

## HOWARD G. BUFFETT TO RECEIVE WORLD ECOLOGY AWARD



**Howard G. Buffett** will receive the Center's World Ecology Award at a gala dinner to be held at the **Missouri Botanical Garden** on Friday, May 13, 2011. Buffett will be the 19<sup>th</sup> recipient of the World Ecology Award. Through his Howard G. Buffett Foundation, he is directing projects in Afghanistan, Burundi, Colombia, Democratic Republic of the Congo, El Salvador, Guatemala, Honduras, Liberia, Nicaragua, Sierra Leone, Sudan, Uganda and many other countries.

Buffett has been employed with and served on boards at a variety of organizations, including United States Trade Representative Committees, Archer Daniels Midland Company, The GSI Group, Coca-Cola Enterprises, ConAgra Foods, Sloan Implement, Coca-Cola Company, Berkshire Hathaway and numerous nonprofit boards.

In 1999, using family assets, Buffett established HGBF, whose mission is to improve the standard of living and quality of life for the world's most impoverished and marginalized populations. The

foundation's immediate priorities include food security, clean water and humanitarian aid in conflict and post-conflict regions. When Buffett established HGBF, he already worked on his own 1,400-acre farm near Decatur, Ill. He now also oversees two research farms of 2,300 acres and 9,200 acres in Illinois and South Africa, respectively.

In addition to the primary mission described above, his foundation's operations have remained sensitive to global issues such as conservational agriculture, habitat protection and biodiversity. Additional funding is directed toward nutrition, forced migration and development of journalists—which supports student learning and improved governance. Buffett also continues a decade-long interest in the well-being of cheetahs and mountain gorillas.



He has traveled to more than 100 countries documenting the challenges of preserving our biodiversity while providing adequate resources to meet the needs of a growing global population. He is the recipient of numerous honors bestowed by both international governments and domestic organizations. He has authored a number of books: *On the Edge: Balancing Earth's Resources* (2001); *Tapestry of Life*, (2002); *Taking Care of Our World*, (2002); *Spots Before Your Eyes* (2003, with a foreword by Dr. Jane Goodall); *Threatened Kingdom: The Story of the Mountain Gorilla* (2005); and *Fragile: The Human Condition* (2009).

HGBF's annual report describes its efforts to learn from its mistakes, failures and successes. It seeks to be a catalyst for successful innovation to provide the leadership required for success, and makes seed capital available that can be leveraged for additional support. This year's World Ecology Award recognizes a carefully developed, well-managed and innovative effort to build a better planet by focusing on fundamental, structural problems in order to improve the lives of more than three billion people who live on less than \$2 a day.

Past recipients of the World Ecology Award are: John Denver, Jacques Cousteau, Prince Sadrudin Aga Khan, Dr. Paul Ehrlich, President José María Figueres, Dr. Richard Leakey, Dr. Jane Goodall, Ted Turner, Dr. Gro Harlem Brundtland, Harrison Ford, Conservation International, Teresa Heinz, HRH The Prince of Wales, The Rockefeller Family, Kathryn Fuller, Dr. Peter Raven, Dereck and Beverly Joubert and Dr. David (Jonah) Western.

**For information and tickets to the gala dinner call: (314) 516-5442.**



*In partnership with the Missouri Botanical Garden and the Saint Louis Zoo*



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## JENNI MALIE HIGASHIGUCHI



**Jenni Malie Higashiguchi**, a doctoral student in biology at the University of Missouri–St. Louis, was born in Hawaii on March 24, 1981, and passed away on April 4 after a brief but catastrophic illness.

Jenni received her undergraduate degree in biology from the University of Hawaii, where she studied some of the Hawaiian forest birds that occur nowhere else. She joined the large number of researchers interested in understanding why so many Hawaiian forest birds have become extinct. She joined the Ph.D. program in Evolution, Ecology, and Systematics in the Department of Biology at the University of Missouri–St. Louis in 2007 to work with **Dr. Patricia Parker**, the E. Desmond Lee Endowed Professor of Zoological Studies. Working with Parker’s group she applied what was learned in Hawaii in order to help Galapagos birds escape the same sad fate.

