

Garland R. Upchurch, Jr.

Curator Adjoint, University of Colorado Museum of Natural History
University of Colorado, Boulder, CO 80309 Garland.Upchurch@colorado.edu

Retired Associate Professor of Biology
Texas State University, San Marcos, Texas 78666

I. Academic/Professional Background

Education

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, & Earth System History	Smithsonian Institution, Indiana University, U.S. Geological Survey, University of Colorado, and National Center for Atmospheric Research
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Professional Experience

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 of Natural History (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 Transportation	Contract Paleontologist	1990–1991
Texas State University	Assistant Professor Department of Biology	1991–1999
Texas State University	Associate Professor Department of Biology (Retired 9/2020)	1999–2020
University of Colorado, Boulder	Curator Adjoint University Museum	2013–2025
Denver Museum of Nature and Science	Research Associate	2019–2025

Grants, Fellowships, Honors and Awards

Grants (only funded proposals listed, awards to Texas State University unless otherwise indicated)

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, Boulder.)
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, Boulder.)
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 Denver Museum of Nature and Science.)
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.
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. (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 Benjamin 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; Jonathan Lohse, Martha Spradley, and Garland Upchurch, Co-PIs.
- 2013–2014 National Science Foundation, Predoctoral Fellowship for Jon Richey. 3 years, \$132,000. Garland Upchurch, PI (account manager for Year 1).
- 2017–2021 National Science Foundation, Population and Community Ecology Program, Grant DEB-1655985, "Collaborative Research: A unique window into the ecology of Cretaceous forests during the rise of angiosperms". Garland Upchurch, PI. 3+ years, \$132,980.

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, 1995 Listed in *Who's Who In The West*.
- 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

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

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

1991–2000	Biology 1410 Introductory Botany	Lecture (30 offerings) (Fall, Spring, and Summer semesters)
1992–2020	Biology 4411/5411 Plant Morphology	Lecture & Laboratory (14 offerings) (Spring semester)
1993–2019	Biology 4412/5412 Plant Anatomy	Lecture & Laboratory (11 offerings) (Spring semester)
1999–2018	Biology 5110E/7102	Paleobotany Seminar (13 offerings)
2001	Biology 5319E History of Vegetation & Climate	Lecture & Discussion (1 offering) (Spring Semester)
2001–2017	Biology 1320 Modern Biology I (non-majors)	Lecture (>15 offerings) (Fall, Spring, and Summer semesters)

2001–2013	Biology 1421 Modern Biology II (non-majors)	Lecture (>14 offerings) (Fall, Spring, and Summer semesters)
2006–2020	Biology 7308/5308 History of Vegetation and Climate	Lecture with student projects (7 offerings)

University of Colorado, Boulder

2021	Geology 5862-900 Independent Study Plant Anatomy for Geoscientists	Online lectures and laboratories (with Karen Chin)
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Mentorship, external advising, and related items

Postdoctoral

2006–2007	Dr. Sergey Vikulin, Fulbright Research Fellow, Komorov Botanical Institute, Russian Academy of Sciences. Project: Early Tertiary floras of the Arctic
2010–2012	Dr. Emilio Estrada-Ruiz, CONACyT Postdoctoral Research fellow, Mexico. Project: 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 *Zingiberopsis*
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, Honors Student Jon Richey. B.S. (with honors) conferred
5/2011.
Class projects, BIO 7308
- 2010–2012 Thesis advisor, Honors Student Dori Thompson. B.S. (with honors) conferred
5/2012.
Class projects, BIO 7308
- 2011–2014 Thesis advisor, M.S. student Jon Richey. Degree conferred 8/2014.
- 2011–2019 Thesis advisor, Ph.D. student Joan Parrott. Degree conferred 5/2019.
- 2013–2014 External member, Ph.D. committee of Jacqueline Scherer, University of Texas
at San Antonio. Degree conferred 8/2014.
- 2013–2019 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
- 2015–2016 Member of two M.S. committees, Texas State University
Member, M.S. committee of Nicole Ridgwell, University of Colorado, Boulder
Degree conferred 5/2016.

