

Tupper 4pm seminar

Tue, Mar 14, 4pm seminar speaker will be Jesus Mavarez, STRI

Speciation by hybridization in Heliconius Butterflies

Bambi seminar

Thursday, March 16, Bambi seminar speaker will be Janet Jander, Naturvardsenheten Lansstyrelsen Dalarna, Sweden

Conservation and ecotourism - hand in hand in a Swedish National Park

Arriving next week

Manfred Ayasse, University of Ulm, to conduct comparative community studies of bats, on BCI.

John Wares, University of Georgia, to study the global phylogeny of Chthamalus, at Naos and Bocas.

Helmut Elsenbeer, University of Postdam, to join the group conducting a soil mapping survey of the Barro Colorado Nature Monument.

Ingo Wehrtmann, Universidad de Educación a Distancia de Panamá, Yolanda Camacho, Leslie Harris, Universidad de Costa Rica, Natural History Museum of Los Angeles County, to join Peter Glynn's cruise to study the effects of El Niño on coral reefs.

Orland Vargas, Organization for Tropical Studies and Maureen Donnelly and James Watling, Florida International University, to study the geographic and temporal variation in chemical defense of the dendrobatid frog, *Dendrobates pumilio*, and its relationship to diet, color/pattern, and forest structure, on Bocas del Toro.



Smithsonian Tropical Research Institute, Panamá

www.stri.org

March 10, 2006



Rubinoff



Robinson



Rand



Ryan

STRI announced the "A. Stanley Rand Fellowship" during a memorial celebration at SI

More than a hundred friends, colleagues and former students of Stanley Rand gathered at the Smithsonian's Ripley Center on Friday, February 24, for a memorial celebration. Mike Ryan of the University of Texas at Austin, Stan's long-time collaborator and friend, presided the ceremony, and speakers included Ira Rubinoff, (who also read a statement from Mike Robinson), Ron Heyer of the National Museum of Natural History, Gene Morton of the National Zoo and Robin Andrews of Virginia Polytechnic Institute. Pat Rand, children Hugh, Margaret and Katherine, their families, and Stan's brother and family were also a part of the celebration.

Stan belonged to the founding generation of STRI scientists, and dedicated his life to tropical biology, especially to evolutionary studies of the behavior of amphibians and reptiles. His pioneering studies, extensive knowledge of natural history and evolutionary biology, insight and wit, attracted a large cadre of collaborators and students to Panama, many of whom have launched highly successful careers in part through their association with Stan.

In recognition of Stan's efforts to foster and promote the careers of Latin American biologists and his belief in the importance and value of organism-driven, field-based

tropical research, STRI has established an A. Stanley Rand Fellowship, to be awarded preferentially to a Latin American student who is studying animal behavior or ecology. This Fellowship fund, which has already grown to almost \$15,000, will honor Stan's memory and lifetime scientific achievements. We hope to award the first Stan Rand Fellowship at STRI's fellowship meeting later this month.

Contributions or inquiries may be sent to: Lisa Barnett, Smithsonian Tropical Research Institute, 1100 Jefferson Drive, Suite 3123, MRC-705, Washington, DC 20013-7012

More arrivals

Jennifer Holland, National Geographic, to conduct comparative community studies of bats, on BCI.

Elizabeth Kalko, STRI, to continue bat research, on BCI.

Eileen, Nannette and William Hebet and Kasey Fowler, University of Nebraska, to explore the neural basis of complex behavior in amblypygids (Class Arachnida, Order Amblypygi), on BCI.

Douglas Robinson, Oregon State University, to do a spotmapping birds on the BCI tree plots, extension of ESP bird monitoring efforts, on BCI.

Brianne Addison, University of Missouri, to study the life history physiology nexus constraints on the evolutionary diversifications of avian life histories, in Gamboa.

Randy Moore, Oregon State University, to study avian community dynamics, on BCI and Gamboa.

Corey Tarwater, University of Illinois Urbana-Champaign, to monitor the dynamics of avian communities and population in Central Panama.

Dirk Holescher, Institute of Soil Science and Forest Nutrition, University of Goettingen, to study the NITROF-Impact of elevated nitrogen input on the biogeochemistry and productivity of tropical forest, on BCI, Gamboa and Fortuna.

Natalia Biani, University of Texas at Austin, to study the sensory systems of nocturnal and diurnal bees, at Tupper.



Photo by Daniel H. Sandweiss

Nature: Early maize agriculture and interzonal interaction in southern Peru

An ancient culture in southern Peru cultivated corn some 4,000 years ago, about a thousand years earlier than previously believed, suggests a new study by Smithsonian scientists Linda Perry, National Museum of Natural History (NMNH) and Dolores Piperno, STRI and NMNH), with colleagues Daniel H. Sandweiss and Kurt Rademaker from the University of Maine, Michael A. Malpass, from Ithaca College, and Adam Umire and Pablo de la Vera, from Perú.

