

# Garland R. Upchurch, Jr.

Associate Professor of Biology     Curator of Paleobotany

Texas State University-San Marcos, San Marcos, Texas 78666 (512) 245-2178

## I. Academic/Professional Background

### Education

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B.S.	1975	Botany	University of Nebraska, Lincoln
M.S.	1978	Botany	University of Michigan, Ann Arbor
Ph.D.	1981	Botany	University of Michigan, Ann Arbor

Dissertation: *Evolution of the cuticle in early angiosperm leaves from the Lower Cretaceous Potomac Group (Atlantic Coastal Plain, U.S.A.)*.  
Dissertation committee co-chaired by James Doyle & Charles Beck.

Postdoctoral	1981–91	Botany, Geology, & Global Change	Smithsonian Institution, Indiana University, U.S. Geological Survey, University of Colorado, and National Center for Atmospheric Research
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### Professional Experience

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University of Nebraska, Lincoln	Teaching & Herbarium Assistant School of Life Sciences	1974–1975
University of Michigan, Ann Arbor	Teaching Assistant Division of Biological Sciences	1975–1981
Smithsonian Institution, Washington, D.C.	Postdoctoral Fellow Department of Paleobiology (with Drs. Leo Hickey & Francis Hueber)	1981–1983
Indiana University, Bloomington	NSF-funded Postdoctoral Researcher Department of Biology (with Dr. David Dilcher)	1983–1984
U.S. Geological Survey, Denver, CO	National Research Council Postdoctoral Research Associate (with Drs. Jack Wolfe & Douglas Nichols)	1984–1986
University of Colorado, Boulder	NSF-funded Research Associate University Museum (with Dr. Erle Kauffman)	1986–1988

National Center for Atmospheric Research	Postdoctoral Fellow Advanced Study Program (with Dr. Starley Thompson)	1988–1991
Colorado Department of Highways	Contract Paleontologist	1991
Texas State University-San Marcos	Assistant Professor Department of Biology	1991–1999
Texas State University-San Marcos	Associate Professor Department of Biology	1999–2015

## Grants, Fellowships, Honors and Awards

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### Grants (only funded and pending proposals listed)

1986–1988	National Science Foundation, Systematic Biology Program. Project entitled, "Patterns in plant extinction and environmental change at the Cretaceous-Tertiary boundary, North America, Part I." G.R. Upchurch, Jr., Principal Investigator, E.G. Kauffman, Co-principal Investigator. \$90,000. (Grant made to the University of Colorado.)
1988	National Science Foundation, Division of Polar Studies. Project entitled, "Campanian to Eocene dispersed plant cuticles from Seymour Island, Antarctica." Subcontract to project entitled "Campanian to Eocene floral history of the James Ross Island Basin, Antarctica." R.A. Askin, Principal Investigator. \$9,617. (Grant made to the University of Colorado.)
1990	National Science Foundation, Paleontology and Stratigraphy Program. Project entitled, "Analysis of leaf debris in the Mahakam Delta." Subcontract to project entitled "Phytotaphonomy of hydrocarbon precursors, Mahakam Delta, Kalimantan." R.A. Gastaldo, Principal Investigator. \$4,500. (Grant made to the University of Colorado.)
1991–94	National Science Foundation, Biotic Survey and Inventory Program. Project entitled, "Paleofloristic data for the study of global change and biotic extinction." G.R. Upchurch, Jr., Principal Investigator. \$100,000. (Grant made to Texas State University-San Marcos.)
1994	Texas State University-San Marcos, Office of Research and Sponsored Projects, Research Enhancement Grant. Project entitled, "Simulating climate change during mass extinction." One year, \$3,850.
1994–96	Texas Higher Education Coordinating Board, Advanced Research Program. Project entitled, "Paleovegetation and Global Climate Change Across the Cretaceous-Tertiary Boundary." G.R. Upchurch, Jr., Principal Investigator, \$40,873. (Grant made to Texas State University-San Marcos.) (A companion proposal submitted by B. Otto-Bliesner and C. Scotese, UT-Arlington, was funded for \$27,000. Supercomputer time funded separately through UT-Arlington and the National Center for Atmospheric Research)

- 1997–1998 Texas State University-San Marcos, special research funds for the Freeman Ranch property. Project entitled, "Paleobotanical survey of the Freeman Ranch". One year, \$850.
- 1998–2000 National Institutes of Health, Phase II grant for small businesses, "Identification of plants using neural network technology". With F. Wadleigh, C. Meachem, G. Cottrell, & V. Hildebrand through Netrologic, Inc. Frank Wadleigh, Principal Investigator, G.R. Upchurch, project member/domain expert. Mix of academic & corporate scientists, total for everyone = \$736,922. (Grant made to Netrologic Inc.)
- 2005 Texas State University-San Marcos, Research Enhancement Program. Project entitled, "Paleogeography of the Late Miocene: Testing the uplift hypothesis of climatic change". One year, \$5,950.
- 2007–2008 Library Research Grant, Texas State University. One year, \$2,935. (With David Lemke)
- 2008–2009 Library Research Grant, Texas State University. One year, \$2,025.
- 2009–2010 Texas State University-San Marcos, Research Enhancement Program. Project entitled, "New records of karstic landscape evolution, fossil plant assemblages, and paleohydrology as preserved in an ancient Appalachian sinkhole lakebed." \$4,500. (With Benjamin Schwartz)
- 2009–2010 Library Research Grant, Texas State University. One year, \$1,870.
- 2010–2012 Cave Conservancy of the Virginias, Project entitled, "New records of karstic landscape evolution, fossil plant assemblages, and paleohydrology as preserved in an ancient Appalachian sinkhole lakebed." \$9,838 (With Ben Schwartz)
- 2010–2011 Library Research Grant, Texas State University. One year, \$2,000.
- 2013–2015 National Science Foundation, Major Research Instrumentation Program, Project entitled, "MRI: Acquisition of a High Resolution Computed Tomography System for Research and Education." 2 years, \$1,007,690, with a 30% institutional cost share. Daniel Wescott, PI; Garland Upchurch, Jonathan Lohse, and Martha Spradley, Co-PIs.
- 2013–2014 National Science Foundation, Predoctoral Fellowship for Jon Richey. 3 years, \$132,000. Garland Upchurch, PI (account manager for Year 1).

### **Graduate Grants**

- 1976 Rackham Summer Research Grant, University of Michigan, "Cuticular anatomy of early angiosperm leaves: Preliminary studies."
- 1978–1979 Scott Turner Awards in the Earth Sciences #1 and #2, University of Michigan, "Cuticle evolution in early flowering plants."
- 1978–1980 Rackham Block Grants for Summer Dissertation Research #1, #2 and #3, University of Michigan, "Evolution of the cuticle in early angiosperm leaves from the Lower Cretaceous Potomac Group of Virginia and Maryland."

### Postdoctoral fellowships (competitive)

- 1981–1983 Postdoctoral Fellowship, Smithsonian Institution, "Systematics, evolution, and paleoecology of early angiosperm leaves from the Lower Cretaceous Potomac Group (Atlantic Coastal Plain)."
- 1984–1986 National Research Council Postdoctoral Research Associateship, U.S. Geological Survey, "Foliar analysis of the terminal Cretaceous event, Raton Basin."
- 1988–1991 Postdoctoral Fellowship, National Center for Atmospheric Research, Boulder, Colorado.

### Honors and awards

- 1975 Weber-Ernst Award, Outstanding Undergraduate Major in Botany, University of Nebraska, Lincoln.
- 1981–1983 Smithsonian Institution Postdoctoral Fellowship.
- 1984–1986 National Research Council Postdoctoral Research Associateship, U.S. Geological Survey.
- 1986 Society of Economic Paleontologists and Mineralogists, Excellence in Presentation Award (shared with D.J. Nichols, R.F. Fleming, R.H. Tschudy, and C.L. Pillmore).
- 1988–1991 Postdoctoral Fellowship, National Center for Atmospheric Research, Boulder, Colorado.
- 1992 Listed in *Who's Who In The West*.
- 1995 Listed in *Who's Who In The World*.
- 1996 Listed in *Who's Who In Science and Engineering, 3rd Edition*.
- 1998 Listed in *Who's Who in America* and *Who's Who in the World*
- 1999 Presidential Seminar, Texas State University-San Marcos  
Listed in *Who's Who in the World*
- 2001 Biographee, "2000 Outstanding Scientists of the 21st Century". Cambridge, International Biographical Centre, Melrose Press Ltd.  
Listed in *International Scientist of the Year 2001*
- 2002 Nominee, Presidential Award for Excellence in Service, College of Science, Texas State University, San Marcos  
Biographee, "2000 Outstanding Scientists of the 21st Century". Cambridge, International Biographical Centre, Melrose Press Ltd.