	RESESS Co-mentor of Ann Marie Prue, University of Colorado, Boulder (with Karen Chin)
2015–2018	Thesis advisor, M.S. student Ann Marie Prue. Degree conferred 5/2018.
2020–2022	Member, M.S. committee of Austin Sorscher, University of Colorado, Boulder. Degree conferred 5/2022.
2023	Member, M.S. committee of Eva Jorn, University of Colorado, Boulder.

Organizations

Professional

- American Geophysical Union
- Botanical Society of America
- Geological Society of America
- International Organization of Palaeobotany

Museum, exhibits, collections, and related experience

1974–1975	Nebraska State Museum, Herbarium Assistant (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> .
1991–2020	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, Cretaceous-Paleogene boundary of the Raton Basin, NM and CO, annual meeting, Botanical Society of America.
2004	Academic consultant on paleobotany for film entitled, " <i>Austin Past and Present: A Multimedia Documentary about the History of Austin</i> ".
2005	Leader of paleobotanical field trip, annual meeting, Botanical Society of America
2005–2020	Curator of Paleobotany, Texas State University, San Marcos, TX
2012–2025	Curator Adjoint, University of Colorado Museum of Natural History, Boulder, CO
2018–2025	Research Associate, Denver Museum of Nature and Science

Service

Honors and Awards

2002	Nominee, Presidential Award for Excellence in Service, Texas State University
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Department of Biology, Texas State University

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
1999–2018	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

- 1991–2017 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
- 2011–2018 Seminar in Paleobotany and Paleoclimatology, BIO 5110/7102, average two sections per year.
- 2011–2022 Guest lectures on History of Life, BIO 4301, Evolution; and BIO 7353, Biogeography, Texas State University.

Other service, Texas State University

- 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.
- 2005–2018 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
- 2010–2015 Rebuilt greenhouse teaching collections, planned teaching gardens (esp. palms & cycads)

College of Science, Texas State University

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

University Committees, Texas State University

- 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
 2021 Teaching online course Geology 5862-900, Plant Anatomy for Geoscientists, University of Colorado, Boulder (unpaid)

National (Professional) Service

Paleobotanical Section, Botanical Society of America (unless otherwise noted).

- 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 Ecosystems: The late Mesozoic and Cenozoic." North American Paleontological Convention V, Chicago, IL, June 1992. (With R.L. Stuckey)
- 2010 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, 9th European Palaeobotany Palynology Conference, Padova, Italy, August 26–31, 2014 (with Barry Lomax and Jiri Kvacek).

II. Publications

Books

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. Paleoeecology 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

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
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- 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. *Eos* 79 (17): S49 (Abs.).
- Upchurch, G.R. Jr., Lomax, B.H., Beerling, D.J., and Otto-Bliesner, B.L. Modeling the impact on terrestrial ecosystems of climatic changes across the Cretaceous-Tertiary boundary. *Eos* 79 (45): F455 (Abs.).
- 1999 Upchurch, G.R., Jr., Beerling, D.J., Lomax, B.H., and Otto-Bliesner, B.L. Integrating paleobotany with climate modeling. XVI International Botanical Congress Abstracts: 44.
- Wadleigh, F., Meacham, C., Upchurch, G.R., Jr. Automated identification of plants using neural networks. XVI International Botanical Congress Abstracts: 478.
- 2000 Upchurch, G.R., Jr. Comparing paleobotanical estimates of climate and climate model output: An example from the latest Cretaceous. International Organization of Paleobotany Conference VI, Abstracts: 132–133.
- Scherer, J., Upchurch, G.R., Jr., Mack, G.H., and Knaus, M.J. Foliar physiognomic estimates of climate for the latest Cretaceous: Comparative sensitivity to transfer function. *American Journal of Botany* 87 (6) Supplement: 76 (Abs.).
- 2001 Scherer, J., Upchurch, G.R., Jr., and Knaus, M.J. A laboratory exercise for teaching

