

## **DERECK AND BEVERLY JOUBERT TO RECEIVE WORLD ECOLOGY AWARD**

When asked, **Dereck and Beverly Joubert** may say they are global conservationists who make films. Winners of five Emmys, two Chris awards, the Grand Teton award, and a George Foster Peabody award, Dereck and Beverly Joubert have dedicated their lives to using documentary films and books to enhance conservation of African wildlife. They have specialized in the big cats of Africa, believing that the large predators are the best indicators to the health of many ecosystems.

*Piper* is a tropical plant genus of mostly shrubs, but including a few vines, herbs, and small trees. The most famous species is *Piper nigrum* from which black and white pepper are derived. *Piper* species are hardy plants with numerous medicinal properties that have made them important to humans throughout the world. At least 1,000 species are known, mostly from the New World and Asian tropics. The fruits are an important food for many bat species.



*Beverly and Dereck Joubert (Photo: Mike Meyers).*



Their films include *Eternal Enemies: Lions and Hyenas*, *Ultimate Enemies: Elephants and Lions*, *Reflections on Elephants*, *Lions of Darkness*, *Patterns in the Grass* and *Wildlife Warriors*. Recent projects include *Relentless Enemies: Lions and Buffalo*, a documentary shot over two years as the Jouberts lived among a pride of lions and a large buffalo herd in the Duba region of Botswana's Okavango Delta. The film includes dramatic first ever footage of lions hunting in water. Their latest film, *Eye of the Leopard*, which won an Emmy, the Jules Verne and Japanese festivals, documents a young leopard's survival in wild Africa over a period of three years, beginning just eight days after her birth.

Using the connections and influence that their reputation brings, they have argued successfully to ban the hunting of lions in Botswana. They talk to presidents and members of government throughout Africa, as well as communities and villages, using their film work as a foundation for discussion. In addition, the Jouberts' opposition to execution-style culling of elephant herds has so far helped to prevent Botswana from emulating the policies of Zimbabwe and South Africa, where herds are thinned to reduce elephant-human conflicts.

Dereck and Beverly Joubert are Explorers-in-Residence at the **National Geographic Society** and their goal in life is to use their talents to enhance African wildlife conservation. They are board members of various trusts and conservation bodies and two years ago formed the **Great Plains Trust**, an entity that is involved in what they call, Conservation Tourism where areas of conservation under threat that could do with an injection of funding, to support community involvement can be turned around with minimal tourism rather than see collapse or more harsh unsustainable uses. The presentation of the World Ecology Award will take place at a gala dinner to be held at the **Missouri Botanical Garden** on **Saturday, October 11, 2008**.

### **PETER RAVEN RECEIVES BBVA AWARD FOR RESEARCH IN ECOLOGY AND CONSERVATION BIOLOGY**

In January 2008, **Dr. Peter H. Raven** was presented with the BBVA Foundation Award for Scientific Research in Ecology and Conservation Biology in recognition of his significant contributions to biodiversity conservation in Latin America. The award of 500,000 euros is shared with **Dr. Harold Mooney** (Paul S. Achilles Professor of Environmental Biology at Stanford University). Peter Raven and Harold Mooney received this prestigious award for "their outstanding contributions to understanding the evolutionary and co-evolutionary processes that shape the adaptations of plants,

the communities they form, and the diversity and biogeography of those communities, and how plants contribute to ecosystem function. Both lead the world in their understanding of, and raising concerns about, the loss of plant diversity through habitat destruction and invasive species, and in seeking ways to prevent biodiversity loss."

### **GALÁPAGOS ISLANDS RESEARCH RECOGNITION**

**Dr. Patricia Parker's** team of researchers on the Galápagos Island has been awarded the Municipal Prize for Scientific Merit by the Cantonal Council of Santa Cruz. The award, presented by **Mayor Leopoldo Bucheli Mora**, was accepted on Dr. Parker's behalf by **Dr. Bryan Milstead**, Director of Vertebrates at the **Charles Darwin Research Station**. Dr.



