

Curriculum Vitae
Jerry Lin Farris

Department of Biological Sciences Arkansas State University
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PROFESSIONAL PREPARATION

Arkansas State University, State Univ., Arkansas. B.S., Zoology, 1979
University of Oklahoma Field Biological Station, Kingston, OK. Summer Session in Algal and Field Ecology, 1980
Arkansas State University, State Univ., Arkansas. M.S., Biology, 1981.
Virginia Polytechnic Institute and State University, Blacksburg, Virginia. Ph.D., Zoology, 1986.

APPOINTMENTS

Virginia Polytechnic Institute and State University
Post-doctoral Research Associate in Zoology, 1986
Research Scientist in Zoology, 1987-1990
Visiting Assistant Professor in Biology and Affiliate Faculty Member of the Center for Environmental and Hazardous Materials Studies, 1991-1992.
Arkansas State University
Assistant Professor, Department of Biological Sciences, 1992-1996
Director, Ecotoxicology Research Facility, 1994-2005
Judd Hill Chair of Environmental Biology, 1994-2005
Associate Professor, Department of Biological Sciences, 1997-2001
Professor, Department of Biological Sciences, 2002-2008
Associate Dean, College of Sciences and Mathematics, 2005-2009
University Distinguished Professor of Biology, 2009-present
Affiliated Faculty member, Arkansas Biosciences Institute, 2004-2022

PROFESSIONAL AFFILIATIONS

Society of Environmental Toxicology and Chemistry (SETAC), Mid South Regional SETAC, North American Benthological Society, Freshwater Mussel Conservation Society, Sigma Xi, Arkansas Environmental Federation, Phi Kappa Phi, American Association of University Professors, Council of Environmental Deans and Directors

GRANTS AND AWARDS

Farris, J. L., D. S. Cherry, J. Cairns, Jr. and E. P. Smith. American Electric Power Company. 1991 (\$49,600) Selenium sensitivity of biota from Little Scary Creek, West Virginia.

Farris, J. L., D. S. Cherry, R. J. Neves and J. Cairns, Jr. American Electric Power Company. 1991-1992 (\$209,700) Validation of copper concentrations at the Clinch River Plant, Virginia.

Farris, J. L., and D. S. Cherry. American Electric Power Company. 1991 (\$55,800) Toxicity testing of copper and whole effluent from Big Sandy Plant, Kentucky.

Cherry, D. S., J. L. Farris and J. Cairns, Jr. Duquesne Light Company. 1990-1991 (\$93,000) *Corbicula* anti-fouling and molluscicide fate and effect studies regarding nuclear power generation.

Farris, J. L., R. J. Neves and D. S. Cherry. Ecological Specialists, Inc. 1991 (\$6,142) Validation of silt tolerance in juvenile mussels.

Farris, J. L., D. S. Cherry, and J. Neves. American Electric Power Corporation. 1991-1994 (\$265,000) Sources of pollutants influencing point and non-point toxicity to the mussel fauna in the Clinch River drainage system.

Neves, R. J., J. L. Farris and D. S. Cherry. American Electric Power Corporation. 1991-1992 (\$68,000) Propagation of juvenile freshwater mussels at the Clinch River Steam Plant, Carbo, Virginia.

Farris, J. L., R. J. Neves and D. S. Cherry. U. S. Fish and Wildlife Service. 1992-1993 (\$10,900) Cellulolytic enzyme assay analysis on mollusks in the Clinch River, Virginia.

Cherry, D.S., J.R. Lauth, and J.L. Farris. Proctor and Gamble Company. 1992-1993 (\$65,000) Chronic toxicity testing of Foley Mill effluent..

Farris, J. L. U.S. Fish and Wildlife Service. 1993-1994 (\$25,520) Monitoring and database management in the Upper Tennessee River Basin.

Farris, J. L., J. H. VanHassel, R. J. Neves. The Nature Conservancy. 1993-1994 (\$10,000) Biomonitoring for maintenance of unionids: EPA Watershed Protection Approach Demonstration Project in the Upper Tennessee River Basin - Virginia.

Farris, J. L., R. L. Johnson. Arkansas State University, Faculty Research Award. 1993-1994 (\$10,660) Allozyme analysis of freshwater mussels: modeling of genotypic diversity in aquatic ecosystems.

Farris, J. L., K. R. Seeley, and S. Zylstra. U.S. Fish and Wildlife Service. 1994-1995 (\$68,000) Development of ranking systems for water quality and biologic integrity in the Upper Tennessee River Basin.

Farris, J. L. Miami University. 1993-1994 (\$4,060) Evaluation of cellulolytic activity in freshwater mussels for use in resource damage claims.

Farris, J. L. Miami University. 1993-1994 (\$2,320) Use of cellulolytic activity in freshwater mussels to assess the health of Ohio river basin unionids prior to encrustation by zebra mussels.

Farris, J. L. American Electric Power Service Corporation. 1994 (\$17,400) Untreated mine water effects on Ohio River mussels.

Farris, J. L. American Electric Power Service Corporation. 1994-1995 (\$17,400) Evaluation of non-point source pollutants using in-stream indicators of mollusc health.

Farris, J. L. Ouachita River Institute. 1993-1994 (\$4,700) Evaluation of substrate toxicity and cellulase inhibition from mercury contamination.

Farris, J. L. SILO Advisory Council. 1993-1994 (\$2,492) Use of cellulolytic activity in a proposed framework for developing indicators of ecosystem health.

Farris, J.L. City of Jonesboro. 1993-1994 (\$4,490) Effect of pesticides for mosquito control on target and non-target organisms.

Farris, J.L. U.S. Fish and Wildlife Service, Bloomington Field Office, Indiana. 1995 (\$17,000) Use of sediment tests with juvenile mussels in preassessment phase investigations for damaged resources.

Farris, J.L. American Electric Power Service Corporation, Columbus, Ohio. 1995-1997 (\$66,528) Restoration of Unionid mussels to Leading Creek using fish host encystment and media transformation.

Farris, J. L. Weston, Inc. Edison, New Jersey. 1995 (\$10,800) Evaluation of sediment toxicity from sites in Bayou Bonfouca using juvenile mussels.

Farris, J.L. and J.L. Harris. Arkansas Game and Fish Commission. 1995-1998 (\$66,500) Zebra mussel impacts on freshwater mussels in Arkansas.

Farris, J.L. and B.D. Bennett. Arkansas Soil Testing and Research Laboratory and US EPA. 1995-1998 (\$168,400) Demonstration of cotton production BMP impact on the soil and water resources of the Arkansas Delta.

Farris, J.L. Chisenhall, Nestrud and Julian. 1995-1996 (\$15,000) Evaluation and characterization of a nickel dominated discharge and its effect on a treatment plant effluent.

Farris, J.L. and R.S. Grippo. Ecological Specialists, Inc. 1995-1996 (\$23,690) Toxicity assessment of sediment and water related to the ecological characterization of Weldon Spring.

Farris, J.L. Ecological Specialists, Inc. 1996 (\$31,973) Toxicity assessment of sediment and water related to the Weldon Spring Remedial Action Project: Option Period Characterization.

Farris, J.L. and Jon Pierce. SILO Advisory Council Grant. 1996 (\$3,600) Limnological analysis of an intensive-use reservoir.

Farris, J.L. and C.D. Milam. Shell Exporters Association. 1996-1997 (\$23,220) Relating sediment and habitat conditions to historical impact on resident mussel communities in Kentucky Lake.

Farris, J.L., T.J. Naimo and C.D. Milam. U.S. Fish and Wildlife Service. 1997 (\$6,091) Assessment of condition indices as indicators of mussel damage in response to a coal-fine spill.

McGhee, R., A. Hadar, J. Farris and R. Grippo. Mideast Travel Award. 1996-1997 (\$32,000) Collaborative environmental research for comparative Delta studies.

Farris, J.L. Arkansas State University, Faculty Research Award. 1997-1998 (\$5,778) Cellulolytic activity as bioeffect endpoint in mussels to reduce uncertainty in the assessment of ecological risks.

Farris, J.L. and C.D. Milam. American Electric Power Service Corporation. 1998 (\$26,508) Propagation and establishment of juvenile mussels in Leading Creek using fish host encystment and media transformation.

Grippo, R., J. Farris, B. Bennett and R. Cox. U.S. Corps of Engineers. 1997-1998 (\$46,820) Environmental assessment for feasibility study of harbor expansions for Pemiscot County and New Madrid, MO on the Mississippi River.

Farris, J.L. ,J.L. Harris, and C.D. Milam. Arkansas Game and Fish Commission. 1998-1999 (\$20,500) Zebra mussel impacts on freshwater mussels in Arkansas.

Farris, J.L. USDA, Agricultural Research Service Mid-South Area. 1998-1999 (\$124,000)

- Measurement of impairment and the effects of contaminant loading and reduction in conservation and management of Deltaic watersheds.
- Farris, J.L. and C.D. Milam. U.S. Fish and Wildlife Service. 1999-2000 (\$8,910) Impacts on unionid populations in the Middlefork Holston River, VA: biomarker responses measured in *Lexingtonia dolabelloides* following a mussel die-off.
- Farris, J.L., J.L. Harris and C.D. Milam. U.S. Department of the Interior, Fish and Wildlife Service. 2000-2002 (\$40,000) Life history and population biology of the endangered speckled pocketbook.
- Harris, J.L. and J.L. Farris. USDA Forest Service, Ouachita National Forest. 2000-2002 \$30,000 Mussel survey of the Fourche and Petit Jean rivers in Arkansas.
- Stephens, W. W. and J. L. Farris. Catfish Promotion Board. 2001-2002 \$8,000 Instream community assessment of aquaculture effluents,
- Farris, J.L. and C.D. Milam. City, Water and Light, Inc. 2001-2002 (\$33,438) Evaluation of streams receiving treated municipal effluent.
- Farris, J.L. and C.D. Milam. U.S. Dept. of Agriculture Forest Service. 2001-2002 (\$15,500) GIS mussel database for Ozark and St. Francis National Forests.
- Farris, J.L., C.D. Milam and J.L. Harris. Arkansas Game and Fish Commission. 2001-2002 (\$18,106) GIS database of Arkansas mussels (NB09).
- Farris, J.L. US Fish and Wildlife Service. 2001-2003 (\$15,000) Life history of the Ouachita Rock Pocketbook (*Arkansia wheeleri*).
- Farris, J.L., J.L. Harris, A.D. Christian, W.R. Hoeh, R.L. Johnson, M. Gordon and C.D. Milam. Arkansas Game and Fish Commission. 2001-2004 (\$58,935) Species limits and phylogeography of Lampsilinae (Bivalvia; Unionoida) in Arkansas with emphasis on species of *Lampsilis*.
- Farris, J.L. Potesta and Associates. 2001-2003 (\$145,699) Assessment of fish community responses to a coal slurry spill in the Tugfork River in Kerma, West Virginia.
- Milam, C.D., J.L. Farris, and J.L. Harris. 2002. US Army Corps of Engineers, Memphis District. (\$7,800) Development of an electronic key for Arkansas freshwater mussel populations.
- Farris, J.L. Combined Various Regional Industries and Municipalities. 1996-2004 (\$371,644) Evaluation of point and non-point impacts on receiving stream communities predicted by toxicity and impairment testing.
- Farris, J.L. Parsons Engineering Science, Inc. 2002 (\$26,448) Bioassessment of water and sediment quality on Robinson Military Training Area.
- Farris, J.L., A.D. Christian and J.L. Harris. US Fish and Wildlife Service. 2002-2004 (\$30,000) Life history and population biology research on the threatened Arkansas fatmucket (*Lampsilis powelli*) and the special concern Ouachita creekshell (*Villosa arkansasensis*).
- Farris, J.L. US Fish and Wildlife Service. 2002-2003 (\$33,000) Field validation of buffer zones to protect the Fat pocketbook.

Farris, J.L. Parsons Engineering Science, Inc. 2002-2003 (\$6,496) Fort Chaffee Maneuver Training Center Scaleshell mussel survey.

Farris, J.L. USDI Fish and Wildlife Service. 2002-2003 (\$43,560) Polynuclear aromatic hydrocarbon concentrations in sediments and potential impacts to benthic and fish communities at the Felsenthal National Wildlife Refuge.

Christian, A.J. and J.L. Farris US Dept of Agriculture Forest Service. 2002-2003 (\$20,000) Challenge Cost Share Agreement for life history and population biology research on the threatened Arkansas fatmucket (*Lampsilis powellii*) and the special concern Ouachita creekshell (*Villosa arkansasensis*).

Grippio, R.C. and J.L. Farris . USDA. 2002-2004 (\$246,000) Fate and effect of the aquaculture therapeutant potassium permanganate.

Hannigan, R.E. and J.L. Farris. National Science Foundation. 2003-2006 (\$262,350) REU Site: R.I.S.E. – Research internships in science of the environment at Arkansas State University.

Hannigan, R.E. and J.L. Farris. National Science Foundation. 2003-2005 (\$163,159) Linkages between the chemical weathering of black shales and metal contamination in aquatic systems.

Hannigan, R.E., J.L. Farris, J. Russ, Roger Buchanan. National Science Foundation 2003-2007 (\$723,665) Assessing environmental life histories of freshwater fish: applications of otolith microchemistry.

Risch, T. and J.L. Farris. Arkansas Bioscience Institute. 2003-2004 (\$104,819) Assessing the benefits of genetically modified crops: Using small mammal models.

Risch, T.S., M. Srivatsan, and J. L. Farris. Arkansas Biological Institute. 2004-2005 (\$75,000) Assessing the benefits of genetically modified crops: Using small mammal models.

Farris, J.L. and A. Christian. 2003-2005. (\$50,000). US Fish and Wildlife Service Interagency agreement. Life history and population biology research on the threatened Arkansas fatmucket (*Lampsilis powellii*) and the special concern Ouachita creekshell (*Villosa arkansasensis*).

Christian, A., J.L. Farris. Arkansas Highway and Transportation Department. 2004-2008 (\$175,000) Habitat restoration plan and programmatic biological assessment for *Potamilus capax*.

Farris, J.L. U.S. Fish and Wildlife Service. 2004-2006 (\$17,000) Identifying potential fish hosts of the western fanshell (*Cyprogenia aberti*).

Farris, J.L. US Department of Agriculture. 1998-2007 (\$974,503) Agricultural Research Service, Mid-South Area. Edge of field ecosystems for water quality improvement.

