



CECB UPDATE

Boston University • Center for Ecology and Conservation Biology • Fall 1998

Greetings from the CECB Director

Welcome to the first edition of "CECB UPDATE." Our CECB friends have increased over the past year and we would like to use this forum to express our gratitude and to share some of our activities and goals for 1999. This past year has been a busy one for us, most notably the expansion of our Tropical Ecology Program in Ecuador, the development of a fund-raising campaign to support activities at the Tiputini Biodiversity Station (TBS), and the sponsorship of two excursions to Ecuador for friends of CECB. We have worked closely with Boston University's Division of International Programs and Office of Development and Alumni Relations, and greatly appreciate their enormous support. The Division of International Programs has helped recruit, market, and coordinate the logistics of our semester-long Tropical Ecology Program, while the Office of Development has helped establish a fund-raising campaign and coordinate trips to Ecuador for friends of CECB. One of the most exciting developments this past year was the completion of a 100 meter-long canopy walkway at TBS.

Our major fund-raising goals for 1999 include the establishment of fellowships for undergraduates, graduate students, and post-doctoral researchers to initiate long-term research at TBS. We also hope to raise funds for TBS to upgrade computers, establish a satellite link for internet access, install a solar power system, and construct an extension to the canopy walkway. I am looking forward to the coming year, and again wish to thank you, as a friend of CECB, for making this past year a tremendous success.

Sincerely yours,
Thomas H. Kunz, Director

An Incredible View from the Top

Under the direction of Professor Thomas H. Kunz, Boston University's Center for Ecology and Conservation Biology recently completed the construction of a 100 meter-long canopy walkway suspended between five emergent trees at the Tiputini Biodiversity Station. By comparison, the walkway is approximately the length of a football field and is as high as a seven to ten story building. Located deep within the Ecuadorian rainforest, this walkway ranges in height from 25 to 30 meters above the ground and is only one of seven such structures in all of South America (three are located in Brazil, one is in Peru, and two are located in Colombia). (*Continued on page 2*)



Professor Thomas H. Kunz traversing a span of the rainforest canopy walkway at the Tiputini Biodiversity Station (Photo credit: Philip Wittman)

"Access to the rainforest canopy, using vertical ladders and horizontal walkways, provides researchers with unparalleled opportunities to study one of the last frontiers of the tropical rainforest."

--Thomas H. Kunz

BU's Tropical Ecology Program Continues to Grow

Through a collaboration with the Universidad San Francisco de Quito, Boston University offers a semester-long Tropical Ecology Program in Ecuador for undergraduate majors in Biology and Environmental Science.

The first group of students ventured to Ecuador for BU's Tropical Ecology Program in the spring of 1995. The number of students seeking this unique educational experience has continued to increase since its inception. For the past two years we have been sending one group of 10-12 students to Ecuador in the fall semester and two groups of 12-14 students in the spring semester. For the 1999-2000 academic year, we expect to send a total of 48 students—24 each in the fall and spring semesters, respectively.

This intense, field-based program includes courses in rainforest ecology, montane ecology, and coastal ecology. Students spend a large portion of the semester in the field, including two weeks on the Pacific coast and one week on the Galapagos Islands. One of the highlights of this program is for students to spend one month at the Tiputini Biodiversity Station, where they conduct individual and group research projects. In addition to having access to the new canopy walkway for research projects, students have access to a 120 meter-high canopy tower, built around a majestic silk-cotton (kapok) tree. From the canopy tower and walkway, students are able to observe and study insects, frogs, lizards, birds, monkeys, other mammals, and assorted plant-life with an incredible view from the top—a place where few other humans have tread.

Tropical Ecology Program Faculty

Dr. Kelly Swing, adjunct associate professor of Biology at Boston University, has been the full-time program coordinator and instructor for the Tropical Ecology Program since 1995. Dr. Swing also serves as the Director of the Tiputini Biodiversity Station and as professor of Environmental Sciences at Universidad San Francisco de Quito. A graduate of Auburn University, with a Ph.D. from Louisiana State University, Dr. Swing specializes in tropical marine and freshwater fishes. He has an extensive background in tropical ecology and has taught field courses in Ecuador since 1992.

Dr. Monica Swartz is a newly appointed faculty member for the Tropical Ecology Program. She will begin teaching in our spring semester program in 1999. She is a graduate of UCLA, with a Ph.D. from the University of Texas, Austin. Her research focuses on army ants and ant-following birds in the neotropics. She has taught field courses in tropical ecology and conducted research in Costa Rica, Peru, and Ecuador.