- plant-climate relationships. Botany 2001, the annual meeting of the Botanical Society of America, Abstracts: 167.
- 2002 Upchurch, G.R., Jr., Beerling, D.J., Lomax, B.H., and Otto-Bliesner, B.L. Latest Cretaceous global vegetation: current understanding and areas for future study. Abstracts for Workshop on Cretaceous Climate and Ocean Dynamics: <http://cis.who.edu/Science/GG/CCOD/viewAbstracts.cfm?RefNumber=19725570>
- Scherer, J., Upchurch, G.R., Jr., Mack, G.H., and Knaus, M.J. How consistently do regression models of foliar physiognomy predict Cretaceous climate? Abstracts for Workshop on Cretaceous Climate and Ocean Dynamics: <http://cis.who.edu/Science/GG/CCOD/viewAbstracts.cfm?RefNumber=19725572>
- 2003 Upchurch, G.R. Jr., Mack, G.H., and Wheeler, E.A. Late Cretaceous fossil forests from south-central New Mexico. Botany 2003, Abstract no. 239: 64.
- Scherer, J., and Upchurch, G.R., Jr. Maastrichtian latitudinal temperature gradients and tropical temperatures: Paleobotanical evidence from North America. Geological Society of America, 2003 Annual Meeting, Seattle, WA: Abstract no. 203-14.
- 2004 Upchurch, G.R., Jr. Climate, vegetation, and mass extinction: What do we know now? 21st Annual Mid-Continent Paleobotanical Colloquium, Sam Noble Museum of Natural History, Norman, Oklahoma.
- 2005 Upchurch, G.R., and Wolfe, J.A. Cretaceous and early Tertiary history of primitive eudicots in North America. XVII International Botanical Congress.
- Upchurch, G.R., and Wolfe, J.A. Re-examination of foliage of Nelumbonaceae from the Cretaceous and Early Tertiary of North America. Botany 2005.
- Scherer, J., and Upchurch, G.R. Jr. Paleobotanical evidence on latitudinal temperature gradients and mechanisms of climatic warming during the Late Cretaceous. Botany 2005.
- 2006 Upchurch, G.R., Beerling, D.J., and Lomax, B.H. Paleobotanical evidence on environmental change at the Cretaceous-Tertiary boundary, North America. For symposium entitled, "Advances in Paleobotany—Recognizing the Contributions of David L. Dilcher and Jack A. Wolfe on the Occasion of Their 70th Birthday".
- Scherer, J., Upchurch, G.R., Jr., and Mack, G.H. A New Species of *Pandanites* from the Maastrichtian of south-central New Mexico: Implications for the history of Pandanaceae. Botany 2006, Annual Meeting of the Botanical Society of America.
- Axsmith, B., Upchurch, G.R., Jr., and Jacobs, B.F. New *Pseudofrenopsis varians* (Cheirolepidiaceae) Fossils from the Cretaceous of Texas and Arkansas: Structural and Paleocological Implications. Botany 2006, Annual Meeting of the Botanical Society of America.
- Upchurch, G.R., Jr. A combined paleobotanical and modelling perspective on latest Cretaceous climate. 7th European Palaeobotany - Palynology Conference, Prague, Czech Republic.
- Rochefford, Kat, Mathisrud, C.L., Demko, T.M., and Upchurch, G.R. Jr. Reconstructing the Late Jurassic paleoenvironment through chronostratigraphic correlation of Morrison Formation subsurface well logs, outcrops, and fossil bearing layers in the eastern Bighorn Basin, Wyoming. Geological Society of America, 2006

Annual Meeting.

