucción de los bosques tropicales si no confrontamos esta realidad."

US ambassador visits Bocas del Toro Station

Barbara J. Stephenson, US ambassador in Panama, visited STRI's Bocas del Toro Station (BRS) on Tuesday, September 1st, with Littleton Tazewell, director of USAID, Panama.

They visited with BRS director Rachel Collin and the rest of the Station staff. They also went diving in Bocas waters and inspected the Watershed Restoration in Old Bank project in Bastimento,

Los bosques tropicales tienen una estructura compleja que mantiene muchas especies, las que a su vez, ayudan a que el bosque prospere. Nuevas carreteras abren una caja de Pandora de tala ilegal, minería, negocios de agricultura y especulación en el valor de la tierra. En el Amazonas del Brasil, el 95% de toda la deforestación y los fuegos ocurren dentro de los 50 km alrededor de las carreteras. Además, las carreteras fronterizas ponen en peligro a indígenas que tratan de vivir sin mucho contacto con los de afuera, con la proliferación de petróleo nuevo, gas y caminos para la tala en su territorio. Los mineros en busca de oro y ganaderos con frecuencia subyugan a los indígenas.

También llegan nuevas enfermedades letales. Infecciones como la malaria, el dengue, y el HIV todos aumentan después de abrirse una nueva carretera. "La carretera propuesta entre Colombia y Panamá, por ejemplo, expondrá a una de las áreas biológicamente más importantes del mundo, la vida silvestre de Chocó-Darién, a una destrucción fuera de control.

En la sección de Opinión de *New Scientist*, los lectores pueden

enviar sus propias opiniones en pro o en contra de la noticia. La opinión de Laurance obtuvo apoyo inmediato al punto que un lector se preguntó si Eneas Salati, no tendría "toda la razón."

Otros, sin embargo, acusaron "al resto del mundo" de reclamar, como propio, un recurso global sin pagar por él. "Ellos esperan que Brasil y otros países similares no se desarrollen de la misma forma que lo hicieron ellos... países como Brasil se ven forzados a hacer lo único que pueden hacer para sus propios intereses..."

El editor de un blog se ofreció a financiar unos cuantos acres... siempre y cuando alguien pusiera una webcam para supervisar. Finalmente, "Steve" escribe: "Y quién le ha dado el derecho a Brasil y a otros de tomar decisiones sobre recursos esenciales para la supervivencia de la humanidad? ¿Por qué mantienen como rehén a todo el globo?"

Muchos piensan que Laurance simplemente dio en el clavo. "Para bien o para mal, debemos confrontar la realidad de que la única forma de conservar la naturaleza tropical es simplemente mantener algunas áreas en donde no se pueda penetrar a través de carreteras."



Rachel Collin, Littleton Tazewell and Barbara Stephenson, Bocas del Toro Research Station

More departures

Carlos Jaramillo to Paipa, Colombia, to lecture at the Congreso Colombiano de Geología.

Sergio Dos Santos to Denver, Colorado, to attend the Long Term Ecological Research Network All Scientists Meeting, Integrating Science and Society in an Ever-Changing World.

New publications

Comita, Liza M., Uriarte, María, Thompson, Jill, Johnchheere, Inge, Canjam, Charles D., and Zimmerman, Jess K. 2009. "Abiotic and biotic drivers of seedling survival in a hurricane-impacted tropical forest." *Journal of Ecology* Online.

Laurance, William F. 2009. "Roads are ruining the rainforests." *New Scientist* 2753(August 28): 15-16.

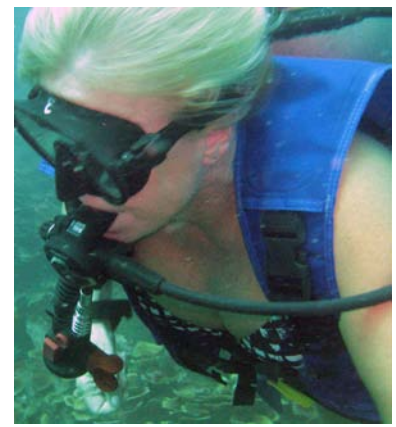
Crk, Tanja, Uriarte, María, Corsi, Fabio, and Flynn, Dan. 2009. "Forest recovery in a tropical landscape: what is the relative importance of biophysical, socioeconomic, and landscape variables?" *Landscape Ecology* 24(5): 629-642.

Palacios-Vargas, José G., Simón Benito, José C., and Paniagua Nucamendi, Jorge. 2009. "Especies nuevas de *Americanura* (Collembola: Neanuridae) de América Latina: New species of *Americanura* (Collembola: Neanuridae) from Latin America." *Revista Mexicana de Biodiversidad* 80: 431-443.

Swenson, Nathan G. and Enquist, Brian J. 2009. "Opposing assembly mechanisms in a Neotropical dry forest: implications for phylogenetic and functional community ecology." *Ecology* 90(8): 2161-2170.