Farris, J.L. Potesta and Associates. 2001-2006 (\$217,430) Assessment of fish community responses to a coal slurry spill in the Tugfork River in Kerma, West Virginia.

Farris, J.L., Cols. Green S., Bouldin, J., Phillips, G. USEPA Star Grant. 2006-2009 (\$193,400) Delta Center for Agricultural Water Use.

Green, S., Farris J.L. Arkansas Natural Resources Commission. 2006-2008 (\$19,375) Characterization of agricultural runoff for nutrient reduction associated with ProAgri[™] treatment of poultry litter added to soils.

Farris, J.L. Entergy. 2007-2008 (\$25,000) Assessing the environmental impacts of the dust suppressant acidulated soybean soapstock, an agricultural bi-product in aquatic systems.

Christian, A., J.L. Farris and J.L. Harris. Arkansas Game and Fish Commission. 2007-2008. (\$28,060) Life history research on the special concern southern hickorynut, *Obovaria jacksoniana* (Frierson, 1912).

Farris, J.L. Arkansas Biosciences Institute. 2008-2009 (\$75,000) Assessment of vegetative regulatory network performance at drainage scales.

Farris, J.L., Kroger R, Moore, MT. City of Jonesboro. 2009-2010 (\$24,494) Vegetation management assessment.

Farris, J.L. USDA. 2009-2013 (\$132,980) Contaminant removal by edge-of-field wetlands; Specific Cooperative Agreement USDA No 58-6408-9-351

Kroger, R., Farris, J.L., and Moore, M.T. Mississippi Alabama Sea Grant Consortium 2010-2012 (\$143,800) Decreasing nitrate-N loads to coastal ecosystems with innovative drainage management strategies in agricultural landscapes.

Farris, J.L. Arkansas Science and Technology Authority. 2010-2013 (\$100,000) Center for Efficient and Sustainable Use of Resources (CESUR).

Farris, J.L. USDA ARS 2013-2018 (\$108,206) Contaminant removal by edge-of-field wetlands, Service Contract Agreement.

Farris, J.L. and M. Reba. USDA NRCS 2013-2016 (\$150,000) Tailwater recovery characterization-AR Component Conservation Innovation Grant.

Farris, J.L. and M. Reba. US Fish and Wildlife Service 2013-2014 (\$18,240) Water monitoring and transported sediment characterization on National Wildlife Refuges-Region 4; Big Lake National Wildlife Refuge (BL NWR).

Farris, J.L. USDA ARS 2017-2022 (\$147,778) Novel edge-of-field practices for nutrient and pesticide runoff mitigation, Service Contract Agreement.

PROFESSIONAL ACTIVITIES

Served as consulting aquatic ecologist, benthic ecologist or ecotoxicologist for the following:

Hercules Inc
 Celanese Corporation
 Consumers Power Company
 Procter and Gamble Environmental Safety Department
 Borg-Warner Chemicals Corporation
 American Electric Power Service Corporation, Columbus, OH
 American Electric Power Service Corporation's Clinch River Plant
 Ecological Analysts
 Utilities Water Act Group (UWAG)

Union Carbide Corporation
 IBM Corporation
 Wisconsin Paper Council
 Bowater Southern Paper Company
 International Joint Commission
 International Paper Company
 Hoechst Celanese, Rock Hill, SC and Narrows, VA
 Virginia Fibers Corporation
 Central Virginia Laboratories and Consultants
 Maine Paper Council
 Duquesne Light Company, Pittsburgh, PA
 Biological Monitoring, Inc, Blacksburg, VA
 Farr Company, Jonesboro, AR
 City of Jonesboro, Jonesboro, Arkansas
 Weyerhaeuser
 Boston-Dana, Paragould, AR
 EVS Environment Consultants
 R&R Environmental Engineering
 Kuwait University
 Tennessee Department of Transportation
 East Tennessee State University
 HydroQual, Inc
 City Water and Light, Jonesboro, AR
 U.S. Army Corps of Engineers, Memphis District
 US Dept of Justice
 Jones, Day, Reavis and Pogue, Toledo, OH
 Wichita State University
 Texas State University, San Marcos
 Middle Tennessee State University
 Parsons Engineering Science, Inc
 Cargill Meat Solutions Corp.
 Potesta and Assoc.
 Engineering Environmental Management, Inglewood CO
 Ridolphi Inc., Seattle, WA
 PBS&J Environmental Toxicology
 HNTB Corp. KC, MO
 E²M Engineering-Environmental Management, Inc
 PetroHawk Chemical
 Thompson and Knight, LLP
 Chisenhall, Nestrud & Julian, P.A., Little Rock, AR
 EnSafe, Memphis, TN
 Eastern Research Group, Inc.

POSITIONS HELD

Thermogas Corporation - Accounting Department, Little Rock, Arkansas, 1974
 Maumelle Newtown, Inc. - Construction and Design Department, Maumelle, Arkansas, 1975-1976
 Malone and Hyde - Accounting and Wholesale Inventory, Memphis, Tennessee, 1976
 Franklin Electric Corp. - Maintenance Division, Jacksonville, Arkansas, 1977-1978
 Garrison Motor Freight - Terminal Assistant, Little Rock, Arkansas, 1979-1980
 Arkansas State University (Biology Department): Graduate Teaching Assistant, 1980-1981

Virginia Polytechnic Institute and State University (Biology Department):

- Graduate Teaching Assistant - Aquatic Ecology, General Biology, Principles of Biology, Honors Laboratory, 1982-1984. Duties included lecture and exam preparation, laboratory supervision and assignment of grades.
- Graduate Teaching Associate, 1983-1984. Duties include scheduling and supervision of 30 plus Graduate Teaching Assistants, conducting weekly lab training sessions for the GTAs, modifying lab exercises as appropriate and acting as liaison between the staff and laboratory technicians.
- Graduate Research Assistant, 1984-1986. Responsible for ongoing research being conducted at the Glen Lyn Power Plant field site and laboratory bioassays conducted at the University Center for Environmental Studies Ecosystem Simulation Laboratory.
- Post-doctoral Research Associate in Zoology, 1986. Responsible for on-site field research conducted at the Glen Lyn Power Plant laboratory and artificial streams; also for design, development and construction of the field laboratory and artificial stream system at the Clinch River Power Plant, Carbo, Virginia. Duties included supervision of water chemistry for three laboratories, further development of cellulosytic monitoring for in-stream testing, and culture and maintenance of *Ceriodaphnia* and algal stocks.
- Research Scientist in Zoology, 1987-1990. Responsible for ongoing research at the Clinch River Plant field laboratory and benthic monitoring programs in four rivers in Virginia and Tennessee. Duties included scheduling and supervision of graduate students and technicians, acting as liaison between industry personnel and researchers, as well as generation and analysis of acute and chronic toxicity and impairment tests at the environmental Simulation Laboratory and two laboratories within the Virginia Tech Biology Department.
- Visiting Assistant Professor in Biology and Affiliate Faculty Member of the Center for Environmental and Hazardous Materials Studies, 1991-1992. Manager of the Center's Ecosystem Simulation Laboratory included responsibility for supervision of graduate students and technicians as well as implementation of all quality assurance/quality control protocol for research activities. As Visiting Professor duties included serving as committee member or co-chair on student committees in Biology, Fisheries and Wildlife and the UCE&HMS. Grants were conducted in both the Department of Biology and the UCE&HMS.

Arkansas State University:

- University Distinguished Professor of Biology, and affiliated faculty member Arkansas Biosciences Institute (2009-2022)
- Associate Dean, College of Sciences and Mathematics (2005-2009)
- Director, Graduate Program in Environmental Sciences (1996-2005)
- Professor, Department of Biological Sciences (2002-2008)
- Associate Professor, Department of Biological Sciences (1996-2001)
- Assistant Professor, Department of Biological Sciences (1992-1996)
- Director of the Ecotoxicology Research Facility, Responsibilities include directing graduate students and technicians involved with ongoing research, securing research grants, teaching Ecology and Ecology field laboratory, Aquatic Ecotoxicology, Topical Seminar and design, management and equipping two certified toxicity laboratories (1996-2005)
- Chairholder, Judd Hill Chair of Environmental Biology, College of Arts and Sciences, Arkansas State University (1996-2005)

Graduate Faculty, Adjunct Appointments:

- | | |
|---|-----------|
| Virginia Tech | 1990-1997 |
| East Tennessee State University | 1992-1998 |
| University of Mississippi | 1996-2001 |
| University of Memphis | 2008-2015 |
| Arkansas Biosciences Institute, ASU Jonesboro | 2005-2021 |

POSTDOCTORAL APPOINTMENTS DIRECTED *and current positions:*

Jonathan D. Maul	2004-2006,	Ecotoxicologist/Environmental Safety Syngenta, Greensboro, NC
William W. Stephens	2004-2005,	Environmental Resources Management, Houston, TX
Alan D. Christian	2001-2002,	Associate Professor, UMass Boston
Jagruiti P. Gandhi	2001-2002,	QC Director at Raffaello Research Labs, Los Angeles, CA
Matthew T. Moore	1999-2000,	Research Ecologist, USDA ARS National Sedimentation Lab

DIRECTED DISSERTATIONS AND THESES

Joseph R. Bidwell (Ph. D., 1993) Department of Biology, Virginia Tech, Physiological thresholds of the Asiatic clam and comparisons of impairment levels in aquatic organisms, Co-major advisor with D.S. Cherry.

Donna K. Reed (Ph. D., 1993) Department of Biology, Virginia Tech, Measured effects in Clinch River snail communities from power plant discharges, Co-major advisor with D.S. Cherry.

Lewis C. Hunt (M.S., Biology in 1996) Department of Biological Sciences, Arkansas State University. Evaluation of poultry litter and its associated effects on the wood frog (*Rana sylvatica*) in the Ozark Mountains of Arkansas.

Cristin D. Milam (M.S., Biology in 1996) Department of Biological Sciences, Arkansas State University. Relating threshold responses of *Corbicula fluminea* to assess damage in resident mussel populations of the Ohio River basin.

Matt Moore (M.S., Biology in 1996) Department of Biological Sciences, Arkansas State University. Dynamics of propanil conversion to noneffective metabolites and their relation to biological integrity in agricultural ecosystems of Northeast Arkansas.

Margaret L. Barfield (M.S., Biology in 1997) Department of Biological Sciences, Arkansas State University. Comparison of responses using two biomarkers on freshwater molluscs exposed to cadmium.

Andrew A. Beall (M.S., Biology in 1997) Department of Biological Sciences, Arkansas State University. Perception of water quality and aesthetic value of Arkansas deltaic waterscapes and their relationship to bioassessments.

Erik L. Winchester (M.S., Biology in 1997) Department of Biological Sciences, Arkansas State University. Application of ChE activity as a biomarker for monitoring pesticide exposure to freshwater mussels.

Sarah A. Clem (M.S. in 1998) Department of Biological Sciences, Arkansas State University. Complexities in testing early lifestage responses of freshwater mussels to metals and contaminated sediments.

Jon R. Pierce (M.S., Biology in 2000) Department of Biological Sciences, Arkansas State University. Vitellogenin induction in the Red-eared Slider turtle, *Trachemys scripta*, as a biomarker for endocrine disruption.

Tammy V. Ash (M.S., Biology In 2001) Department of Biological Sciences, Arkansas State University. An assessment of the 303D-listed Strawberry River, Arkansas, with resulting management implications.

Richard H. Rauschenberger (M.S., Biology in 2001) Department of Biological Sciences,

- Arkansas State University. Development and viability of alligator snapping turtle, *Macrolemys temminckii*, eggs, embryos, and hatchlings incubated in soils with different pesticide risks. (Co-major advisor with S.E. Trauth).
- Lora L. Harding (M.S., Biology in 2001) Department of Biological Sciences, Arkansas State University. Assessment of instream conditions for two deltaic streams receiving treated municipal effluent in Northeast Arkansas.
- David L. Feldman (M.S., Biology in 2002) Department of Biological Sciences, Arkansas State University. Characterization of macroinvertebrate communities and the conditions that define agricultural drainage ditches.
- Rebecca Winterringer (M.S., Biology in 2003) Department of Biological Sciences, Arkansas State University. Population dynamics and reproductive patterns of the federally endangered freshwater mussel, *Lampsilis streckeri* (Frierson 1927).
- Nova D. Goosby (M.A., Biology in 2004) Department of Biological Sciences, Arkansas State University. The effect of diallyl sulfide in pancreatic cancer chemoprevention- beneficial or adverse?
- Sonya Baker (M.A., Biology in 2004) Department of Biological Sciences, Arkansas State University. Chemopreventive effects of resveratrol on pancreatic tumor cells.
- Jonathan D. Maul (Ph.D., 2004) Environmental Sciences Program, Arkansas State University. Examination and monitoring of ecological and contaminant stressors using vertebrate and invertebrate models.
- William W. Stephens (Ph.D., 2004) Environmental Sciences Program, Arkansas State University. Characterization and impact assessment of aquaculture effluents on wadeable drainages in the deltas of the Lower Mississippi River Valley.
- Jennifer L. Bouldin (Ph.D., 2004) Environmental Sciences Program, Arkansas State University. Interaction of agricultural runoff with vegetated aquatic systems to reduce potential toxicity.
- Mary Scott (M.S., 2004) Department of Biological Sciences, Arkansas State University. Life history and population biology of the Arkansas Fatmucket, *Lampsilis powellii* (Lea, 1852).
- Shannon Davis (M.S., 2005) Environmental Sciences Program, Arkansas State University. The acute toxicity of Weedar 64 (2,4-D) in field and laboratory exposures.
- Sheryl Greenway (M.S., 2005) Environmental Sciences Program, Arkansas State University. Establishing conventional species sensitivity data for caffeine as an emerging contaminant posing risk to aquatic environments.
- Stephen Rice (M.S., 2005) Environmental Sciences Program, Arkansas State University. Development of ranking systems for water quality and biologic integrity in the UpperTennessee River Basin.
- Ashley McBride Wren, (M.A., 2006) Department of Biological Sciences, Arkansas State University. Freshwater mussel response to various flow conditions.
- George M. Ogendi (Ph.D., 2006) Environmental Sciences Program, Arkansas State University. Weathering of black shale and its impacts on surface water and sediment quality, and aquatic organisms. Co-major advisor with R. Hannigan