## Teaching Honors and Awards

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1996	Alpha Delta Pi Favorite Professor, Texas State University
1997	Alpha Delta Pi Favorite Professor, Texas State University
1998	Alpha Delta Pi Favorite Professor, Texas State University
2004	Alpha Delta Pi Favorite Professor, Texas State University Delta Gamma Favorite Professor, Texas State University
2005	Alpha Delta Pi Favorite Professor, Texas State University

## Courses Taught

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### University of Nebraska, Lincoln

1974	Introductory Botany	Laboratory (1 offering)
1975	Plant Morphology and Evolution	Laboratory (1 offering)

### University of Michigan

1975–81	Biology for Majors	Laboratory & Discussion (5 offerings)
1976–78	Introductory Botany	Laboratory (3 offerings)
1978	Biology for Non-majors	Discussion (1 offering)
1979	Plant Systematics	Laboratory (1 offering)

### Indiana University

1983	Special Topics in Paleobotany class (series of 6 lectures).
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### Texas State University, San Marcos

1991–2000	Biology 1410 Introductory Botany	Lecture (30 offerings) (Fall, Spring, and Summer semesters)
1992–2014	Biology 4411/5411 Plant Morphology	Lecture & Laboratory (11 offerings) (Spring semester)
1993–2013	Biology 4412/5412 Plant Anatomy	Lecture & Laboratory (11 offerings) (Spring semester)
1999–2014	Biology 5110E/7102	Seminar (8 offerings)
2001	Biology 5319E History of Vegetation & Climate	Lecture & Discussion (1 offering) (Spring Semester)
2001–2013	Biology 1320 Modern Biology I (non-majors)	Lecture (>12 offerings) (Fall, Spring, and Summer semesters)
2001–2013	Biology 1421	Lecture (>14 offerings)

	Modern Biology II (non-majors)	(Fall, Spring, and Summer semesters)
2006–2012	Biology 7308/5308 History of Vegetation and Climate	Lecture with student projects (4 offerings)

## **Mentorship, external advising, and related items**

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### **Postdoctoral**

2006–2007	Dr. Sergey Vikulin, Fulbright Research Fellow, Komorov Botanical Institute, Russian Academy of Sciences. <b>Project:</b> Early Tertiary floras of the Arctic
2010–2012	Dr. Emilio Estrada-Ruiz, CONACyT Postdoctoral Research fellow, Mexico. <b>Project:</b> Late Cretaceous fossil wood floras from North America.

### **Student**

1991–2012	Supervision of student volunteers and grant workers. Duties include laboratory preparation of plant tissue samples, field assistance, curatorial work, computer programming, and database organization.
1995	Thesis advisor, honors student Kristi Dunn. Thesis entitled, "Biofilm enhancement of leaf fossilization potential" (published in <i>Geology</i> )
1996–1997	Andrea Wakefield, graduate research on a Late Cretaceous fossil forest." Karl Hagenbuch, undergraduate research student on Cretaceous conifers from the McRae Formation of New Mexico
1997–1998	Jennifer Mittelhauser, undergraduate research student on leaf economics and cuticular anatomy
1998	Rebecca Smith, graduate research on biomass abundance for a latest Cretaceous fossil forest.
1997–2001	Informal supervision and direct involvement in research of Ph.D. student Barry Lomax, University of Sheffield, UK (thesis advisor: David Beerling).
1997–1999	M.S. thesis advisor for Robert Cowie. Thesis entitled, "Reconstructing stomatal gas exchange in the fossil conifer <i>Pseudofrenelopsis varians</i> ."
1999–2005	Research advisor for Jacqueline Scherer, summer teacher intern through SMTEI (Science Math Technology Education Institute).
2001	English language editor for Ph.D. thesis of Anke Steppuhn, University of Tübingen, Germany (thesis advisor: Volker Mosbrugger).
2001–2003	External member for Ph.D. committee of Kevin Carpenter, University of California, Davis. (thesis advisor: Geraat Vermeij).
2006	Ph.D. student projects on paleobotany of the latest Cretaceous, BIO 7308 Amanda Birnbaum, undergraduate research on the systematics of <i>Zingiberopsis</i> Crystal Mathisrud, University of Wisconsin, River Falls. Flora of Jurassic Park.
2007	M.S. student projects on paleobotany of the latest Cretaceous, BIO 7308
2007–2008	Mark Gorman, University of Colorado, origin of latest Cretaceous amber

- 2008 Renee Hardin, systematics of latest Cretaceous cycads.  
 J. Michael Tapp, University of Alaska, Fairbanks. Phytodebris floras of the Prince Creek Formation (Upper Cretaceous), North Slope of Alaska.  
 Emilio Estrada-Ruiz, UNAM, Mexico City, Mexico. Late Cretaceous floras of the Olmos Formation of Mexico, and adjacent regions of North America.  
 Patricia Valella, University of Denver. The diet of Matschie's tree kangaroo from Papua New Guinea.
- 2008–2010 Ph.D. thesis advisor, Patricia Valella
- 2009 Plant Anatomy (BIO 5412) student projects (3 projects)
- 2010–2011 Thesis advisor, undergraduate Honors Students Jon Richey and Dori Thompson  
 Class projects, BIO 7308
- 2011–2012 Thesis advisor, undergraduate Honors Student Dori Thompson  
 Class projects, BIO 7308
- 2011–2014 M.S. thesis advisor, Jon Richey (graduated 8/2014)
- 2011–2015 Ph.D. thesis advisor, Joan Parrott
- 2013–2014 External member for Ph.D. committee of Jacqueline Scherer, University of Texas at San Antonio (graduated 8/2014)
- 2013–2015 External member, M.S. committee of Alejandra Sainz, National Polytechnic University of Mexico, Mexico City, Mexico
- Informal supervision and direct involvement in graduate research of
- Dori Contreras, University of California, Berkeley
  - Alexandra Lee, University of Nottingham, UK
  - Sinem Tanrikulu, University of California, Davis
- 2014 External thesis examiner for Ph.D. student Tamara Fletcher, University of Queensland, Australia  
 Member of three M.S. committees, Texas State University  
 Assisted laboratory visitor Ludovic Renard with thesis work on fossil epiphyllous fungi.
- 2015 Member of two M.S. committees, Texas State University  
 Member of M.S. committee, Museum Studies, University of Colorado, Boulder  
 RESESS Mentor, University of Colorado, Boulder (with Karen Chin)

## Organizations

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### Professional

- American Geophysical Union
- Botanical Society of America
- Geological Society of America
- International Organization of Palaeobotany
- SEPM (Society of Economic Paleontology and Mineralogy)

### Museum, exhibits, collections, and related experience

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1974–1975	Nebraska State Museum, Herbarium Assistant (both modern and fossil plants)
1975–1981	University of Michigan, Museum of Paleontology, graduate experience with paleobotanical collections (research and expansion of collections)
1981–1983	U.S. National Museum, postdoctoral experience with paleobotanical collections (research and expansion of collections)
1983–1984	Indiana University, postdoctoral experience with paleobotanical collections (now at Florida State Museum) (research and expansion of collections)
1986–1991	University of Colorado Museum, postdoctoral experience with paleobotanical collections (research and expansion of collections)
1987	Co-leader of paleobotanical field trip, annual meeting, Botanical Society of America
1990	Co-leader of paleobotanical field trip, annual meeting, Botanical Society of America
1990–1991	Paleobotanical consultant, Denver Museum of Natural History. Included collections evaluation, leading field trips for the general public, and minor collections expansion
1990–1995	External Advisory Committee, Hall of Mesozoic Life, Nebraska State Museum.
1990–1995	External Advisory Group, exhibit entitled, “Prehistoric Journey”, Denver Museum of Natural History (now Denver Museum of Nature and Science).
1991	Co-producer of Colorado Department of Highways Exhibit: <i>The Littleton Railroad Depression Paleoflora</i> .
1991–2015	Development and curation of paleobotanical research collections, Texas State University, San Marcos (>10,000 specimens). Includes supervision of field crews, student curatorial assistants, student researchers, and volunteers. Emphasis is on plant megafossils from the Cretaceous-Tertiary boundary.
1997	Exhibit on Cretaceous plants, Texas State University Biology Department
2001	Leader of two-day paleobotanical field trip, annual meeting, Botanical Society of America
2004	Academic consultant on paleobotany for film entitled, “ <i>Austin Past and</i>



*Present: A Multimedia Documentary about the History of Austin”.*

- 2005 Leader of paleobotanical field trip, annual meeting, Botanical Society of America
- 2005–2015 Curator of Paleobotany, Texas State University, San Marcos, TX
- 2012–2015 Curator Adjoint, University of Colorado Museum, Boulder, CO (unpaid position)

## Service

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### Honors and Awards

- 2002 Nominee, Presidential Award for Excellence in Service, Texas State University

### Department of Biology

#### Committee work

- 1991-2004 Chair, Seminar Committee
- 1995–1997 Member, Natural Science Center Committee
- 1997–2002 Student Colloquium Committee
- 1998 Member, Molecular Systematics Search Committee
- 1999–2015 Personnel Committee
- 2001–2005 Budget Committee
- 2002 Assistance with proposal writing of tenure-track faculty for the Research Enhancement Program
- 2002–2003 Geology & Hydrology Search Committees  
Planning Committee
- 2002–2005 Undergraduate Research Committee
- 2003 Chair, ad hoc committee to determine future of Introductory Botany
- 2004–2006 Chair, ad hoc committee on biological collections.
- 2005–2012 Greenhouse committee (for the construction of a new research greenhouse)
- 2008 Hydrogeologist Search Committee

#### Teaching service

- 1991–2013 Teaching large freshman sections with >50 students (up to 4 sections per year).
- 1997 Overload teaching, extra lecture and lab section, Biology 5412, Plant Anatomy.
- 1999 Overload teaching, Biology 5110E, seminar on Mass Extinction  
Guest lectures for Biology 5318, Special Topics in Biology
- 2001 Development of three (3) new courses as part of the Biology 2000 curriculum (BIO 1320, 1421, and 5319E)
- 2002 Overload teaching, two laboratory sections, Biology 4412/5412, Plant Anatomy

- 2003, 2005 Overload teaching, laboratory sections of Biology 4411/5411, Plant Morphology.  
 2006 Development of Biology 5308/7308, History of Vegetation and Climate.  
 1997–2009 Teaching evening classes, BIO 1320, BIO 4411, BIO 4412, BIO 7308  
 2011–2014 Seminar in Paleobotany and Paleoclimatology, BIO 5110/7102, average two sections per year.  
 Guest lectures on History of Life, BIO 4301, Evolution; and BIO 7353, Biogeography.

