

## **CURRICULUM VITA**

### **Michael Owen Rischbieter**

Department of Biology  
Presbyterian College  
Clinton, S.C. 29325  
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#### **Academic Training:**

Ph.D., Geology, USC-Columbia, Columbia, S.C., 1992.

Doctoral Work: Biology, University of North Carolina-Chapel Hill, Chapel Hill, N.C., 1984-1987. ABD: dissertation research in paleobotany.

M.S., Biology, Western Illinois University, Macomb, Illinois, 1984.

B.S., Botany, University of Washington, Seattle, Washington, 1980.

#### **Academic Positions:**

July 2006-Present: Professor of Biology, Biology Department, Presbyterian College. Teaching duties include Introductory Biology, Evolution, Paleontology, Biogeography, Botany, Plant Systematics, Natural History of the Colorado Plateau\*, Paleobiology of the Southwest\*, Ecology and Paleobiology of the Western Great Plains\*, Paleobiology of the Southeastern U.S.\*, Natural History of the Galapagos Islands\*, (\*3 week field course).

July 1998-June 2006: Chairman, Biology Department, Presbyterian College, Clinton, SC.

Jun. 1987- 1998: Biology Department., Presbyterian College, Clinton, SC.

June 1994: Visiting Professor, The University of South Carolina. Course: SMED 520-Life Science for Teachers.

Jan. 1992-May 1992: Visiting Professor, The University of South Carolina. Courses taught: 3 Special Topics Courses in Paleontology: Paleontology for Earth Science Teachers (SMED 729).

Feb. 1991-Aug. 1992: Graduate Assistant, Geology Department, USC-Columbia.

Aug. 1986-Apr. 1987- Teaching Fellowship, Biology Dept., University of North Carolina, Chapel Hill, North Carolina. Coordinator: Introductory Biology Laboratories.

Aug. 1986-Apr. 1987- Biology Tutor, Athletic Dept., University of North Carolina-Chapel Hill. Tutor athletes over a broad range of biological subjects; Introductory Biology, Genetics, Organismal Biology, etc.

May 1986-Sept. 1986- Field and Laboratory Assistant, School of Forestry and Environmental Studies, Duke University, Durham, North Carolina. Soil mineralization.

Aug. 1984-May, 1986- Teaching Assistant, Biology Department, University of North Carolina, Chapel Hill, North Carolina. Introductory Biology Laboratories.

Aug. 1982-Apr. 1984 - Teaching Assistant, Biology Department, Western Illinois University, Macomb, Illinois. Introductory Biology Laboratories.

Jan. 1981-Dec. 1981 - Laboratory Technician and Field Assistant, Botany Department (with William A. DiMichele), University of Washington, Seattle, Washington. Research on Indiana Paper Coal; specimen curation.

**Evaluation/Assessment Positions:**

June 2013-current: External evaluator, The Citadel STEM Center of Excellence Ambassadors Program.

June 2011-current: External evaluator, The Citadel STEM Center of Excellence ITQ Program.

August 2010-August 2013: External evaluator, Clemson University CEIMS Program.

July 1998-99: Assessment specialist for the "Mobile Science Project", a DDESMEA-funded program stationed at Presbyterian College.

Jul. 1994: Invited evaluator at Baylor University, Waco, TX., of an NSF-funded program to establish a new non-majors Biology course, using a multi-disciplinary approach to teaching, and alternative assessment strategies to evaluate student progress; directed by Dr. Dawn Adams.

**Other Biology-Related Experience:**

July 1998-99: Assessment specialist for the "Mobile Science Project", a DDESMEA-funded program stationed at Presbyterian College.

Jul. 1994: Invited evaluator at Baylor University, Waco, TX., of an NSF-funded program to establish a new non-majors Biology course, using a multi-disciplinary approach to teaching, and alternative assessment strategies to evaluate student progress; directed by Dr. Dawn Adams.

Mar. 1988-1992: Judge, South Carolina Junior Academy of Science. Judge oral/written reports of High school-level students in the areas of botany and zoology.

May 1983-Jun. 1983- Illinois Dept. of Conservation Turkey Check-Station Operator.

Nov. 1983-Dec. 1983- Illinois Dept. of Conservation Deer Check-Station Operator.

**Research Interests:**

Morphology and evolution of Lower Carboniferous lycopods; morphology and anatomy of Upper Carboniferous pteridosperms. Palynology of the Plio-Pleistocene of South Carolina. Fossil mammals from the Oligocene of the Wyoming Badlands. Dendrochronology as a proxy for understanding the effects of climate change.

**Membership Held in Professional Societies:**

The Explorer's Club  
The Paleontological Society  
Botanical Society of America  
American Institute of Biological Sciences  
South Carolina Science Council

**Community Service:**

Science Olympiad Coach  
Host local schools, Girl Scouts, to PC Biology Dept.  
Visits to local schools—fossils, and other biology-related topics  
Coach—YMCA Youth Soccer; Clinton U-17 Soccer (state Champions 1996)  
Girl Scouts—help organize activities (my wife is a Troop Leader and Program Director)

**Student Research (\* denotes Honors Research)**

2015-16. Sydney Fontenot. A multi-environmental analysis of the accuracy of dendrochronology on old growth *Quercus alba*.