- 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:*
<http://www.2007.botanyconference.org/engine/search/index.php?func=detail&aid=1515>
- 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:
<http://www.2007.botanyconference.org/engine/search/index.php?func=detail&aid=1510>
- Phipps, Carlie J., Upchurch, Garland, and Oxley, F.M. A preliminary survey of fungal biodiversity across the Cretaceous-Tertiary boundary, Raton and Denver basins, USA. Botany 2007, the annual meeting of the Botanical Society of America:
<http://www.2007.botanyconference.org/engine/search/index.php?func=detail&aid=1254>
- Vikulin, Sergey V., Upchurch, Garland R, Jr., LePage, Ben A. Micromorphological investigations of conifers from the Early Tertiary of the Canadian Arctic. 2007 Kryshstofovich Readings, St. Petersburg, Russia.
- 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, Abstract PP43B-1267.
- 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. Eos Trans. AGU, 89(53), Fall Meet. Suppl., Abstract: PP11D-07.
- Tapp, J.M. II, Upchurch, G.R., Fowell, S.J., McCarthy, Paul, and Fiorillo, Anthony. A Preliminary Analysis of Phytodebris Assemblages from the Lipscomb Bone Bed Area, Prince Creek Formation, North Slope, Alaska. Geological Society of America, 2008 Joint Annual Meeting: 164-6.
- Estrada-Ruiz, Emilio, Upchurch, Garland R. Jr., and Cevallos-Ferriz, Sergio. Flora and Climate of the Olmos Formation (upper Campanian-lower Maastrichtian), Coahuila, Mexico: A Preliminary Report. Geological Society of America, 2008 Joint Annual Meeting: 811-5.
- 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 pCO₂ levels and climate in the Late Cretaceous from fossil Lauraceae. *Botany 2011 Abstract 523*.
- Richey, J.D., and Upchurch, G.R. Inference of pCO₂ 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 pCO₂ 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. 9th 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 for just disturbed? Modelling thermal tolerance to determine habitat preference in early angiosperms. 9th European Palaeobotany and Palynology Conference, 26-31 August 2014, Padova Italy, Abstract Book: 133–134.
- Lomax, B., Smillie, I., Knight, C. and Upchurch, G.R. Genome size and angiosperm evolution. 9th 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 CO₂ 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.
- 2016 Contreras, D.L., Upchurch, G.R., and Mack, G.H. The Jose Creek Tuff flora—An exceptional late Campanian flora from south-central New Mexico. Geological Society of America Abstracts with Programs. Vol. 48, No. 7 doi: 10.1130/abs/2016AM-287362
- 2017 Upchurch Jr., G., Parrott, J., Estrada-Ruiz, E., Contreras, D.L. Climate and vegetation of southern Laramidia: A paleobotanical reconstruction for the upper Campanian Jose Creek Member, McRae Formation, south-central New Mexico. Botany 2017, Abstract 337.
- Upchurch, G., Parrott, J., Estrada-Ruiz, E., Contreras, D. Climate of southern Laramidia: A multi-proxy paleobotanical reconstruction from the upper Campanian Jose Creek Member, McRae Formation, south-central New Mexico, USA. 10th International Symposium on the Cretaceous – ABSTRACTS. Berichte der Geologischen Bundesanstalt (ISSN 107-8880), Band 120, Wien 2017: 265.

