

**Benjamin Marland Torke**  
Curriculum Vitae, October 2008

**Address and contact information**

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Institute of Systematic Botany  
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**Current Position**

Assistant Curator of Botany, Institute of Systematic Botany, New York Botanical Garden (August, 2008–present)

Research: systematics and evolution of the Leguminosae, with particular emphasis on the species-rich neotropical tree genus *Swartzia* and related genera; speciation and community assembly in neotropical rainforest trees; floristics of the neotropics, with emphasis on the Amazon basin.

**Appointments**

Research Associate, Department of Botany, Academy of Natural Sciences, Philadelphia (September 2008–December 2011).

**Education**

Ph.D. (Evolution, Ecology and Population Biology), December 2006

Washington University and the Missouri Botanical Garden, St. Louis, MO.

Research: Systematics and evolutionary diversification of *Swartzia* (Leguminosae)

Mentors: Barbara A. Schaal & Peter H. Raven

M.S. (Environmental and Plant Biology), December 1997

Ohio University, Athens, OH

Research: Systematics of *Salvia* section *Ekmania* (Lamiaceae)

Mentor: Philip D. Cantino

B.S. (Biology), May 1994

Ball State University, Muncie, IN

**Postdoctoral Experience**

Postdoctoral Fellow (October, 2006–August 2008)

Laboratory for Molecular Systematics and Ecology, Academy of Natural Sciences, Philadelphia, PA. Research: Phylogeography of tropical rainforest trees.

**Previous Professional Experience**

Herbarium Curatorial Assistant, New York Botanical Garden, Bronx, NY (February 1998–July 2000)

Herbarium Assistant, Ball State University, Biology Department, Muncie, IN (January–May 1994)

Student Conservation Association Volunteer Assistant to National Forest Botanist, Winema National Forest, Chiloquin District, Chiloquin, OR (1993, summer)

**Teaching Experience**

Graduate Teaching Assistant, Biology Department, Washington University, St. Louis, MO. Course: Biological Clocks (for biology majors) (2002).

Instructor of Record, Department of Environmental and Plant Biology, Ohio University, Athens, OH and Ohio University-Zanesville Campus, Zanesville, OH. Courses: Wildflowers, Plants and People (both for non-majors) (April–November 1997).

Teaching Assistant, Ohio University, Department of Environmental and Plant Biology, Athens, OH.  
 Courses: Trees and Shrubs (for non-majors), Dendrology (for plant biology majors),  
 Introductory Plant Biology (for plant biology majors), Plant Morphology (for graduate  
 students and undergraduate plant biology majors), Plant Systematics (for graduate students  
 and undergraduate plant biology majors), (September 1994–March 1997).

### **Undergraduate Advising**

Claire Addis, Luther College, Decorah, Iowa. Research Project: "Molecular Investigation of  
*Swartzia*." Research Experiences for Undergraduate Program, Academy of Natural Sciences, 2  
 month summer internship (June, July 2007).

Kimberely Wu, Bernard College, New York, NY. Research Project: "A Forgotten Legacy of 20th  
 Century Floristics: Unearthing the Collection of Taiwanese Plant Specimens in the Herbarium of  
 the Academy of Natural Sciences." Research Experiences for Undergraduate Program, Academy  
 of Natural Sciences, 2 month summer internship (June, July 2008).

### **Publications and Manuscripts**

Torke, B. M. & Zamora, N. A. (in prep.). Notes on *Swartzia* (Leguminosae) in Central America  
 preliminary to the Flora Mesoamericana, with descriptions of two new species from Costa  
 Rica. To be submitted to *Brittonia*.

Chung, K.-F., Torke, B. M. & Wu, K. (in prep.). Unearthing a forgotten legacy of 20th century  
 floristics: the collection of Taiwanese plant specimens in the Herbarium of the Academy of  
 Natural Sciences (PH). To be submitted to *Taiwania*.