- Elizabeth A. Ashcraft (M.S., 2006) Department of Biological Sciences, Arkansas State University. Assessment of relic valve condition to estimate time since mortality in Unionid bivalves.
- Brent L. Walker (M.S., 2006) Department of Biological Sciences, Arkansas State University. Characterization and biomonitored responses to measured turbidity in the L'Anguille River, Arkansas.
- Joshua Seagraves (M.S., 2006) Department of Biological Sciences, Arkansas State University. The reproductive biology and habitat characterization of the endangered Ouachita rock pocketbook, *Arkansia wheeleri*, (Ortmann and Walker, 1912).
- Traci C. Hudson (M.S., 2007) Environmental Sciences Program, Arkansas State University. Employing biomonitoring to assess stream conditions of Fourche Creek, Little Rock, Arkansas in an urbanized watershed.
- Nikki Enger-Luster (M.A., 2007-) Environmental Sciences Program, Arkansas State University. The effects of culture and maintenance of trout chow preparation on the test organism, *Ceriodaphnia dubia*.
- Mathangi Gopalan (M.S., 2007) Environmental Sciences Program, Arkansas State University. Assessing the toxicological impacts of a dust suppressant using laboratory biomonitoring.
- P. Sharon Wren (M.S., 2008) Environmental Sciences Program, Arkansas State University. The spinach project with the East Arkansas Resource and Development Council.
- Sheryl Greenway (M.S., 2010) Department of Biological Sciences, Arkansas State University. Effects of fluidized gas desulfurization (FGD) gypsum on non-target freshwater and sediment dwelling organisms
- Finis William Osier (M.S., 2011) Environmental Sciences Program, Arkansas State University. A cost benefit analysis case study of the renewable energy technology programs in distance and classroom settings.
- Oluwayinka O. Iseyemi (Ph.D., 2015) Environmental Sciences Program, Arkansas State University. Effectiveness of agricultural drainage systems on contaminant mitigation: The influence of landscape properties.
- Lisa Ellington (Ph.D., 2016) Environmental Sciences Program, Arkansas State University. Nutrient reduction design for sustainable municipal wastewater treatment.
- Traci C. Hudson (Ph.D., 2016) Environmental Sciences Program, Arkansas State University. Assessing aquatic system metabolism response to disturbance.
- LeeVi Haas (M.S., 2017) Department of Biological Sciences, Arkansas State University. Water quality characteristics of reservoir tailwater recovery systems associated with agriculture production in Northeast Arkansas.
- Ethan Leonard (M.S., 2017) Department of Biological Sciences, Arkansas State University. Water quality characterization of a tailwater recovery system associated with row crop agricultural production.
- Robert R. Clark (M.S., 2021) Environmental Sciences Program, Arkansas State University. Promoting sustainable stormwater management on the campus of Arkansas State University.

Geoffrey K. Payne (M.S. 2022) Department of Biological Sciences, Arkansas State University.
Evaluation of woodchip bioditch reactors as a nutrient reduction conservation strategy.

Undergraduate honors advisees:

Richard W. Cole (B.S. Honors thesis, 1995) Department of Biological Sciences, Arkansas State University. Differentiation of copper uptake from sediment or overlying water by the Asian clam, *Corbicula fluminea*, and the modification of sediment characters in a 30-day artificial stream test.

Jon L. Pierce (B.S Honors thesis, 1996) Department of Biological Sciences, Arkansas State University. Limnology and bioassessment of an intensive-use agricultural reservoir in NE Arkansas.

Melissa McDade (B.S. Honors thesis, 1998) Department of Biological Sciences, Arkansas State University. Determination of Unionid (*Amblema plicata*) condition in short-term refugia at the Mammoth Spring National Fish Hatchery.

Scott Treece (B.S. Honors thesis, 2013) Department of Biological Sciences, Arkansas State University. Spatial distribution of nutrients and Microcystin-LR in reservoirs and recreational lakes of Northeast Arkansas.

Geoffrey Payne (B.S. Honors thesis, 2015) Department of Biological Sciences, Arkansas State University. Characterization of sedimentation and its impacts at Big Lake National Wildlife Refuge, Manila, AR.

Service on Graduate Student Thesis and Dissertation Advisory Committees:

M.C. Hove	1990	Virginia Tech,	MS Fisheries and Wildlife Sciences
L.T. Wolcott	1990	Virginia Tech,	MS Fisheries and Wildlife Sciences
L.M. Rifci,	1990	Virginia Tech,	MS Zoology
P.J. Jacobson	1990	Virginia Tech,	MS Zoology
M.T. McCann	1992	Virginia Tech,	MS Fisheries and Wildlife Sciences
D.L. Michaelson	1993	Virginia Tech,	MS Fisheries and Wildlife Sciences
P.J. Rust	1993	Arkansas State,	MS Biology
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PUBLICATIONS

Reviews, Books, and Book Chapters:

Water Pollution Biology. 1989. By P. D. Abel. John Wiley and Sons, New York. 231 p.
Transactions of the American Fisheries Society 119(4):3171.

Aquatic Ecotoxicology: Fundamental Concepts and Methodologies, Volume I. 1989. Alain Boudou and Francis Ribeyre (eds.). CRC Press, Inc., Boca Raton, Florida. 332 p. Journal of the North American Benthological Society 11:106-107.

M.T. Moore, C.M. Cooper, E.R. Bennett, S. Smith, Jr., F.D. Shields, Jr., and J.L. Farris. 2004. The role of vegetated drainage ditch research in the Mississippi Delta: Current results and future directions. In: Water Quality Assessments in the Mississippi Delta: Regional Solutions, National Scope. M.T. Nett, M.A. Locke, and D.A. Pennington (Eds.) American Chemical Society Symposium Series 877. American Chemical Society, Washington, D.C. pp. 194-203.

Ogendi, G. M., Farris, J.L, and Hannigan, R.E. 2004a. Black Shale Trace Metal Concentrations

- and Toxicity: Preliminary Findings. In: Wanty, R.B. and Seal, R. II (Eds.) Water Rock Interaction, Vol 2: 1359 -1362. Taylor and Francis Group plc, London, UK.
- Farris, J.L., C.D. Milam, M.T. Moore, S.O. Rice, S.A. Clem, J.R. Pierce, and M.R. Barfield. 2005. Standard Operating Manual for Ecotoxicology Research Facility: Investigative Methods of Use. Arkansas State University, Jonesboro, AR. 473 pp.
- Moore, M.T., C.M. Cooper and J.L. Farris. 2005. Drainage ditches. In: J.H. Lehr and J Keeley, Eds. Water Encyclopedia: Surface and Agricultural Water. Wiley Science, pp. 87-92.
- Farris, J.L. and J.H. Van Hassel. 2007. Freshwater Bivalve Ecotoxicology, J.L. Farris and J.H. Van Hassel (Eds.). CRC Press, New York, NY.
- Farris, J.L. and J.H. Van Hassel. 2007. Introduction, pp. 1-14, In: Farris and Van Hassel, *Freshwater Bivalve Ecotoxicology*. New York: CRC Press.
- Dunn, H.L., J.L. Farris, and J.H. Van Hassel. 2007. Case study: impact of partially-treated mine-water on an Ohio River (USA) mussel bed: use of multiple lines of evidence in impact analysis pp. 335-348, In: Farris and Van Hassel, *Freshwater Bivalve Ecotoxicology*. New York: CRC Press.
- Milam, C.D., R.G. Hudson, and J.L. Farris. 2007. Propagation and culture of freshwater mussels, pp. 65-90, In: Farris and Van Hassel, *Freshwater Bivalve Ecotoxicology*. New York: CRC Press.
- Farris, J.L. and J.H. Van Hassel. 2007. A review of the use of unionid mussels as biological indicators of ecosystem health, pp. 19-37, In: Farris and Van Hassel, *Freshwater Bivalve Ecotoxicology*. New York: CRC Press.
- Ogendi, G.M., Farris, J.L. and Hannigan, R.E. 2007. Association of dissolved organic carbon with stream discharge and dissolved metals concentrations in black shale-draining streams. pp 249-274, In: Sarkar, R. Datta and R. Hannigan (Eds.), Concepts and Applications in Environmental Chemistry: Developments in Environmental Science Series 5, Elsevier.
- Feldman DL, Farris JL, Moore MT, and Cooper CM. 2010. A characterization of benthic macroinvertebrate communities in agricultural drainage ditches of the northeast Arkansas Delta, USA. In: Moore, MT and Kröger, R (Eds.) Agricultural drainage ditches: Mitigation wetlands for the 21st century. Research Signpost. Kerala, India.
- Farris JL, Milam CD, Moore MT, Bennett ER, Cooper CM, Smith S Jr., and Shields, FD, Jr. 2010. Evaluating toxicity of atrazine and lambda-cyhalothrin amendments in agricultural ditch mesocosms. In: Moore, MT and Kröger, R (Eds.) Agricultural drainage ditches: Mitigation wetlands for the 21st century. Research Signpost. Kerala, India.
- Moore, M.T., R. Kröger, J.L. Farris, M.A. Locke, E.R. Bennett, D.L. Denton, C.M. Cooper, C.M. 2011. From vegetated ditches to rice fields: thinking outside the box for pesticide mitigation. Pages 29-37 in K.S. Goh, B.L. Bret, T.L. Potter, and J. Gan., editors, Pesticide Mitigation Strategies for Surface Water Quality. ACS Symposium Series 1075, American Chemical Society, Washington, D.C.
- Moore, M.T., J.L. Farris, R. L. Nifong, E.R. Bennett, J. M. Taylor, M. A. Locke and R. Kröger. In Press. Vegetated ditches for mitigation of complex contaminant mixtures. In: The Ecotoxicology of Aquatic Macrophytes A Springer Science monograph published through the

Journal Articles:

- Belanger, S. E., J. L. Farris, D. S. Cherry and J. Cairns, Jr. 1985. Sediment preference of the freshwater Asiatic clam, *Corbicula fluminea*. *The Nautilus* 99(2/3):66-73.
- Belanger, S. E., J. L. Farris, D. S. Cherry and J. Cairns, Jr. 1986. Growth of Asiatic clams, *Corbicula* sp., during and after zinc exposure in field-located and laboratory artificial streams. *Archives of Environmental Contamination and Toxicology* 15:427-434.
- Doherty, F. G., J. L. Farris, D. S. Cherry and J. Cairns, Jr. 1986. Control of the freshwater fouling bivalve *Corbicula fluminea* by halogenation. *Archives of Environmental Contamination and Toxicology* 15:535-542.
- Belanger, S. E., J. L. Farris and D. S. Cherry. 1988. Reduction in organic effluent static acute toxicity to fathead minnows by various aeration techniques. *Environmental Pollution* 50:189-210.
- Farris, J. L., J. H. Van Hassel, S. E. Belanger, D. S. Cherry and J. Cairns, Jr. 1988. Application of cellulolytic activity of *Corbicula* to in-stream monitoring of power plant effluents. *Environmental Toxicology and Chemistry* 7:701-713.
- Farris, J. L., S. E. Belanger, D. S. Cherry and J. Cairns, Jr. 1989. Cellulolytic activity as a novel approach to assess long-term zinc stress to *Corbicula*. *Water Research* 23(10):1275-1283.
- Belanger, S. E., J. L. Farris and D. S. Cherry. 1989. Effects of diet, water hardness, and population source upon acute and chronic toxicity of copper to *Ceriodaphnia dubia*. *Archives of Environmental Contamination and Toxicology* 18:601-611.
- Clements, W. H., J. L. Farris, D. S. Cherry and J. Cairns, Jr. 1989. The influence of water quality on macroinvertebrate community responses to copper in outdoor experimental streams. *Aquatic Toxicology* 14:249-262.
- Belanger, S. E., J. L. Farris, D. S. Cherry and J. Cairns, Jr. 1990. Validation of *Corbicula* growth as a stress response to copper in artificial and natural streams. *Canadian Journal of Fisheries and Aquatic Sciences* 47(5):904-914.
- Belanger, S. E., D. S. Cherry, J. L. Farris, K. G. Sappington and J. Cairns, Jr. 1991. Sensitivity of the Asiatic clam to various biocidal control agents. *Journal of the American Water Works Association* 83(10):79-87.
- Haag, W. R., D. J. Berg, E. W. Garton and J. L. Farris. 1993. Reduced survival and fitness in native bivalves in response to fouling by the introduced zebra mussel (*Dreissena polymorpha*) in western Lake Erie. *Canadian Journal of Fisheries and Aquatic Sciences* 50(1):13-19.
- Jacobson, P. J., J. L. Farris, R. J. Neves and D. S. Cherry. 1993. Use of neutral red to assess survival of juvenile freshwater mussel (*Bivalvia:Unionidae*) in bioassays. *Transactions of the American Microscopical Society* 112(1): 78-80.
- Jacobson, P. J., J. L. Farris, R. J. Neves and D. S. Cherry. 1993. Juvenile freshwater mussel (*Bivalvia:Unionidae*) responses to acute toxicity testing with copper. *Environmental Toxicology and Chemistry* 12:879-883.