### **Other service**

- 2005 Setup of Paleobotanical Collections Facility, Department of Biology. Facility includes: 1) Collections Range with >10,000 specimens, 2) Macrophotography Facility with digital and film capabilities, and 3) Photomicrography Facility with Brightfield, Phase-contrast, and Epifluorescence capabilities.  
 2005–2015 Curator of Paleobotany, Texas State University, San Marcos  
 2007–2012 Ordered >400 books and monographs for the Texas State University Library  
 2008–2009 Made pdfs of career publications (including high-resolution photographic plates) and placed them on Ecommons  
 2010–2012 Rebuilt greenhouse teaching collections, planned teaching gardens (esp. palms & cycads)

### **College of Science**

- 1997, 2001, 2002 Research Enhancement Program (REP), Proposal Review Panel, College of Science (included assisting tenure-track faculty in proposal preparation)

### **University Committees**

- 1999 Search Committee, Associate Vice President of Academic Affairs for Research & Sponsored Projects, representative from the College of Science  
 2000–2002 Graduate Scholarship Selection Committee, representative from the College of Science  
 2002–2005 Presidential Seminar Selection Committee, representative from the College of Science (Chair from 2003 to 2005).  
 2002–2003 Undergraduate Research Council, representative from the College of Science (Chair: Billy Covington).  
 2004 Undergraduate Academic Center committee, representative, College of Science.  
 2005–2006 Pecos Hall renovation committee

### **Service to community and other universities**

- 1983 Judge, Montgomery County, Maryland, Gem and Mineral Show  
 1988 Lecture, Western Interior Paleontological Society, Denver, Colorado  
 Lecture, Colorado Native Plants Society, Fort Collins, Colorado  
 Lecture, dinosaur extinction, Milehicon 1988 (Denver science fiction convention)

- 1992–1993 Presentations on fossils, Crockett Elementary School, San Marcos
- 1994–1995 Cub Scout Pack 118, San Marcos, assisted with Sights & Sounds and July 4 sales.
- 1999 James Madison High School, San Antonio, TX, co-leader of field trip for environmental science class of Jackie Scherer
- 2001 Ex officio member, Climate Modeler Search Committee, University of Texas at Austin, Department of Geology (resulted in the hiring of Zong-Liang Yang)
- James Madison High School, San Antonio, TX, judge of Science Fair projects

## **National (Professional) Service**

### **Paleobotanical Section, Botanical Society of America.**

- 1984 Annual Meeting, Botanical Society of America, session chair.
- 1985 Annual Meeting, Botanical Society of America, session chair.
- 1988 Annual Meeting, Botanical Society of America, co-organizer of field trip to collect fossil plants from the early Tertiary of California.
- 1990 Annual Meeting, Botanical Society of America, co-organizer of field trip to collect fossil plants from the Early Cretaceous of Virginia
- Session chair, Annual Meeting, Botanical Society of America
- Judge of best student paper in paleobotany, Annual Meeting, Botanical Society of America
- 1992–1993 Member, ad hoc committee on policies regarding future use of the Paleobotanical Section's endowments.
- 1996–1997 Chair of section
- 1997–2005 Representative to the Association of North American Paleontological Societies (ANAPS). ANAPS plans the North American Paleontological Convention.
- 2001 Botany 2001, annual meeting of the Botanical Society of America, leader of two-day field trip entitled, “Paleoecology of the Cretaceous-Tertiary boundary in the Raton Basin, New Mexico and Colorado”.
- 2005 Botany 2005, annual meeting of the Botanical Society of America, leader of one-day field trip to the Tertiary of Texas.
- 2007 Chair of ad hoc committee to establish an outstanding achievement award, Paleobotanical Section, Botanical Society of America.
- 2012 Chaired 2 sessions, Annual Meeting, Botanical Society of America
- 2013 Judge, Outstanding Student Presentation, American Geophysical Union Fall Meeting, San Francisco, CA

### **Symposium organization**

- 1992 Co-organizer of symposium entitled, "The Origin of Modern Terrestrial

- 2010 Ecosystems: The late Mesozoic and Cenozoic." North American Paleontological Convention V, Chicago, IL, June, 1992. (With R.L. Stuckey)  
Co-organizer of two sessions on Cretaceous climates, American Geophysical Union Fall Meeting, San Francisco, CA (With A. Fiorillo, G. Ludvigsen, and P.J. McCarthy)
- 2014 Co-organizer and convener of two scientific sessions on early flowering plants, 9<sup>th</sup> European Palaeobotany Palynology Conference, Padova, Italy, August 26–31, 2014 (with Barry Lomax and Jiri Kvacek).

## II. Publications

### Books

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#### Monographs

- 1981 Upchurch, G.R., Jr. *The evolution of the cuticle in early angiosperm leaves from the Lower Cretaceous Potomac Group (Atlantic Coastal Plain, U.S.A.)*. Doctoral thesis, University of Michigan, Ann Arbor, 180 p.
- 1990 Upchurch, G.R., Jr., and Dilcher, D.L. Cenomanian angiosperm leaf megafossils, Dakota Formation, Rose Creek locality, Jefferson County, southeastern Nebraska. *U.S. Geological Survey Bulletin* 1915, 55 p. + 31 pls.
- 1994 Upchurch, G.R., Jr., Crane, P.R., and Drinnan, A.N. The megaf flora from the Quantico locality (Middle to Upper Albian), Lower Cretaceous Potomac Group of Virginia. *Virginia Museum of Natural History Memoir* 4: 58 p.

#### Chapters in books

- 1981 Upchurch, G.R., Jr., and Doyle, J.A. Paleoecology of the conifers *Frenelopsis* and *Pseudofrenelopsis* (Cheirolepidiaceae) from the Cretaceous Potomac Group of Maryland and Virginia. In Romans, R.C., ed. *Geobotany II*. New York, Plenum Press, p. 167–202.
- 1987 Upchurch, G.R., Jr., and Wolfe, J.A. Mid-Cretaceous to Early Tertiary vegetation and climate: Evidence from fossil leaves and wood. In Friis, E.M., W.G. Chaloner, and P.R. Crane, eds., *The origins of angiosperms and their biological consequences*. Cambridge, Cambridge University Press, p. 75–105.
- 1989 Upchurch, G.R., Jr. Terrestrial environmental changes and extinction patterns at the Cretaceous-Tertiary boundary, North America. In Donovan, S.K., ed., *Mass Extinction: Processes and Evidence*. London, Belhaven Press, p. 195–216; printed in the United States by Columbia University Press.
- 1990 Kauffman, E.G., Upchurch, G.R., Jr., and Nichols, D.J. The Cretaceous-Tertiary boundary interval at South Table Mountain, near Golden, Colorado. In Kauffman, E.G., and Walliser, O.H., eds., *Extinction events in Earth History*. Heidelberg, Springer-Verlag, p. 365–392.
- 2001 Upchurch, G.R., Jr. Climate–Modelling using Fossil Plants. In Briggs, D.E.G.,

and Crowther, P.R., eds., *Palaeobiology II*. Oxford, Blackwell Science Ltd, p. 483–485. (This is the “how to” guide of paleobiology.)

- 2009 Upchurch, G.R., Jr. Mass Extinction: Role of Climates. In Gornitz, V., ed., *Encyclopedia of Palaeoclimatology and Ancient Environments*. Encyclopedia of Earth Sciences Series, Kluwer Academic Publishers, p. 547–550.

### Custom Textbooks and Curriculum

- 1995 Upchurch, G.R., Jr. *Biology 1410: Course Study Guide*. Wm. C. Brown Publishers, Dubuque, Iowa. 144 p. + 22 p. appendix.
- 1997–2004 Upchurch, G.R., Jr. *Laboratory Exercises for Biology 4412/5412, Plant Anatomy*. Published through the Texas State University Bookstore (1997-2002) and supplied through Blackboard (2004).
- 1998 Upchurch, G.R., Jr. *Biology 1410: Course Study Guide, Second Edition, Parts 1–4*. Published through Texas State University Bookstore.
- Upchurch, G.R., Jr. *Introductory Plant Biology Course Study Guide, Seventh Edition*. McGraw Hill Companies, 206 p.+ 30 p. appendix.
- 2000 Upchurch, G.R., Jr. *Introductory Plant Biology Course Study Guide, Eighth Edition*. McGraw Hill Companies, 206 p.+ 30 p. appendix.
- 2000–2005 Upchurch, G.R., Jr. *Laboratory Manual, Biology 4411/5411, Plant Morphology*. Published through Texas State University bookstore (2000-2003) and supplied through Blackboard (2005).
- 2002–2009 Upchurch, G.R., Jr. *Blackboard & TRACS: Biology 1320, Modern Biology-1* (lecture notes, review materials, sample exams, old exams, and answer keys).
- 2002–2009 Upchurch, G.R., Jr. *Blackboard & TRACS: Biology 1421, Modern Biology-2* (lecture notes, review materials, sample exams, old exams, and answer keys).
- 2004–2009 Upchurch, G.R., Jr. *Blackboard & TRACS: Biology 4412/5412, Plant Anatomy* (laboratory exercises, study guides, and digital image library).
- 2006–2007 Upchurch, G.R., Jr. *Blackboard: Biology 5308/7308, History of Vegetation and Climate* (powerpoint lectures and extensive supplemental readings).
- 2008 *Blackboard: Biology 4411/5411, Morphology of Vascular Plants*. (powerpoint lectures, supplemental readings, laboratory exercises).

## Articles

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### Journal Articles

- 1984 Upchurch, G.R., Jr. The cuticular anatomy of early angiosperm leaves from the Lower Cretaceous Potomac Group of Virginia and Maryland, Part 1, Zone 1 leaves. *American Journal of Botany* 71: 192–202
- Upchurch, G.R., Jr. Cuticular evolution in Early Cretaceous angiosperms from the Potomac Group of Virginia and Maryland. *Annals of the Missouri Botanical Garden* 71: 518–546.

