

# STRI news '99

Smithsonian Tropical Research Institute Weekly Newsletter

Panama, June 25, 1999

## Tupper Seminar

Tuesday, June 29, noon seminar speaker will be William F. Laurance, National Institute for Research in the Amazon, Brazil, and National Museum of Natural History, SI

*Ecology and Ecosystem Dynamics of Amazonian Forest Fragments*

### Abstract

The Amazon Basin is experiencing the world's highest absolute rates of forest loss and fragmentation. A 20-year study of >62,000 large ( $\geq 10$  cm DBH) trees in the central Amazon reveals that fragmented rainforests have sharply elevated rates of tree mortality that strongly influence forest dynamics, floristic composition, and microclimate. Increased tree mortality and damage in fragments lead to a substantial loss of above-ground biomass that is not offset by increased growth of woody vines and small trees. This "collapse" of biomass in tropical forest fragments worldwide could cause up to 150 million tons of atmospheric carbon emissions annually, above and beyond that produced by deforestation. Fragmented forests are also increasingly prone and beyond that produced by deforestation. Fragmented forests are also increasingly prone to fires and droughts. During the severe 1997/98 El Niño drought, rates of tree mortality rose sharply in fragmented Amazonian forests, increasing fuel loads for fires and probably leading to additional carbon emissions from biomass decomposition. Unless current land-use trends are altered, alarming synergisms between droughts and forest fragmentation are likely to become far more common in the Amazon.

## Bambi Seminar

Wednesday, June 30, Bambi seminar speaker will be William F. Laurance

*Rainforest Fragmentation and the Structure of Mammal Communities in Tropical Australia*

### Abstract

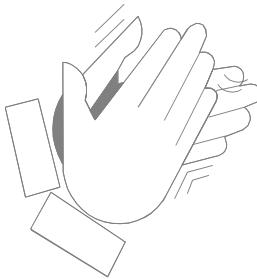
Description of the effects of rainforest fragmentation on nonflying mammals and their habitats in northern Queensland, Australia. Data from >8,000 captures or detections of 26 marsupial and rodent species reveal that edge effects have a substantial influence on many species. Fragmentation leads to dramatic changes in predator assemblages, with larger, forest-dependent species being replaced by smaller, more generalized species. Species that tolerate or exploit the matrix of modified habitats surrounding fragments (cattle pastures and regrowth forest) usually persist or increase in fragments, whereas those that avoid these habitats often decline or disappear. Some implications of these findings for forest and landscape management will be discussed.

## Arrivals

- Glenn and Jen Marangelo, University of Montana, Jun 26 - Jul 24, to work with Douglas Emlen on the project "Does development bias the evolution of beetle horns?", on BCI.
- Martin Wikelski, University of Illinois, Jun 27 - Jul 27, to work on environmental control of reproduction in spotted antbirds, in Gamboa.
- Alexander Scheurerlein, Max-Planck-
- Gesellschaft, Germany, Jun 27, to work with Martin Wikelski in Gamboa.
- Ellen Doris, Turnstone Publishing, Jun 27-30, to meet with staff of the canopy crane.
- William Laurance, National Institute for Research in the Amazon, (INPA) and SI, Jun 27 - Jul 2, to consult with STRI staff, visit facilities and present seminars, on a STRI's visiting scholar award.
- Genevieve Patenaude, University of Quebec, Jun 28 - Nov 1, to work on the FACE ring project with Catherine Potvin.
- Participants at the Panama FACE ring Project Workshop, Jun 30- Jul 2 at the Tupper Center.
- Mary Johnston and Michael Weiser, University of Oklahoma, Jun 30 - Jul 28, to work with Michael Kaspari on invertebrate responses to litter fertilization, on BCI.
- Henry Stockwell, STRI research associate, Jul 1-30, to conduct a survey of Panamanian weevils and their host plants, at Tupper.
- Marlene Elias and Gabrielle Parent, McGill University, Jul 1 - Aug 22, to work with Catherine Potvin on the effects of CO<sub>2</sub> enrichment on carbon storage and species growth in a tropical mixed-species plantation ecosystem, on the mainland.
- Peter Marko, STRI postdoctoral fellow, Jul 1-12, to work on the phylogenetic analysis of faunal turnover in tropical American arcid bivalves, at Naos.
- Kristine Ovaska, short-term visitor from the University of British Columbia, Canada, Jul 1-31, to study the courtship calls and behavior of frogs of the genus