- Belanger, S. E., D. H. Davidson, J. L. Farris, D. L. Reed and D. S. Cherry. 1993. Effects of cationic surfactant exposure in stream mesocosms to a bivalve mollusc. *Environmental Toxicology and Chemistry, Special Journal Issue, Risk Assessment of Surfactants* 12:1789-1802.
- Farris, J. L., J. L. Grudzien, S. E. Belanger, D. S. Cherry and J. Cairns, Jr. 1994. Molluscan cellulolytic activity responses to zinc exposure in laboratory and field stream comparisons. *Hydrobiologia* 287:161-178.
- Dobbs, M. G., J. L. Farris, R. J. Reash, D. S. Cherry and J. Cairns, Jr. 1994. Evaluation of the resident species procedure for developing site-specific water quality criteria for copper in Blaine Creek, Kentucky. *Environmental Toxicology and Chemistry* 13(6):963-971.
- Bidwell, J.R., J.L. Farris and D.S. Cherry. 1995. Comparative response of the zebra mussel, *Dreissena polymorpha*, and the Asian clam, *Corbicula fluminea*, to DGH/QUAT, a nonoxidizing molluscicide. *Aquatic Toxicology* 33:183-200.
- Rifici, L.M., D.S. Cherry, J.L. Farris and J. Cairns, Jr. 1996. Acute and subchronic toxicity of methylene blue (3,7-bis[dimethylamino]phenazathionium chloride) to larval fathead minnows (*Pimephales promelas*): implications to aquatic toxicity testing. *Environmental Toxicology and Chemistry* 15:1304-1308.
- Moore, M.T. and J.L. Farris. 1997. Acute and chronic toxicity of the herbicide Stam M-4 in field and laboratory exposures. *Archives of Environmental Contamination and Toxicology* 33:199-202.
- Jacobson, P.J., R.J. Neves, D.S. Cherry and J.L. Farris. 1997. Sensitivity of glochidial stages of freshwater mussels (Bivalvia:Unionidae) to copper. *Environmental Toxicology and Chemistry* 16:2384-2392.
- Reed-Judkins, D.K., J.L. Farris, D.S. Cherry, A.G. Heath, John Cairns Jr. 1997. Functional responses in *Leptoxis praerosa* to increasing metal concentration and exposure duration. *Environmental Toxicology and Chemistry* 16:1666-1676.
- Milam, C.D. and J.L. Farris. 1998. Relating threshold responses of *Corbicula fluminea* to assess damage in resident mussel populations exposed to partially treated mine water. *Environmental Toxicology and Chemistry* 17:1611-1619.
- Johnson, R.L., F.Q. Liang and J.L. Farris. 1998. Genetic diversity among four Amblemini species (Bivalvia: Unionidae) in the Cache and White Rivers, Arkansas. *The Southwestern Naturalist*. 43:321-332.
- Johnson, R.L., F.Q. Liang C.D. Milam and J.L. Farris. 1998. Genetic diversity and cellulolytic activity among several species of Unionid bivalves in Arkansas. *Journal of Shellfish Research* 17(5):1375-1382.
- Moore, M.T., J.R. Pierce, C.D. Milam, J.L. Farris and E.L. Winchester. 1998. Responses of non-target organisms to aqueous propanil exposure. *Bulletin of Environmental Contamination and Toxicology* 61:169-174.
- Bidwell, J.R., D.S. Cherry, J.L. Farris, L.A. Lyons and J. Petrille. 1999. Efficacy of intermittent halogenation for control of the zebra mussel, *Dreissena polymorpha*. *Hydrobiologia* 394:53-62.

- Milam, C.D., J.L. Farris and J.D. Wilhide. 2000. Evaluating mosquito control pesticides for effect on target and non-target organisms. *Archives of Environmental Contamination and Toxicology* 39(3): 324-328.
- Naimo, T.J., W.G. Cope, E.M. Monroe, J.L. Farris, and C.D. Milam. 2000. Influence of diet on survival, growth, and physiological condition of fingernail clams *Musculium transversum*. *Journal of Shellfish Research* 19: 23-28.
- Moore, M.T., E.R. Bennett, C.M. Cooper, S. Smith, Jr., F.D. Shields, Jr., C.D. Milam, and J.L. Farris. 2001. Transport and fate of atrazine and lambda-cyhalothrin in an agricultural drainage ditch in the Mississippi Delta, USA. *Agriculture, Ecosystems and Environment* 87:309-314.
- Barfield, M.L., J.L. Farris, and Marsha C. Black. 2001. Biomarker and bioaccumulation responses of Asian Clams exposed to aqueous cadmium. *J. Toxicol. Environ. Health Part A* 63:495-510.
- Cherry, D.S., J.H. VanHassel, J.L. Farris, D.J. Soucek and D. Neves. 2002. Site-specific derivation of the acute copper criteria for the Clinch River, Virginia. *Human and Ecological Risk Assessment* 8(3):591-601.
- Cooper, C.M., Moore, M.T., Bennett, E.R., Smith, S. Jr., and Farris, J.L. 2002. Alternative environmental benefits of agricultural drainage ditches. *Verh. Internat. Verein. Limnol.* 28:1678-1682.
- Maul, J.D. and J.L. Farris. 2003. Unusual occurrence of a Worm-eating Warbler (*Helmitheros vermivorus*) in an intensive agricultural landscape in northeastern Arkansas. *Southwestern Naturalist* 48: 297-299.
- Farris, J.L., C.M. Cooper, J. Grubaugh, and B. Justus. 2003. What is the Delta? An environmental sciences perspective. *Arkansas Review: A Journal of Delta Studies* 34(3):167-183.
- Schultz, R., M.T. Moore, E.R. Bennett, C.D. Milam, J.L. Bouldin, J.L. Farris, S. Smith Jr. and C.M. Cooper. 2003. Acute toxicity of methyl-parathion in wetland mesocosms: Assessing the influence of aquatic plants. *Archives of Environmental Contamination and Toxicology* 45(3):331-336.
- Schulz R., M.T. Moore, E.R. Bennett, J.L. Farris, S. Smith Jr., and C.M. Cooper. 2003. Methyl-parathion toxicity in vegetated and nonvegetated wetland mesocosms. *Environmental Toxicology and Chemistry* 22(6):1262-1268.
- Maul, J.D. and Farris, J.L. 2004. The effect of sex on avian plasma cholinesterase enzyme activity: a potential source of variation in an avian biomarker endpoint. *Archives of Environmental Contamination and Toxicology* 47(2):253-258.
- Bouldin, J.L., C.D. Milam, J.L. Farris, M.T. Moore, S. Smith, Jr. and C.M. Cooper. 2004. Evaluating toxicity of Asana XL (esfenvalerate) amendments in agricultural ditch mesocosms. *Chemosphere* 56 (7), 677-683.
- Bouldin, J.L., J.L. Farris, M.T. Moore and C.M. Cooper. 2004. Vegetative and structural characteristics of agricultural drainages in the Mississippi Delta landscape. *Environmental Pollution* 132(3):403-411.

- Maul J.D., J.L. Farris, C.D. Milam, S. Testa III, C.M. Cooper, and D.L. Feldman. 2004. The influence of physical habitat and water quality on macroinvertebrate communities in degraded streams of northwest Mississippi. *Hydrobiologia* 518:79-95.
- Rauschenberger R.H., S.E. Trauth, J.L. Farris. 2004. Incubation of alligator snapping turtle (*Macrochelys temminckii*) eggs in natural and agricultural soils. *Applied Herpetology* 1(3-4): 299-310.
- Cooper C.M., M.T. Moore, E.R. Bennett, S. Smith, Jr., J.L. Farris, C.D. Milam and F.D. Shields, Jr. 2004. Innovative uses of vegetated drainage ditches for reducing agricultural runoff. *Water Science and Technology* 49(3):117-123.
- Stephens, W.W. and J.L. Farris. 2004. Instream community assessment of aquaculture effluents. *Aquaculture* 231:149-162.
- Stephens, W.W. and J.L. Farris. 2004. A biomonitoring approach to aquaculture effluent characterization in channel catfish production. *Aquaculture* 241(1):319-330.
- Milam, C.D., J.L. Bouldin, R.L. Schulz, J.L. Farris, M.T. Moore, S. Smith, Jr. and C.M. Cooper. 2004. Evaluating acute toxicity of methyl parathion application in constructed wetland mesocosms. *Environmental Toxicology* 19(5):471-479.
- Maul, J.D. and J.L. Farris. 2004. Monitoring exposure of passerines to acephate, dicotophos, and malathion using cholinesterase reactivation. *Bulletin of Environmental Toxicology and Chemistry* 73(4):682-689.
- Maul, J.D., and J.L. Farris. 2005. Monitoring exposure of northern cardinals, *Cardinalis cardinalis*, to cholinesterase-inhibiting pesticides: enzyme activity, reactivations, and indicators of environmental stress. *Environmental Toxicology and Chemistry* 24:1721-1730.
- Maul, JD, JP Gandhi, and JL Farris. 2005. Community level physiological profiles of cloacal microbes in songbirds (Order: Passeriformes): variation due to host species, host diet, and habitat. *Microbial Ecology* 50(1):19-29.
- Bouldin JL, Farris JL, Moore MT, Smith S Jr, Stephens WW, Cooper CM. 2005. Evaluated fate and effects of atrazine and lambda-cyhalothrin in vegetated and unvegetated microcosms. *Environmental Toxicology* 20(5):487-498.
- Hobbs, M.S., R.S. Grippo, J.L. Farris, B.R. Griffin and L.L. Harding, 2006. Comparative acute toxicity of potassium permanganate to non-target aquatic organisms. *Environmental Toxicology and Chemistry*. 25(11):175-181.
- Maul, J.D., J.B. Belden, B.A. Schwab, M.R. Whiles, B. Spears, J.L. Farris, and M.J. Lydy. 2006. Bioaccumulation and trophic transfer of polychlorinated biphenyls (PCBs) by aquatic and terrestrial insects to tree swallows (*Tachycineta bicolor*). *Environmental Toxicology and Chemistry* 25(4): 1017-1025.
- Maul, J.D., J.L. Farris, and M.J. Lydy. 2006. Interaction of chemical cues from fish tissues and organophosphorous pesticides on *Ceriodaphnia dubia* survival. *Environmental Pollution* 47(2):253-258.
- Baral, A., R. Engelken, W. Stephens, J. Farris, and R. Hannigan. 2006. Evaluation of Aquatic Toxicities of Chromium and Chromium-Containing Effluents in Reference to Chromium Plating Industries. *Archives of Environmental Contamination and Toxicology* 50(4):496-502.

- Moore, M.T., Bennett, E.R., Cooper C.M., Smith, S. Jr., Farris, J.L., Drouillard, K.G., and Schulz, R. 2006. Influence of vegetation in mitigation of methyl parathion runoff. *Environmental Pollution* 142(2):288-294.
- Bouldin, J.L., Farris, J.L., Moore, M.T., Smith, S. Jr., and Cooper, C.M. 2006. Hydroponic uptake of atrazine and lambda-cyhalothrin in *Juncus effuses* and *Ludwigia peploides*. *Chemosphere* 65(6):1049-1057.
- Ogendi, G., Brumbaugh, W.G., Hannigan, R.E., and Farris, J.L. 2007. Effects of acid volatile sulfide on metal bioavailability and toxicity to midge larvae, *Chironomus tentans* in black shale sediments. *Environmental Toxicology and Chemistry* 26:130-139.
- Ogendi, G.M., Hannigan, R.E., and Farris, J.L. 2007. Toxicity of metal-enriched black shale-draining surface waters to *Ceriodaphnia dubia* and *Pimephales promelas*. *Journal of Agricultural, Food, and Environmental Sciences* 1(1):1-14.
- Bouldin JL, Farris JL, Moore MT, Smith S Jr, Cooper CM. 2007. Assessment of diazinon toxicity in sediment and water of constructed wetlands using deployed *Corbicula fluminea* and laboratory testing. *Archives of Environmental Contamination and Toxicology* 53(2):174-182.
- Ogendi, G., Hannigan, R., Farris, J. 2008. Macroinvertebrate assemblages in shale-draining streams of North-Central Arkansas, USA. *The Open Environmental and Biological Monitoring Journal* 1: 33-42.
- Stephens, W.W., Moore, M.T., Farris, J.L., Bouldin, J.L., Cooper, C.M. 2008. Considerations for assessments of wadeable drainage systems in the agriculturally dominated deltas of Arkansas and Mississippi. *Archives of Environmental Contamination and Toxicology* 55:432-441.
- Moore, M., Greenway, S., Farris, J., Guerra, B. 2008. Assessing caffeine as an emerging environmental concern using conventional approaches. *Archives of Environmental Contamination and Toxicology* 54:31-35.
- Harris JL, Posey WR, Davidson CL, Farris JL, Oetker SR, Stoeckel JN, Crump BG, Barnett MS, Martin HC, Matthews MW, Seagraves JH, Wentz NJ, Winterringer R, Osborne C, and Christian AD. 2009. Unionoida (Mollusca: Margaritiferidae, Unionidae) in Arkansas, Third Status Review. *Journal of the Arkansas Academy of Science* 63:50-86.
- Wentz, NJ, Harris, JL, Farris, JL, Christian, AD. 2009. Mussel inventory and population status of the federally endangered *Potamilus capax* (Green 1832) in the Tyronza River, Arkansas. *Journal of the Arkansas Academy of Science* 63:169-176.
- Kroger, R., Moore, M.T., Farris, J.L., Gopalan, M. 2011. Evidence for the use of low-grade weirs in drainage ditches to improve nutrient reductions from agriculture. *Water, Air, and Soil Pollution* 221:223-234.
- Greenway, S.L., Moore, M.T., Farris, J.L., Rhoton, F.E. 2011. Effects of fluidized gas desulfurization (FGD) gypsum on non-target freshwater and sediment dwelling organisms. *Bulletin of Environmental Contamination and Toxicology* 86(5):480-483.
- Kroger, R., Moore, M.T., Farris, J.L. 2011. Concentrated standing tailwater: a mechanism for nutrient delivery to downstream aquatic ecosystems. *Journal of Agricultural Science and Technology Part B* 1:773-777.

- Kroger, R., Pierce, S.C., Littlejohn, K.A., Moore, M.T., Farris, J.L. 2012. Decreasing nitrate-N loads to coastal ecosystems with innovative drainage management strategies in agricultural landscapes: An experimental approach. *Agricultural Water Management* 103:162-166.
- Kroger, R., Thornton, K.W., Moore, M.T., Farris, J.L., Prevost, J.D., Pierce, S.C. 2012. Tiered collaborative strategies for reducing hypoxia and restoring the Gulf of Mexico. *Journal of Soil and Water Conservation* 67(3):70A-73A.
- Kroger, R., Moore, M.T., Thornton, K.W., Farris, J.L., Prevost, J.D., Pierce, S.C. 2012. Tiered on-the-ground implementation projects for Gulf of Mexico water quality improvements. *Journal of Soil and Water Conservation* 67(4):94A-99A.
- Peck, A.J., J.L. Harris, J.L. Farris and A.D. Christian. 2014. Survival and horizontal movement of the freshwater mussel *Potamilus capax* (Green, 1832) following relocation within a Mississippi Delta stream system. *American Midland Naturalist* 172:76-90.
- Moore, M.T., J.R. Pierce and J.L. Farris. 2015. Water-quality analysis of an intensively used on-farm storage reservoir in the Northeast Arkansas Delta. *Archives of Environmental Contamination and Toxicology* 69(1):89-94.
- Iseyemi, O.O., J.L. Farris, M.T. Moore and Seo-eun Choi. 2016. Nutrient mitigation efficiency in agricultural drainage ditches: An influence of landscape management. *Bulletin of Environmental Contamination and Toxicology* 96 (6): 750-756.
- Grippio, R.S., V.M. McNeely and J.L. Farris. 2016. Unexpected increases in fecundity of *Ceriodaphnia dubia* exposed to reused rice irrigation water. *Bulletin of Environmental Contamination and Toxicology* 96(6): 720-724.
- Reba, M.L., J.H. Massey, M.A. Adviento-Borbe, D. Leslie, M.A. Yaeger, M. Anders and J.L. Farris. 2017. Aquifer depletion in the Lower Mississippi River Basin: Challenges and solutions. *Universities Council on Water Resources Journal of Contemporary Water Research and Education* 162:128-139.
- Iseyemi, O.O., J.L. Farris, M.T. Moore, M.A. Locke and Seo-eun Choi. 2018. Phosphorus dynamics in agricultural drainage ditches: An influence of landscape properties. *Journal of Soil and Water Conservation* 73(5) 558-566.
- Iseyemi, O., M. A. A. Adviento-Borbe, L. Haas, J. L. Farris, M. L. Reba and J. H. Massey. 2018. Validation of a spectrophotometric procedure for determining nitrate in water samples. *Journal of Environmental and Toxicological Studies* 2(1): [dx.doi.org/10.16966/2576-6430.113](https://doi.org/10.16966/2576-6430.113).
- Nifong, R. L., J.M. Taylor, G. Adams, M.T. Moore and J.L. Farris. 2020. Recognizing both denitrification and consumptive processes improves whole system diel N₂ flux models in discrete reaches of agroecosystems. *Limnology and Oceanography:Methods* 18:169–182.
- Iseyemi, O., M. Reba, L. Haas, E. Leonard, E. and J.L. Farris. 2021. Water quality characteristics of tailwater recovery systems associated with agriculture production in the mid-southern US. *Agricultural Water Management* 249(2): 106775.

