STRI is expanding its research on animal behavior and evolutionary biology by establishing a Laboratory of Evolutionary Neurobiology and Behavior under the leadership of behaviorist William T. Wcislo. The new facility will focus on comparative neurobiological and behavioral studies of tropical invertebrates with extreme body size reduction. The Laboratory will also provide well-equipped facilities for visiting neurobiologists; will host symposia on topics relating to brain miniaturization; and will explore connections between brain miniaturization and applied research related to engineering and information technology. As part of the program, six finalists were interviewed and presented seminars at STRI as a requirement to compete for two five-year research fellowships, one in Neurobiology and the other in Behavioral Biology, this past week. The candidates were Rudi Loesel, Rheinish Westfaelische Technical University, Germany, Jeremy Niven, University of Cambridge, Marc Seid, University of Zurich, Culum Brown, University of Edinburgh, Gerlinde Hoebel, University of Missouri and Rafael Rodriguez, University of Missouri. In the photo, Bill Wcislo shows part of his collection of small insects, in his laboratory.
More arrivals

Michael Kaspari, University of Oklahoma, to study the regulation of brown food webs: The ecology of tropical litter food webs, on BCI.

Michael Caldwell, Boston University, to study the adaptive timing of hatching in red-eye treefrogs, in Gamboa.

Michelle Stein, short-term fellow from the University of Minnesota, to study the implications of hunting for tropical plant community composition: Differential effects on seed removal, on BCI.

Kirk Zigler, Duke University, to study the reproductive isolation between two Caribbean sea urchins, at Naos.

Robert Dudley, University of California at Berkeley, to study ecophysiology and orientation mechanisms of migratory Neotropical butterflies, on BCI.

Ryan Taylor, University of Texas, to study multi-modal communication and mate choice in the Túngara frog, Physalaemus pustulosus, in Gamboa.

Leaving this week

Ira Rubinoff to Singapore to meet with Frank Levinson to discuss programs and visit CTFS sites.

David Roubik to Quintana Roo, Mexico, to work with colleague, Rogel Villanueva, on joint field projects in Sian Ka'An Biosphere Reserve.

Bill Wcislo to Singapore to meet with Frank Levinson and engineers to evaluate a new device for data collection and discuss the neurobiology initiative at STRI.

Panama’s Major recognizes Heckadon as Panama’s most distinguished environmentalist

In an event taking place on April 22, Earth Day, Panama’s major Juan Carlos Navarro presented a parchment bound to Sonia Martinelli de Heckadon who attended in the name of STRI’s director for Communication and Public Programs (OCAPP) Stanley Heckadon Moreno, in recognition for his efforts to conserve Panama’s flora, fauna and its diversity.

“More than any other person in Panama, Heckadon has had more to do with conservation and education to our youth, in his struggle to maintain our natural legacy” concluded Navarro, who highlighted Heckadon’s career and tireless contributions to conservation efforts in Panama.

Heckadon has produced more than 200 contributions including 14 monographs and books. He has given more than 500 conferences to help raise the level of environmental awareness and the need for tropical developing countries to strengthen scientific research on their natural resources to all audiences, from international decision makers to fishermen, taxi drivers and small children. He has served as public servant in the areas of community development, environmental coordinator and advisor, director of Panama’s renewable resources agency, and has worked as international consultant for a variety of institutions in the US, Europe, and Latin America. As OCAPP director, Heckadon is STRI’s voice and face for local and international audiences, is responsible for educational programs at four research centers, marine and terrestrial, and the Office for Public Information.

En un evento celebrado el 22 de abril, Día de la Tierra, el alcalde de Panamá, Juan Carlos Navarro hizo entrega de un pergamino a Sonia Martinelli de Heckadon, que asistió en nombre del director de la Oficina de Divulgación y Programas Públicos de STRI (OCAPP), Stanley Heckadon Moreno, en reconocimiento de sus esfuerzos por conservar la flora y fauna de Panamá y su diversidad.