2015. Lauren Berkey\*. An examination of dental wear patterns of the Oligocene taxa *Mercyroididon*, using scanning electron microscopy.

2014. William Mullinax\*. Paleofloral characteristics of late Carboniferous/early Permian glossopterid collection from Santa Catarina State, Brazil.

2013-14. Rebecca Miller\*. Testing the accuracy of dendroclimatology as a proxy for the effects of human induced global climate change.

2012. Joanne Petz. A report on the flora of the Musgrove Mill State Historic Site.

2011. Caitlin Basnight\*. Analysis of dental wear patterns in the Oligocene mammal taxa *Leptomeryx* and *Poebrotherium*.

2010. Meghan Skinner\*. The effect of elevated CO<sub>2</sub> levels on the stomata density, and stomatal index of *Arabidopsis thaliana*.

2009. Emily Davis. A cladistic analysis of the honeysuckle *Lonicera sp.*

2008. Nicholas Blake\*. An ecological study of the relative density and relative dominance of the trees and understory plants contributing to the pollen rains in the pond sedimentary basins in and around Clinton SC.

2008. Carly Eargle\*. An analysis of the pollen and spores contributing to the pond sediments in and around Clinton SC: light microscopy

2008. Heather Hawkins\*. An analysis of the pollen and spores contributing to the pond sediments in and around Clinton SC: electron microscopy

2007. Allison Serdah\*. The use of a modified air abrasion technique to analyze the structures used in the cladistic analysis of two Oligocene oreodonts

2007. Sarah Cash\*. A microfaunal analysis of the late Middle Pliocene Walrus Ditch Locality near Summerville, South Carolina.

2006. Danielle Gill\*. Are the dinoflagellates of the Camelot Locality Eocene contamination or signs of a sea-level change in the Pleistocene?

2005. Anna Sheppard\*. An analysis of the dinoflagellates of the Camelot Locality sediments, Harleyville, South Carolina.

2004. Melissa Clare Beaty\*. A paleoenvironmental analysis of the Camelot Fauna Locality utilizing the angiosperm and gymnosperm component of the microflora.

2003. Laurel Delaney and Mary Douglas Hayne. A microfaunal analysis of the Pleistocene Camelot Locality of South Carolina.

1999. Matt Moore. An analysis of the Duplin Formation fossils, and a paleoenvironmental reconsideration of the Tearcoat Locality near Sumter, South Carolina.

**Publications and Abstracts:**

2012. Michael T. Dunn, Prescott Atkinson, James Lacefield, Michael Rischbieter. *Winslowia tuscumbiana* gen. et sp. nov. (Chaloneriaceae): A Cormose, Heterosporous, Ligulate Lycopsid Reconstructed from the Inside Out from the Pride Mountain Formation (Late Mississippian/Serpukhovian) of Northern Alabama. International Journal of Plant Sciences, Vol. 173, No. 1 (January 2012), pp. 96-111

2009. Carly Eargle and Michael O. Rischbieter. "An Analysis of the Pollen Profiles in Pond Deposition Basins and Associated Plant Community Structure in Young's Pond, Clinton, SC". Council of Undergraduate Research "Posters on the Hill" Abstract.

2009. Eargle, C and M.O. Rischbieter. An analysis of the pollen and spores contributing to the pond sediments in and around Clinton SC . BigSURS Undergraduate Research Symposium Abstracts. UNC-Asheville.
- 2007 Cash, S. and M.O. Rischbieter. A Microfaunal Analysis of the Walrus Ditch Locality. BigSURS Undergraduate Research Symposium Abstracts. Coastal Carolina University.
- 2006 Gill, Danielle and M. Rischbieter, Presbyterian College. A survey and environmental assessment of the dinoflagellates of the Pleistocene Camelot Fauna. South Carolina Academy of Sciences Abstract
- 2005 Beaty, M.C. and M. Rischbieter, Presbyterian College. Palynology of the Irvingtonian Camelot Fauna Locality. South Carolina Academy of Sciences Abstract.
- 2004 Delaney, L, M.D. Hayne and M. Rischbieter, Presbyterian College. An analysis of the palynoflora of the Camelot Fauna, Harleyville, SC. South Carolina Academy of Sciences Abstract.
- 2000 Moore, M and M. Rischbieter, Presbyterian College. A morphometric analysis of the Duplin Formation near Sumter, SC. South Carolina Academy of Sciences Abstract.
- 1999 Willaimson, R. and M. Rischbieter, Presbyterian College. A Comparative Study of Snake Scale Microdermatoglyphics. South Carolina Academy of Sciences Abstract.
- 1996 Rischbieter, M.O, J.R. Carpenter, and O. Saunders. Life Science Source Book: A guide to Life Science Activities, Volume 1: Ecology. Center for Science Education, University of South Carolina, Columbia, South Carolina.
- 1993 Rischbieter, M.O., J.M. Ryan, and J.R. Carpenter. Use of microethnographic strategies to analyze some affective aspects of learning-cycle-based minicourses in paleontology for teachers. *Journal of Geological Education*, v. 41, p. 208-218.
- 1985 Stidd, B.M., M.O. Rischbieter, and T.L. Phillips. A new lyginopterid pollen organ with alveolate pollen exines. *Amer. J. Bot.* 72(4):501-508.
- 1985 Rischbieter, M.O., and B.M. Stidd. Anatomically and morphologically preserved *Linopteris obliqua* Bunbury from the Herrin No. 6 Coal of Southern Illinois. *Amer. J. Bot. Abstr.*, 72(6):899.
- 1984 DiMichele, W.A., M.O Rischbieter, D.L. Eggert, and R.A. Gastaldo. Stem and leaf cuticle of *Karinopteris*: source of cuticles from the Indiana "paper" coal. *Amer. J. Bot.*, 71(5):626-637.