The article "Early maize agriculture and interzonal interaction in southern Peru" published by *Nature* (Mar 2), presents results from excavations in the Andean highland town of Waynuna, where corn leaf and corncob remains were found in the ruins of a house at least 3,600 years old.

"The presence of this edible root confirms archeologists'

suspicions that people in the eastern lowland forests—where the plant was grown—made contact with people in the highlands—where the root was consumed" writes Nicholas Bakalar in his review "Corn, arrowroot fossils in Peru change views on Pre-Inca culture" for *National Geographic*.

Asked by *National Geographic*, former STRI fellow Jose Iriarte, professor of archaeology at the University of Exeter in England, said that the research was "a welcome expansion in the application of microbotanical techniques to the Central Andean highlands." "Plants are one of the most important items that people exchanged in the past," he added. "And documenting these interactions will prove crucial to unraveling the connections between the eastern tropical forest and the Andean highlands on the brink of complex societies."

STRI Science Symposium

The STRI's Science Symposium organized by Allen Herre, will be held on Wednesday, March 22. Mark your calendars!

Congratulations!

To Robert and Analissa Joyce, for the birth of their daughter Analissa, on February 28, Panama City. She weighed 6lb 1oz.

Departures

William F. Laurance to New York, to attend a workshop at the Columbia University, on the use of carbon-offset funds to reduce deforestation; and give a seminar.

Rachel Collin, to Louisiana, to give a seminar at the University of Louisiana in Lafayette.

Todd Capson, to Los Angeles, to attend the "Tar River Drug Discovery Meeting."

STRI on TV

Don't miss tomorrow's "K-nes y Algo Más", on local television channel 7, "TeleSiete", at 12:30pm, where a young reporter will present BCI through an interview with Chelina Batista. This will be the second video produced by Arkheim Productions, at no cost to STRI.

New publications

Bowen, Brian W., Bass, Anna L., Muss, Andrew, Carlin, J.L., and Robertson, D. Ross. 2006. "Phylogeography of two Atlantic squirrelfishes (Family Holocentridae): exploring links between pelagic larval duration and population connectivity." *Marine Biology* Online.

More publications

Engelbrecht, Bettina M.J., Dalling, James W., Pearson, Timothy R.H., Wolf, Robert L., Galvez, David A., Koehler, Tobias, Tyree, Melvin T., and Kursar, Thomas A. 2006.

"Short dry spells in the wet season increase mortality of tropical pioneer seedlings." *Oecologia* Online.

Herre, Edward Allen. 2006. "Barcoding helps biodiversity fly." *Proceedings of the National Academy of Sciences* 14(11): 3949-3950.

Herrera-Cubilla, Amalia, Dick, Matthew H., Sanner, Joann, and Jackson, Jeremy B.C. 2006. "Neogene cupuladriidae of tropical America. I: Taxonomy of recent Cululadria from opposite sides of the isthmus of Panama." *Journal of Paleontology* 80(2): 245-263.

Kajobe, Robert, and Roubik, David Ward. 2006. "Honey-making bee colony abundance and predation by apes and humans in a Uganda forest reserve." *Biotropica* 38(2): 210-218.

Laurance, William F. 2006. "Diversity in tropical forests." *Science* 311: 1376.

Laurance, William F., Nascimento, Henrique E.M., Laurance, Susan G., Andrade, Ana C.S., Fearnside, Philip M., Ribeiro, Jose E.L.S., and Capretz, Robson L. 2006. "Rain forest fragmentation and the proliferation of successional trees." *Ecology* 87(2): 469-482.

**Safety number:
212-8211**



IACUC training for sea turtle care

A training course for sea turtle conservation, rehabilitation, captive care, medicine and surgery was offered by the Institutional Animal Care and Use Committee (IACUC) from February 16-18. The workshop, led by Terry Norton, from St. Catherine Island Wildlife Center, was attended by fifty participants, mostly veterinary students. Seven members of the STRI staff, Inez Campbell, Reinier Vargas, Benjamin Ordoñez, Franklin Guerra, Gabriel Thomas, Argelis Ruiz and Miriam Venegas, and Nora Lapenta (STRI and IACUC) also participated in the workshop.

The seminar was possible thanks to St. Catherine Island Wildlife Center through voluntary work by Terry Norton, the Veterinary School at the University of Panama, and STRI.

The participants were trained in basic monitoring of the health condition of the turtles, nourishment and assessment of the area where turtles are kept. Recommendations by instructor Norton to improve the habitat of the turtles will follow the workshop.

