

Tupper 4pm seminar

Tue, Mar 11, Tupper seminar speaker will be John Parker, SI **Impacts of 'big' herbivores on plant invasions**

Paleo-Talk

Wed, Mar 12, Paleo-talk speaker will be Ellen Currano, Penn State University/ SI **Increased insect damage during Paleocene-Eocene global warming events in the Bighorn Basin, Wyoming**

Bambi seminar

Thu, Mar 13, Bambi seminar speaker will be John Parker, Smithsonian Environmental Research Center **Impacts of 'big' herbivores on evolution of plant defenses**

Arrivals

Annemarie Surlykke, University of Odense, Denmark, to conduct comparative community studies of bats, on BCI.

Sheryl Kolasinski, director, SI Office of Planning and Project Management, to meet with members of the STRI administration and OFEO personnel, regarding STRI Capital Plan.

Shelley Etnier, Butler University, to participate in a Field Course, at Bocas del Toro.

Franklin Marek, to join the project "Poison or passion: warning and attraction in a colour polymorphic frog", at Bocas del Toro.

Kristin McElligott, University of Wisconsin, Milwaukee and Sزانة Rutishauser, University of Pittsburgh, to join Field Study Course in Tropical Biology, on BCI.



Smithsonian Tropical Research Institute, Panamá

www.stri.org

March 7, 2008

David Challinor (1921-2008)

David Challinor, SI former assistant secretary for Science, passed away on Wednesday, March 5, in Washington DC, due to heart failure. He is survived by wife Joan Ridder Challinor, children Julia, Mary, Sarah, and David Thompson Challinor. Also by six grandchildren: Benjamin and Hope Challinor Richardson, Roxanne Margaret and Isabelle Challinor Smith, Mason and Nels Challinor. Also by one sister: Mary Challinor Ewing.

A graduate from Harvard and Yale, David Challinor first came to the Smithsonian in 1966, when he was hired by Smithsonian secretary S. Dillon Ripley as special assistant in tropical biology. He became director of the Office of International Activities in 1968, and beginning in 1971 served as assistant secretary for Science for nearly 20 years. He was appointed assistant secretary for Research and later science advisor to the Secretary in 1988, serving under Smithsonian secretaries Robert McCormick Adams and I. Michael Heyman. Challinor retired in 1996 keeping the position of senior scientist emeritus at the National Zoological Park.

David Challinor contributed monthly letters since 1989 to the present on a wide variety of

subjects, from the global trade of animals and birds to dragons, communication, meteorites, love, Panamanian spiders, the managing of forests, climate change, and the nature of trust. In his last letter dated February 2008, Challinor wrote about the advances in monitoring devices, highlighting historic work of STRI scientists using very small devices to study the foraging behavior of *Pelamis platurus*, an Indo-Pacific sea snake. "I like to think that this threat may have been one factor in scuttling the Atomic Energy Commission's grandiose and alarming "Swords into Ploughshares" plan to use buried atom bombs to excavate the proposed waterway," referring to a plan to construct a sea level canal through Panama in the 70's.

According to SI acting secretary Cristián Samper, "...The Smithsonian has been built on the shoulders of those dedicated leaders and staff members who came before us... referring to Challinor, one iconic figure whose "long service to the Institution helped build our traditions, values, and strengths.



To a friend, STRI's Neal G. Smith, Challinor was gentle and intelligent. "A wonderful writer with a gentle rich cultured voice. A kind man..."

"We will never run out of curious minds dedicated to filling in the gaps in what we know now, and the process should continue as long as mankind survives" writes Challinor to close his last letter.

All 219 letters can be read and enjoyed at: <http://si-pddr.si.edu/dspace/handle/10088/1074>

David Challinor, ex-subsecretario para Ciencias de SI, falleció el miércoles 5 de marzo en Washington DC, de un paro cardíaco. Sus deudos son su esposa Joan Ridder Challinor, sus hijos Julia, Mary, Sarah, y David Thompson Challinor. También dejó seis nietos: Benjamin y Hope

New publications

Estrada, C., and Jiggins, Chris D. 2008. "Interspecific sexual attraction because of convergence in warning colouration: is there a conflict between natural and sexual selection in mimetic species?" *Journal of Evolutionary Biology* Online.