## Departures

- John Christy, Jun 26 - Jul 1, to Lewisburg, Pennsylvania, to attend the annual meetings of the animal behavior society.
- Héctor Guzmán, Jun 27 - Aug 3, to Venezuela, to consult with colleagues at the Universidad Simón Bolívar, then to take vacation for a few weeks, and to Costa Rica to continue research on coral reefs.
- Dolores Piperno, Jun 30 - Jul 23, to Mexico, to start a project to study the origins and early dispersal of maize.



## ¡Bravo!

Como dice el dicho, "más vale tarde que nunca". Nos remontamos a la fiesta de Navidad de 1997. En esta ocasión, una persona de Procurement hizo la promesa de encargarse de la Fiesta de Navidad de 1998. Y cumplió esa promesa. No fué tarea fácil, pero con iniciativa y voluntad decidida, y ayudado por un grupo de compañeros, su Comité de Fiesta, lograron superar las dificultades que encontraban en el camino y nos dieron una fiesta a todo meter. Desde las invitaciones personalizadas, los gorros de Santa, los mariachis, y todo lo demás, todo estuvo estupendo, una fiesta para recordar. A todos, unas tardías "muchas gracias". Cabe mencionar que esta persona también se ha encargado de varios otros eventos, como las celebraciones del Día de la Madre, y Día del Padre en Tupper/Tívoli, todas muy divertidas.

¡Bravo Gabriel Martínez, muy bien hecho!

## New Seminar Coordinator

# FACE Ring Project Workshop

## Reunión del Proyecto ACELA

The principal investigators of the Panama FACE ring project will hold their first meeting at STRI from Wednesday, June 30 through Friday, July 2. The workshop aims to review the progress of the prototype project, reach a consensus on the scientific direction of the Panama FACE site, and elaborate a funding strategy. On Thursday, July 1, the Panama FACE ring project will be officially inaugurated in Sardinilla, Colon province with Panamanian, USA and Canadian officials, agencies and corporation representatives. The FACE project is a joint effort between STRI, McGill University and Brookhaven National Laboratory (BNL). Harry Barnes is the project director, Catherine Potvin (McGill) is the scientific director, and BNL is providing the technical support ••• *Los investigadores principales del proyecto ACELA (Anillo de Carbono Enriquecido en la Libre Atmósfera) en Panamá, llevarán a cabo su primera reunión en STRI del miércoles 30 de junio al viernes 2 de julio. Los objetivos de la reunión son discutir el progreso del proyecto prototipo, llegar a un consenso sobre su orientación científica y elaborar una estrategia para la captación de fondos. El proyecto ACELA de Panamá será inaugurado oficialmente el jueves 1ro de julio en Sardinilla, provincia de Colón, con la asistencia de representantes de agencias y corporaciones, así como de oficiales de Panamá, Estados Unidos y Canadá. El proyecto ACELA es un esfuerzo conjunto entre STRI, la Universidad de McGill y el Laboratorio Nacional de Brookhaven. Harry Barnes es el director del proyecto, Catherine Potvin (McGill) es la directora científica, y Brookhaven suministra el apoyo técnico.*

STRI new seminar coordinator is Egbert G. Leigh. If you wish to give a seminar please contact Egbert Leigh at BCI, tel 272-2124 • Fax 272-3065



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## Smithsonian Business Ventures

Making a significant commitment to the development of new business opportunities and expansion of its

existing publishing, retail and media enterprises, the Smithsonian is creating a separate organization within the Institution: Smithsonian Business Ventures. The first chief executive officer (CEO) of Business Ventures will be Gary Beer, former president and CEO of the Sundance Group, starting on Aug 17.

Beer, 48, led the Sundance Group, the for-profit arm of the Sundance Organization founded by Robert Redford. At the Smithsonian, he will preside over all for-profit business activities —Smithsonian magazines, museum shops, mail-order catalogs, concessions, commercial alliances, direct marketing, product development and licensing, and media content products.

Smithsonian Business Ventures' mission is to maintain and expand commercial revenue streams that enable the Smithsonian to support existing programs and create new ones, furthering its mission as an educational and research organization.