Parker, the E. Desmond Lee Professor for Zoological Studies, leads a research group that includes scientists from the **WildCare Institute** at the **Saint Louis Zoo**, **Charles Darwin Research Station** and the **Galápagos National Parks** along with graduate and undergraduate students from UM-St. Louis.

Dr Parker's group studies the behavioral and evolutionary ecology of natural populations and the Galápagos Islands, with their simple ecologies of different islands, present a "natural laboratory" for ecological and behavioral investigations. Her team has also undertaken a survey of diseases of the endemic and introduced birds of the Galápagos Islands. This study is providing managers with important information on current threats and possibilities for remediation, as well as many opportunities for studies of interest to basic science.

### **2008 JANE AND WHITNEY HARRIS LECTURE**

The 2008 Jane and Whitney Harris lecture was presented by **Dr. Jerry F. Franklin** in the Shoenberg Auditorium, **Missouri Botanical Garden** on Wednesday, March 12: *The old-growth forests of the Pacific Northwest: An overview of advances in scientific understanding and conservation policies*. Dr. Franklin is Professor of Ecosystem Analysis, College of Forest Resources, University of Washington, Seattle.

Dr. Franklin completed his B.S. and M.S. in forest management at Oregon State University and completed his Ph.D. in botany at Washington State University. He is Director of the Wind River Canopy Crane Research Facility and a Co-Principal Investigator of a \$6 million grant from the National Science Foundation to plan a

National Ecological Observatory Network (NEON). NEON is a continental-scale research platform for discovering and understanding the impacts of climate change, land-use change, and invasive species on ecology.

He has published extensively on aspects of forest ecology, forest management and biodiversity conservation. His work has been recognized through numerous awards including The Heinz Award for the Environment and the LaRoe Award for lifetime scientific contributions to conservation biology from the Society for Conservation Biology.



*Dr. Jerry F. Franklin, 2008 Jane and Whitney Harris Lecturer.*



## UM-ST. LOUIS RANKED FIFTH FOR FACULTY RESEARCH PRODUCTIVITY

The **University of Missouri-St. Louis** has been ranked fifth in the country among small research universities in the Academic Analytics' Faculty Scholarly Productivity Index. UM-St. Louis follows notable schools such as San Diego State University, Bryn Mawr College, Boston College and Georgetown University.

## NEWS OF HARRIS CENTER FACULTY, STUDENTS AND ALUMNI

**Dr. Zuleyma Tang-Martinez** received the 2007 Distinguished Service Award from the **Animal Behavior Society** for her extraordinary service to the Society as president and for her efforts to diversify the membership of the society by encouraging participation of Latin Americans, North American under-represented groups, and undergraduates.

**Dr. Patricia Parker** (with collaborator **Dr. Hernan Vargas**) obtained a \$193,000 grant from the **Peregrine Fund** for her ongoing studies of Galápagos hawks. The grant will support two Ecuadorian students to be recruited into the UM-St. Louis master's program and will investigate potential causes for the apparent disappearance of the juvenile class of Galápagos hawks on Santiago Island in the Galápagos Archipelago. Dr. Parker is the E. Desmond Lee Endowed Professor in Zoological Studies, a position that strengthens relationships between the **Whitney R. Harris World Ecology Center** and the **Saint Louis Zoo**.

**Dr. Elizabeth Kellogg** was awarded \$164,754 for her project: *GEPR: Genetic*

*mechanisms regulating inflorescence architecture in maize and other cereals* by the University of California, Berkeley. Dr. Kellogg is the E. Desmond Lee Endowed Professor in Botanical Studies, a position that links the **Department of Biology** and the **Whitney R. Harris World Ecology Center** to the **Missouri Botanical Garden**.

**Dr. Elizabeth Kellogg** was awarded \$46,921 from the University of Missouri Research Board for *Diversity among relatives of switchgrass*.

**Dr. Bette Loiselle** was awarded \$32,170 from the University of Missouri Research Board for *Estimating effective seed dispersal distances and genetic variation in tropical plants of native and introduced habitats* and \$12,430 from the UM-St. Louis Research Board for *Seed dispersal and genetic variation in tropical plants in native and introduced habitats*.

