

# STRI newsletter

May 12, 1995

SMITHSONIAN TROPICAL RESEARCH INSTITUTE - Apartado 2072, Balboa, Panamá

No. 19

## TUPPER CENTER SEMINARS

Tuesday, May 16, noon seminar speakers will be Richard Condit, Center for Tropical Forest Sciences, STRI

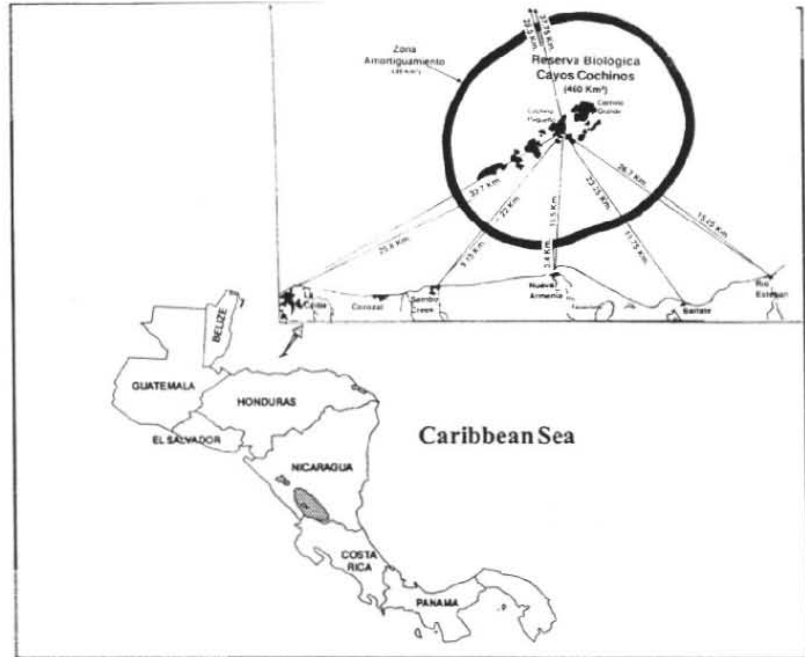
*Tree Diversity Estimates Using Different Plot Sizes: An Assessment from 50ha Plots in Panama, India, and Malaysia*

### Abstract

Fundamental to measurements of tree diversity in tropical forests is an understanding of how species counts in small plots correlate with the diversity of an entire forest. The network of 50 ha plots from very different forests are available for comparison: in seasonal dry forest at the Mudumalai Reserve in India, there are 71 species in 50 ha; in seasonal moist forest at Barro Colorado Island in Panama, there are 303 species in 50 ha, and in non-seasonal moist forest at the Pasoh Forest in Malaysia, there are 817 species in 50 ha (stems  $\geq 10$  mm dbh censused at each). Despite the large diversity differences, species-stem curves for the 3 plots have remarkably similar shapes. Curves for stems  $\geq 10$  mm dbh and for stems  $\geq 100$  mm dbh essentially coincide, so that a sample of stems from the smaller size class includes the same number of species as a sample of the same number of stems from the larger size class. Log-log species-stem curves for the 3 plots diverge until 1000-2000 stems have been sampled; above this they are parallel. Thus, samples of fewer than 1000 stems have been sampled; above this they are parallel. Thus, samples of fewer than 1000 stems would underestimate the diversity differences between the plots. These results suggest fairly simple, general rules for estimating total diversity from moderate samples of stems.

### Note:

No Bambi seminar scheduled for this coming week.



Location of Cayos Cochinos Biological Reserve ••• Localización de la Reserva Biológica Cayos Cochinos (por Steve Paton)

## New Center for Marine Research Opened in Honduras

### Nuevo Centro de Investigación Marina en Honduras

taken from press release by William Schulz

A major field station for marine biological research in the Caribbean was opened on Saturday, May 6, near the Bay Islands of Honduras, by a consortium of private partners in Honduras and Switzerland, the Honduras Coral Reef Foundation, and a partnership of STRI and the Honduran government. The opening ceremony was attended by Honduran President Dr. Carlos Roberto Reina.