- 1986 Wolfe, J.A., and Upchurch, G.R., Jr. Vegetation, climatic and floral changes at the Cretaceous-Tertiary boundary. *Nature* 324: 148–152
- 1987 Wolfe, J.A., and Upchurch, G.R., Jr. Leaf assemblages across the Cretaceous-Tertiary boundary in the Raton Basin, New Mexico and Colorado. *Proceedings of the National Academy of Sciences* 84: 5096–5100.
- Crane, P.R., and Upchurch, G.R., Jr. *Drewria potomacensis* gen. et sp. nov., an Early Cretaceous member of Gnetales from the Potomac Group of Virginia. *American Journal of Botany* 74: 1723–1738.
- Wolfe, J.A., and Upchurch, G.R., Jr. North American non-marine climates and vegetation during the Late Cretaceous. *Palaeogeography, Palaeoclimatology, Palaeoecology* 61: 33–77.
- 1989 Wolfe, J.A., and Upchurch, G.R., Jr. Reply to "Comments on Wolfe and Upchurch (1987): North American nonmarine climates and vegetation during the Late Cretaceous," by V.A. Krassilov. *Palaeogeography, Palaeoclimatology, Palaeoecology* 69: 142–144.
- 1990 Upchurch, G.R., Jr., and Askin, R.A. Latest Cretaceous and earliest Tertiary dispersed plant cuticles from Seymour Island, Antarctica. *Antarctic Journal of the U.S. (1989 Review)* 24 (5): 7–10.
- 1993 Upchurch, G.R., Jr., and Wolfe, J.A. Cretaceous vegetation of the Western Interior and adjacent regions of North America. In Kauffman, E.G., and Caldwell, W.G.E., eds., *Cretaceous evolution of the Western Interior Basin*. Geological Association of Canada Special Paper 39: 243–281
- 1995 Upchurch, G.R., Jr. Dispersed angiosperm cuticles: Their history, preparation, and application to the rise of angiosperms in Cretaceous to Paleocene coals, southern Western Interior of North America. *International Journal of Coal Geology* 28: 161–227.
- 1997 Otto-Bliesner, B.L., and Upchurch, G.R., Jr. Vegetation-induced warming of high-latitude regions during the Late Cretaceous period. *Nature* 385: 304–307.
- Dunn, K.A., McLean, R.J.C., Upchurch, G.R., Jr., and Folk, R.L. Enhancement of leaf fossilization potential by bacterial biofilms. *Geology* 25: 1119–1122 (undergraduate thesis co-supervised by Upchurch & McLean; Upchurch was thesis advisor).
- 1998 Upchurch, G.R., Jr., Otto-Bliesner, B.L., and Scotese, C.R. Vegetation-atmosphere interactions and their role in global warming during the latest Cretaceous. *Philosophical Transactions of the Royal Society of London, Biological Sciences Series* 353: 97–112.
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2009

Upchurch, G.R., Kiehl, J., Shields, C., and Scotese, C.R. Coupled climate model simulations of the latest Cretaceous (Maastrichtian): Comparison with proxy data. Geological Society of America, 2009 Annual Meeting: 222-7.

Upchurch, G.R., Kiehl, J.T, Shields, C.A., and Scotese, C.R. Coupled Climate Model Simulations of a Late Cretaceous (Maastrichtian) Greenhouse Climate: Comparison with Proxy Data. Eos Trans. AGU, 90(52), Fall Meet. Suppl., Abstract PP13B-1390.

Schwartz, B.F., Upchurch, G.R., Willard, D.A., Bernhardt, C.E., and Valella, P.A. A New Late Glacial Site in the Central Appalachians of Virginia. Preliminary Findings From Paleobotany, Palynology, and Geomorphology. Eos Trans. AGU, 90(52), Fall Meet. Suppl., Abstract PP31C-1374.

Shields, C.A., Kiehl, J.T., Upchurch, G.R., and Scotese, C. Monsoons across

- Epochs: Diagnosing Monsoonal Circulations across Warm, Greenhouse Climates as Simulated by the Community Climate System Model (CCSM3). *Eos Trans. AGU*, 90(52), Fall Meet. Suppl., Abstract PP41A-1481.
- 2010 Upchurch, G.R., and Feild, T. The rise of flowering plants and land surface physics: the Cretaceous and Eocene were different. *Eos Trans. AGU*, 91(52), Fall Meet. Suppl., Abstract PP11B-1439.
- Shellito, L.J., Upchurch, G.R., Shields, C.A., and Kiehl, J.T. The role of vegetation in high-latitude warming during the latest Cretaceous. *Eos Trans. AGU*, 91(52), Fall Meet. Suppl., Abstract PP11B-1443.
- Shields, C.A., Upchurch, G.R., Kiehl, J.T., Scherer, J., and Scotese, C. Simulating the warm Arctic environment for the latest Cretaceous using the Community Climate System Model (CCSM3). *Eos Trans. AGU*, 91(52), Fall Meet. Suppl., Abstract PP14A-07.
- 2011 Estrada-Ruiz, E., Upchurch, G., Wheeler, E., and Mack, G. Late Cretaceous dicotyledonous woods from the Crevasse Canyon and McRae Formations, south-central New Mexico, USA: Part I. *Botany 2011 Abstracts*.
- Richey, J., and Upchurch, G. Inference of pCO<sub>2</sub> levels and climate in the Late Cretaceous from fossil Lauraceae. *Botany 2011 Abstract 523*.
- Richey, J.D., and Upchurch, G.R. Inference of pCO<sub>2</sub> levels during the Late Cretaceous using fossil Lauraceae. *Eos Trans. AGU*, 92(52), Fall Meet. Suppl., Abstract PP11A-1771.
- 2012 Upchurch, G.R., Mack, G., Estrada-Ruiz, E., Wheeler, E., Parrott, J., Thompson, D., and Richey, J. Late Cretaceous Plant Macrofloras From South-Central New Mexico: A Preliminary Report. *Botany 2012*, Abstract 340.
- Thompson, D., Upchurch, G.R., Parrott, J., Estrada-Ruiz, E., and Mack, G. Reconstructing a Redwood from Multiple Organs: New material from the Upper Cretaceous Jose Creek Member, McRae Formation of south-central New Mexico. *Botany 2012*, Abstract 595.
- Parrott, J., Estrada-Ruiz, E., Thompson, D., Upchurch, G.R., Wheeler, E., and Mack, G. The conifer wood flora of the Upper Cretaceous Jose Creek Member, McRae Formation, south-central New Mexico: A preliminary report. *Botany 2012*, Abstract 408.
- Richey, J., and Upchurch, G.R. Inference of pCO<sub>2</sub> Levels During the Late Cretaceous Using Fossil Lauraceae. *Botany 2012*, Abstract 1335.
- 2013 Upchurch, G.R. Potomac Group angiosperm leaves: A new look at an old problem. Themes of land plant evolution, a celebration of the contributions of Leo J. Hickey. *Botany 2013*, Abstract 423. (Invited)
- Contreras, D., Upchurch, G. and Mack, G. New data on the structure and phylogenetic position of an extinct Cretaceous redwood. *Botany 2012*, Abstract 749. (Presentation won the best student paper award, Paleobotanical Section.)



Parrott, J., Upchurch, G., Wheeler, E. and Mack, G. Forest of Giants: An in situ angiosperm forest of Late Cretaceous south-central New Mexico. *Botany* 2013, Abstract 451.

Lomax, B., Smilie, I., Knight, C., and Upchurch, G. Genome size and the early angiosperms. *Botany* 2013, Abstract 514.

Upchurch, G.R., Jr. Paleobotany and Cretaceous Arctic warming: A combined empirical and mechanistic perspective. Geological Society of America 2013 Annual Meeting, Paper No. 406-9. (Invited)

Richey, J., Upchurch, G.R., Joeckel, R., Smith, J., Ludvigson, G.A., and Lomax, B.H. Atmospheric carbon dioxide and its relation to carbon cycle perturbations during Ocean Anoxic Event 1d: A high resolution record from dispersed plant cuticle. Geological Society of America 2013 Annual Meeting, Paper No.128-11 (poster).

Scherer, J., Suarez, M.B., Bush, J., and Upchurch, G.R. Jr. Testing a paleoprecipitation proxy across Texas floras. Geological Society of America 2013 Annual Meeting, Paper No. 328-9.

Richey, J., Upchurch, G.R., Joeckel, R., Smith, J., Ludvigson, G.A., and Lomax, B.H. Atmospheric carbon dioxide and its relation to carbon cycle perturbations during Ocean Anoxic Event 1d: A high resolution record from dispersed plant cuticle. American Geophysical Union Fall Meeting, PP33B-1919 (poster).

2014

Upchurch, G.R., Richey, J., Joeckel, R.M., Suarez, M., Ludvigson, G., and Smith, J. Stratigraphy of the Rose Creek Pit, Dakota Formation of Nebraska: Implications for the minimum age of Pentapetalae and Lauraceae. 9<sup>th</sup> European Palaeobotany and Palynology Conference, 26-31 August 2014, Padova Italy, Abstract Book: 284

Lee, A., Upchurch, G.R., Murchie, E., and Lomax, B. Dark and disturbed or just disturbed? Modelling thermal tolerance to determine habitat preference in early angiosperms. 9<sup>th</sup> European Palaeobotany and Palynology Conference, 26-31 August 2014, Padova Italy, Abstract Book: 133–134.