**Dr. Robert Marquis** was awarded \$68,256 from the **Missouri Department of Conservation** for his project: *Timber harvesting effects on the Missouri oak herbivore fauna associated with the Missouri Ozark Forest Ecosystem Project*.

**Matt Ogburn** (M.S. 2007) is the 2008 thesis award winner in the competition held each year by the Midwest Graduate Deans Organization. Matt won for his thesis, *Anatomical variation in Cactaceae sensu lato* and was advised by **Dr. Peter Stevens**. Matt is currently working on his Ph.D. at Brown University. The competition for this prestigious award includes all the "Big 10" and "Big 12" schools and private schools such as Notre Dame, Northwestern and the University of Chicago. This is the second time the Department of Biology has been recognized in this way. **Kristine Mothershead** (M.S. 1997), advised by **Dr. Robert Marquis** won the award in 1998.



**Marcela Fernandez** (M.S. 2006) from Costa Rica, has been accepted to complete her Ph.D. at **Cornell University** with full financial support.

**Eloisa Sari** was awarded a prestigious CAPES-Fulbright scholarship that will support her in the Ph.D. program for two years. The CAPES-Fulbright Program supports educational exchanges at the doctorate level that strengthen understanding and communication between the United States and Brazil. Eloisa's advisor is **Dr. Patricia Parker**.

**Andrea Loayza** was awarded a dissertation research grant from the National Science Foundation (\$11,460) for her project: *Closing the seed dispersal loop for Guettarda viburnoides: Connecting patterns of avian seed dispersal with population growth in a Neotropical savanna*. Andrea's advisor is **Dr. Bette Loiselle**.

**Felipe Zapata** was awarded a dissertation research grant from the National Science Foundation (\$14,991) for his project: *U.S.-Brazil international systematics and evolution of the plant genus Escallonia (Escalloniaceae): Integrating morphology and molecules in the Neotropical mountains*. Felipe also received a Garden Club of America Award in Tropical Botany (\$5,500). Felipe's advisor is **Dr. Peter Stevens**.

**Monica Carlsen**, was awarded a dissertation research grant from the National Science Foundation (\$10,840) for her project: *Understanding the origin and rapid diversification of the genus Anthurium (Araceae) integrating molecular phylogenetics, morphology and anatomy*. Monica also received a Garden Club of America Award in Tropical Botany (\$5,500). Monica's advisors are **Dr. Tom Croat** and **Dr. Peter Stevens**.

**Dr. Robert Marquis** and **Humberto de Paula Dutra** received a grant of \$1,000 for

their project: *Impact of an invasive species, Lonicera maackii, on biodiversity through biotic interactions* from the Webster Groves Nature Study Society.

**Jeffrey Norris** received a TWA scholarship (\$7,000) and the 2007 St. Louis Audubon Society Scholarship (\$1,500) for his study of urban bird populations in Costa Rica. Jeff's advisor is **Dr. Godfrey Bourne**.

**Linda Svensson** was awarded \$14,000 from the Sweden America Foundation for her research on avian malaria. Linda's advisor is **Dr. Robert Ricklefs**.

## HARRIS CENTER SCHOLARSHIP RECIPIENTS

The following graduate and undergraduate students have been awarded scholarships by the Whitney R. Harris World Ecology Center in Fall 2007 and Spring 2008.

**Adrian Azpiroz:** Antoinette McGrath Memorial Scholarship to Promote Scientific Literacy (Book award).

**Patty Baiao:** Antoinette McGrath Memorial Scholarship to Promote Scientific Literacy (Book award) and Stephen Mitchell Doyle Scholarship in Tropical Ecology: *The role of neutral mechanisms in the maintenance of plumage polymorphism in red-footed boobies (Sula sula)*.

**Beatriz Baker-Meio:** Mallinckrodt Tropical Research Scholarship: *Local morphometric and ecological variation in Section Xerocalyx (Chamaecrista sp.: Leguminosae): Consequences for understanding speciation*.

**Kirk Barnett:** Thomas F. George Undergraduate Research Scholarship: *Lonicera maackii (Amur honeysuckle) and its effect on the foraging behavior of the mice population in the Saint Louis area*.



