

Tupper seminar

Tuesday, January 23, noon seminar speaker will be Michaela Hau, Princeton University

Timing of breeding in variable environments: Tropical birds as model systems

Little is known about the environmental cues and the physiological mechanisms that tropical birds use to regulate reproduction. I am investigating the endocrine mechanisms that regulate reproduction in Spotted Antbirds from the Panamanian rainforest and in Small Ground Finches from the arid Galapagos islands. Spotted antbirds live in a fairly predictable seasonal environment and show regular changes in gonad sizes and hormone titers. They may use the same photoperiodic cues as mid and high latitude species, in spite of the very small annual variation in photoperiod close to the equator. However, spotted antbirds also respond strongly to seasonal food availability suggesting a remarkable flexibility in adjustment to environmental conditions. Small ground finches exposed to rather unpredictable climate in Galapagos appear to breed whenever rains fall, and maintain regressed gonads during the rest of the year. Lack of physiological preparation for the breeding season and short-term responses to rain and food stimuli suggest a striking flexibility in the regulation of breeding in small ground finches. I suggest that tropical birds can serve as model systems to uncover endocrine adaptations to different environments. Unraveling the neuroendocrine mechanisms behind flexibility in reproductive timing will clarify whether differences found between temperate and tropical birds represent variations of the same basic mechanism or instead reflect fundamental divergence in physiological control systems.



Smithsonian Tropical Research Institute, Panamá

www.stri.org

January 19, 2001

Summer camp in Culebra



A group of 14 children from 6-12 years old are participating in a summer camp organized by STRI at the Marine Exhibition Center in Punta Culebra from 8am to 12 every day from January 15 through 19. A second summer camp for children of the same age is scheduled for January 29 through February 2. In the photos, Argelis Ruiz (top, right) shows the children the use of Culebra telescopes and Lidia de Valencia (bottom, left) directs them in putting together the pieces of a puzzle with a map of the earth.

Photos: Marcos A. Guerra



Un grupo de 14 niños de 6 a 12 años están participando en un campamento de verano organizado por STRI en el Centro de Exhibiciones Marinas en Punta Culebra de 8am a 12m todos los días del 15 al 19 de enero. Un segundo campamento para niños de estas edades se llevará a cabo del 29 de enero al 2 de febrero. En las fotos, Argelis Ruiz (arriba a la derecha) les enseña a los niños el uso de los telescopios de Culebra, y Lidia de Valencia (abajo a la izquierda) los dirige mientras arman un rompecabezas del globo terráqueo.

Campamento de verano en Culebra

STRI publication in *Science* predicts widespread loss of rainforest in Brazil

According to a publication in this week of *Science* (January 19, 2001) by William Laurance and colleagues at STRI's Biological Dynamics of Forest Fragments Project, as much as 42% of the Amazon River basin of Brazil will be seriously damaged or lost altogether in the next two decades if that country's infrastructure development projects go forward as planned. Laurance's team developed comprehensive computer models that integrate current data on deforestation, logging, fires, mining, roads, parks and reserves with information about a host of existing and planned infrastructure projects, including the construction of railroads, highways and hydroelectric dams; the installation of power lines and gas lines; and the channelization of rivers. According to the

Bambi seminar

Thursday, January 25, Bambi seminar speaker will be Seirian Summer

A short film about ants

This is a video focussing on the work of a (the) European group of people working on leaf cutter ants!

Arrivals

Sonya Clegg, San Francisco State University, California, Jan 22 - Feb 18, to work on the natural selection on wintering populations of yellow warblers in Panama and genetics of migrant bird populations, at Galeta and Naos.

Tanja Schleicher, University of Würzburg, Germany, Jan 24 - Feb 28, to work with Gerhard Zotz on the ecology of tropical epiphytes, on BCI.

Gerhard Zotz, University of Würzburg, Germany, Jan 25 - Feb 28, to continue with research projects, on BCI.

STRI in the news

Cerca del Mar in the Revista section of *La Prensa*, January 16. The article describes the outreach activities of the marine education program conducted by STRI in Punta Culebra in the Amador Causeway.