Puebla, Oscar, Bermingham, Eldredge, and Guichard, Frederic. 2008. "Population genetic analyses of *Hypoplectrus* coral reef fishes provide evidence that local processes are operating during the early stages of marine adaptive radiations." *Molecular Ecology* 17(6): 1405-1415.

STRI in the news

"Seeing forest biodiversity for the trees, by Eli Kintisch. 2008. ScienceNOW Daily News: 6 March.

Smithsonian announces Global Forest Carbon Research Initiative. 2008. First Science News: March 3.

Shallow water ahead for Panama Canal. Host Steve Inskeep. 2008. NPR Morning Edition Date: March 3.

Lost logs are a barrier to turtle breeding. 2008. New Scientist, March 1.

Rainforest logging threatens sea turtles. Displaced logs on beaches are preventing endangered turtles from nesting. 2008. Nature: February 27.

Logging threatens African sea turtles. 2008. Africa, Marine Wildlife. 27 February.

Scientists devise new biodiversity method. 2008. T. V. Padma: 5 March.

Challinor Richardson, Roxanne Margaret e Isabelle Challinor Smith, Mason y Nels Challinor, así como una hermana, Mary Challinor Ewing.

Challinor se unió por primera vez al Smithsonian en 1966 reclutado por el secretario S. Dillon Ripley como asistente especial en biología tropical. Fue director de la Oficina de Actividades Internacionales en 1968, y desde 1971 fungió como subsecretario para Ciencias por cerca de 20 años. Fue subsecretario para Investigación y más tarde consejero científico del Secretario desde 1988 bajo las administraciones de Robert McCormick Adams y I. Michael Heyman. Challinor se jubiló en 1996 manteniendo una posición como científico emérito en el Parque Zoológico Nacional.

Challinor contribuyó con cartas mensuales de 1989 hasta el presente sobre una variedad de

China's wood industry fueled by illegal log imports from rainforest countries

While China has improved management of its forestry sector, expanding forest plantation cover and banning harvesting of natural forests, China's recent growth as wood-products exporter is built on timber imports –much of which are illegal– argues Bill Laurance in *Science* (Feb 29).

Noting that Chinese imports quadrupled over the past decade — from an estimated 12.5 to 45 million cubic meters — William F. Laurance says much of the growth in China's timber supplies has come in unprocessed logs from developing countries, which offer relatively economic benefits to timber-exporting nations and are often linked to illegal trade.

"Most logs imported into China are effectively stolen, with no payment of government

temas, del comercio mundial de animales, hasta dragones, comunicación, meteoritos, amor, arañas panameñas, la administración de bosques, cambio climático, y la naturaleza de la confianza.

En su última carta en febrero de 2008, Challinor escribió sobre los avances en rastreadores electrónicos, destacando el histórico trabajo de científicos de STRI que usaron pequeños rastreadores para estudiar el comportamiento de forrajeo de *Pelamis platurus*, una serpiente marina del Pacífico Indico. "Me gustaría pensar que esta amenaza fue un factor para engavetar los grandiosos y alarmantes planes de usar "espadas para arar", refiriéndose a los planes de usar bombas atómicas para construir un canal a nivel a través de Panamá en la década de lo años 70.

De acuerdo a Cristián Samper, secretario interino del

Smithsonian, "...El Smithsonian se construyó sobre los hombros de aquellos líderes y personal dedicados que vinieron antes que nosotros, refiriéndose a Challinor, una figura icónica que ayudó a la formación de los valores, tradiciones y fortalezas de nuestra Institución. Para un amigo, Neal G. Smith, de STRI, "Un escritor maravilloso con una voz amable y de gran riqueza cultural... Un buen hombre..."

"Nunca nos quedaremos sin la curiosidad humana para llenar los espacios vacíos en nuestros conocimientos actuales, proceso que debe continuar mientras sobreviva el género humano" escribió Challinor para terminar su última carta antes de morir.

Todas las 219 cartas pueden leerse y disfrutarse en: <http://si-pddr.si.edu/dspace/handle/10088/1074>



hunters, and land speculators that in turn destroy or severely degrade forests and their wildlife."

Laurance argues that developed countries are playing a key role in the destruction: it is their demand for cheap wood products that is fueling China's wood products industry. As such, says Laurance, efforts to rein in the illegal timber trade will have to target consumer preferences in wealthy nations.

"Chinese wood products corporations will have little incentive to alter their predatory behavior so long as consumers in wealthy nations blithely continue buying their products," concludes Laurance.