“Heckadon ha producido más de 200 contribuciones incluyendo 14 monografías y libros. Ha dado más de 500 conferencias para ayudar a elevar el nivel de conciencia ambiental y la necesidad que tienen los países tropicales en desarrollo de reforzar la investigación científica sobre sus recursos naturales, a todo tipo audiencias, desde administradores de recursos internacionales hasta pescadores, taxistas y niños pequeños. Ha servido en el sector público en áreas de desarrollo comunitario, coordinador ambiental y asesor, director nacional del Instituto de Recursos Naturales Renovables de Panamá y ha trabajado como consultor internacional en una variedad de instituciones en los EU, Europa y Latinomérica. Como director de OCAPP, Heckadon es la voz y el rostro de STRI ante audiencias locales e internacionales, es responsable por los programas educativos en cuatro centros de investigación, marinos y terrestres, y la Oficina de Divulgación de STRI.
**New publications**


**Seminario de Nomenclatura de las Plantas**

The University of Panama invites the STRI community to attend a seminar on plant terminology from June 6-11 totaling 40 hours. Registration fee is $100. The application form must be filled and sent before May 21. Interested to attend please call 213-0009, or e-mail Jorge Mendieta, coordinator at: mendija@cwpanama.net mendija_8@yahoo.es

**Tupper champions!**

The STRI’s “Fulbito” championship trophy was passed to the Tupper team, congratulations! Special thanks to Franklin Guerra and Bolivar Castillo who organized the event!

El trofeo del campeonato de Fulbito de STRI pasó al equipo de Tupper este año. ¡Felicitaciones a todos! Un agradecimiento especial a Franklin Guerra y Bolívar Castillo, quienes organizaron el evento, y lo llevaron a feliz término.

**More publications**

Perdices, Anabel, Doadrio, I., and Bermingham, Eldredge. 2005. "Evolutionary history of the synbranchid eels (Teleostei: Synbranchidae) in Central America and the Caribbean islands inferred from their molecular phylogeny." *Molecular Phylogenetics and Evolution Online*.


Figs and their fig wasps

With Charlotte Jander and Marcos Guerra, on BCI

In the mutualism between fig trees and their pollinating wasps, both partners are completely dependent on each other for reproduction. Fig trees are dependent on wasps for pollination, whereas wasps use some of the fig's resources for the development of wasp offspring. “What prevents the two partners from exploiting each other?” Charlotte asks.

Charlotte Jandér, medical doctor from Sweden, hopes to uncover the mechanisms that maintain the fig-fig wasp mutualism. Last year, she left her country and former career to pursue a doctorate degree in biology at Cornell University in Ithaca, New York. She conducts her thesis research around BCI in collaboration with STRI staff scientist E. Allen Herre.

One focus of Charlotte’s research is examining the consequences for wasps if they fail to pollinate. “If wasps cheat by not doing their share in the agreement, do they have lower fitness?” Charlotte uses experiments to determine whether pollinating wasps have more offspring than wasps that are forced not to carry pollen. Charlotte’s research should shed light on a question that has mystified biologists for many years: how are mutualisms maintained?

“Doing biological research is very creative and challenging. I absolutely love it!” Charlotte concludes.

En el mutualismo entre los higuerones y sus avispas polinizadoras, ambos socios son completamente dependientes uno del otro para la reproducción. Los higuerones dependen de las avispas para su polinización, mientras que las avispas usan parte de los recursos de los higuerones para el desarrollo de sus crías. ¿Qué previene que los dos socios se exploten entre sí?

Uno de los enfoques de la investigación de Charlotte es examinar las consecuencias si las avispas dejan de polinizar. “Si las avispas dejan de cumplir su convenio, ¿perderían condiciones físicas? Charlotte realiza experimentos para determinar si las avispas polinizadoras tienen más crías que las que son forzadas a no portar polen. Las investigaciones de Charlotte podrían arrojar luz sobre la pregunta que ha confundido a los biólogos por muchos años: ¿Cómo se mantienen los mutualismos?

“Llevar a cabo investigaciones biológicas es un reto y es muy creativo, ¡absolutamente adoro lo que hago!” concluye Charlotte.