Torke, B. M. & B. A. Schaal. (in prep.). A phylogeographic study of the Central American apetalous  
 clade of *Swartzia* (Leguminosae-Papilionoideae): population subdivision and geographic  
 isolation trump dispersal and gene flow in a neotropical tree diversification. To be submitted to:  
*Proceedings of the National Academy of Sciences*.

Torke, B. M. & Mansano, V. de F. (in press). A phylogenetically based sectional classification of  
*Swartzia* (Leguminosae-Papilionoideae). *Taxon*.

Torke, B. M. & Schaal, B. A., 2008. Molecular phylogenetics of the species-rich neotropical genus  
*Swartzia* (Leguminosae-Papilionoideae) and related genera of the swartzioid clade. *American  
 Journal of Botany* 95: 215–228.

Torke, B. M. 2007. Three new species of *Swartzia* (Leguminosae-Papilionoideae) from northern  
 South America. *Botanical Journal of the Linnean Society* 153: 343–355.

Torke, B. M. 2007. New Combinations and Species-level Synonyms in *Swartzia* (Fabaceae:  
 Papilionoideae). *Novon* 17: 110–119.

Torke, B. M. 2004. Two new species of *Swartzia* (Leguminosae) from the Amazon Basin of Brazil,  
 with notes on the genus and a key to the unifoliolate species. *Systematic Botany* 29: 358–365.

Torke, B. M. 2004. Caricaceae. In: Smith, N., Mori, S. A., Henderson, A., Stevenson, D. W. &  
 Heald, S. V. (eds.). *Flowering Plants of the Neotropics*. Princeton University Press, Princeton &  
 Oxfordshire, Pp. 85–86.

Torke, B. M. 2000. A Revision of *Salvia* section *Ekmania*. *Brittonia* 52: 265–302.

### **Published Abstracts/ Presentations**

Pennington, R. T., Lavin, M. Torke, B. M. 2007. Using plant phylogenies to understand patterns of  
 dispersal assembly and niche conservatism in the rain forests and seasonally dry forests of the  
 Neotropics. The annual meeting for the Association for Tropical Biology and Conservation,  
 Morelia, Mexico, 15–19 July 2007. Program and Abstracts, Pp. 26.

- Torke, B. M. & Schaal, B. A.. 2007. Phylogeography of the Central American apetalous clade of *Swartzia* (Leguminosae): geographic isolation and population subdivision trump dispersal and gene flow in a tropical tree diversification. Botany 2007, Chicago, IL, 7–11 July 2007, Online Abstracts: (<http://www.2007.botanyconference.org/engine/search/index.php?func=detail&aid=1300>).
- Torke, B. M. & Schaal, B. A.. 2004. A preliminary phylogeny of *Swartzia* (Fabaceae-Papilionoideae), based on chloroplast and nuclear sequence data. Botany 2004, Snowbird, UT, 31 July–5 August 2004. Online Abstracts: (<http://www.2004.botanyconference.org/engine/search/index.php?func=detail&aid=176>).
- Torke, B. M. & Schaal, B. A.. 2002. Phylogeny and evolution of *Swartzia* (Leguminosae), based on chloroplast and nuclear sequences. Botany 2002, Madison, WI, 2–7 August 2002. Online Abstracts: (<http://www.botany2002.org/section12/abstracts/142.shtml>).
- Torke, B. M. & Schaal, B. A.. 2001. Preliminary phylogenetic, evolutionary and monographic investigations in *Swartzia* (Leguminosae). Botany 2001, Albuquerque, NM, 12–16 August 2001. Online Abstracts: (<http://www.botany2001.org/section15/abstracts/9.shtml>).