- Contreras, D.L., Looy, C., Upchurch Jr., G., Mack, G. The late Campanian Jose Creek flora from New Mexico, a window into forest structure during the rise of angiosperms. Botany 2017, Abstract 422.
- Sender, L.M., Doyle, J.A., Upchurch Jr., G., Villanueva-Amadoz, U. Diez, J.B. Leaf and inflorescence evidence for near-basal Araceae in the latest Albian (mid-Cretaceous) of Spain. Botany 2017, Abstract 398.
- Parrott, J., and Upchurch Jr., G. Significance and systematic assignment of early platanoid fossil woods from the McRae Formation. Botany 2017, Abstract 343.
- Parrott, J. and Upchurch Jr., G. The angiosperm wood flora of the Upper Cretaceous (Campanian) McRae Formation, south-central New Mexico: Diversity and significance. Botany 2017, Abstract 345.
- Estrada-Ruiz, E., Upchurch Jr., G., Wheeler, E., Mack, G. Late Cretaceous angiosperm woods from McRae Formation, south-central New Mexico, USA: Part II. Botany 2017, Abstract 56.
- Lomax, B., Lee, A., Smilie, I., Knight, C., and Upchurch, G. Experimental insights into angiosperm origins. European Geophysical Union General Assembly Abstracts, v. 19, p. 13277.
- 2018 Upchurch, G.R., Parrott, J., Wheeler, E., Estrada-Ruiz, E., Chin, K., Lehman, T., Mack, G., and Wolfe, D. Cretaceous angiosperm trees are common in mid-low latitudes of North America. European Palaeobotany and Palynology Conference 2018, Abstract O262.
- Contreras, D., Upchurch, G. and Looy, C. Diversity and distribution of monocots from a single tuff layer in the upper Campanian Jose Creek Member, McRae Formation of New Mexico. Botany 2018, Abstract 953.
- Contreras, D., Upchurch, G. and Looy, C. The late Campanian Jose Creek flora from New Mexico, a unique window into the ecology of Cretaceous forests during the rise of angiosperms. European Palaeobotany and Palynology Conference 2018, Abstract O346.
- Harper, C., Parrott, J., Upchurch, G., and Krings, M. Angiosperm wood-colonizing fungi (Ascomycota) from the Upper Cretaceous of New Mexico, USA. Botany 2018, Abstract 423.
- Sender, L.M., Doyle, J.A., Upchurch, G.R., Villanueva-Amadoz, U., and Diez, J.B. Leaves and inflorescences of Araceae and other monocots in the latest Albian (mid-Cretaceous) of Spain: implications for early monocot evolution. European Palaeobotany and Palynology Conference 2018, Abstract O296.
- 2019 Coiro, M., Doyle, J., Upchurch, G., and Martinez, L. An Aptian angiosperm leaf mistaken for a cycad reveals an unexpected extinct line in the Early Cretaceous radiation of angiosperms. Botany 2019, Abstract 781.
- Contreras, D., Upchurch, G., and Looy, C. Forest structure during the ecological expansion of flowering plants: evidence from the southern Western Interior. NAPC 2019 Abstracts: 108-109.
- Contreras, D., Doyle, J., and Upchurch, G. Implications of fossils for phylogeny and evolution of Cupressaceae *sensu lato*. Botany 2019, Abstract 1042.

III. Scholarly Activities

Invited Talks, Symposia, Scientific Workshops, & 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. |

- Convener of workshop, "The Analysis of Dispersed Cuticles". Exxon Production Research Company, Houston, Texas, April 1991.
- 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 70th 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, 9th 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
- 2016 Participant, Deep Time Climate Model Intercomparison Project (DeepMIP) workshop, Boulder, CO.
Participant, Deep Time Workshop (to guide future climate model development), Santa Cruz, CA.
- 2017 Seminar, Department of Geosciences, University of Texas at San Antonio.
- 2019 Invited participant, Paleocene-Eocene Thermal Maximum (PETM) workshop, Santa Cruz, California (organizers: Jeffrey Kiehl, Scott Wing, James Zachos)

Laboratory visitors

- 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 Institute 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
2017	Dr. Elisabeth Wheeler, North Carolina State University Dr. Emilio Estrada-Ruiz, National Polytechnic Institute of Mexico Dr. Lisa Boucher, University of Texas, Austin
2018	Dr. Karen Chin, University of Colorado, Boulder
2019, 2024	Dr. Emilio Estrada-Ruiz, National Polytechnic Institute of Mexico

Consulting

1982	Smithsonian Institution Press, information contributor to book, <i>Thread of Life: The Smithsonian Looks at Evolution</i> .
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	<i>National Geographic</i> , artistic advisor for January 1993 issue on Dinosaurs.
1993	Saunders Publishing, Reviewer of <i>Botany</i> , 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 <i>Plant Biology</i> , 2 nd Edition, by Rost et al. (Chapters 10, 25) McGraw Hill Publishers, review of <i>Essentials of Biology</i> , 1 st Edition (Chapters 20–21). Prentice Hall Publishers, review of <i>Biology: Inquiries and Insights</i> , by Insel et al. (Chapters 1–4).
2005	John Wiley Publishers, review of <i>Biology: Understanding Life</i> , 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, 2nd 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, 2nd 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.)
 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 indicated)