"The experience and international reputation of the Institute in the field of tropical biology were the reasons for the invitation made to STRI by this country, its private entrepreneurs and the AVINA Foundation of Switzerland..." said Elena Lombardo, in her speech during the inauguration of the station.

The new station will be the site for numerous studies of Caribbean coral reefs and other marine habitats, as well as a new initiative in the sustainable development of fishing and tourism. "With our Swiss and Honduran partners, STRI plans to operate a model facility that combines a comprehensive marine-science program with outreach to people in local communities whose livelihoods depend on the abundant marine resource of Cayos Cochinos..." says Ira Rubinoff. The field station includes solar powered laboratory and living space for 15 scientists, housing for a station manager, a new pier with wet-lab facilities, including a seawater system for aquaria, with access to the NOAA set up meteorological and hydrological stations at the pier; and a dining facility

that doubles as a auditorium and commons for researchers using the station. Scientists will have access to Cochino Pequeño by air or by boat from the mainland city of La Ceiba, Honduras. Creating the new reserve involved numerous challenges for Héctor Guzmán, STRI, who is the director in charge of developing the reserve management plans.

The opening of the new station coincided with the first Smithsonian sponsored expedition to Cayos Cochinos aboard the *Urracá* by a team of scientists, including researchers from *Universidad Nacional Autónoma de Honduras*. They carried out a variety of studies aimed at better understanding the area's natural resources, including forest and mangrove habitats on the islands. Guzmán says the expedition would result in a more complete picture of the kinds of research opportunities that exists for scientists in several disciplines, in the area.

## PEOPLE

### Arrivals

- Joseph Swihart, SI Office of Contracting and Property Management, May 14-19, to give a training course and review procedures at STRI.
- Caroline Michalski, Barbara Hayford and Judy Jolly, University of Kansas, May 13-30, to carry out studies on the diversity of Coleoptera, Diptera and Hymenoptera (Insecta), at Gamboa.
- James Ashe and David Brzoska, University of Kansas, May 13-19, to study the biodiversity and community structure of forest floor Coleoptera, in Gamboa and Fortuna.
- Stephen Yanoviak, University of Oklahoma, May 15-15 Oct, to study the ecology of animal communities in water filled treeholes on BCI.
- Nick Upton and Kevin Flay from Green Umbrella Ltd, U.K., May 15-7 Jun, to film the documentary "Beetlemania", on mainland.
- Gerardo Avalos, Mellon Predoctoral fellow from the University of Missouri, May 15-15 Aug, to work on plant physiology, at Tupper.
- Robert Dudley, University of Texas, May 15-15 Jul, to continue studies on the ecophysiology of butterfly migrations in Central America, at BCI.
- Hans Bohnert, Mellon Senior fellow and Christine Michalowski, both from the University of Arizona, May 17-24, to see on the metabolic pathways for assimilation of carbon dioxide in vascular plants, at Tupper.
- Maria Bridarolli, STRI Latin American intern from the *Universidad Nacional de Rio Cuatro, Argentina*, May 17-20 Aug, to join Stanley Rand's studies on the Túngara frog.
- Lori Dries, May 18-14 Aug, to work with Michael Ryan and A. Stanley Rand, in Gamboa.

- John Pickering, University of Georgia, May 18-13 Jul, to continue a Panamanian insect diversity survey and inventory, on mainland.

### Departures

- Richard Condit, May 18-26, to Washington D.C., for the annual meetings of the CTFS at SI.

### Correction ••• Corrección



On Friday, May 5th, this Newsletter published, on page 4, a photograph of Manuel Lombardo, from the Environmental Education Office, Ministry of Education, giving certificates to children, under the name of Francisco Escoffery, Marketing Manager of the *Banco Continental*, also at the event to present gifts to this group of winning children of the PROMAR drawing contest. Our appologies.