Published Conference Proceedings:

- Reba, M.L., Kahill, K., Czarnecki, J., Rigby, J.R., and Farris, J.L., 2015. Early findings from artificial recharge efforts of the Mississippi River Valley Alluvial Aquifer. *Proceedings of the*

- American Society of Agricultural and Biological Engineers. Paper No. 152190162. Pp 1-20.
- Gopalan, M.B., Bouldin, J.L., Farris, J.L. 2006. Use of biomonitoring at farm-scale to formulate and assess the impacts of improved cotton farming practices upon reduction of ecological risk. *Proceedings of an International Perspective on Environmental and Water Resources*, New Delhi, India. pp. 18-20.
- Moore, M.T., Cooper, C.M., Bennett, E.R., Smith, S. Jr., Shields, F.D. Jr., and Farris, J.L. 2004. Vegetated drainage ditch research in the Mississippi Delta Management Systems Evaluation Area (MDMSEA): Current results and future directions. In: *Water Quality Assessments in the Mississippi Delta: Regional Solutions and National Scope*. American Chemical Society Symposium Series No. 877. pp. 194-203.
- Moore, M.T., Pierce, J.R., and Farris, J.L. 2004. Limnological evaluation of an agricultural reservoir in northeast Arkansas. *Proceedings of the Mississippi Water Resources Conference*. (CDROM).
- Christian, A.D., J. Bouldin, N. Bickford, L. Kanieski, A. McBride, S.B. McCord, A. Sako and J.L. Farris. 2003. Winter and spring water quality of the Big Creek Watershed, Craighead County, Arkansas: Nutrients, habitat, and macro-invertebrates. *Journal of the Arkansas Academy of Science* 57, 27-36.
- Cooper C.M., M.T. Moore, E.R. Bennett, S. Smith, Jr., J.L. Farris, C.D. Milam, and F.D. Shields, Jr. 2002. Innovative uses of vegetated drainage ditches for reducing agricultural runoff. 6th International Conference on Diffuse Pollution, Amsterdam, The Netherlands (also published proceedings p. 119-126).
- Christian, A.D., W.R. Posey III, P.J. Rust, J.L. Farris, J.L. Harris and G.L. Harp. 2001. Growth curves of commercially valuable unionid bivalve (*Bivalvia: Unionidae*) in Arkansas. *Proceedings of the Arkansas Academy of Sciences* 54:41-50.
- Moore, M.T., C.M. Cooper, S. Smith, Jr., E.R. Bennett, and J.L. Farris. 2001. Drainage ditches: New conceptual BMPs for non-point source pollution and TMDL development. *Proceedings of the Seventh Federal Interagency Sedimentation Conference* pp. 65-71.
- Milam, C.D., J.L. Farris, J. Van Hassel, M.L. Barfield 2000. Reintroduction of native freshwater mussels into a recovering stream using both in vivo and in vitro propagation techniques. pp. 53-61. In: *Freshwater Mollusk Symposium Proceedings - Part I: Proceedings of the Conservation, Captive Care, and Propagation of Freshwater Mussels Symposium*, Columbus, OH, March 1998. R.A. Tankersley, D. Warmolts, G. T. Watters, and B. Armitage (eds). Ohio Biological Survey, Columbus, Ohio.
- Farris, J.L., S.D. Davis, C.D. Milam, J.L. Pierce, E.L. Winchester, and W.H. Baker. 2000. Evaluating aquatic macroinvertebrate communities receiving nonpoint runoff in the lower St. Francis River. *Proceedings of the Arkansas Water Resources Center Annual Conference: Water Resources Issues in the Arkansas Delta* MSCO:15-22.
- Baker, W.H., S.D. Carroll, M.A. Henslee and J.L. Farris. 2000. Demonstration of best management practices for the protection and improvement of the soil and water resources in the Arkansas delta. *Proceedings of the Arkansas Water Resources Center Annual Conference: Water Resources Issues in the Arkansas Delta* MSCO:1-5.
- Farris, J.L., J.T. Knight, C.D. Milam, F. Buzen and J.F. Nix. 1998. In stream monitoring of

sediments and water in the lower Ouachita River for site impact to aquatic biota. *Proceedings of the Arkansas Academy of Sciences* 52:35-45.

Milam, C.D., J.L. Farris, J.H. Van Hassel, and M.L. Barfield,. 1997. Reintroduction of native freshwater mussels into a recovering stream using both in vivo and in vitro propagation techniques. *Proceedings of the Conservation, Captive Care, and Propagation Symposium, Columbus, Ohio*.

Barfield, M.L., S.A. Clem and J. L. Farris. 1997. Comparison of acute testing methods of *Utterbackia imbecilis* (Say) with variation on age, diet and in vitro transformation method. *Proceedings of The Upper Mississippi River Conservation Committee* 2:257-264.

Moore, M.T. and J.L. Farris. 1996. Herbicide runoff and its relationship to a deltaic agricultural ecosystem. *Proceedings of the Delta Conference: Connecting Points of View for Sustainable Natural Resources*. 257-263.

Moore, M.T., C.D. Milam and J.L. Farris. 1996. Reference sediment selection in the lower Mississippi Delta. *Proceedings Arkansas Academy of Science* 50:84-90.

Farris, J. L., D. S. Cherry, W. R. Slagle and M. G. Dobbs. 1993. Suitability of Biological indices to evaluate light inhibition effects from treated pulp mill effluents. *Proceedings of the 1992 TAPPI Environmental Conference, Technical Association of Paper and Pulp Industries, Boston, Massachusetts* 1:253-259.

Bidwell, J.R., D.S. Cherry, J.L. Farris and L.A. Lyons. 1993. Comparative response of the Zebra mussel, *Dreissena polymorpha*, and the Asiatic clam, *Corbicula fluminea*, to the molluscicide CT-1. *Proceedings of the third International Zebra mussel Conference, Electric Power Research Institute, Toronto, Canada*.

Cherry, D. S., J. L. Farris, J. R. Bidwell, A. Mikailoff, R. L. Schema and J. W. McIntire. 1990. Application of a molluscicide and environmental fate and effects at the Beaver Valley Power Station, Duquesne Light Company. *Proceedings of the 1990 EPRI Macrofouling Symposium, Electric Power Research Institute, Palo Alto, California*.

Farris, J. L. and G. L. Harp. 1982. Aquatic macroinvertebrates of three acid bogs on Crowley's Ridge in Northeast Arkansas. *Proceedings Arkansas Academy of Science* 36:23-27.

Technical Reports and Documents:

Evaluation of Potential Acute Toxicity of Effluent from International Business Machines Corporation, Poughkeepsie, New York. (D. S. Cherry, S. E. Belanger and J. L. Farris). Summary reports from 1986-1990.

The Role of *Ceriodaphnia* and Fathead Minnow Short-term Chronic Tests in Wisconsin Pollutant Discharge and Elimination System Testing. (D. S. Cherry, S. E. Belanger and J. L. Farris). Wisconsin Paper Council. (1987), 63 p.

Macroinvertebrate Community Responses to Bowater Inc., Southern Division, Treated Effluent in the Hiwassee River (1987-1988). (D. S. Cherry and J. L. Farris). Bowater, Inc. 50 pp.

Acute and Chronic Toxicity Evaluation of Bowater, Inc., Southern Division, Treated Effluent, (D. S. Cherry and J. L. Farris, (1988), Bowater, Inc. 70 pp.

Ecological, Biochemical and Toxicological Procedures for Identifying and Quantifying the Extent of

- Metals in Power Plant Effluents. (D. S. Cherry, J. L. Farris and S. E. Belanger). American Electric Power Company, Columbus, Ohio (1988). 399 pp.
- Measured Effects of Lead Concentrations in the East Fork of the Greenbrier River Concerning NPDES permit #WV 0001121. (D. S. Cherry, J. L. Farris and W. H. Clements). Howes Leather Company. Summary toxicity reports from 1988-1989.
- Laboratory and Field Validations of Selected Biota to Heavy Metal Stress: A Gold Plated Data Set. (Farris, J.L., E.P. Smith, D.S. Cherry and J.Cairns, Jr.). US Section International Joint Commission, US and Canada, Washington, DC. 60 pp.
- Chronic Impairment of International Paper's Pine Bluff Mill Effluent to *Ceriodaphnia dubia* and Fathead Minnow (*Pimephales promelas*): four quarterly tests for 1988-1989. (D. S. Cherry, J. L. Farris and J. R. Lauth). International Paper Company, Memphis, Tennessee. (1990). 75 pp. each report.
- Environmental Fate and Effects Studies - Baseline, Spring and Fall Dosing Studies, Duquesne Light Company Beaver Power Station (D. S. Cherry, J. L. Farris, J. R. Bidwell, A. Mikailoff, R. L. Shema and J. W. McIntire). Duquesne Light Company, Shippingport, Pennsylvania. (1990). 116 pp.
- Dissipation of 003 Effluent and Biological Response Studies in the New River at the Hoechst Celanese Plant. (D. S. Cherry, J. L. Farris and E. P. Smith). Hoechst Celanese Corporation, Narrows, Virginia. (1991). 157 pp.
- Control of *Corbicula* by BETZ Laboratories Chemicals with Environmental Fate and Effects *Ceriodaphnia dubia* Survival and Reproductive Impairment Studies. (D. S. Cherry, J. L. Farris, J. R. Bidwell and L. A. Lyons). BETZ Laboratories, Inc., Trevose, Pennsylvania. (1991). 54 pp.
- Validation of Copper Concentrations in Laboratory Testing for Site-Specific Copper Criteria in the Clinch River. (J. L. Farris, D. S. Cherry and R. J. Neves). American electric Power Company. (1991). 60 pp.
- Acute Toxicity Testing of Copper Using Blaine Creek Water for Justification of Site-Specific Water Quality Criteria. (J. L. Farris, M. G. Dobbs and D. S. Cherry). American Electric Power Co. (1991). 45 pp.
- Chronic Toxicity Testing of Big Sandy Plant Fly Ash Pond Discharge Using U. S. EPA's 7-day *Ceriodaphnia dubia* and Fathead Minnow (*Pimephales promelas*) Tests. (J. L. Farris and D. S. Cherry). American electric Power Co. (1991). 65 pp.
- Laboratory and Field Ecotoxicological Studies at the Clinch River Plant, Virginia. (D. S. Cherry, J. L. Farris and R. J. Neves). American Electric Power Co. (1991). 228 pp.
- Chlorine Dissipation of the 003 Effluent into the Catawba River and Asiatic Clam Spawning Activity. (D. S. Cherry and J. L. Farris). Hoechst Celanese Corporation. (1991). 79 pp.
- Artificial Stream Studies and Sampling of the James River to Evaluate Color Effects from Virginia Fibre's Treated Effluent. (J. L. Farris, D. S. Cherry and M. G. Dobbs). Virginia Fiber Corporation and Virginia State Water Control Board. (1992). 169 pp.
- Effects of Contaminated Sediments from Bayou Bonfouca on Juvenile Freshwater Mussels. (J.L. Farris, S.A. Clem, M.L. Barfield, Cristi D. Milam and M.T. Moore). Roy F. Weston, Inc.