She had identified the study of the mosquito vectors of bird diseases as a critical piece of the puzzle that she would solve, and one that would contribute importantly to the goal of preventing extinctions of Galapagos birds. Jenni received the 2008 John Denver Memorial Scholarship in Tropical Ecology, the 2010 Stephen Mitchell Doyle Memorial Scholarship in Tropical Ecology and the 2011 Antoinette McGrath Memorial Scholarship from the Center. She was in her third Galapagos field season, and second on this project, when she fell ill. Parker said the mosquitoes Jenni caught before her illness may provide the understanding that will help preserve the birds in one of nature’s most famous wild places.

Jenni was brought to Miami for treatment, and then to Cleveland, where she passed away. She did not have any infectious diseases, but died of acute liver failure of unknown cause. “Jenni Malie Higashiguchi was a gentle and caring person who would make beautiful leis for her student colleagues in celebration of each of their successes and bring delectable homemade sushi to any gathering,” said Parker. “She always preferred talking in person to email or phone and we will forever continue to see her face peeking around our doors. Her contributions to the University and to Galapagos have been enormous.”

A fund has been created in her name at the Whitney R. Harris World Ecology Center. Memorial donations should go to: Jenni Malie Higashiguchi Fund of the Whitney R. Harris World Ecology Center, University of Missouri–St. Louis, One University Blvd., St. Louis, MO 63121.

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## 2011 JANE AND WHITNEY HARRIS LECTURE

The 2011 Jane and Whitney Harris lecture was given by **Dr. Mary Power** on April 12 in the Shoenberg Auditorium at the **Missouri Botanical Garden**. Her lecture was entitled: *Food webs in river networks*. Power is a river ecologist and Professor of Integrative Biology at the University of California, Berkeley. Since 1988, she has been Faculty Director of the Angelo Coast Range Reserve, one of 36 large natural reserves in the University of California Natural Reserve System protected for university-level research and teaching, and public outreach. She is a past President of the Ecological Society of America and the American Society of Naturalists, and is a member of the American Academy of Arts and Sciences and the California Academy of Sciences. With her students and collaborators, Power studies food webs in temperate and tropical rivers. They investigate environmental controls on interactions of algae, aquatic invertebrates, fish, amphibians, and the birds, lizards, spiders, and bats that feed on fish or insect emergence. These webs of interactions link rivers, watersheds, and coastal marine ecosystems in surprising ways. Understanding the interactions that connect these environments should help us forecast how they will respond to changes in climate, land use, or biota.

## HARRIS CENTER SCHOLARSHIP RECIPIENTS

The Harris Center Scholarship Committee awarded the following research scholarships in 2010-2011:

*Christensen Fund Scholarship in Plant Conservation*

**Rani Asmarayani:** Phylogenetic study of Asian *Piper* (Piperaceae)

*John Denver Memorial Scholarship in Tropical Ecology*

**Letícia de Souza Soares:** Predicting avian malaria prevalence in a modified landscape of central Amazonia

*Stephen Mitchell Doyle Memorial Scholarship in Tropical Ecology*

**Jenni M. Higashiguchi:** Transmission dynamics of avian disease in Galapagos

*Jane Harris Scholarship in Tropical Botany*

**Robbie Hart:** Climate change impacts on Himalayan rhododendrons

*Mallinckrodt Research Scholarship*

**Robbie Hart:** Climate change impacts on Himalayan rhododendrons

*Peter H. Raven World Ecology Scholarship*

**Heritiana Ranarivelo:** Phylogeny and character evolution in *Psorospermum* (Hypericaceae)

*Antoinette McGrath Memorial Scholarship to Promote Scientific Literacy*

**Diego Salazar, Oyomoare Osazuwa-Peters, Jose Luis Rivera, Robbie Hart and Matt Medeiros.**



## RESEARCH REPORT



*Apis cerana* on a *Rhododendron racemosum* flower. Early in the season, at the lower elevations near the warm Lijiang Valley, pollinators are common even on the earliest flowers; higher up the mountain they remain rare (Photo: R. Hart).

**Robbie Hart** is currently working to characterize how a changing climate is affecting the distribution, phenology, pollination and reproduction of rhododendrons on Yulong Mountain in the Eastern Himalayas of China. This spring, he kept busy as one of the earliest flowerings in memory brings open blossoms even at the higher elevations where snowstorms are still frequent. Hiking transects that rise 1500 meters from the house where the 1930s plant collector Joseph Rock lived up to the rocky peak of Yulong's south summit well over two miles above sea level, he is monitoring when pollinators arrive and when flowers open at the different elevations. Warming simulated by transplanting rhododendrons into a high-altitude greenhouse is also helping to explain the effects of temperature on phenology, with some species this year flowering weeks earlier in the greenhouse than in the populations from which they were transplanted.