For sale

Daihatsu Charade '91, excellent condition, AC, 16 valve engine, 63,000 km. New parts: tires, brakes, radiator, exhaust, alternator. \$3,500 negotiable. Tel 227-6022 ext 2344 E-mail gottsber@tivoli.si.edu

authors, even under the more optimistic of the two scenarios modeled, the Brazilian Amazon will be drastically altered by current development schemes and land-use trends over the next 20 years.

Publicación de STRI en Science predice pérdida de bosques en Brasil

De acuerdo a un artículo publicado en el número de esta semana de *Science* (Enero 19, 2001) por William Laurence y colegas del Proyecto de Dinámica Biológica de Fragmentos de Bosques de STRI, un porcentaje tan alto como 42% de la cuenca del Río Amazonas en Brasil podría perderse o verse seriamente afectada en las próximas dos décadas, si los proyectos de desarrollo de infraestructura de ese país se llevan a cabo de acuerdo a los planes. Laurence y sus colegas desarrollaron modelos de simulación en computadora integrando información reciente sobre deforestación, tala de árboles, fuegos, explotación de minas, caminos, parques y reservas, junto con una gama de proyectos de infraestructura incluyendo la construcción de vías ferroviarias, carreteras y represas hidroeléctricas, la instalación de líneas para la conducción de gas y electricidad, y la canalización de ríos. De acuerdo a los autores, aún en el más optimista de los escenarios simulados el Amazonas brasileño se alterará seriamente por los esquemas actuales de desarrollo en los próximos 20 años.

Operador de grúa temporal

STRI requiere los servicios de un operador de grúa temporal para trabajar en el Parque Natural Metropolitano y en Fuerte Sherman en Colón cuando otros operadores estén de vacaciones. Los candidatos deberán tener al menos cinco años de experiencia como operadores de grúa idóneos, preferiblemente en grúas de torre permanente, excelente estado de salud y tener licencia de conducir vigente. La persona seleccionada será responsable por la operación y mantenimiento de la grúa, generadores, góndolas, etc. Deberá trabajar en turnos rotativos, en días feriados y fines de semana, y conducirá el vehículo asignado al proyecto transportando científicos y equipo. Este trabajo exige alto sentido de responsabilidad y puntualidad. Aquellos interesados deberán presentar su hoja de vida, copia de certificados y los nombres y teléfonos de tres referencias recientes, al Departamento de Recursos Humanos, Instituto Smithsonian de Investigaciones Tropicales, Apartado 3353, Balboa, Ancón, República de Panamá. Se recibirán solicitudes hasta el 02 de febrero de 2001.

From the Visitor's Office

No STRI I.D.'s will be issued on Friday, February 2, 2001.

No se procesarán carnets de identificación de STRI el viernes 2 de febrero.

New STRI publications

Dewalt, Saara J., Schnitzer, Stefan A., and Denslow, Julie S. 2000. "Density and diversity of lianas along a chronosequence in a central Panamanian lowland forest." *Journal of Tropical Ecology* 16: 1-19.

Gehrig, H.H., Winter, Klaus, Cushman, J., Borland, A., and Taybi, T. 2000. "An improved RNA isolation method for succulent plant species rich in polyphenols and polysaccharides." *Plant Molecular Biology Reporter* 18: 369-376.

Schnitzer, Stefan A., and Carson, Walter P. 2000. "Have we forgotten the forest because of the trees?" *Trends in Ecology and Evolution* 15(9): 375-376.

Schnitzer, Stefan A., Dalling, James W., and Carson, Walter. 2000. "The impact of lianas on tree regeneration in tropical forest canopy gaps: evidence for an alternative pathway of gap-phase regeneration." *Journal of Ecology* 88: 655-666.



Published weekly by the STRI Office of Education
Marialuz Calderon, editor
Adriana Bilgray, assistant editor
Marcos Marcos Marcos A. Marcos, photographer
Georgina de Alba, director

Headline photo: *Polythrix anginus* (family: Hesperiiidae).
by Annette Aiello.