- (1995). 75 pp.
- Cellulolytic Enzyme Assay Analysis of Molluscs in the Clinch River, Virginia (J.L. Farris, R.J. Neves and D.S. Cherry). U.S. Fish and Wildlife Service (1994). 44 pp.
- Measured Effects in Juvenile Freshwater Mussels Exposed to Sediments Contaminated with #2 Diesel Fuel Oil in Fish Creek. (J.L. Farris, S.A. Clem and C.D. Milam). U.S. Fish and Wildlife Service (1994). 70 pp.
- Weldon Spring Site Remedial Action Project Ecological Characterization: Chronic Toxicological Testing from Site Water and Whole Sediment. (J. L. Farris and coworkers from the Ecotoxicology Research Facility). Ecological Specialists, Inc. (1995). 258 pp.
- Weldon Spring Site Remedial Action Project Ecological Characterization: Acute Toxicological Testing from Site Water and Whole Sediment. (J. L. Farris and coworkers from the Ecotoxicology Research Facility). Ecological Specialists, Inc. (1995). 216 pp.
- Macroinvertebrate Community Assemblages in South Indian Creek and Tributaries and Effects of Mineral Leaching from Highway Construction. (D. S. Cherry and J. L. Farris). Tennessee Department of Transportation. Ongoing summaries for quarterly monitoring of biotic and physicochemical measurements from 1990-1997.
- Quarterly Report for First, Second, and Third Quarters of 1995: Water Quality Monitoring for I-181 Construction Ernestville, TN. To the North Carolina State Line, Project #86002-1240-04. (P.R. Scheuerman, D.S. Cherry, J.L. Farris, M.G. Dobbs and J.R. Bidwell) Tennessee Department of Transportation (1995). 56 pp.
- Corbicula fluminea* responses to Partially-Treated Mine Water: Assessing Damage to Freshwater Mussels Using Surrogate Exposures. (J.L. Farris and Cristin D. Milam) American Electric Power Service Corporation. (1996). 155 pp.
- In Stream Monitoring of Sediment-Associated Impairment in the Lower Ouachita River, Arkansas. (J.L. Farris and Cristin D. Milam) Ouachita River Institute. (1996). 51 pp.
- Weldon Spring Site Remedial Action Project Ecological Characterization: Chronic Toxicological Testing from Site Water and Whole Sediment, Option Period. (J. L. Farris , C.D. Milam, M.L. Barfield, M.T. Moore and E.L. Winchester) Ecological Specialists, Inc. (1996). 264 pp.
- Weldon Spring Site Remedial Action Project Ecological Characterization: Acute Toxicological Testing from Site Water and Whole Sediment, Option Period. (J. L. Farris, C.D. Milam, M.L. Barfield, M.T. Moore and E.L. Winchester). Ecological Specialists, Inc. (1996). 220 pp.
- Assessment of Cellulase Activity and Glycogen Concentrations in *Actinonaias spp.* as Indicators of Exposure to a Coal-fine Spill in the Powell River, Virginia. (J.L. Farris, T.J. Naimo, C.D. Milam and E.M Monroe). U.S. Fish and Wildlife Service. (1997). 16 pp.
- Mississippi Delta - Environmental Research Consortium: Concept Paper. (K.J Maier, J.L. Farris, W H. Benson and K. Baer). University of Memphis. (1997). 12 pp.
- Final Report on Mideast Environmental Studies. (R. McGhee, A. Haydar, J. Farris and R. Grippo). International Programs and Services, Arkansas State University. (1997). 25 pp.
- Characterization of the Aquatic Macroinvertebrate Community and Water Chemistry of the Lower St. Francis River, Arkansas. (J.L. Farris, E.L. Winchester, C.D. Milam and S.P. Davis). US

- EPA . (1997). Ongoing compilation. (Annual summaries for 1995-1998).
- Management Alternatives to Control Mercury Accumulation in Fish. (T. Knight, C. Kuyper, J. Farris and C. Milam). Arkansas Mercury Task Force. (1997). 94 pp.
- Relating Sediment and Habitat Conditions to Historical Impacts on Resident Mussel Communities in Kentucky Lake. (J.L. Farris, C.D. Milam, C. Davidson and J. R. Pierce). Shell Exporters Association. (1997). 93 pp.
- Zebra Mussel Impacts on Freshwater Mussels in Arkansas: Use of Mammoth Spring National Fish Hatchery as a Refuium for Mussels. (J.L. Farris, C.D. Milam, J.L. Harris, and R.L. Shelton). Arkansas Game and Fish Commission. (2000). 112 pp.
- Impacts on unionid populations in the Middle Fork Holston River, VA: biomarker responses measured in *Lexingtonia lolabelloides* following a mussel die-off. (J.L. Farris, C.D. Milam, T.J. Newton and E.M. Monroe). U.S. Fish and Wildlife Services (2000). 251 pp.
- Development of a Geographic Information System (GIS) Database for native Arkansas Mussels (NB09) (J.L. Farris, C.D. Milam and J.L. Harris). Arkansas Game and Fish Commission (2001). 125 pp.
- Evaluation of streams that receive treated effluents from City Water and Light's East & West municipal Treatment facilities. (J.L. Farris, C.D. Milam and L.L. Harding). City Water and Light, Inc. (2001). 76 pp.
- Instream Community Assessment of Aquaculture Effluents. (W.W. Stephens and J.L. Farris). Arkansas Farm Bureau Federation and the Arkansas Catfish Promotion Board (2002). 25 pp.
- Measured responses of the Asian clam (*Corbicula fluminea*) to runoff associated with urbanization: a multifaceted biomonitoring approach in a watershed assessment of northwest Arkansas. (Bouldin, J.L., J.L. Farris and C.M. Milam). City of Rogers Urban Watershed Management Plan. (2002). 45 pp .
- Mussel and Water Conditions on Robinson Maneuver Training Center, Arkansas. 2003. (J.L. Farris, .L. Bouldin and W.W. Stephens). Military Department of Arkansas, North Little Rock, AR. (2003). 223 pp.
- Fort Chaffee Maneuver Training Center Scaleshell Mussel Survey. 2003. (J.L. Farris, J.L. Bouldin and W.W. Stephens). Military Department of Arkansas, Fort Smith, AR. 166 pp.
- Species limits and phylogeography of Lampsilinae (Bivalvia: Unionoida) in Arkansas with emphasis on species of *Lampsilis*. (Harris, J.L., W.R. Hoeh, A. D. Christian, R.D. Johnson, J.L. Farris, and M.E. Gordon) 2004. Arkansas Game and Fish Commission and the U.S. Fish and Wildlife Service. 89 pp.
- Reproductive biology and habitat characterization of the federally endangered freshwater mussel, *Arkansia wheeleri* in the Little and Ouachita rivers, Arkansas, Agreement No: 1448-40181-01-G-105. 2003. (J.L. Farris, J.H. Seagraves, and J.L. Harris. 105 pp.
- Fate and effect of the aquaculture therapeutant potassium permanganate. Final performance report to the US Department of the Interior, Fish and Wildlife Service, Sport Fisheries Restoration Program. (R.S. Grippo, Farris, J.L. and M.S. Hobbs). 2006. 8 pp.
- Life history and population biology of the federally threatened Arkansas fatmucket (*Lampsilis*

- powellii* (I. Lea 1852)) and the state special concern Ouachita Creekshell, (*Villosa arkansasensis* (I Lea 1862)), Hot Springs, Arkansas, USDA Forest Service, Ouachita National Forest. (A.D. Christian, J.L. Farris and J.L. Harris). 2006. 84 pp.
- Life history and population biology of the state special concern Ouachita Creekshell, *Villosa arkansasensis* (I Lea 1862). (A.D. Christian, A.D., J.L. Farris and J.L. Harris). 2006. Arkansas Game and Fish Commission, Perrytown, Arkansas. 66 pp.
- Bivalve bioaccumulation correlation analysis, Cannelton Industries superfund site, Tannery Bay, Sault Ste Marie, Mi. Prepared for National Oceanic and Atmospheric Administration Coastal Protection and Restoration Division, Chicago, IL. Ridolphi Inc., Kern Statistical Services, Inc., and Arkansas State University. (J.L. Farris). 2006. 93 pp.
- Status of *Epioblasma florentina curtisii* (Frierson and Utterback 1916), Curtis Pearlymussel, in Arkansas. (J.L. Harris, J. L. Farris, and A. D. Christian). 2007. Report prepared for U.S. Fish and Wildlife Service, Columbia, MO. 37 p. + appendices.
- Characterization of agricultural runoff for nutrient reduction associated with ProAgritm treatment of poultry litter added to soils. (S. Green and J.L. Farris). 2009. Report prepared for Arkansas Natural Resources Commission. 6 pp.
- Delta Center for agricultural water use. (J.L. Farris, S. Green, J. Bouldin, G. Phillips, M.T. Moore, R. Kroger and R. Pezeshki). 2010. Report for Star #EM-83296801, US EPA STAR-L1. 25 pp.
- Drainage canal vegetation management plan for the City of Jonesboro, AR. (R. Kroger, J.L. Farris and M.T. Moore). 2010. Report for City of Jonesboro, AR. 59 pp.
- Characterization of Sedimentation and Its Impacts at Big Lake National Wildlife Refuge, Manila, AR. (J.L. Farris, M.L. Reba and G. Payne). 2016. Report for USFW Service National Wildlife Refuge System. 45 pp.
- Understanding the influence of tailwater recovery systems upon water quality associated with row crop agriculture production. (J.L. Farris, E. Leonard, L. Haas and M.L. Reba). 2016. Final report prepared for USDA-NRCS. 139 pp.

PUBLISHED ABSTRACTS AND PRESENTATIONS:

- Farris, J. L. and B. L. Kimmel. 1980. Double isotropic labelling applied to the detection of autotrophic and microheterotrophic responses to nutrient enrichment. Annual Meeting of the Great Plains Limnology Society Meeting, Fayetteville, Arkansas.
- Farris, J. L. and G. L. Harp. 1982. Aquatic macroinvertebrates of three acid bogs on Crowley's Ridge in Northeast Arkansas. Annual Meeting of the North American Benthological Society, Ann Arbor, Michigan.
- Farris, J. L. F. G. Doherty, and D. S. Cherry. 1984. Use of an improved artificial stream system for testing the control of Asiatic clams (*Corbicula fluminea*) with chlorine. Annual Meeting of the Society of Environmental Toxicology and Chemistry, Arlington, Virginia.
- Belanger, S. E., J. L. Farris, D. S. Cherry and J. Cairns, Jr. 1985. Response of *Corbicula fluminea* to low levels of zinc in artificial stream systems. Annual Meeting of the Society of Environmental Toxicology and Chemistry, St. Louis, Missouri.

- Farris, J. L., D. S. Cherry, J. H. Van Hassel, and J. Cairns, Jr. 1986. Application of cellulolytic activity of *Corbicula* sp. to in-stream monitoring of power plant effluents. Annual Meeting of the Society of Environmental Toxicology and Chemistry, Alexandria, Virginia.
- Cherry, D. S., J. H. Van Hassel, J. L. Farris, S. E. Belanger, W. L. Specht and J. Cairns, Jr. 1986. Site specific evaluation of zinc and cadmium criteria using an integrated field/laboratory approach. Annual Meeting of the Society of Environmental Toxicology and Chemistry, Alexandria, Virginia.
- Belanger, S. E., D. S. Cherry and J. L. Farris. 1986. Acute bioassay protocols for fish exposed to oxygen demanding effluents. Annual Meeting of the Society of Environmental Toxicology and Chemistry, Alexandria, Virginia.
- Belanger, S. E., J. L. Farris and D. S. Cherry. 1987. Effects of diet, water hardness, and population source on copper toxicity to *Ceriodaphnia*. Eighth Annual Meeting, Society of Environmental Toxicology and Chemistry, Pensacola, Florida.
- Farris, J. L., R. B. Genter, F. S. Colwell, S. E. Belanger, D. S. Cherry and J. Cairns, Jr. 1987. Structural-functional artificial stream responses of microbial-periphyton communities and clam-snail populations to zinc. Eighth Annual Meeting, Society of Environmental Toxicology and Chemistry, Pensacola, Florida.
- Farris, J. L. S. E. Belanger, D. S. Cherry and J. Cairns, Jr. 1987. Laboratory-field validation of growth and cellulase impairment to copper toxicity of Asiatic clams. Eighth Annual Meeting, Society of Environmental Toxicology and Chemistry, Pensacola, Florida.
- Belanger, S. E., J. L. Farris and D. S. Cherry. 1987. Comparisons of the 7-day *Ceriodaphnia* reproductivity test with the 30-day *Corbicula* cellulase/growth test. Eighth Annual Meeting, Society of Environmental Toxicology and Chemistry, Pensacola, Florida.
- Belanger, S. E., J. L. Farris and D. S. Cherry. 1987. Refinement and validation of the *Ceriodaphnia* reproductive test using copper. Poster Session presented at the Annual Meeting of the Society of Environmental Toxicology and Chemistry, Pensacola, Florida. November, 1987.
- Farris, J. L., D. S. Cherry and J. Cairns, Jr. 1987. Molluscan cellulolytic activity associated with long term metal exposure. Annual Meeting of the North American Benthological Society, Orono, Maine.
- Belanger, S. E., J. L. Farris, D. S. Cherry and J. Cairns, Jr. 1987. Validation of *Corbicula* growth during heavy metal exposure in natural and artificial streams. Annual Meeting of the North American Benthological Society, Orono, Maine.
- Farris, J. L., J. H. Van Hassel and D. S. Cherry. 1988. Comparisons of mollusc in-stream monitoring with impairment testing and benthic surveys. Annual Meeting of the North American Benthological Society, Guelph, Canada.
- Farris, J. L. and D. S. Cherry. 1988. Comparative metal toxicity in six species of freshwater mussel glochidia. Ninth Annual Meeting, Society of Environmental Toxicology and Chemistry, Arlington, Virginia.
- Belanger, S. E., J. L. Farris and D. S. Cherry. 1988. Acute and chronic toxicity of pH and pH-metal mixtures to *Ceriodaphnia dubia*. Ninth Annual Meeting, Society of Environmental

Toxicology and Chemistry, Arlington, Virginia.

- Bidwell, J. R., J. L. Farris, D. S. Cherry, J. Cairns, Jr., and L. A. Lyons. 1989. A 10-day growth test using artificial substrate with the midge, *Chironomus riparius*. Thirty-eighth Annual Meeting Abstracts, North American Benthological Society, Blacksburg, Virginia.
- Reed, D. K., J. L. Farris, D. S. Cherry and J. Cairns, Jr. 1989. A comparison of habitat preferences between the snails, *Leptoxis praerosa* and *Pleurocera uncialis*, in the Clinch River, Virginia. North American Benthological Society meeting, Blacksburg, Virginia.
- Bidwell, J. R., J. L. Farris, D. S. cherry. 1990. Use of introduced bivalves as biological indicators of pollution. Annual Meeting of the American Society of Limnology and Oceanography, Williamsburg, Virginia.
- Jacobsen, P. J., J. L. Farris, R. J. Neves and D. S. Cherry. 1989. Comparisons of sensitivity among early life stages of freshwater mussels exposed to copper. Tenth Annual Meeting, Society of Environmental Toxicology and Chemistry, Toronto, Canada.
- Bidwell, J. R., D. S. Cherry, J. L. Farris and J. Cairns, Jr. 1989. Use of selected freshwater invertebrates to evaluate the molluscicide Clam-trol and its detoxification potential. Tenth Annual Meeting, Society of Environmental Toxicology and Chemistry.
- Reed, D. K., J. L. Farris, D. S. Cherry and J. Cairns, Jr. 1989. Acute toxicity, chronic impairment and recovery of the snail, *Leptoxis praerosa*, from copper-dominated effluent exposures. Tenth Annual Meeting, Society of Environmental Toxicology and Chemistry.
- Cherry, D. S., S. E. Belanger, J. L. Farris, K. G. Sappington and J. Cairns, Jr. 1989. Sensitivity of the Asiatic clam (*Corbicula fluminea*) to various biocidal control agents. Tenth Annual Meeting, Society of Environmental Toxicology and Chemistry.
- Farris, J. L., J. H. Van Hassel and D. S. Cherry. 1989. Incorporating bivalve testing for a field derived site specific criterion. Tenth Annual Meeting, Society of Environmental Toxicology and Chemistry.
- Reed, D. K., J. L. Farris, D. S. Cherry and J. Cairns, Jr. 1990. Functional responses in *Leptoxis praerosa* from long-term (114-D) exposures to ambient Cu and Zn water quality criteria concentrations. Eleventh Annual Meeting, Society of Environmental Toxicology and Chemistry, Arlington, Virginia.
- Belanger, S. E. H. D. Davidson, D. L. Reed, J. L. Farris and D. S. Cherry. 1990. The growth response of Asiatic clams as an indicator of surfactant exposure in stream mesocosms. Presented at the Eleventh Annual Meeting of the Society of Environmental Toxicology and Chemistry, Arlington, Virginia.
- Cherry, D. S., J. L. Farris, J. R. Bidwell, A. Mikailoff, R. L. Schema and J. W. McIntire. 1990. Application of a molluscicide and environmental fate and effects at the Beaver Valley Power Station, Duquesne Light Company, Proceedings of the 1990 EPRI Macrofouling Symposium. Electric Power Research Institute, Palo Alto, CA.
- Bidwell, J.R., J.L. Farris and D.S. Cherry. 1990. Use of introduced bivalves as biological indicators of pollution. Annual Meeting of the American Society of Limnology and Oceanography, Williamsburg, Virginia.
- Cherry, D. S., J. L. Farris, S. E. Belanger, J. H. Van Hassel and J. Cairns, Jr. 1990.