- 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 megafloras 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 21st 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 70th 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 pCO₂ 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 pCO₂ 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. 9th European Palaeobotany and Palynology Conference, 26-31 August 2014, Padova Italy, Abstract Book: 284
- 2017 Upchurch Jr., G., Parrott, J., Estrada-Ruiz, E., Contreras, D.L. Climate and vegetation of southern Laramidia: A paleobotanical reconstruction for the upper Campanian Jose Creek Member, McRae Formation, south-central New Mexico. Botany 2017, Fort Worth, Texas, June 28, 2017.

- Upchurch, G., Parrott, J., Estrada-Ruiz, E., Contreras, D. Climate of southern Laramidia: A multi-proxy paleobotanical reconstruction from the upper Campanian Jose Creek Member, McRae Formation, south-central New Mexico, USA. 10th International Symposium on the Cretaceous, Vienna, Austria, August 22, 2017.
- 2018 Upchurch, G.R., Parrott, J., Wheeler, E., Estrada-Ruiz, E., Chin, K., Lehman, T., Mack, G., and Wolfe, D. Cretaceous angiosperm trees are common in mid-low latitudes of North America. European Palaeobotany and Palynology Conference 2018, Dublin, Ireland, August 16, 2018.
- 2024 Upchurch, G.R. Dicot wood anatomy: A tool for reconstructing Late Cretaceous climate. Community Earth System Model Workshop, Paleoclimate Working Group, National Center for Atmospheric Research, Boulder, CO. June 12, 2024

Reviews and review panels

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*

	<i>Canadian Journal of Botany</i> <i>Geological Society of America Special Papers</i>
2004	<i>American Journal of Botany</i> <i>Global and Planetary Change</i> <i>Palaaios</i>
2005	<i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> <i>Paleobiology</i> Special volume on Neogene vegetation of Europe (ed. D. Uhl and V. Mosbrugger)
2006	<i>Palaeontologica Electronica</i>
2007	<i>American Journal of Botany</i> (x5) <i>American Naturalist</i> <i>Canadian Journal of Earth Sciences</i> <i>Courier Forschungsinstitut Senckenberg</i> <i>Journal of Geophysical Research, Biogeosciences</i> <i>Occasional Papers of the Yale Peabody Museum</i>
2008	<i>Palaeontology</i> <i>Palaaios</i>
2009	<i>International Journal of Coal Geology</i> <i>Lethaia</i> <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i>
2010—2012	I forget.
2013	<i>American Journal of Botany</i> <i>Frontiers in Plant Science</i> . <i>Geological Society of America Special Papers</i> (x2)
2014	<i>American Journal of Botany</i> <i>Botanical Journal of the Linnean Society</i> <i>Bulletin of the Peabody Museum of Natural History</i> <i>Cretaceous Research</i> <i>Historical Biology</i> <i>Journal of the Geological Society of London</i> <i>Perspectives in Plant Ecology, Evolution, and Systematics</i> <i>Taxon</i>
2015	<i>Botanical Journal of the Linnean Society</i> <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> <i>Taxon</i>
2016	<i>American Journal of Botany</i> <i>New Mexico Museum of Natural History Publications</i> <i>Taxon</i>
2017	<i>Cretaceous Research</i> <i>International Journal of Plant Sciences</i>
2018	None (I turned down requests due to my phased retirement and long-term move to Colorado.)
2019	<i>Journal of the Geological Society</i>

Two others that I now forget.

2022 *Climate Dynamics*
 2023 *Cretaceous Research*
 2024 *Cretaceous Research*

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
 2016 American Chemical Society, Petroleum Research Fund.
 2017–2023 I forget.

Teaching workshops

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).