Lomax, B., Smilie, I., Knight, C. and Upchurch, G.R. Genome size and angiosperm evolution. 9<sup>th</sup> European Palaeobotany and Palynology Conference, 26-31 August 2014, Padova Italy, Abstract Book: 146 (poster).

Richey, J.D., Upchurch, G.R., Suarez, M.B., Joeckel, R.M., Smith, J.J., Ludvigson, G.A., and Lomax, B.H. Changes in CO<sub>2</sub> during OAE1d: A Comparison to Other Carbon Cycle Perturbations of the Mesozoic. American Geophysical Union, Fall Meeting, PP13A-1401 (poster).

Scherer, J., Suarez, M., and Upchurch, G.R. Comparison of paleoprecipitation estimates from stable carbon isotope analysis of fusain at two Cretaceous fossil sites. 2014 Geological Society of America Annual Meeting in Vancouver, British Columbia, Paper No. 251-9.

### III. Scholarly Activities

#### Invited Talks, Symposia, and Lectures

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- 1982 Seminar, Paleontological Society of Washington, Washington, D.C.
- 1985 Seminar, Systematics and Evolution Discussion Group, San Diego Museum of Natural History.
- 1986 Seminar, Department of Botany, Colorado State University, Fort Collins.  
North American Paleontological Convention IV, Boulder, Colo. Symposium entitled, "Death by earthly causes: A no-nonsense approach to mass extinction." (With Jack A. Wolfe.)
- 1986 Geological Society of America, Annual Meeting, theme session on the end-Cretaceous extinctions. (Paper presented by Jack A. Wolfe.)
- 1987 Speaker, Smithsonian Institution, Evolution of Terrestrial Ecosystems Group, conference on paleobotany, paleoclimatology, and the origin of coal.  
Annual meeting, Geological Association of Canada. Symposium entitled, "Evolution of the Western Interior Basin." (With Jack A. Wolfe.)  
Annual Meeting, American Association of Stratigraphic Palynologists. Symposium entitled, "The paleobotany of spores." (Paper presented by Douglas J. Nichols.)  
Bingham Seminar, Department of Geology, Yale University, New Haven, CT.
- 1988 The Third International Conference on Global Bioevents: Abrupt Changes in the Global Biota. Talks entitled, "Terrestrial environmental changes and plant extinction patterns at the Cretaceous-Tertiary boundary, North America," and "Reinvestigation of the Cretaceous-Tertiary boundary interval at South Table Mountain, Golden, Colorado."  
Climate Club Seminar, National Center for Atmospheric Research.
- 1989 Speaker, MIT Knight Fellows Symposium on Climate Change, National Center for Atmospheric Research, Boulder, Colorado (for members of the press).  
Speaker at workshop, "Extinction in the Geologic Record." 28th International Geological Congress, Washington, D.C.  
Speaker at workshop, "The Analysis of Phytodebris." Sponsored by the Paleobotanical Section, Botanical Society of America. 1989 Annual Meeting of the Botanical Society of America, Toronto, Canada.
- 1991 Seminar, Department of EPO Biology, The University of Colorado, Boulder.  
Geological Society of America, 1991 Annual Meeting, theme session on terrestrial extinction at the end of the Cretaceous, San Diego, California.  
Seminar, Department of Botany, The University of Georgia, Athens.

- 1992 North American Paleontological Convention V, Chicago, IL. Symposium entitled, "The Origin of Modern Terrestrial Ecosystems: The late Mesozoic and Cenozoic."  
Seminar, Institute for Geophysics, The University of Texas at Austin.  
Seminar, Department of Geology, The University of Texas at Arlington.
- 1993 XV International Botanical Congress, Tokyo, Japan. Symposium entitled, "The Impact of Environmental Change on Angiosperm Evolution." (With J.A. Doyle.)  
Seminar, University of Texas Marine Science Institute, Port Aransas.
- 1994 Geological Society of America, 1994 Annual Meeting, Coal Geology Symposium. Symposium entitled, "The origin and compositional characteristics of Tertiary coals: Palynological, paleobotanical, and paleoecological aspects."
- 1994 Seminar, Department of Botany, The University of Texas at Austin.
- 1995 Speaker, Second Genesis User's Workshop, National Center for Atmospheric Research, Boulder, Colorado. (Conference supported by the Environmental Protection Agency.)
- 1996 Seminar, Lamont-Doherty Earth Observatory, Columbia University, New York  
Seminar, Biology Department, Texas State University-San Marcos  
North American Paleontological Convention-96, Washington, D.C. Symposium entitled, "Reconciling fossil and geochemical data and model results for periods of global warmth" (with B.L. Otto-Bliesner and C. Scotese).  
Seminar, Department of Ecology, Population, and Organismal Biology, University of Colorado, Boulder.
- 1997 Seminar, Department of Geology, Southern Methodist University, Dallas, Texas.  
Royal Society of London, London, England, discussion meeting entitled, "Vegetation-climate-atmosphere interactions: past, present, and future".  
New Mexico Museum of Natural History, Albuquerque, NM, Annual Symposium on New Mexico Paleontology.
- 1998 American Geophysical Union, 1998 Spring Meeting, Boston, Massachusetts, symposium on reconciling paleoclimate model output and the paleoclimatic record.  
Seminar, Paleontological Society of Washington, Washington, D.C.
- 1999 Presidential Seminar, Texas State University-San Marcos.  
XVI International Botanical Congress, St. Louis, MO. Symposium entitled, "Paleobotanical approaches to paleoclimate". (With B.H. Lomax, D.J., Beerling, and B.L. Otto-Bliesner).  
Seminar, Department of Biology, Trinity University, San Antonio, TX

- 2000 VI International Organization of Paleobotany meeting, Qinhuangdao, China. Symposium entitled, “Paleoclimate and its interaction with vegetation”.  
Seminar, Department of Biology, University of Nebraska at Omaha.  
Seminar, Institute for Paleontology, University of Bonn, Germany.  
Seminar, Institute and Museum for Geology and Paleontology, University of Tübingen, Germany.
- 2001 Seminar, Department of Geology, University of Texas at Austin, February 2001.  
Seminar, Department of Geology, Texas A&M University, College Station.
- 2002 Seminar, Department of Biology, Texas State University-San Marcos.  
Invited participant, NSF-sponsored Workshop on Cretaceous Climate and Ocean Dynamics, Florissant, Colorado.
- 2003 Seminar, Department of Biology, Texas State University-San Marcos.
- 2005 XVII International Botanical Congress, Vienna, Austria. Symposium entitled, “Understanding the early diversification of the eudicots” (Susana Magallon and Sara Hoot, organizers).  
Seminar on “How to become a scientist”, Department of Biology, Texas State University-San Marcos.
- 2006 Invited speaker for symposium entitled, “Advances in Paleobotany—Recognizing the Contributions of David L. Dilcher and Jack A. Wolfe on the Occasion of Their 70<sup>th</sup> Birthday”. Florida Museum of Natural History, Gainesville, Florida (Steven Manchester and Robert Spicer, organizers).  
Invited speaker for symposium on Mesozoic Climate, 7th European Palaeobotany – Palynology Conference, Prague, Czech Republic (Jiri Kvacek and Alexi Herman, organizers).
- 2007 Speaker, “Half-baked ideas” seminar, Dept. of Biology, Texas State University
- 2008 Joint Meeting, Geological Society of America, symposium entitled, “Ancient Polar Ecosystems and Environments: Proxies for Understanding Climate Change and Global Warming” (Paper presented by Mike Tapp)  
Joint Meeting, Geological Society of America, symposium entitled, “Gulf of Mexico Coastal Plain Paleontology” (Paper presented by Sergio Cevallos).
- 2009 Seminar, Department of Geology, University of Texas at Arlington
- 2010 Seminar, Department of Geology, Baylor University
- 2012 Seminar, Department of Geology, University of Nebraska, Lincoln, NE
- 2013 Invited speaker for theme session entitled, “Themes of land plant evolution, a celebration of the contributions of Leo J. Kickey.” Botany 2013, New Orleans, LA.

- Invited speaker for topical session entitled, "Ancient polar ecosystems and climate history in deep time". Geological Society of America Annual Meeting, Denver, CO
- 2014 Invited speaker for scientific session on early flowering plants, 9<sup>th</sup> European Palaeobotany Palynology Conference, Padova, Italy, August 26–31, 2014  
Seminar, Department of Biology, Cameron University, Lawton, OK
- 2015 Seminar, Department of Geological Sciences, University of Colorado, Boulder

## Workshops

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- 1989 Invited speaker at workshop, "Extinction in the Geologic Record." 28th International Geological Congress, Washington, D.C., July 15-16, 1989.  
Invited speaker at workshop, "The Analysis of Phytodebris." Sponsored by the Paleobotanical Section, Botanical Society of America. 1989 Annual Meeting of the Botanical Society of America, Toronto, Canada, August 6, 1989.
- 1991 Convener of workshop, "The Analysis of Dispersed Cuticles". Exxon Production Research Company, Houston, Texas, April, 1991.
- 1993 Invited participant, First Genesis User's Workshop, National Center for Atmospheric Research, September 1993. (Conference supported by the Environmental Protection Agency.)
- 1995 Invited speaker, Second Genesis User's Workshop, National Center for Atmospheric Research, Boulder, Colorado, August 1995. (Conference supported by the Environmental Protection Agency.)
- 2002 Invited participant, NSF-sponsored Workshop on Cretaceous Climate and Ocean Dynamics, Florissant, Colorado.