### Invited Lectures

- Torke, B. M. 2008. Systematics and evolutionary diversification in the new world tropics: examples from the species-rich tree genus *Swartzia*. University of Wisconsin Parkside, Kenosha, Wisconsin.
- Torke, B. M. 2008. The diversity and evolution of rainforest tree communities in the New World Tropics. Philadelphia Botanical Club, Philadelphia, Pennsylvania.
- Torke, B. M. 2008. Systematics, biogeography, and evolutionary diversification in the species-rich neotropical tree genus *Swartzia* (Leguminosae-Papilionoideae) and related genera. New York Botanical Garden, Bronx, New York.
- Torke, B. M. 2008. Systematics and evolutionary diversification in the new world tropics: examples from the species-rich tree genus *Swartzia*. Grand Valley State University, Allendale, Michigan.
- Torke, B. M. 2006. Molecular phylogenetics and diversification in the species-rich neotropical tree genus *Swartzia* (Leguminosae-Papilionoideae). Academy of Natural Sciences, Philadelphia, Pennsylvania.
- Torke, B. M. 2005. Phylogenetics and diversification of *Swartzia* (Papilionoideae-Leguminosae), a species-rich neotropical tree genus. New York Botanical Garden, Bronx, New York.

### Academic Awards and Honors

- Catherine M. Lieneman Scholarship in Arts and Sciences, Washington University (2004–2005)
- Washington University Graduate Fellowship (2000–2007)
- Nomination for Outstanding Graduate Masters Student, Ohio University (1997)
- Ohio University Graduate Student Teaching Assistantship (1994–1997)
- Golden Key Honor Society (1994)
- Ball State University Dean's List for Academic Achievement (5 times, 1990–1994)

### Research Funds Awarded

- Torke, B. M. 2006. Diversification studies in the species-rich neotropical tree genus *Swartzia* (Leguminosae-Papilionoideae). Postdoctoral Fellowship in Molecular Systematics, Academy of Natural Sciences: \$75000 salary, \$22000 research expenses.
- Torke, B. M. 2005. Leaflet anatomy and diversification in *Swartzia* (Leguminosae): integrating fossils and phylogeny. Deep Time Project: \$1200.
- Torke, 2005. Revisionary and monographic studies of *Swartzia* (Leguminosae). The Rupert Barneby Award, New York Botanical Garden: \$1000.

Torke, B. M. & B. A. Schaal. 2003. Diversification in trees of the lowland neotropical rainforest, based on studies of the ubiquitous legume genus *Swartzia*. National Science Foundation Doctoral Dissertation Improvement Grant (DEB 0309162), with additional funds for International Collaboration: \$19,500.

Torke, B. M. 2001. Phylogenetic relationships and diversification in *Swartzia* (Fabaceae), based on DNA sequence data. American Society of Plant Taxonomists Research Grant for Graduate Students: \$1000.

Torke, B. M. 2001. Phylogenetic relationships and diversification in *Swartzia* (Fabaceae), based on DNA sequence data. Botanical Society of America Karling Award: \$500.

Torke, B. M. 1995. Systematics of *Salvia* section *Ekmania* (Labiatae). Ohio University John Houk Memorial Research Grant: \$350.

### **Certifications**

Graduate of the Academia de Espanol, Quito, Ecuador - advanced Spanish training (1997).

Tropical Plant Systematics (taught in Costa Rica), Organization for Tropical Studies (1996).

OSHA Chemical Hygiene Lab Standards (1995–2006).

### **International Botanical Fieldwork**

Dominican Republic, Costa Rica, Ecuador, Brazil, French Guiana, Bolivia, Peru, Guyana, Mexico, Guatemala, Belize, Nicaragua, United States.

### **Community Outreach**

Outstanding Mentor, Mentor St. Louis: a program for underprivileged elementary school youths (2003–2004).

### **Languages**

Proficient in English and Spanish, basic communication in Portuguese.

### **Reviewer for Scientific Journals**

Annals of the Missouri Botanical Garden (2004)

Botanical Journal of the Linnean Society (April, 2008)

Blumea (July, 2007)

International Journal of Plant Sciences (September, 2008)

Novon (April, 2008)

Rodriguisea (2006)

Systematic Botany (April, 2008)

### **Reviewer of Grant Proposals**

National Geographic Society (July, 2008)

National Science Foundation-USA (September, 2008)

### **Professional Society Affiliations**

American Society of Plant Taxonomists

Botanical Society of America

International Association for Plant Taxonomy

National Geographic Society