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World-wide, approximately 30 such walkways have been constructed and are being used for research and ecotourism. Kunz notes that access to the rainforest canopy, using vertical ladders and horizontal walkways, provides researchers with unparalleled opportunities to study one of the last frontiers of the tropical rainforest.

Scientists and students who visit the Tiputini Biodiversity Station, in the lowland rainforest of Amazonian Ecuador, have incredible opportunities to conduct research in an environment that has rarely been explored. Researchers who have studied tropical rainforests estimate that half of the world's microbes, plants, and animals make their living in the rainforest canopy. Given that nearly 70% of all organisms on earth reside in tropical regions, the numbers of unstudied organisms and ecological relationships in this region are staggering. Many of nature's secrets remain to be discovered in this vast, yet unexplored "terrestrial sea" of biodiversity.

The Tiputini canopy walkway was designed and built by Canopy Construction Associates, Inc., a consortium of U.S. contractors who have built similar structures in New England, Borneo, Peru and Belize. Some of the materials used for the construction of this walkway were prefabricated before making the seaward journey from Boston to Ecuador via the Panama Canal. After arriving at the Ecuadorian port city of Guayaquil, the container was transported overland by truck to the Tiputini River—a three day trip from the coast over the Andes Mountains. After being off-loaded at the Tiputini River, the final leg of the trip was completed in a motorized canoe to the Tiputini Biodiversity Station. A crew of five local workers unloaded and hand-carried over 10,000 pounds of construction materials from the river landing to the rainforest construction site. One month lapsed from the departure of the shipping container from Boston to its final destination in Ecuador. It took a crew of six U.S.-based construction workers a total of three weeks of 12-hour days, fending off biting insects, tropical rainstorms, and slippery trails to complete the walkway on time.



Worm's eye view of the Canopy Walkway at the Tiputini Biodiversity Station (Photo credit: Thomas H. Kunz)

The Tiputini canopy walkway was constructed using stainless steel cables, forged galvanized hardware, Dacron™ rope and netting, and Polywood™ walkway treads and platforms (manufactured from recycled plastic). User access to the walkway is gained by climbing a series of aluminum ladders which are bolted to the trunk of an emergent tree. This is the first canopy walkway constructed using Polywood. Polywood is expected to resist deterioration from fungi and the ravenous attacks by wood-eating termites. Other canopy walkways throughout the world have used native wood to construct platforms and walkway treads that require replacement at frequent intervals. It is expected that the Tiputini canopy walkway will be able to resist these natural forces and last for as many years as the supporting trees remain standing and the stainless steel cables are intact. Annual inspections will ensure that the walkway minimizes safety risks to the researchers who use this awesome structure.

Friends of CECB Visit Tiputini Biodiversity Station

Thomas H. Kunz led two groups of CECB friends to the Tiputini Biodiversity Station, in January and March of 1998. Members of the January group included Urbain DeWinter (Division of International Programs), Christopher Reaske (Office of Development and Alumni Relations), William Macauley (Trustee, LAW '69), John Cigliano (GRS '95), David Morimoto (GRS '92), James Baird (Massachusetts Audubon Society), and Bart Bouricius (Canopy Construction Associates, Inc.). Other visitors included Jennifer and Leigh Macauley and Brian Foster.

The March trip, organized by the Boston University Alumni Travel Program, included excursions to the Tiputini Biodiversity Station and the Galapagos Islands. Participants included Denis Bustin (Office of Alumni Relations), Ayres D'Souza (SPH '92), Margorie D'Souza, James Hanks (GRS '56), Nina Hanks (SAR '56), Annamarie Hayes-Eggert (CAS '47, GRS '48, SED '78), Robert Eggert, William Macauley - (Trustee, LAW '69), Shelia Macauley, Charles and Connie Naginey, Roger Phelps (SSW '59), Natalie Sanderson (SED '50), Betty-Jane Scheff (SED '66), and Faye Stone (LAW '65).

Friends of CECB

The Center for Ecology and Conservation Biology in collaboration with the Office of Development and Alumni Relations initiated a fundraising campaign in 1997. Under the leadership of Vice President Christopher R. Reaske and Trustees William F. Macauley and Earle H. Chiles, the CECB Gift Fund topped \$85,000. Most of these funds were used for the construction of the rainforest canopy walkway at the Tiputini Biodiversity Station.

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For more information about the Center for Ecology and Conservation Biology or the Tiputini Biodiversity Station, please contact the CECB Director, Thomas H. Kunz.

Tel: 617.353.6982; E-mail: cecb@bu.edu;

Web site: <http://bio.bu.edu/CECB>