## Laboratory visitors

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- 1995 Dr. David Beerling (University of Sheffield, UK)
- 1996 Prof. David Dilcher (University of Florida)  
Prof. James Doyle (University of California, Davis)  
Dr. Jack Wolfe (University of Arizona)
- 1999 Prof. David Beerling and Mr. Barry Lomax (University of Sheffield, UK)
- 2001, 2002 Mr. Kevin Carpenter (University of California, Davis)
- 2003 Prof. Brian Axsmith (University of South Alabama)  
Prof. Gar Rothwell (Ohio University)  
Mr. Kevin Carpenter (University of California, Davis)
- 2004 Profs. Claudia Johnson and Erle Kauffman (Indiana University, Bloomington)  
Dr. Conrad LaBandiera (Smithsonian Institution)
- 2006 Prof. Carlie Phipps (SUNY Institute of Technology)  
Ms. Crystal Mathisrud (University of Wisconsin, River Falls)

- 2006, 2007 Dr. Sergey Vikulin, Komorov Botanical Institute, St. Petersburg, Russia  
 Prof. Carlie Phipps (SUNY Institute of Technology)  
 Mr. Mark Gorman (University of Colorado, Boulder)  
 Ms. Crystal Mathisrud (University of Wisconsin, River Falls)
- 2008 Prof. Taylor Feild (University of Tennessee, Knoxville)  
 Mr. James Michael Tapp (University of Alaska, Fairbanks)  
 Mr. Emilio Estrada-Ruiz (UNAM, Mexico City)  
 Ms. Patricia Vallela (Denver University—enrolled in Texas State Ph.D. program 2008–2010)
- 2009 Dr. Scott Wing (U.S. National Museum of Natural History, Washington, D.C.)
- 2010–2012 Dr. Emilio Estrada-Ruiz (CONACYT postdoctoral fellow, Mexico)
- 2011, 2013 Dr. Barry Lomax, University of Nottingham, UK
- 2012 Dr. Lisa Boucher, University of Texas, Austin
- 2013 Dr. Emilio Estrada-Ruiz, National Polytechnic University of Mexico, Mexico City  
 Dr. Marina Suarez and Ms. Jacqueline Scherer, University of Texas, San Antonio
- 2014 Dr. Ruth Stockey, Oregon State University  
 Ms. Dori Contreras, University of California, Berkeley  
 Mr. Ludovic Renard, University of British Columbia, Canada

## Consulting

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- 1982 Smithsonian Institution Press, information contributor to book, *Thread of Life: The Smithsonian Looks at Evolution*.
- 1989 Denver Museum of Natural History, Department of Earth Science.
- 1990 Amoco Production Company, Houston, TX.  
 Denver Museum of Natural History, Department of Earth Science.
- 1991 Denver Museum of Natural History, Department of Earth Science.
- 1992 *National Geographic*, artistic advisor for January 1993 issue on Dinosaurs.
- 1993 Saunders Publishing, Reviewer of *Botany*, second edition, by James Mauseth (Chapters 1–9).
- 1998–2000 Netrologic Inc., scientist on National Cancer Institute SBIR Grant entitled, “Identification of plants using neural network technology.”
- 2000 Holt, Reinhart and Winston, Inc., evaluator of secondary science textbooks.
- 2004 Brooks/Cole Thompson Learning, review of *Plant Biology*, 2<sup>nd</sup> Edition, by Rost et al. (Chapters 10, 25)  
 McGraw Hill Publishers, review of *Essentials of Biology*, 1<sup>st</sup> Edition (Chapters 20–21).  
 Prentice Hall Publishers, review of *Biology: Inquiries and Insights*, by Insel et al. (Chapters 1–4).
- 2005 John Wiley Publishers, review of *Biology: Understanding Life*, by Alters and Alters (Chapters 18, 20, 23)
- 2012 Dr. Isabel Montanez, University of California, Davis.

## Media coverage and external recognition of research

- 1986 *Science News*, August 23 issue, article entitled, "Extinctions: The earthly argument."  
*Mosaic*, article entitled, "Mass extinctions: The biological side."
- 1988 *Science*, February 12 issue, Research News article entitled, " Was there a prelude to the dinosaurs' demise?"
- 1990 *Omaha World Herald*, February 25 edition, article on early flowering plant fossils from Nebraska.  
ABC Evening News and Denver channels, October and November, stories on the paleontology of Denver International Airport, Denver Museum of Natural History.
- 1993 Discussion of research on fossil Gnetales and the Cretaceous-Tertiary boundary extinctions in textbook, Paleobotany and the Evolution of Plants, 2<sup>nd</sup> edition, by W.N. Stewart and G.W. Rothwell. Cambridge University Press, Cambridge, UK, p. 379, 492–501.  
*Resource News* (the quarterly newsletter of the Nebraska Conservation and Survey Division), v. 2, no. 1, article entitled, "Leaf fossil bears Roger Pabian's name".
- 1994 *New Waves*, March issue, article on modeling ancient climate and vegetation.
- 1995 *Hill Views*, Summer issue, article on research entitled, "Forecast from the past."
- 1997 British Broadcasting Corporation, Radio 4, interviewee for *Science Now*, May 24, 1997.
- 1999 Discussion of research and reproduction of published maps on Late Cretaceous and early Tertiary vegetation in textbook, Late Cretaceous and Cenozoic History of North American Vegetation, by Alan Graham. Oxford University Press, Oxford, UK, p. 152–161, 195.
- 1999 *The Daily University Star*, April 22, 1999, article entitled, "SWT groups celebrate Earth Day, promote environmental awareness".
- 2000 Discussion of fossil Gnetales and reproduction of published illustrations of Gnetales and Cretaceous flowering plants in textbook, Green Plants: Their Origin and Diversity, 2<sup>nd</sup> edition, by P.R. Bell and A.R. Hemsley. Cambridge University Press, Cambridge, UK, p. 259–261, 307.  
Report on research in article entitled, "Back to the future for plant and ecosystem evolution", by D. Beerling and J. Francis. *Trends in Ecology and Evolution*, v. 15 (11), November 2000, p. 442.
- 2001 Write-up of paper published by Knaus, Upchurch, and Gillespie in *Review of Palaeobotany and Palynology* in article entitled, "Annual Review of Paleobotany for 2000", by K.B. Pigg and M.L. DeVore. *Geotimes* (July 2001), p. 35.
- 2002 Press articles on paper published by Beerling, Lomax, Royer, Upchurch, and Kump in *Proceedings of the National Academy of Sciences USA*. Gary Upchurch and/or Southwest Texas State University (now Texas State University) are mentioned in articles published by *National Geographic Press* and *BBC News*. (Research is also discussed in *Science News* and *New Scientist* but without mention of Gary Upchurch or Southwest Texas State University. The *National Geographic News* story is still posted on the Texas State University web site at: [http://www.mrp.swt.edu/mrp/relations/news/news13\\_nag.html](http://www.mrp.swt.edu/mrp/relations/news/news13_nag.html).)  
The abominable Mystery of the First Flowers: Clues from Nebraska and Kansas, by M.R. Bolick and R.K. Pabian (web article on the mid-Cretaceous Rose Creek paleoflora of southeastern Nebraska that mentions the work of Gary Upchurch and David Dilcher). (Story no longer posted.)

- 2007 "Russian Academy of Sciences begins collaborative research with Texas State University."  
Spectrum (newsletter of the College of Science, Texas State University) 6 (2): 2, 7.

### **Papers presented at professional meetings** (oral unless otherwise indicate)

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- 1978 Upchurch, G.R., Jr. A preliminary report on the cuticular structure of the oldest known structurally preserved angiosperm leaves. Botanical Society of America, 1978 Annual Meeting, Blacksburg, Virginia.
- 1979 Upchurch, G.R., Jr. The cuticular anatomy of *Sapindopsis* from the Lower Cretaceous Potomac Group of Virginia and Maryland. Botanical Society of America, 1979 Annual Meeting, Stillwater, Oklahoma.
- 1980 Upchurch, G.R. Jr., and Doyle, J.A. Paleoecology of the conifers *Frenelopsis* and *Pseudofrenelopsis* (Cheirolepidiaceae) from the Cretaceous Potomac Group of Maryland and Virginia. Geobotany II conference, Bowling Green University, Bowling Green, Ohio.
- 1983 Upchurch, G.R., Jr. *Ficophyllum* leaves from the Lower Cretaceous Potomac Group: Evidence for possible affinities with Magnoliales and Austrobaileyaceae. Botanical Society of America, 1983 Annual Meeting, Grand Forks, North Dakota.
- Upchurch, G.R., Jr. The cuticular anatomy of "platanoid" leaves from the Lower Cretaceous Potomac Group. Botanical Society of America, 1983 Annual Meeting, Grand Forks, North Dakota.
- Upchurch, G.R., Jr., Hickey, L.J., and Niklas, K.J. Leaves with chloranthoid characters from the Lower Cretaceous Potomac Group. Botanical Society of America, 1983 Annual Meeting, Grand Forks, North Dakota.
- 1984 Upchurch, G.R., Jr., and Dilcher, D.L. A magnoliid leaf flora from the mid-Cretaceous Dakota Formation of Nebraska. Botanical Society of America, 1984 Annual Meeting, Fort Collins, Colorado.
- Upchurch, G.R., Jr., and Dilcher, D.L. Magnoliid leaves from the Cretaceous Dakota Formation of Nebraska and Kansas. Abstracts of Contributed Papers and Poster session, Second International Organization of Paleobotany Conference, Edmonton, Alberta, Canada.
- 1985 Upchurch, G.R., Jr., and Crane, P.R. Probable gnetalean megafossils from the Lower Cretaceous Potomac Group of Virginia. Botanical Society of America, 1985 Annual Meeting, Gainesville, Florida.
- Upchurch, G.R., Jr., Nichols, D.J., Fleming, R.F., Tschudy, R.H., and Pillmore, C.L. Cuticular and palynological analyses of vegetational change across the Cretaceous-Tertiary boundary at Sugarite, Raton Basin, New Mexico. Botanical Society of America, 1985 Annual Meeting, Gainesville, Florida.
- 1986 Upchurch, G.R., Jr., and Wolfe, J.A. Vegetational and climatic change at the Cretaceous-Tertiary boundary, North America. Fourth North American Paleontological Convention, Boulder, Colorado. (Invited).
- 1987 Upchurch, G.R., Jr., and Wolfe, J.A. Cretaceous vegetation of the Western Interior of North America. Geological Association of Canada, 1987 Annual meeting, Saskatoon, Saskatchewan, Canada (Invited).