Barbara J. Stephenson, embajadora de los EU en Panamá, visitó la Estación de Investigaciones de STRI en Bocas del Toro (BRS), el martes 1ro de septiembre, con Littleton Tazewell, director de USAID, Panamá. Fueron atendidos por Rachel Collin, directora de BRS y el resto del personal de la Estación. Tuvieron la oportunidad de bucear en aguas de Bocas del Toro e inspeccionaron el

Proyecto de Restauración de la Cuenca de Old Bank en Bastimentos, financiado por USAID. La visita a este proyecto, que suministrará tratamiento de aguas servidas a 144 hogares en esta comunidad, así como la restauración de los ecosistemas marinos y de manantiales con plantas nativas, fue la razón principal de la visita de Stephenson. También aprovechó para conocer las instalaciones de STRI en Bocas.



Stephenson

Petrolera Nacional supports program *Tú y el Mar con el Smithsonian*

In a presentation held at STRI's Punta Culebra Nature Center on Thursday, August 27, Petrolera Nacional, S.A. (Terpel) donated \$10,000 to Fundación Smithsonian de Panamá to fund the environmental education program "Tú y el Mar con el Smithsonian" [You and the Sea with the Smithsonian].

"Tú y el Mar con el Smithsonian" is a program designed exclusively for working with children from pre-school through 12th grade. During the educational tours, students learn about natural history in tropical oceans and the importance of conserving marine coastal zones, and are briefed on recent research conducted by STRI scientists.

Twenty-five thousand students from all over the country participate each year in a concrete learning experience. They watch, they do, they listen, they touch. Special emphasis is given to direct sensorial and cognitive experience of the natural world. The program was begun



in 1992 and is currently directed by educational specialist Lidia de Valencia.

The photo shows María Eugenia Charris of Terpel, accompanied by a group of children from Jardín de Niños, Valencia, Giselle Muschett, Fundación Smithsonian and other Terpel staff members (in red), as she presents the check to Joe Salterio, president of Fundación Smithsonian de Panamá.

Petrolera Nacional, S.A. (Terpel) donó \$10,000 a la Fundación Smithsonian de Panamá, para financiar el programa de educación ambiental "Tú y el Mar con el Smithsonian" que se lleva a cabo en el Centro Natural Punta Culebra de STRI, el jueves 27 de agosto.

"Tú y el Mar con el Smithsonian" es un programa diseñado para trabajar exclusivamente con estudiantes de pre-escolar a 12vo grado. Durante las giras pedagógicas

los estudiantes aprenden sobre la historia natural de los mares tropicales, la importancia de la conservación de zonas marinas costeras e información sobre las investigaciones recientes hechas por los científicos del STRI.

Veinticinco mil estudiantes de todo el país que participan cada año tienen una experiencia de aprendizaje concreto. Ellos observan, hacen, escuchan, tocan. Se hace especial énfasis en la experiencia directa sensorial y cognitiva con el mundo natural. Este programa empezó en 1992 y es dirigido actualmente por Lidia de Valencia, especialista en educación.

La foto muestra a María Eugenia Charris de Terpel haciendo entrega del cheque a Joe Salterio, presidente de Fundación Smithsonian de Panamá, con un grupo de estudiantes de la escuela Jardín de Niños: Valencia, Giselle Muschett, Fundación Smithsonian y otros miembros del personal de Terpel (en rojo).

PANAMA

PANAMANIAN PASSAGES

Smithsonian Latino Center, Washington DC

ABOUT PANAMA CALENDAR OF EVENTS CREDITS



Panama

As a bridge between continents and barrier between oceans, the Isthmus of Panama is often reduced to its meaning for other places and peoples. Yet Panama has always been more than a route or an obstacle on the way to somewhere else. Buffeted by the forces of geology and geopolitics, Panama is often perceived as a reflection of faraway events. Yet developments in Panama itself have helped to shape the future far beyond its own shores.

The Isthmus of Panama is a place where the ecological, economic, and political links that bind our world together have themselves been forged.

"Panamanian Passages" offers glimpses at some of the most important episodes in the history of the Isthmus of Panama from the completion of the land bridge between the Americas some 3 million years ago into the present. The following texts and images tell a story of Panama as an ecological bridge and barrier, but above all as a home to a people who have embarked on a new chapter of their history, one that promises once again to transport the world to a new place.

COMING SOON!

Panamanian Passages Exhibition opening October 5, 2009 [See Calendar of Events for details]

Panamanian Passages Online Exhibition opening October 15, 2009

CANAL ZONE
GOLD RUSH CENTENNIAL
1849-1949



CONSTRUCTION OF THE PANAMA RAILROAD WAS NECESSARY BY THE DISCOVERY OF GOLD IN CALIFORNIA, TO BEGUN IN 1848 AND COMPLETED FROM OCEAN TO OCEAN IN 1855. FROM 1855 PASSENGER TRAINS CONNECTING WITH EVERY STEAMER, CARRIED THOUSANDS OF GOLD SEEKERS ON THE WAY TO CALIFORNIA.