Taken from mongabay.com
royalties to exporting nations or environmental control over harvest operations. At least 80% of Chinese timber imports from Brazil, Cambodia, Cameroon, Congo-Brazzaville, Equatorial Guinea, Gabon, Indonesia, Myanmar, Papua New Guinea, and the Solomon Islands are illegal, according to recent estimates, with somewhat lower values (50 to 60%) for Malaysia and Russia," writes Laurance. "Unprocessed logs are easy to acquire and smuggle, and corruption in the log trade is far more prevalent than that for processed forest products."

Laurance says the illegal timber trade is driving forest degradation and deforestation in the tropics by providing impetus for road building which "increases access to forests for slash-and-burn farmers,

Global Forest Carbon Research Initiative

Forests contain nearly 40 percent of the world's carbon—more than the atmosphere contains—but too little is known about forest carbon dynamics to predict whether anthropogenic global change will increase or decrease forest carbon pools. Helene Muller-Landau (in the photo) STRI staff scientist, announced a major global research effort to quantify forest carbon pools and fluxes. She announced the new effort at the Climate Change in the Americas Symposium, held from February 25-29, at the institute's headquarters in Panama.

Researchers from more than 70 institutions working in a network of 25 forest study sites currently monitor more than 3 million trees representing approximately 8,200 species—10 percent of the world's total tree fauna. This Global Forest Observatory, which is coordinated by STRI's Center for Tropical Forest Science, was originally set up to understand biodiversity but has become an ideal tool for determining the on-the-ground effects of global change.

Working with partners at 12 of the CTFS sites, Muller-Landau will assess carbon storage and movement by quantifying the amount of carbon in trees, soils, lianas and woody debris; determining annual carbon flux at different sites; and seeking explanations for movement of carbon through forest ecosystems. Finally, scientists will scale up the study from individual sites to the larger landscape level by collaborating with regional forest ecologists and remote sensing researchers.

Global warming has been driven by the burning of fossil fuels since the start of the industrial revolution. Current levels of atmospheric carbon have not been reached in the

last 400,000 years. While there is evidence from the CTFS forest plots indicating that some forests are currently absorbing some of this excess carbon from the atmosphere, other studies suggest that global temperature increases are actually slowing tree growth and, therefore, carbon absorption. Rainfall patterns and drought frequency are expected to shift as well—also with unknown impacts on forest carbon budgets.

If forests absorb more carbon from the atmosphere than they release, this will slow the rise in atmospheric carbon dioxide and reduce associated climate change; in contrast, if forest releases exceed absorption, atmospheric and climate change will accelerate.

Initial work from the CTFS plots has already shown significant variation in the carbon stored in trees at sites across the network, as well as significant changes in carbon fluxes through time. Funding from the HSBC Climate Partnership—in addition to supporting the carbon initiative—will support the first-ever landscape-level study in the tropics to understand the role of forests in biodiversity conservation and ecosystem services, as well as carbon storage.

Los bosques contienen cerca del 40% del carbono mundial—más de lo que la atmósfera contiene—pero se sabe muy poco sobre la dinámica del carbono forestal para predecir si el cambio global antropogénico aumentará o disminuirá los depósitos de carbono forestal. Helene Muller-Landau (en la foto) científica de STRI, anunció un esfuerzo global de investigación para cuantificar los depósitos de carbono y sus fluctuaciones. El anuncio fue hecho durante el Simposio de Cambio Climático

Taken from EurekaAlert!
en las Américas, celebrado del 25 al 29 de febrero, en la sede de STRI en Panamá.

Investigadores de más de 70 instituciones que trabajan en una red de 25 sitios de estudio forestales monitorean actualmente más de tres millones de árboles que representan aproximadamente 8,200 especies—10% de la fauna de árboles del mundo. Este Observatorio Global de la Tierra, coordinado por el Centro de Ciencias Forestales del Trópico de STRI, se estableció originalmente para comprender la biodiversidad, pero se ha convertido en una herramienta ideal para determinar los efectos del cambio climático sobre la superficie de la tierra.

Trabajando con socios en 12 sitios del CTFS, Muller-Landau tiene planeado medir el depósito de carbono y su movimiento, mediante la cuantificación de la cantidad de carbono de los árboles, suelos, lianas y materia leñosa; la determinación de la fluctuación anual de carbono en los diferentes sitios; y la búsqueda de explicaciones para el movimiento de carbono a través de los ecosistemas forestales. Finalmente, los científicos ampliarán los estudios de cada sitio a un nivel mayor dentro del paisaje, colaborando con ecólogos forestales e investigadores que hacen medidas a control remoto.