- Upchurch, G.R., Jr., and Wolfe, J.A. Extinction patterns in Laurales at the Cretaceous-Tertiary boundary, southern Rocky Mountains. Botanical Society of America, 1987 Annual Meeting, Columbus, Ohio.
- Upchurch, G.R., Jr., and Wolfe, J.A. Foliar diversity in latest Cretaceous Laurales. Botanical Society of America, 1987 Annual Meeting, Columbus, Ohio.
- Upchurch, G.R., Jr., and Wolfe, J.A. Plant extinction patterns at the Cretaceous-Tertiary boundary, Raton and Denver basins. Geological Society of America, 1987 Annual Meeting, Phoenix, Arizona.
- 1988 Upchurch, G.R., Jr. Terrestrial environmental changes and plant extinction patterns at the Cretaceous-Tertiary boundary, North America. The Third International Conference on Global Bioevents: Abrupt Changes in the Global Biota, Boulder, Colorado (Invited).
- Upchurch, G.R., Jr., Kauffman, E.G., and Nichols, D.J. Reinvestigation of the Cretaceous-Tertiary boundary at South Table Mountain, Golden, Colorado. Third International Conference on Global Bioevents: Abrupt Changes in the Global Biota, Boulder, Colorado (Invited).
- Upchurch, G.R., Jr. Chloranthoid foliage from the latest Cretaceous and earliest Tertiary of the central Rocky Mountains. Botanical Society of America, 1988 Annual Meeting, Davis, California.
- 1989 Upchurch, G.R., Jr., and Askin, R.A. Vegetational and floristic change across the Cretaceous-Tertiary boundary, Seymour Island, Antarctica. Geological Society of America, 1989 Annual Meeting, Kansas City, Missouri.
- 1990 Upchurch, G.R., Jr., and Askin, R.A. Vegetational and floristic change across the Cretaceous-Tertiary boundary, Seymour Island, Antarctic Peninsula. Botanical Society of America, 1990 Annual Meeting, Richmond, Virginia.
- 1991 Upchurch, G.R., Jr. Changes in terrestrial vegetation and climate across the Cretaceous-Tertiary boundary: A global perspective. Geological Society of America, 1991 Annual Meeting, San Diego, California (Invited).
- 1992 Upchurch, G.R., Jr., and Olson, J. Patterns of terrestrial plant carbon: Late Mesozoic and Cenozoic. Geological Society of America, 1992 Annual Meeting, Cincinnati, Ohio.
- Upchurch, G.R., Jr., Cretaceous vegetational change: A biomal perspective. North American Paleontological Convention V, Chicago, Illinois (Invited).
- 1993 Upchurch, G.R., Jr., and Doyle, J.A. The rise of angiosperms: A global perspective. XV International Botanical Congress, Yokohama, Japan (Invited).
- 1994 Upchurch, G.R., Jr. Dispersed plant cuticles: A brief history and application to coals of the Raton Basin. Coal Geology Symposium, Geological Society of America, 1994 Annual Meeting, Seattle, Washington (Invited).
- Upchurch, G.R., Jr., and Mack, G.H. Systematics and paleoecology of a Late Cretaceous (Maastrichtian) megaflora, Jose Creek Member, McRae Formation, New Mexico. Botanical Society of America, 1994 Annual Meeting, Knoxville, Tennessee.
- 1995 Upchurch, G.R. Jr., Otto-Bliesner, B.L., and Scotese, C.R. Latest Cretaceous paleovegetation and global climate: Comparison of proxy data with GENESIS simulations. Second Genesis Users' Workshop, National Center for Atmospheric Research, Boulder, Colorado (Invited).

- Upchurch, G.R., Jr., Otto-Bliesner, B.L., and Scotese, C.R. Latest Cretaceous paleovegetation and climate: Comparison of proxy and model data. American Geophysical Union, 1995 Spring Meeting, Baltimore, Maryland.
- 1996 Upchurch, G.R., Jr., Otto-Bliesner, B.L., and Scotese, C. Vegetation and warm climate during the latest Cretaceous. International Organization of Paleobotany Conference, Santa Barbara, California.
- Upchurch, G.R., Jr., Otto-Bliesner, B.L., and Scotese, C. Vegetation and warm climates during the latest Cretaceous. North American Paleontological Convention-96, Washington, D.C. (Invited).
- 1997 Upchurch, G.R., Jr., Marino, B.D., Mone, W.E., and McElroy, M.B. Carbon isotope ratios in extant and fossil plant cuticle. 1997 Annual Meeting, Botanical Society of America, Montreal, Canada.
- Dunn, K.A., Upchurch, G.R., McLean, R.J.C., and Folk, R.L. Biofilm enhancement of leaf fossilization potential: Experimental evidence. 1997 Annual Meeting, Botanical Society of America, Montreal, Canada.
- Upchurch, G.R. Plant megaflores from the Jose Creek Member, McRae Formation, south-central New Mexico. First Annual Conference on New Mexico Paleontology, Albuquerque, New Mexico.
- 1998 Upchurch, G.R., Jr., Lomax, B.H., Beerling, D.J., and Otto-Bliesner, B.L. Primary productivity modeling: A tool for integrating climate model output and geologic climate proxies. American Geophysical Union, 1998 Spring Meeting, Boston, Massachusetts (Invited).
- Upchurch, G.R., Jr., Lomax, B.H., Beerling, D.J., and Otto-Bliesner, B.L. Modeling the impact on terrestrial ecosystems of long-term climatic changes across the Cretaceous-Tertiary boundary. American Geophysical Union, 1998 Fall Meeting, San Francisco, California.
- 1999 Upchurch, G.R., XVI International Botanical Congress, St. Louis, MO. Symposium entitled, "Paleobotanical approaches to paleoclimate". Presentation entitled, "Integrating paleobotany with climate modeling" (Invited).
- (poster) Wadleigh, F., Meacham, C., and Upchurch, G.R., Jr. XVI International Botanical Congress, St. Louis, MO. Presentation entitled, "Automated identification of plants using neural networks."
- 2000 Upchurch, G.R., VI International Organization of Paleobotany meeting, Qinhuangdao, China. Symposium entitled, "Paleoclimate and its interaction with vegetation." Presentation entitled, "Comparing paleobotanical estimates of climate and climate model output: An example from the latest Cretaceous" (Invited).
- Upchurch, G.R., Jr. Informal presentation for Paleobotanical Section, Botany 2000 (National meeting of the Botanical Society of America).
- 2001 Upchurch, G.R., Jr. Informal presentation at Annual Meeting of American Association of Stratigraphic Palynologists, San Antonio, TX.
- 2002 (poster) Upchurch, G.R., Jr., Beerling, D.J., Lomax, B.H., and Otto-Bliesner, B.L. Workshop on Cretaceous Climate and Ocean Dynamics, Florissant, Colorado. Presentation entitled, "Latest Cretaceous global vegetation: Current understanding and areas for future study" (Contributed paper at an invitation-only conference).

- (poster) Scherer, J., Upchurch, G.R., Jr., Mack, G.H., and Knaus, M.J. Workshop on Cretaceous Climate and Ocean Dynamics, Florissant, Colorado. Presentation entitled, "How consistently do regression models of foliar physiognomy predict Cretaceous climate?" (Contributed paper at an invitation-only conference).
- 2003 Upchurch, G.R. Jr., Mack, G.H., and Wheeler, E.A. Presentation at Botany 2003, Mobile, AL. Presentation entitled, "Late Cretaceous fossil forests from south-central New Mexico."
- Scherer, J., and Upchurch, G.R., Jr. Presentation at the Geological Society of America, 2003 Annual Meeting, Seattle, WA. Presentation entitled, "Maastrichtian latitudinal temperature gradients and tropical temperatures: Paleobotanical evidence from North America." (paper presented by G. Upchurch).
- 2004 Upchurch, G.R., Jr. Presentation at the 21<sup>st</sup> Annual Mid-Continent Paleobotanical Colloquium, Sam Noble Museum of Natural History, Norman, Oklahoma. Presentation entitled, "Climate, vegetation, and mass extinction: What do we know now?"
- 2005 Upchurch, G.R., and Wolfe, J.A. Presentation at the XVII International Botanical Congress, Vienna, Austria. Presentation entitled, "Cretaceous and early Tertiary history of primitive eudicots in North America."
- Upchurch, G.R., and Wolfe, J.A. Presentation at Botany 2005, Austin, Texas. Presentation entitled, "Re-examination of foliage of Nelumbonaceae from the Cretaceous and Early Tertiary of North America."
- 2006 Upchurch, G.R., Beerling, D.J., and Lomax, B.H. Paleobotanical evidence on environmental change at the Cretaceous-Tertiary boundary, North America. Presentation at meeting entitled, "Advances in Paleobotany—Recognizing the Contributions of David L. Dilcher and Jack A. Wolfe on the Occasion of Their 70<sup>th</sup> Birthday".
- 2007 Upchurch, Garland, and Vikulin, S.V. Improved Techniques for the Preparation of Leaves From Extant and Organically Preserved Fossil Seed Plants. Botany 2007, the annual meeting of the Botanical Society of America.
- Vikulin, S.V., Upchurch, Garland, and LePage, B.A. Cuticle micromorphology of *Glyptostrobus* from the Early Cenozoic of the Canadian Arctic. Botany 2007, the annual meeting of the Botanical Society of America.
- (poster) Upchurch, G.R., Jr., and Marino, B.D. Plant cuticle: A geochemical and biophysical sensor of the carbon cycle. American Geophysical Union, 2007 Fall Meeting.
- 2008 Upchurch, G.R., Estrada-Ruiz, E., and Cevallos-Ferriz, S. Did tropical rainforest vegetation exist during the Late Cretaceous? New data from the late Campanian to early Maastrichtian Olmos Formation, Coahuila, Mexico. American Geophysical Union, Fall Meeting.