### At the Tupper Center

- Mon, May 15 ■ NSF Group Meeting, Small Meeting Room, 1pm
- Tue, May 16 ■ Communication Meeting, SMR, 10am
- Property Management Training, LMR, 8:30am
- Noon seminar by Richard Condit, STRI, AUD

### At the Culebra Marine Reserve

- Tue, May 16 through Fri, May 19 *Academia Bilingüe Arabe Panameña*
- Sat, May 20 *Instituto Enrico Fermi*

### At Barro Colorado Island Station

- Sat, May 13 *Academia Santa Maria (Colon)* and visitors from Panama, Spain and the U.S.
- Sun, May 14 *Instituto Justo Arosemena*
- Sat, May 20 *Colegio Jose Maria Branco* and visitors from Panama city.
- Sun, May 21 *Nova Vida*

## ANNOUNCEMENTS

### Research Assistant Available

Martin Schlaepfer, McGill University, Canada, former research assistant to Ross Robertson in San Blas, offers his services to work at STRI either in marine or terrestrial projects, from May 28 through December 1, 1995. Interested please call the STRI Office of Fellowships and Education.

**STRI Bibliography 1994*****La Bibliografía de STRI de 1994***

The annual compilation of STRI supported publications started recently. The first draft of the bibliography was only distributed through "Group-Wise" at STRI for additions and corrections. In approximately 1 or 2 weeks, the Office of Fellowships and Education will distribute a hard copy of the second version of the bibliography to the rest of the scientific community, and the alumni outside Panama. Even though we already have 204 citations, we don't have all the reprints. Those in "Group-Wise" will receive notice of the missing publications soon. The hard copy version of the bibliography highlights them. Before closing the compilation process, we will put the last version of the bibliography in "Groupwise" for a last view. We will highly appreciate your cooperation, since we are trying to design a faster way to publish the annual product of STRI research.

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Recientemente, se dió inicio a la compilación anual de las publicaciones de STRI de 1994. El primer borrador de la bibliografía fue distribuida únicamente a través de "GroupWise" en STRI para su revisión. En 1 ó 2 semanas, la Oficina de Becas y Educación distribuirá el segundo borrador de la bibliografía en fotocopias al resto de la comunidad científica. Aunque ya tenemos 204 citas de las publicaciones, no tenemos copias de todas. Los que están en "GroupWise" pronto recibirán la lista de las publicaciones que faltan. En la bibliografía en fotocopia aparecerán marcadas las publicaciones faltantes. Antes de cerrar el proceso de compilación de 1994, la versión final de la bibliografía se pondrá en "GroupWise" para una última revisión. Mucho agradeceremos su cooperación en este sentido, ya que estamos tratando de diseñar una forma más rápida y eficiente de publicar el producto anual de las investigaciones de STRI.



Last week, Edilberto Mazúa, Emberá community leader of the Tortuga village, Ucurgantí River in Darién, received from Maria Luz Calderón and Stanley Heckadon, 12 packages of clothing, kitchenware and food for children, donated by the STRI Community to the families that lost their homes during the fire that struck their villages on March 31. Mazúa was very appreciative to STRI for this prompt support ••• La semana pasada, Edilberto Mazúa, dirigente Emberá de la comunidad de Tortuga, Río Ucurgantí, Darién, recibió de manos de Maria Luz Calderón y Stanley Heckadon, 12 bolsas de ropa, utensilios de cocina y comida para niños, donados por la comunidad de STRI a las familias que perdieron sus hogares durante el fuego que azotó esta comunidad indígena el pasado 31 de marzo. Mazúa mostró un profundo agradecimiento por la rápida respuesta de STRI a su gente. (Foto: M.A. Guerra)

**MISCELLANEOUS****In the Search of Bones ••• En la Búsqueda de Huesos**

Claudio Carrasco, research assistant at BCI, is interested in studying the mammal population in the Island. He will appreciate anybody finding bones of any mammal (especially the skull) to bring them to the main labs or let him know about its location ••• Claudio Carrasco, asistente de investigación en Barro Colorado está interesado en estudiar las poblaciones de mamíferos en la Isla. Si alguien encuentra huesos de cualquier mamífero (especialmente de la cabeza), mucho apreciará que los lleve a los laboratorios principales o le deje saber sobre dónde puede localizarlos.

**Se Vende**

Computadora Packard Bell 386 (120 Mega • 2 RAM expandibles a 16). Incluye DOS, Lotus y Words. Impresora Panasonic KXP 1124i y Monitor - \$950. Para mayores informes comunicarse con Mercedes de Denis, después de horas de trabajo al 23-2467.