**Jenny Bollmer:** Antoinette McGrath Memorial Scholarship to Promote Scientific Literacy (Book award).

**Marcos Coelho:** Antoinette McGrath Memorial Scholarship to Promote Scientific Literacy (Book award).

**Paulo Camara:** Antoinette McGrath Memorial Scholarship to Promote Scientific Literacy (Book award).

**Javier Hernandez:** Leo and Kay Drey Scholarship and Goldie Millstone Scholarship: *The effect of photoperiod on the social organization and circadian clock of tropical bumblebees.*

**Jenni Higashiguchi:** John Denver Scholarship in Tropical Ecology: *Transmission dynamics of avian poxvirus in the Galapagos Islands, Ecuador.*

**Cynthia Hong-Wa:** Peter H. Raven World Ecology Scholarship: *Diversification and species assembly within the Malagasy endemic genus *Noronhia* (Oleaceae).*

**Enock Kaledimimo:** Antoinette McGrath Memorial Scholarship to Promote Scientific Literacy (Book award) and Stokes Family Scholarship for internship at the Powdermill Nature Reserve, Carnegie Natural History Museum, Pennsylvania.

**Laura Kent:** Jorie Butler Kent Scholarship: *An examination of individual odors and individual discrimination in the raccoon (*Procyon lotor*).*

**Iris Levin:** Goldie Millstone Scholarship: *Host-parasite dynamics in mixed colonies of Galapagos seabirds.*

**Matthew Medeiros:** Goldie Millstone Scholarship: *Identifying Plasmodium-mosquito associations in Eastern Missouri.*

**Muse Opiang:** Antoinette McGrath Memorial Scholarship to Promote Scientific Literacy (Book award).

**Gonzalo Rivas:** Parker-Gentry Tropical Research Fellowship: *Genetic variation and comparison of effective dispersal distances of two *Miconia* species.*

**Adrianna Rodriguez:** Antoinette McGrath Memorial Scholarship to Promote Scientific Literacy (Book award).

**Brandt Ryder:** Stokes Family Scholarship: *Social networks in a lek breeding bird.*

**Diego Salazar:** Jane and Stanley Birge Scholarship: *The effect of latitudinal variation and local plant adaptation on herbivore species turnover of three widely distributed Piper (*Piperaceae*) species.*

**Diego Santiago:** Antoinette McGrath Memorial Scholarship to Promote Scientific Literacy (Book award).

**Gena Sbeglia:** Henry B. Cowhey Scholarship in Tropical Conservation: *The characterization of agonism and affiliation in ringtailed lemur society.*

**Linda Svensson:** Antoinette McGrath Memorial Scholarship to Promote Scientific Literacy (Book award).

**Felipe Zapata:** Antoinette McGrath Memorial Scholarship to Promote Scientific Literacy (Book award).

*PiperNotes* is the newsletter of the **Whitney R. Harris World Ecology Center**. In collaboration with the **Missouri Botanical Garden** and the **Saint Louis Zoo**, the Center promotes research and education in biodiversity conservation and the sustainable use of natural resources and ecosystems. The Center provides an academic, international environment for graduate education in ecology, evolution, systematics and conservation. The Center supports undergraduate education in conservation biology and promotes awareness within the St. Louis community of the importance of conservation and environmentally sustainable practices.

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Armenian viper, *Montivipera raddei*  
(Photo: Jeff Ettling, Saint Louis Zoo).

## TOP STORIES

**DERECK AND BEVERLY JOUBERT** to receive World Ecology Award.

**PETER H. RAVEN** receives BBVA Foundation Award for Research in Ecology and Conservation Biology.

**UM-ST. LOUIS** ranked fifth in the nation for faculty research productivity.

**DR. PATRICIA PARKER'S** team awarded the Municipal Prize for Scientific Merit for Galápagos Island research.

*Whitney R. Harris World Ecology Center  
Department of Biology  
University of Missouri-St. Louis  
1 University Boulevard  
St. Louis, MO 63121  
<http://hwec.umsl.edu>  
Phone: 314-516-6203*

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