El Institucional Animal Care and Use Committee (IACUC) ofreció un curso de entrenamiento para la conservación de tortugas marinas, rehabilitación, medicina, cirugía y cuidado de tortugas en cautiverio, del 16 al 18 de febrero. En el taller, liderado por Terry Norton, de St. Catherine Island Wildlife Center, hubo 50 participantes, la mayoría estudiantes de veterinaria. Siete miembros de la comunidad de STRI, Inez Campbell, Reinier Vargas, Benjamín Ordoñez, Franklin Guerra, Gabriel Thomas, Argelis Ruiz y Miriam Vanegas, y Nora Lapenta, de STRU e IACUC también participaron en el taller.

El seminario fue posible gracias al St. Catherine Island Wildlife Center a través del trabajo voluntario de Terry Norton, la Facultad de Veterinaria de la Universidad de Panamá y STRI.

Los participantes se entrenaron en el monitoreo básico de las condiciones de salud de las tortugas, alimentación y la supervisión del área donde se mantienen a las tortugas.

More publications

Medina, E., Aguiar, G., Gomez, Marcela S., Aranda, Jorge E., Medina, J.D., and Winter, Klaus. 2006.

"Taxonomic significance of the epicuticular wax composition in species of the genus *Clusia* from Panama." *Biochemical Systematics and Ecology* 34: 319-326.

Milton, Katharine, Giacalone, Jacalyn, Wright, S. Joseph, and Stockmayer, Gretchen. 2005. "Do frugivore population fluctuations reflect fruit production? Evidence from Panama." In: J. Lawrence Dew, and Boubi, Jean Philippe (Eds.), *Tropical fruits and frugivores: The search for strong interactors*: 5-35. The Netherlands: Springer.

Villarreal A., Juan Carlos, Duff, R.J., and Renzaglia, K.S. 2005. "Anatomical and ultrastructural innovations in *Leiosporocero's dussii* (Steph.) Hassel." *XVII International Botanical Congress - Abstracts*: 451.

Wang, Yung-Ho, and Augspurger, Carol K. 2006. "Comparison of seedling recruitment under arborescent palms in two Neotropical forests." *Oecologia* 147(3): 533-545.

Whiles, Matt R., Lips, Karen R., Pringle, Catherine M., Kilham, Susan K., Kilham, Susan S., Bixby, Rebecca J., Brenes, Roberto, Connelly, Scott, Colon-Gaud, Jose Checo, Hunte-Brown, Meshagae, Huryn, Alexander D., Montgomey, Chad, and Peterson, Scot. 2006. "The effects of amphibian population declines on the structure and function of Neotropical stream ecosystems." *Frontiers in Ecology and the Environment* 4(1): 27-34.

science in progress:

How does the biggest, sweetest, and softest survive?

Story: Ingrid Parker
Edited by ML Calderon
Photos by MA Guerra

Many Panamanians love the sweet purple pulp of the caimito fruit, and in some areas, gardens aren't complete without the beautiful *Chrysophyllum cainito* fruit tree. Through the process of sharing seeds from the biggest, sweetest, and softest fruits, people have been changing the gene pool of these trees for centuries.

At the same time, wild populations of caimito trees are natural to tropical forests in Panama. The wild fruit of caimito is greenish-pink and the size of a grape; their cultivated cousins are deep purple, and the size of an orange. Wild fruits are tougher, full of latex, and have small seeds.

Ingrid Parker, professor at the University of California doing research at the Smithsonian Tropical Research Institute in Panama, studies how the different traits of caimito fruits influence the survival and success of caimito in the wild.

Using wild and cultivated fruits in field experiments, Parker aims to unravel how humans have influenced the evolution of the caimito tree, and how this traditional "genetic engineering" might affect the future of wild populations.

Muchos panameños adoran comer la dulce pulpa púrpura del caimito, y en algunas áreas, los jardines no están completos sin el hermoso árbol *Chrysophyllum cainito*. A través del proceso de seleccionar y compartir semillas de caimito que tienen las frutas más grandes, más dulces y más suaves, la gente ha estado cambiando el banco genético de estos árboles por siglos.

Al mismo tiempo, las poblaciones silvestres de caimito son nativas de los bosques tropicales de Panamá. La fruta silvestre del caimito es entre verde y rosada, y del tamaño

de una uva; sus primos cultivados son púrpura intenso, y del tamaño de una naranja. Las frutas silvestres son más duras, llenas de látex y con semillas pequeñas.

Ingrid Parker, profesora de la Universidad de California que lleva a cabo investigaciones en el Smithsonian Tropical Research Institute en Panamá, estudia cómo las diferentes características del caimito afectan la supervivencia y éxito del caimito silvestre.

Usando frutas silvestres y cultivadas en experimentos de campo, Parker intenta descubrir cómo los humanos han influenciado la evolución del árbol de caimito, y cómo esta "ingeniería genética" puede afectar el futuro de las poblaciones silvestres.