- Ecotoxicological evaluations of macroinvertebrates subjected to metal influenced cooling tower effluent in the Clinch River, Virginia. Presented at the International Conference on Metals in Soils, Water, Plants and Animals. Orlando, Florida.
- Berg, D. J., W. R. Haag, D. W. Garton and J. L. Farris. 1991. Encrustation by *Dreissena polymorpha* may alter composition of western Lake Erie unionid communities. American Society of Limnology and Oceanography, Halifax, Nova Scotia.
- Farris, J. L. and D. S. Cherry. 1991. Integration of contaminants testing and field monitoring: an approach toward weighted evidence data. American Fisheries Society Regional Meeting. Big Meadows National Park, Virginia.
- Reash, R. J., J. L. Farris and M. G. Dobbs. 1991. Derivation of site-specific copper and selenium criteria in a Kentucky stream receiving fly ash discharge. Ohio River Consortium, Columbus, Ohio.
- Farris, J. L., J. H. Van Hassel and D. S. Cherry. 1991. Refinement of site specific copper criteria for the protection of mussel populations. Twelfth Annual Meeting, Society of Toxicology and Chemistry, Seattle, Washington.
- Bidwell, J. R., D. S. Cherry, J. L. Farris and L. A. Lyons. 1991. Short-term fate of a surfactant based molluscicide and its effect upon a sediment dwelling organism. Twelfth Annual Meeting, Society of Toxicology and Chemistry, Seattle, Washington.
- Bidwell, J.R., J.L. Farris, D.S. Cherry and H.E. Kitchell. 1991. Guidelines for laboratory handling and manipulation of the Zebra mussel. Annual Meeting of the Virginia Academy of Science, Harrisonburg, Virginia.
- Rifici, L. M., J. L. Farris, D. S. Cherry and J. Cairns, Jr. 1991. Acute and subchronic toxicity of the aquatic fungicide, methylene blue, to larval fathead minnows (*Pimephales promelas*). Twelfth Annual Meeting, Society of Toxicology and Chemistry, Seattle, Washington.
- Reed, D. K., J. L. Farris, D. S. Cherry and J. Cairns, Jr. 1991. Effects of adhered and water borne metals on cellulolytic activity impairment in the snail, *Leptoxis praerosa*. Twelfth Annual Meeting, Society of Toxicology and Chemistry, Seattle, Washington.
- Dobbs, M. G., J. L. Farris and D. S. Cherry. 1991. Acute toxicity testing of copper using site water for derivation of a site-specific water quality criterion. Twelfth Annual Meeting, Society of Toxicology and Chemistry, Seattle, Washington.
- Bidwell, J.R., D.S. Cherry, J.L. Farris, and L.A. Lyons. 1992. Biochemical response of the Asiatic clam, *Corbicula fluminea*, and the Zebra mussel, *Dreissena polymorpha*, to a surfactant based molluscicide, Society of Environmental Toxicology and Chemistry annual meeting. Cincinnati, Ohio.
- Cherry, D.S., J.L. Farris, J.R. Bidwell, A. Mikailoff, M.M. Yeager, S.R. Lynde, R.L. Shema, and J.W. McIntire. 1992. Environmental effects of molluscicide application for *Corbicula* control in a nuclear power plant: A two-year study, Society of Environmental Toxicology and Chemistry annual meeting. Cincinnati, Ohio.
- Farris, J.L., D.S. Cherry, S.E. Belanger, W.H. Clements, D.K. Reed, and J.H. Van Hassel. 1992. Versatility of artificial stream systems to evaluate industrial effluents: A decade of application in ecotoxicology, Society of Environmental Toxicology and Chemistry annual meeting. Cincinnati, Ohio.

- Van Hassel, J.H., J.L. Farris, and D.S. Cherry. 1992. Differences on community-level responses: to a point source discharge. Society of Environmental Toxicology and Chemistry annual meeting, Cincinnati, Ohio.
- Berg, D.J., W.R. Haag, D.W. Garton, and J.L. Farris. 1992. Responses of native unionids to encrustation by Zebra Mussels, Upper Mississippi River Conservation Committee Meeting, St. Louis, Missouri.
- Farris, J.L., J.H. Van Hassel, and D.S. Cherry. 1992. Adopted site-specific copper criteria to provide protection of freshwater mussels in the Clinch River, Virginia, Upper Mississippi River Conservation Committee Meeting, St. Louis, Missouri.
- Fisher, J.C., J.L. Farris, R.J. Neves, and D.S. Cherry. 1992. An examination of growth rates of three freshwater mussel species in the Clinch River, Virginia to Tennessee, Upper Mississippi River Conservation Committee Meeting, St. Louis, Missouri.
- Church, G. W., D. S. Cherry, J. L. Farris and R. J. Neves. 1992. Geomorphological and lithological factors structuring mussel habitat in the Clinch River, Virginia. Fourth Annual Meeting, North American Benthological meeting, Louisville, Kentucky.
- Church, G.W., D.S. Cherry, J.L. Farris and R.J. Neves. 1992. Habitat characterization and assessment of mussel community health in the Clinch River, Virginia, Society of Environmental Toxicology and Chemistry annual meeting, Cincinnati, Ohio.
- Bidwell, J.R., D.S. Cherry and J.L. Farris. 1992. Comparative response of the Asiatic clam, *Corbicula fluminea* and the Zebra mussel, *Dreissena polymorpha* to osmoregulatory stress, Annual Meeting of the Virginia Academy of Science, Blacksburg, Virginia.
- Miller, M. P., G. W. Church, D. S. Cherry, J. L. Farris and R. J. Neves. 1992. Characterization of bivalve habitat in the Little River, Virginia using an areal sediment sampling technique. North American Benthological Society meeting, Louisville, Kentucky.
- Farris, J. L., D. S. Cherry, W. R. Slagle and M. G. Dobbs. 1993. Suitability of Biological indices to evaluate light inhibition effects from treated pulp mill effluents, Technical Association of Paper and Pulp Industries' Environmental Conference, Boston, Massachusetts.
- Cherry, D.S., J.L. Farris, M.G. Dobbs, J.R. Bidwell, and E.P. Smith. 1993. Laboratory and in-situ studies evaluating the potential toxicity of a chemical-sanitary waste treatment effluent in the New River, Virginia, Society of Environmental Toxicology and Chemistry annual meeting. Houston, Texas.
- Bidwell, J.R., D.S. Cherry, J.L. Farris, L.A. Lyons and J.C. Petrille. 1993. Efficacy of intermittent halogen treatments for control of the zebra mussel, *Dreissena polymorpha*, Society of Environmental Toxicology and Chemistry annual meeting. Houston, Texas.
- Reed, D.K., J.L. Farris, D.S. Cherry and J. Cairns, Jr. 1993. Bioassessment in monitoring recovery of snail populations after reduction of receiving-stream copper concentration, Society of Environmental Toxicology and Chemistry annual meeting. Houston, Texas.
- Fischer, J.C., R.J. Neves, D.S. Cherry and J.L. Farris. 1993. Growth rates and age-class structure of freshwater mussels as an indication of population stability in the Clinch River, Virginia to Tennessee, Society of Environmental Toxicology and Chemistry annual meeting. Houston, Texas.

- Farris, J. L., Steve O. Rice, Kenneth R. Seeley, and Steven Zylstra. 1994. Bioassessment studies of the Upper Tennessee River Basin Initiative in relation to declining mussel populations, Society of Environmental Toxicology and Chemistry annual meeting, Denver, Colorado.
- Hunt, L. C. and J. L. Farris. 1994. Ecotoxicology and risk assessment of the wood frog (*Rana sylvatica*) in the Ozark Mountains of Arkansas: Effects of nonpoint runoff, Society of Environmental Toxicology and Chemistry annual meeting, Denver, Colorado.
- Farris, J. L. 1994. Criteria modification involving sediment criteria, Water Regulations Update Seminar, The Arkansas Environmental Federation annual meeting. Little Rock, Arkansas.
- Farris, J. L., K. R. Seeley and S. O. Rice. 1994. Influence of sediment metals partitioning on toxicity test results and in-situ bivalve monitoring, North American Benthological Society Annual meeting. Orlando, Florida.
- Wilhide, J.D, C.D. Milam, J.L. Farris and L.A. Olson. 1994. Effect of pesticides for mosquito control on target and non-target organisms, The American Mosquito Control Association annual meeting, San Diego, California.
- Milam, C.D., J.L. Farris, J.D. Wilhide and L.A. Olson. 1994. Laboratory and field comparisons of mosquito control applications using biomonitoring on non-target organisms, The Arkansas Academy of Science annual meeting, Jonesboro, Arkansas.
- Milam, C.D., J.L. Farris and J. VanHassel. 1995. Effects of partially treated mine water on resident freshwater mussels of the Ohio River Basin, North American Benthological Society annual Meeting, Denver, Colorado.
- Milam, Cristin, D., J.L. Farris, and J.H. Van Hassel. 1995. Relating threshold responses of *Corbicula fluminea* to assess damage in resident mussel populations of the Ohio River Basin, Society of Environmental Toxicology and Chemistry Second World Congress Meeting, Vancouver, British Columbia, Canada.
- Van Hassel, J.H., D.S. Cherry, M.M. Yeager and J.L. Farris. 1995. Water and sediment quality factors affecting unionid mussel populations in the Clinch River, Virginia, USA, Society of Environmental Toxicology and Chemistry Second World Congress Meeting, Vancouver, British Columbia, Canada.
- Barfield, Margaret L., S.A. Clem, and J.L. Farris. 1995. Comparison of juvenile mussel acute testing methods with variation on artificial transformation media, age, and diet, Upper Mississippi River Conservation Committee Conservation and Management Meeting, St. Louis, Missouri.
- Clem, Sarah A., M.L. Barfield, and J.L. Farris. 1995. Responses of *Utterbackia imbecillis* early lifestages to copper (transformation method comparisons), Upper Mississippi River Conservation Committee, Conservation and Management Meeting, St. Louis, Missouri.
- Van Hassel, John H., D.S. Cherry, M.M. Yeager, and J.L. Farris. 1995. Discrimination of environmental factors affecting unionid mussel distribution in the Clinch River, Virginia, Upper Mississippi River Conservation Committee Conservation and Management Meeting, St. Louis, Missouri.
- Clem, Sarah A., J.L. Farris, and P. Jacobson. 1995. Relative sensitivities for glochidia of

- freshwater mussels to specific metals, North American Benthological Society annual meeting, Denver, Colorado.
- Moore, M.T. and J.L. Farris. 1996. Herbicide runoff and its relationship to a deltaic agricultural ecosystem, Delta Conference, Memphis, Tennessee, and Society of Environmental Toxicology and Chemistry Annual Meeting, Washington, D.C.
- Winchester, E.L., M.T. Moore and J.L. Farris. 1996. The acute toxicity and developmental effects of propanil ((3',4' -dichloropropionanilide (DCPA)) to *Xenopus laevis* and *Rana phenocephala*, Society of Environmental Toxicology and Chemistry Annual Meeting, Washington, D.C.
- Beall, A.A. and J.L. Farris. 1996. Quality and function of Deltaic agriecosystems: Comparisons of human perception and bioassessment, Society of Environmental Toxicology and Chemistry Annual Meeting, Washington, D.C.
- Barfield, M.L., C.D. Milam and J.L. Farris. 1996. Comparison of response using two biomarkers on freshwater molluscs exposed to cadmium, Society of Environmental Toxicology and Chemistry Annual Meeting, Washington, D.C.
- Farris, J.L., C.D. Milam, E.L. Winchester, M.R. Barfield and M.T. Moore. 1996. An ecological-use survey of the Arkansas Delta, National Archives Symposium on the Mississippi River and Her People, Memphis, Tennessee.
- Farris, J.L., C.D. Milam and M. L. Barfield. 1996. Development of metrics for monitoring instream unionid condition, Arkansas Water Resources Research Conference, Fayetteville, Arkansas.
- Barfield, M.L., J.L. Farris and M.L. Black. 1997. Suborganismal responses of metal accumulation, cellulolytic activity and DNA double strand breakage in freshwater bivalves. Biomarker Symposium, American Society of Testing Materials, Atlanta, Georgia.
- Pierce, J.R. and J.L. Farris. 1997. The limnological analysis of an irrigation reservoir in Poinsett County, Arkansas, American Water Resources Association Conference, Long Beach, California.
- Christian, A.D., W.R. Posey II, P.J. Rust., J.L. Farris, J.L. Harris, and G.L. Harp. 1997. Growth curves of three species of commercially harvested freshwater bivalves (Unionidae) in Arkansas. 45th Annual Meeting of the North American Benthological Society, San Marcos, TX.
- Grippo, R.S. and J.L. Farris. 1997. Environmental concerns in Western Asia: Suggestions for the future role of SETAC in Pakistan and India, Society of Environmental Toxicology and Chemistry Annual Meeting, San Francisco, California.
- Knight, J.T., C. Kuyper, J.L. Farris and C.D. Milam. 1997. Management alternatives for mercury remediation, Society of Environmental Toxicology and Chemistry Annual Meeting, San Francisco, California.
- Farris, J.L., C.D. Milam, J. VanHassel, D.S. Cherry. 1997. Repeated biomonitoring for mussel and clam condition during a decade in the Clinch River, Virginia, Society of Environmental Toxicology and Chemistry Annual Meeting, San Francisco, California.
- Pierce, J.R., E.L. Winchester, M.T. Moore, C.D. Milam and J.L. Farris. 1997. Augmenting toxicity point estimates for propanil by establishing exposure-response curves, Society of Environmental Toxicology and Chemistry Annual Meeting, San Francisco, California.