Meanwhile, he continues to analyze data culled from thousands of herbarium specimens collected by Rock and other early plant collectors in area. From the 1880s, Northwest Yunnan has been a center of

botanical collection and historical specimens constitute a sizable dataset of historical distributions and phenologies of rhododendrons. Initial analysis this previous winter with the help of UMSL undergraduates **Emily Geest** and **Kevin Dunham** showed that the collection date of flowering specimens correlated with temperature for the year of collection. Curiously, in warmer years, the mean flowering date derived from herbarium specimens was significantly *later* in the year. This surprising result is in accord with other recent work on phenology and climate in the Himalayan region, but does not seem to fit with the global trend of earlier flowering, and the early start of flowering that was seen this year. One possible explanation of this effect could be delayed winter chilling. Chilling is an important cue timing flowering in many plants, and later chilling in a warm winters could also delay flowering in some species, even as warmer spring temperatures bring on earlier flowering in others. Robbie will be in the field for the rest of the season working to elucidate the specific biological mechanisms behind changing phenology. Robbie received the 2010 **Peter H. Raven World Ecology Scholarship** from the Harris Center.



## NEWS OF HARRIS CENTER FACULTY, STUDENTS AND ALUMNI

**Dr. Robert Ricklefs** received the 2011 Alfred Russel Wallace Award from the **International Biogeography Society** at the biennial meeting held in Heraklion, Crete, in January. This award recognizes a lifetime of outstanding contributions by an eminent scholar in any sub-discipline of biogeography. **Ricklefs** is also serving during 2011 as President of the **American Society of Naturalists**.

**Dr. Corneille Ewango** (M.S. 2006, Democratic Republic of Congo) has been awarded one of the three *Future For Nature Awards*. The award, €50,000, was given in recognition of Ewango's outstanding efforts in the protection of the okapi. Over the past fifteen years Ewango has protected the Ituri Forest and the Okapi Faunal Reserve in the eastern part of DR Congo by means of research and (community-based) conservation. The Okapi Faunal Reserve has become a very important station for training and research in tropical botany and plant diversity conservation.

**Dr. Amy Zanne** has received a CAREER award from the **National Science Foundation**: *Influences of plant traits on wood decomposition rates across scales: From fungal microbe communities to carbon turnover*. Through this five-year award (over \$700,000), Zanne aims to determine the influence of fine-scale plant anatomy, chemistry, and major functional traits on rates of wood decomposition. The study will be done in temperate forests of the Ozark Highlands, Missouri.

**Drs. Patricia Parker** and **Robert Ricklefs** are co-authors of a paper entitled: *110 Years of Avipoxvirus in the Galapagos Islands*. Authors also include former Harris Center graduate students **Dr. Jennifer Bollmer** (Ph.D. 2008) and **Noah Whiteman** (Ph.D. 2006).

**Heritiana Ranarivelo** (Madagascar) received the 2011-2012 Bovard Fellowship from the **Missouri Botanical Garden** to support his fieldwork research in Madagascar.

**Rani Asmarayani** (Indonesia) received the 2011-2012 Baltzer Fellowship from the **Missouri Botanical Garden** to support her fieldwork research in Malaysia and Sulawesi (Indonesia). **Allisyn-Marie Gillet** (USA) and **Leticia Soares** (Brazil) were both awarded research scholarships from the **St. Louis Audubon Society**. **Robbie Hart** (USA) received the 2011 **TWA Scholarship** for graduate research. **Oyomoare Osazuwa-Peters** received the 2011 Mickey Scudder Scholarship from the **Webster Grove Nature Study Society**.

**Dr. Patrick Osborne** received the outstanding educator award from the **St. Louis Audubon Society** at the society's annual awards dinner held on March 5, 2011.

**Jamie Palmer** (USA) and **Iris Levin** (USA) presented at the **Cooper Ornithological Society, Association of Field Ornithologists and Wilson Society Annual Meeting** in Kearney Nebraska in March. The trip was supported by funds from the Harris Center, the Department of Biology and the Graduate School. Jamie presented a part of her master's thesis, *Seroprevalence of malarial antibodies in Galapagos penguins*, and Iris presented a chapter of her Ph.D. dissertation, *A tale of two seabirds: Population genetics of Galapagos great frigatebirds and Nazca boobies*.