1984 Rischbieter, M.O., B.M. Stidd, and T.L. Phillips. A new seed fern pollen organ from the Pennsylvanian of Kentucky. *Amer. J. Bot. Abstr.*, 71(5/2):77.

**Presentations, Other Activities:**

2006-2014. Attended the TATE Conference in Casper, Wyoming.

2014-15. Presented at the Alabama Paleontological Society Meetings in Birmingham, Alabama.

2104-15. Review submitted papers for the American Biology Teacher Journal.

2013. Attended the 2013 National Academies Summer Institute on Undergraduate Education in Biology at UGA-Athens, and was named a *National Academies Education Fellow in the Life Sciences, 2013-2014*.

2005 Session Chair and Presider, Honors Day, Presbyterian College.

2004 Grant recipient and Seminar Chair, SC-BRIN/EPSCoR NSA Program.

2003 "Paleobotany in the Southeastern U.S.A.". May meeting of the Explorer's Club, Columbia, S.C.

2002 Buxton, E. and M. Rischbieter, Presbyterian College. "A study of the fossils of the Triassic Deep River Basin Pekin Formation near Gulf, North Carolina". South Carolina Academy of Sciences Annual Meeting, Poster Session, USC-Aiken, Aiken, SC.

2001 "Paleobotany: plant biology in geologic time". South Carolina Native Plant Society, Annual Meetings, Columbia, S.C.

2000 Presider, Judge of the Geological Section of the South Carolina Academy of Sciences Meetings at Presbyterian College.

1998 "The history of life on earth; a 3.8 billion year virtual year tour." SCJAS Fall Workshop, Presbyterian College, Clinton, SC.

1998 "Fossil life in South Carolina; a hands on tour. SCJAS Fall Workshop, Presbyterian College, Clinton, SC.

1993 "The paleobiology of the Rockies and Great Western Plains", SCJAS Fall Workshop, Converse College, Spartanburg, SC.

1992 "The fossils of South Carolina- a hands-on approach." SCJAS Winter Workshop, Presbyterian College, Clinton, S.C.

1991 "A short course in Paleontology." South Carolina Science Council, Myrtle Beach, South Carolina.

1990 "Paleontology: What do fossils tell us?" SCJAS Winter Workshop, USC-Columbia, Columbia S.C.

1989 "Coal Balls: Preparation techniques of a unique fossil form." SCJAS Winter Workshop, Presbyterian College, Clinton, S.C.

1989 "The world of fossils- a hands-on approach." SCJAS Winter Workshop, Presbyterian College, Clinton, S.C.

1985 "Anatomically and morphologically preserved *Linopteris obliqua* Bunbury from the Herrin No. 6 Coal of Southern Illinois. AIBS, Paleobot. Sect., Gainesville, Florida.

1983 "A new seed fern pollen organ from the Pennsylvanian of Kentucky." AIBS, Paleobot. Sect., Grand Forks, North Dakota.

1982 "A new permineralized lyginopterid pollen organ from the Pennsylvanian of Kentucky." Illinois State Academy of Sciences, Macomb, Illinois.

**Science Related Coursework:**

1. University of Washington: Plant Physiology, Plant Anatomy, Marine Botany, Mycology, Comparative Vascular Plant Morphology, Plant Classification, Statistics, Calculus, Inorganic Chemistry, Organic Chemistry, General Physics.
2. Western Illinois University (Masters Level): Plant Morphology, Plant Taxonomy, Plant Ecology, Bryology, Organic Evolution, Electron Microscopy, Physical and Historical Geology, Geomorphology, Glacial Geology.
3. University of North Carolina (Doctoral Level): Plant Taxonomy, Paleobotany, Invertebrate Paleontology, Stratigraphy, Sedimentary Petrology, Biostatistics.
4. University of South Carolina-Columbia (Doctoral Level): Advanced Coal Petrography, Educational Research Methods, Measurement and Evaluation in Teaching, Ethnography, Geology of South Carolina, Advanced Paleontology, Palynology