Our Eric Amado ••• Nuestro Amado Eric

Text by J.R. Perurena(\*) Photo by M.A. Guerra

There is a popular saying in Panama which translates: "eyes which do not see yield a heart which cannot feel". The truth of that saying became real to me and Marcos Guerra this past Saturday, when we visited Eric Amado in Tinajita, for the first time. Eric was somewhat shy at first. To break the ice, we started talking with his parents Jorge Luis (our co-worker) and his wife Edilma. Among other things, we discussed Eric's drinking water requirements. Eric must drink potable water. This water is not always available. Their dwelling consisted of two rooms until recently; Jorge Luis built a separate 8'X10' concrete block room for Eric, since the boy had to be discharged from a four-month hospital stay. Even then, he was forced to go back to the hospital for a 10-day stay after his first day at home.

Soon enough, Eric started to chat... for Christmas, he wants a soccer ball, a yellow boat, a fire truck, a blue car and a green helicopter. He loves to kick balls, cans, anything; but he must be careful because of the catheter and dialysis bag... So, now he draws! He is 5, with a sharp mind... He has an answer to everything. He gave me many

reasons why he could still love his cat, while not sharing his bread with it. Eric Amado loves bread: soft, hard, fresh, old; he likes them ALLLL. "But you don't have to give him bread to show you love him... says Eric..." What else do you like eating? "Apple juice!.. grape juice, eggs, tortilla, empanada, corn, chicken and rice." He likes taking toys apart; he explained very well why it is not a bad thing to do so...

He draws with both hands. He plays with needles and syringes. He would extend the lead in my mechanical pencil and traverse his shirt and my eraser with it. He knows how to incline the imaginary needle (my mechanical pencil) on his arm so that it will go into a vein. I said I didn't like needles because they hurt. He replied they don't! While talking with his parents, I suddenly felt cold water striking my back; I had been shot with a 20cc syringe. He went to watch TV: "he is a walking TV guide" his mother says. TV helps to keep him away from the yard or soccer... and colds.

Eric Amado has a "chronic renal insufficiency in its terminal phase due to a "congenital bilateral renal hypoplasia and acute anemia". It's imperative for him to undergo strict peritoneal dialysis treatment, in an almost sterile environment and surface 3 times a day. His mother does it at home. This will continue to buy him time until he gets a kidney transplant. This is not done in Panama. The least expensive place for the transplant is Colombia, for \$15,000. Eric Amado takes *Recorman 2000* three times a week to keep his hemoglobin up. Because of his size, he is only administered half of the 14 oz. vials each time—the rest of the content is discharged: this is a \$100/a box medication— He takes *Nefinipina* for his blood pressure. According to his mother, the CSS ran out of it. He gets *Fermarato*, B complex, folic acid, Calcium and *Pepsamar*. He also struggles with asthma.

Sometime later, I was invited to enter Eric Amado's new room. Jorge Luis did a fine job building it. A new bed which was recently purchased with funds raised in the April Happy Hour. A small table for medical supplies as his mother changes the peritoneal dialysis was partly donated. There is a new sink and a paper towel rack made by Jorge. The room has suspended ceiling to keep dust and dirt away. Jorge Luis couldn't purchase Miami windows so he installed ornamental blocks for ventilation. His mother got a curtain with cartoon characters to keep part of the dust from entering the room directly. The concrete floor is mopped with chlorine daily. Ceramic tiles are out of the question for now since there is a great need of an indoor toilet. He also needs a set of drawers for clothing. The April Happy Hour provided the small washer-dryer unit for drying Eric Amado's clothes. Other small things such as paper towel and Ivory soap are needed continuously.

By noon, Eric Amado had been teasing Marcos for a while now. Then he took his hand and asked him to come and see how his mother changed his bag. Marcos had been waiting for the opportunity to take photos. It takes from 15 to 20 minutes with a surgery mask; yet Eric does not like wearing it. The procedure produces pain for the child, but he is brave young man. By that time, he is so tired and swelled that he actually wants it.

Please consider giving towards Eric Amado's Surgery Fund being administered by the STRI's Office of Human Resources. \$15,000 sounds like a lot of money but it can be raised. You may also think of any other way to help. Let us know about it.

(\*) You may ask José Ramón Perurena for details and suggestions. He is a PERUREN groupwiser.