



Date: March 30, 2010

What's growing on
at the Garden!

**MISSOURI BOTANICAL GARDEN SCIENTIST'S NAME
COMMEMORATED IN NEW GENUS**

The New Genus Gereaua is Published in the Journal Systematic Botany

(ST. LOUIS): An article published in the current issue of *Systematic Botany*, the scientific journal of the American Society of Plant Taxonomists, describes a new genus of Sapindaceae (the economically important soapberry family) endemic to Madagascar. The genus, *Gereaua*, has been named in honor of Roy Gereau, assistant curator in the Africa and Madagascar department at the Missouri Botanical Garden.

In the article, "Molecular Phylogenetic and Morphological Evidence Supports Recognition of *Gereaua*, a New Endemic Genus of Sapindaceae from Madagascar," co-authors Sven Buerki, Porter P. Lowry II, Peter B. Phillipson, and Martin W. Callmander, separate the Malagasy species *Haplocoelum perrieri* from the African species of the genus *Haplocoelum*, transferring *H. perrieri* to a new genus they describe as *Gereaua*.

In the 1980s, Gereau started taxonomic work on the plant family Sapindaceae while working with renowned botanist Al Gentry on the Peru checklist, which was later published as the *Catalogue of the Flowering Plants and Gymnosperms of Peru* in 1993. During his research, Gereau identified a large number of Neotropical Sapindaceae specimens and described one new species, *Matayba macrocarpa*. In the early 1990s, Gereau shifted his attention to African studies and worked on identifying Sapindaceae from tropical Africa and Madagascar. In the process, he began to appreciate the tremendous difficulties in circumscribing genera in this family. Because of Gereau's experiences, Sven Buerki, then a Ph.D student, and his professor Dr. Martin Callmander (the authors of the new genus), contacted him while searching for a doctoral dissertation topic for Sven. One of the problems

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ADD ONE: Gereaua

they discussed was the correct placement of the one species in Madagascar that was originally named in the genus *Haplocoelum*, but which didn't seem to fit very well with the other species in the genus, all from tropical Africa. Gereau suspected that the Madagascar species should be placed in a separate genus, and helped Buerki and Callmander obtain a leaf sample to sequence the DNA of *Haplocoelum inoploeum*, the African species critical to the decision about the application of the genus name.

“Results based on nuclear and plastid genomes confirmed that this species, now referred to as *Gereaua perrieri*, was absolutely not related to any species of *Haplocoelum*,” said Sven Buerki of the Institute of Biology at the University of Neuchâtel in Switzerland and one of the lead authors of the article. “Based on the evidence we had no choice than to exclude this species from *Haplocoelum* and describe a new genus. And it was clear to us that this new genus had to be named after Roy Gereau.”

Roy Gereau is one of 47 curators in the science and conservation division at the Missouri Botanical Garden. In addition to holding the title of assistant curator, he is also the director of the Tanzania Botanical Research and Conservation Program. Among his research interests is plant conservation assessment in eastern Africa and he is collaborating with Tanzanian colleagues to help develop the Electronic Catalogue of the Tanzanian Biota.

“Having my family name commemorated in a new genus is a significant honor of which I'm very proud,” said Gereau. “At this point in the history of plant taxonomy, we are still discovering many new species, but we have few opportunities to name new genera.”

With nearly 800,000 specimens from Africa in the herbarium, the Garden is recognized as the U.S. Center for the study of African botany. Recently, the Garden completed digitization of the entire type collection of African plant specimens. Madagascar is an important research focus at the Garden and curators Callmander, Phillipson and Lowry are involved in research on many different plant families and in producing the Madagascar Catalogue Project, available on-line at www.efloras.org/madagascar.

Garden researchers Dr. Li-Bing Zhan, assistant curator at the Garden has also published in the journal *Systematic Botany*, while Dr. Carmen Ulloa, associate curator at the Garden is credited for collecting a new species. Zhan and Chinese collaborator, Hai He, describe a new fern species, *Polystichum speluncicola* from a karst cave in southern Guizhou, China, well-known for its rich

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diversity of plants. Ulloa is credited in the article, “*Geranium pseudodiffusum* (*Geraniaceae*), a New Species from Ecuador and Peru,” by Dr. Carlos Aedo from the Royal Botanic Garden in Madrid. Describing a new species of *Geranium* from Ecuador and Peru, the specimen he selected as type was collected by Aedo and Ulloa during an expedition to Ecuador in 2006 in Cajas Páramo, an area in the Andes Mountains where Ulloa has conducted research for several years.

With scientists on six continents in 38 countries around the globe, the Garden is one of the three largest plant science programs in the world, along with The New York Botanical Garden and the Royal Botanic Gardens, Kew (outside London). With assistance from 75 technical and support personnel, over two dozen graduate students, and 70 volunteers, Garden scientists conduct the essential work of plant identification, classification, and conservation in locations throughout the world.

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NOTE: Digital images available by request. Download media materials at www.mobot.org/press.

The Missouri Botanical Garden’s mission is “to discover and share knowledge about plants and their environment, in order to preserve and enrich life.” Today, 151 years after opening, the Missouri Botanical Garden is a National Historic Landmark and a center for science, conservation, education and horticultural display.

The Missouri Botanical Garden is located at 4344 Shaw Blvd. in St. Louis, just south of I-44 at Vandeventer-Kingshighway (exit #287B). Open 9 a.m. to 5 p.m. every day except Dec. 25. Grounds open at 7 a.m. Wednesdays and Saturdays (exception: special admission rate events). Admission is \$8; free children ages 12 and under and Garden members. St. Louis City and County residents are \$4 and free Wednesdays and Saturdays until noon (exception: special admission rate events - third weekend of May, Labor Day weekend, and first weekend of October). Park for free on site and two blocks west at the Shaw-Vandeventer intersection. The Garden is easily accessible by taking the MetroLink commuter rail line to the Central West End station and picking up a Metro bus (www.metrostlouis.org). For general information, log on to www.mobot.org or call the 24-hour recording at (314) 577-9400 or 1 (800) 642-8842. For membership information, visit www.mobot.org/membership call (314) 577-5118 during weekday business hours. For volunteer opportunities, visit www.mobot.org/volunteer or call (314) 577-5187. The Missouri Botanical Garden is a tobacco-free environment.