El calentamiento global es el resultado de la quema de combustible fósil, que empezó a principios de la revolución industrial. Los niveles actuales de carbono atmosférico no han tenido paralelo en los últimos 400,000 años. Mientras que la evidencia recogida de estudios en las parcelas del CTFS muestran que hay bosques que absorben parte del carbono en exceso de la atmósfera, otros



estudios sugieren que el aumento en la temperatura global disminuye el crecimiento de los árboles y, por lo tanto, la absorción de carbono. Se espera que los patrones en la frecuencia de lluvias y sequías también cambien—lo que traerá impactos impredecibles en cuanto al presupuesto del carbono forestal.

Si los bosques absorben más carbono de lo que liberan en la atmósfera, habrá una disminución en el aumento de dióxido de carbono atmosférico, y el subsecuente cambio climático disminuirá. Por otro lado, si la liberación forestal de carbono es superior a su absorción, los cambios climáticos y atmosféricos aumentarán.

Trabajo inicial en las parcelas del CTFS ya muestra una variación significativa en el depósito de carbono en árboles a través de sitios en la red, lo mismo que ocurre en las fluctuaciones de carbono a través de los tiempos.

Fondos del *Climate Partnership* del HSBC, junto con el apoyo a una iniciativa de carbono, harán posible la realización de un primer estudio a nivel regional en los trópicos para comprender el papel de los bosques en la conservación de la biodiversidad y los servicios que suministran tanto el ecosistema como los depósitos de carbono.

Icon species stock by logs in Gabon

STRI's findings attracts international attention

Story:

William F. Laurance
Edited by M Alvarado
& ML Calderon
Photo: David Liggett

big concern because central Africa is currently experiencing an explosion in logging activity.

An article that will soon appear in the wildlife-conservation journal *Oryx* is already receiving widespread media attention. The article, "Does rainforest logging threaten marine turtles?", by STRI scientist William Laurance and colleagues from Gabon and the US, was featured last week in *Nature*, the *New York Times*, the *International Herald Tribune*, *New Scientist*, and many websites.

Laurance *et al.* show that logging in Gabon is unexpectedly having a serious impact on nesting sea turtles, including the critically endangered leatherback turtle. The logs are lost during down-river transport to coastal shipping yards, and often end up washed up on beaches, where they create a barrier to nesting turtles. Many turtles abort their nesting attempt or lay their eggs too close to the waterline, where they are killed by seawater. Others die when they become entangled in the logs.

Laurance's team counted over 11,000 logs along Gabonese beaches and showed that, in the most important nesting area, over 30% of the beach was inaccessible to turtles. The logs are a

The *Oryx* paper will be published later this month. You can also obtain it from: calderom@si.edu

Un artículo que pronto aparecerá en la revista sobre conservación de la vida silvestre, *Oryx*, ha recibido una amplia atención de parte de los medios. El artículo "Does rainforest logging threaten marine turtles [¿Tortugas amenazadas por la explotación maderera?], por el científico de STRI William F. Laurance y colegas de Gabón y los EU, apareció mencionado la semana

pasada en *Nature*, *New York Times*, *International Herald Tribune*, *New Scientist*, y muchos sitios de web.

Laurance *et al.* muestran que la explotación maderera en Gabón está teniendo un impacto inesperado sobre la anidación de las tortugas marinas, incluyendo la tortuga canal, que se encuentra en peligro crítico de extinción.

Los troncos que se pierden durante el transporte río abajo de las lucas hacia áreas de embarque costeros, terminan con frecuencia en playas, donde crean barreras para tortugas en anidación. Muchas de las tortugas abortan su intento de anidación, o ponen sus huevos muy cerca de la orilla, donde mueren por el agua marina. Otras mueren al enredarse entre los troncos.

El equipo de Laurance contó más de 11,000 troncos a lo largo de las playas de Gabón y mostraron que, en su área más importante de anidación, más del 30% de las playas eran inaccesibles para las tortugas. Los troncos son una gran preocupación debido a que África Central experimenta actualmente una explosión en su actividad maderera.

El artículo aparecerá este mes en *Oryx*. También puede pedirlo a calderom@si.edu