- 2009 Upchurch, G.R., Kiehl, J., Shields, C., and Scotese, C.R. Coupled climate model simulations of the latest Cretaceous (Maastrichtian): Comparison with proxy data. Geological Society of America, 2009 Annual Meeting.
- (poster) Upchurch, G.R., Kiehl, J.T., Shields, C.A., and Scotese, C.R. Coupled Climate Model Simulations of a Late Cretaceous (Maastrichtian) Greenhouse Climate: Comparison with Proxy Data. American Geophysical Union Fall Meeting.
- (poster) Schwartz, B.F., Upchurch, G.R., Willard, D.A., Bernhardt, C.E., and Valella, P.A. A New Late Glacial Site in the Central Appalachians of Virginia. Preliminary Findings From Paleobotany, Palynology, and Geomorphology. American Geophysical Union Fall Meeting.
- (poster) Shields, C.A., Kiehl, J.T., Upchurch, G.R., and Scotese, C. Monsoons across Epochs: Diagnosing Monsoonal Circulations across Warm, Greenhouse Climates as Simulated by the Community Climate System Model (CCSM3). American Geophysical Union Fall Meeting
- 2010 (poster) Upchurch, G.R., and Feild, T. The rise of flowering plants and land surface physics: the Cretaceous and Eocene were different. American Geophysical Union Fall Meeting.
- (poster) Shellito, L.J., Upchurch, G.R., Shields, C.A., and Kiehl, J.T. The role of vegetation in high-latitude warming during the latest Cretaceous. American Geophysical Union Fall Meeting.
- 2011 (poster) Richey, J. and Upchurch, G.R. Inference of pCO<sub>2</sub> levels during the Late Cretaceous using fossil Lauraceae. American Geophysical Union Fall Meeting.
- 2012 Upchurch, G.R., Mack, G., Estrada-Ruiz, E., Wheeler, E., Parrott, J., Thompson, D., and Richey, J. Late Cretaceous Plant Macrofloras From South-Central New Mexico: A Preliminary Report. Botany 2012, Abstract 340.
- (poster) Richey, J., and Upchurch, G.R. Inference of pCO<sub>2</sub> Levels During the Late Cretaceous Using Fossil Lauraceae. Botany 2012, Abstract 1335.
- 2013 Upchurch, G.R. Potomac Group angiosperm leaves: A new look at an old problem. Themes of land plant evolution, a celebration of the contributions of Leo J. Hickey. Botany 2013, Abstract 423. (Invited)
- Upchurch, G.R., Jr. Paleobotany and Cretaceous Arctic warming: A combined empirical and mechanistic perspective. Geological Society of America 2013 Annual Meeting, Paper No. 406-9. (Invited)
- (poster) Richey, J., Upchurch, G.R., Joeckel, R., Smith, J., Ludvigson, G.A., and Lomax, B.H. Atmospheric carbon dioxide and its relation to carbon cycle perturbations during Ocean Anoxic Event 1d: A high resolution record from dispersed plant cuticle. Geological Society of America 2013 Annual Meeting, Paper No.128-11.
- (poster) Richey, J., Upchurch, G.R., Joeckel, R., Smith, J., Ludvigson, G.A., and Lomax, B.H. Atmospheric carbon dioxide and its relation to carbon cycle perturbations during Ocean Anoxic Event 1d: A high resolution record from dispersed plant cuticle. American Geophysical Union Fall Meeting, PP33B-1919.
- 2014 Upchurch, G.R., Richey, J., Joeckel, R.M., Suarez, M., Ludvigson, G., and Smith, J. Stratigraphy of the Rose Creek Pit, Dakota Formation of Nebraska: Implications for the minimum age of Pentapetalae and Lauraceae. 9<sup>th</sup> European Palaeobotany and Palynology Conference, 26-31 August 2014, Padova Italy, Abstract Book: 284

## Reviews and review panels

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### Manuscript reviews (list incomplete)

- 1985            *Palynology*  
*U.S. Geological Survey Professional Papers series*
- 1986            *Annals of the Missouri Botanical Garden*
- 1987            *Annals of the Missouri Botanical Garden*
- 1989            *Science*  
*Annals of the Missouri Botanical Garden*
- 1990            *Transactions of the Royal Society of South Australia*
- 1991            *Cretaceous Research*  
*Paleobiology*  
*Palaeogeography, Palaeoclimatology, Palaeoecology*  
Advances in Legume Systematics: Part 4. The Fossil Record, P.S. Herndeen and D.L. Dilcher (eds.), The Royal Botanical Gardens, Kew.
- 1992            *International Journal of Plant Science*
- 1993            *Palaeogeography, Palaeoclimatology, Palaeoecology*
- 1994            *Marine Micropaleontology*, special issue on Pliocene climates.  
Post-glacial environmental changes - Quaternary and Permian, I. Peter Martini (ed.), Oxford University Press.  
The Anther: Form, Function, and Phylogeny, W.G. D'Arcy and R.C. Keating (eds.), Cambridge University Press.
- 1995            *Review of Palaeobotany and Palynology*  
*International Journal of Plant Science*  
*Geological Society of America Special Paper* (issue on Florissant geology).
- 1996            *Review of Palaeobotany and Palynology*  
*Palaaios*
- 1998            *Botanical Journal of the Linnean Society*
- 1999            *Palaaios*
- 2001            *American Journal of Botany*  
*Canadian Journal of Botany*  
*Geological Society of America Special Papers*
- 2004            *American Journal of Botany*  
*Global and Planetary Change*  
*Palaaios*
- 2005            *Palaeogeography, Palaeoclimatology, Palaeoecology*  
*Paleobiology*  
Special volume on Neogene vegetation of Europe (ed. D. Uhl and V. Mosbrugger)
- 2006            *Palaeontologica Electronica*
- 2007            *American Journal of Botany* (x5)  
*American Naturalist*  
*Canadian Journal of Earth Sciences*

- Courier Forschungsinstitut Senckenberg*  
*Journal of Geophysical Research, Biogeosciences*  
*Occasional Papers of the Yale Peabody Museum*
- 2008 *Palaeontology*  
*Palaios*
- 2009 *International Journal of Coal Geology*  
*Lethaia*  
*Palaeogeography, Palaeoclimatology, Palaeoecology*
- 2010—2012 I forget
- 2013 *American Journal of Botany*  
*Frontiers in Plant Science.*  
*Geological Society of America Special Papers (x2)*
- 2014 *American Journal of Botany*  
*Botanical Journal of the Linnaean Society*  
*Bulletin of the Peabody Museum of Natural History*  
*Cretaceous Research*  
*Historical Biology*  
*Journal of the Geological Society of London*  
*Perspectives in Plant Ecology, Evolution, and Systematics*  
*Taxon*
- 2015 *Botanical Journal of the Linnaean Society*  
*Palaeogeography, Palaeoclimatology, Palaeoecology*  
*Taxon*

**Grant proposal reviews (list incomplete)**

- 1986 National Science Foundation, Systematic Biology Program (2)
- 1987 National Science Foundation, Systematic Biology Program
- 1988 National Science Foundation, Polar Earth Sciences Program  
National Science Foundation, Paleontology and Stratigraphy Program
- 1990 L.S.B. Leakey Foundation
- 1991 National Science Foundation, Systematic Biology Program
- 1994 National Science Foundation, Paleontology and Stratigraphy Program
- 1995 Paleontological Society International Research Program
- 1996 National Center for Atmospheric Research (Supercomputing proposal)
- 2000 National Science Foundation, Nebraska EPSCOR program
- 2001 Review Panel, Research Enhancement Program, College of Science, Texas State University
- 2002 Review Panel, Research Enhancement Program, College of Science, Texas State University  
NERC (National Environmental Research Council), UK
- 2004 National Science Foundation, Paleontology and Stratigraphy Program  
National Science Foundation, Systematic Biology Program

2005	National Science Foundation, Systematic Biology Program NERC (National Environmental Research Council), UK
2007	National Science Foundation, Paleontology and Stratigraphy Program
2009	NERC (National Environment Research Council), UK, British Antarctic Survey/NERC Antarctic Funding Initiative
2010–2014	I forget.
2015	National Science Foundation, Sedimentary Geology and Paleontology Program

## Teaching workshops

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1997	University of Houston, "Rethinking undergraduate education and the core." Texas State University-San Marcos, "Thinking about freshmen." Texas State University-San Marcos, "Improving your teaching and your student evaluations." Texas State University-San Marcos, "How to become an OSCAR winning teacher", teleconference led by Tony Grasha.
1998	Texas State University-San Marcos, "Using interactive television (ITV) for distance education: SWT and ITV - past, present, and future."
2004	Texas State University-San Marcos, "Educating the 'NetGen': Strategies That Work", live teleconference. Texas State University-San Marcos, "Classroom Civility (or Incivility?): A Workshop.
2005	W.H. Freeman Publishers and Sinauer Associates Publishers, invited participant at conference entitled, "Improving Biology Education: Theory and Practice." Inn of the Governors, Santa Fe, New Mexico (various presenters).