- Milam, C.D., J.L. Farris, C. Davidson and J. R. Pierce. 1997. Relating sediment and physiological conditions to historical impacts on resident mussel communities in Kentucky Lake, Society of Environmental Toxicology and Chemistry Annual Meeting, San Francisco, California.
- Winchester, E.L., J.L. Farris, A.A. Grippo and R.S. Grippo. 1997. Effects of aldicarb on cholinesterase activity of two freshwater mollusks, Society of Environmental Toxicology and Chemistry Annual Meeting, San Francisco, California.
- Maier, K. J., J. W. Grubaugh, K. H. Baer, D. Schlenk, J. L. Farris and W. H. Benson. 1998. Lower Mississippi River / Delta Environmental Research Consortium: The Concept and Progress. Mississippi River Research Consortium Meeting, La Crosse, WI.
- Maier, K. J., J. W. Grubaugh, K. H. Baer, D. Schlenk, J. L. Farris and W. H. Benson. 1998. Lower Mississippi River / Delta Environmental Research Consortium: The Concept and Progress. Lower Mississippi River Conservation Committee Meeting, Memphis, TN.
- Milam, C.D., J.L. Farris, J.F. Dwyer, and D.K. Hardesty. 1998. Comparison of Acute Toxicity Responses of glochidia (Unionidae) to six chemicals, Society of Environmental Toxicology and Chemistry Annual Meeting, Charlotte, N.C.
- Farris, J.L., C.D. Milam and J.L. Harris. 1998. Relocation and subsequent evaluation of condition for adult mussel populations relocated to hatchery refugia, Conservation, Captive Care, and Propagation Symposium, Columbus, Ohio.
- Milam, C.D., J.L. Farris, M.L. Barfield, J.H. Van Hassel and L.A. Yocum. 1998. Reintroduction of native freshwater mussels into a recovering stream using both in vivo and in vitro propagation techniques. Conservation, Captive Care, and Propagation Symposium, Columbus, Ohio.
- Milam, C.D., J.L. Farris, J.T. Knight, F. Buzen and J.F. Nix. 1998. In stream monitoring of sediments and water in the lower Ouachita river for site impact to aquatic biota. Arkansas Academy of Sciences Meeting, Little Rock, Arkansas.
- Hayes, W.A., J.R. Pierce, J.L. Farris and A.A. Grippo. 1998. Vitellogenin purification from the Slider turtle, *Trachemys scripta*. Arkansas Academy of Sciences Meeting, Little Rock, Arkansas.
- Scheuerman, P.R., J.L. Farris, D.S. Cherry, R.J. Currie, C.D. Milam, J.D. Napier. 1999. Roadway construction effects on South Indian Creek and tributaries, Erwin, TN to the North Carolina border. Society of Environmental Toxicology and Chemistry Annual Meeting, Philadelphia, PA.
- Bennett, E.R., M.T. Moore, S. Smith, Jr., C.M. Cooper, F.D. Shields, Jr., J.L. Farris, C.D. Milam. 1999. Pesticide fate in agricultural drainage ditches: a case study of mitigation. Society of Environmental Toxicology and Chemistry Annual Meeting, Philadelphia, PA.
- Farris J.L., C.D. Milam, E.R. Bennett, M.T. Moore, S. Smith, Jr., C.M. Cooper, F.D. Shields, Jr. 1999. Evaluating toxicity of atrazine and I-cyhalothrin amendments to agricultural ditch mesocosms. Society of Environmental Toxicology and Chemistry Annual Meeting, Philadelphia, PA.
- McNeely, V.M., R.S. Grippo, J.L. Farris. 1999. Unexpected increase in *Ceriodaphnia dubia* fecundity after exposure to reclaimed rice irrigation water. Society of Environmental

- Toxicology and Chemistry Annual Meeting, Philadelphia, PA.
- M.T. Moore, E.R. Bennett, S. Smith, Jr., C.M. Cooper, F.D. Shields, Jr., C.D. Milam and J.L. Farris. 1999. Transport and fate of atrazine and I-cyhalothrin in agricultural drainage ditches: a case study of mitigation. Arkansas Soil and Water Education Conference, Jonesboro, AR.
- Farris J.L, C.D. Milam, E.R. Bennett, M.T. Moore, S. Smith, Jr., C.M. Cooper, F.D. Shields, Jr. 1999. Evaluating toxicity of atrazine and I-cyhalothrin amendments to agricultural ditch mesocosms. Arkansas Soil and Water Education Conference, Jonesboro, AR.
- Dunn, H.L. R. Villella, J. Farris, C. Gatenby and D. Waller. 1999. Guidelines and techniques for freshwater unionids. Symposium of the Freshwater Mollusk Conservation Society, Chattanooga, TN.
- Cope, W.G. and J.L. Farris. 1999. Conceptual framework for assessing the effects of contaminants on unionid mussels. Guidelines and techniques for freshwater unionids. Symposium of the Freshwater Mollusk Conservation Society, Chattanooga, TN.
- Naimo, T.J., W.G. Cope, E.M. Monroe, J.L. Farris and C.D. Milam. 1999. The effects of diet and Holding time on survival and condition of fingernail clams *Musculium transversum*. Guidelines and techniques for freshwater unionids. Symposium of the Freshwater Mollusk Conservation Society, Chattanooga, TN.
- Harris, J.L., A.D. Christian, J.L. Farris and C.D. Milam. 1999. Restoration of freshwater mussel communities in riverine ecosystems of the Southeastern United States. Southern Bottomland Hardwoods Conference, Memphis, TN.
- Farris, J.L., C.D. Milam, T.J. Newton, E.M. Monroe, J.D. Maul, and T.L. Chapman. 2000. Impacts on unionid populations in the Middlefork Holston River: biomarker responses following a mussel die-off. Society of Environmental Toxicology and Chemistry 21st Annual Meeting, Nashville, TN.
- Milam, C.D., J.L. Farris, M. Moore, S. Smith, Jr., and C. Cooper. 2000. Understanding the structure and function of drainage ditches in Northeast Arkansas. Arkansas Soil and Water Education Conference, Jonesboro, Arkansas.
- Cooper, C.M., M.T. Moore, E.R. Bennett, S. Smith, Jr., and J.L. Farris. 2000. Alternative environmental benefits of agricultural drainage ditches. SIL Conference, Australia.
- Maier, K.J., J.W. Grubaugh, L. Gipson, S.T. Nawrocki, C.D. Milam, and J.L. Farris. 2000. Assessment of the biotic integrity and ambient toxicity of McKellar Lake, 1973-1999. Society of Environmental Toxicology and Chemistry Annual Meeting, Nashville, TN.
- Moore, M.T., C.M. Cooper, R.R. Bennett, S. Smith, Jr., and J.L. Farris. 2000. Reinventing the ditch: Using drainage channels for agricultural runoff remediation. Society of Environmental Toxicology and Chemistry Annual Meeting, Nashville, TN.
- Stephens, W.W. and J.L. Farris. 2000. Biomonitoring effluent impacts of nutrient loading from aquaculture. 21st Annual Meeting of the Society of Environmental Toxicology and Chemistry. Nashville, Tennessee.
- Davis, S. and J.L. Farris. 2000. The Globe Program^R: A teaching strategy for environmental education. 21st Annual Meeting of the Society of Environmental Toxicology and Chemistry. Nashville, Tennessee.

- Maul, J. D., M. T. Moore, J. L. Farris and C. M. Cooper. 2000. Water Quality Regulations Affecting Agricultural Production Practices in the 21st Century: TMDLs. Arkansas Crop Management Conference 2000, Little Rock, AR.
- Farris, J.L., C.M. Cooper, M.T. Moore, and D.L. Feldman. 2000. Attributes of ditch ecosystems as constricted remnant wetlands. Sustainability of Wetlands and Water Resources Conference. Oxford, MS.
- Feldman, D.L., J.L. Farris, M.T. Moore and C.M. Cooper. 2000. Characterization of macroinvertebrate communities and the conditions that define agricultural drainage ditches. North American Benthological Society Annual Meeting, Denver, CO.
- Ash, T.V., D.L. Feldman and J.L. Farris. 2000. Assessing river impact in an intact priority watershed designated for restoration. North American Benthological Society Annual Meeting, Denver, CO.
- Maul, J.D. and J.L. Farris. 2001. Examination of plasma Cholinesterase inhibition in the Northern Cardinal, *Cardinalis cardinalis*, in the agricultural landscape of northeast Arkansas. Society of Environmental Toxicology and Chemistry 22nd Annual Meeting, Baltimore, MD.
- Stephens, W.W. and J.L. Farris. 2001. Biomonitoring of Effluent and Nutrient Contributions From Aquaculture. 70th Annual Meeting of the Arkansas Water Works & Water Environment Association. Hot Springs, Arkansas.
- Bouldin, J.L., C.D. Milam, J.L. Farris, M.T. Moore, S.Smith, Jr., C.M. Cooper, 2001. Effects of esfenvalerate on aquatic and sediment dwelling organisms in agricultural ditch mesocosms. 22nd Annual Meeting of Society of Environmental Toxicology and Chemistry. Baltimore, Maryland.
- Bouldin, J.L., C.D. Milam, J.L. Farris, M.T. Moore, S.Smith, Jr., C.M. Cooper. 2001. Function of agricultural ditches in minimizing non-point pollution. Arkansas Water Works & Water Environment Association, Hot Springs, AR.
- Stephens, W.W. and J.L. Farris. 2001. Legitimizing biomonitoring for measuring impairments in aquaculture discharges. MidSouth Regional Society of Environmental Toxicology and Chemistry. Arkansas State University. Jonesboro, Arkansas.
- Feldman, D.L., J.L. Farris, C.D. Milam, M.T. Moore, S.J. Smith, and C.M. Cooper. 2001. Seasonal variation of biotic and abiotic factors that characterize agricultural drainage ditches. North American Benthological Society annual meeting, LaCrosse WI.
- Milam, C.D., J.L. Bouldin, R. Schulz, J.L. Farris, M.T. Moore, E. Bennett, C.M. Cooper, and S.J. Smith. 2001. Evaluating toxicity of methyl parathion application in constructed wetland mesocosms. North American Benthological Society annual meeting, LaCrosse WI.
- Winterringer, R., J. L. Farris, J.L. Harris, and C.D. Milam. 2001. Correlation of habitat characteristics to indicate mussel bed occurrence in the Middle Fork Little Red River, Arkansas. North American Benthological Society annual meeting, LaCrosse WI.
- Stephens, W.W. and J.L. Farris. 2001. Bioassessment in Consideration of TMDLs. Union County Emergency Planning Committee. El Dorado, Arkansas.
- Stephens, W.W. and J.L. Farris. 2001. Characterization of Channel Catfish Fingerling Effluents

- with Biomonitoring. 22nd Annual Meeting of Society of Environmental Toxicology and Chemistry. Baltimore, Maryland.
- Stephens, W.W., J.L. Farris, and P.A. Stewart. 2001. Legitimizing the Biomonitoring Approach to Aquaculture Effluent Characterization. 22nd Annual Meeting of Society of Environmental Toxicology and Chemistry. Baltimore, Maryland.
- Moore, M.T., C.M. Cooper, E.R. Bennett, S. Smith, Jr., and J.L. Farris. 2001. Fate of pesticides and nutrients in linear wetlands (ditches). 5th Annual American Farm Bureau Watershed Heroes Conference, Amana, Iowa.
- Moore, M.T., C.M. Cooper, E.R. Bennett, S. Smith, Jr., F.D. Shields, Jr., and J.L. Farris. 2001. Vegetated drainage ditch research in the Mississippi Delta Management Systems Evaluation Area (MDMSEA): Current results and future directions. 222nd American Chemical Society National Meeting, Chicago, Illinois.
- Moore, M.T., C.M. Cooper, E.R. Bennett, S. Smith, Jr., J.L. Farris, C.D. Milam, and F.D. Shields, Jr. 2001. TMDL and water quality implications of vegetated drainage ditch research. 22nd Annual Meeting of the Society of Environmental Toxicology and Chemistry, Baltimore, Maryland
- Rauschenberger, R.H., J.L. Farris, and S.E. Trauth. 2001. Viability of alligator snapping turtle, (*Macrocllemys temminckii*) hatchlings incubated in treated and non-treated substrates. 22nd Annual Meeting of the Society of Environmental Toxicology and Chemistry, Baltimore, Maryland.
- Schulz, R., Moore, M.T., Bennett, E.R., Milam, C.D., Bouldin, J.L., Farris, J.L., Smith, S. and Cooper, C.M. 2001. Methyl-parathion effects on macroinvertebrates in vegetated and unvegetated wetland mesocosms. 22nd Annual Meeting of the Society of Environmental Toxicology and Chemistry, Baltimore, Maryland.
- Bennett, E.R., M.T. Moore, R. Schulz, C.M. Cooper, J.L. Farris. 2001. Comparative mitigation of methyl-parathion associated runoff in vegetated and non-vegetated wetlands. 22nd Annual Meeting of the Society of Environmental Toxicology and Chemistry, Baltimore, Maryland.
- Milam, C.D., J.L. Bouldin, R. Schulz, J.L. Farris, M.T. Moore, E.R. Bennett, C.M. Cooper, and S. Smith. 2001. Methyl parathion effects to aquatic organisms following a simulated storm event in constructed wetland mesocosms. 22nd Annual Meeting of the Society of Environmental Toxicology and Chemistry, Baltimore, Maryland.
- Winterringer, R.M., J.L. Farris, J.L. Harris, and C.D. Milam. 2001. Habitat Characterization and Current status of *Lampsilis streckeri* (Frierson 1927) in the Middle Fork Little Red River, Arkansas. Freshwater Mollusk Conservation Society Symposium, Pittsburgh, PA.
- Farris, J.L., C.D. Milam, J.L. Bouldin, M.T. Moore, S. Smith, Jr., C.M. Cooper, 2001. Evaluating toxicity of Asana XL (esfenvalerate) amendments in agricultural ditch mesocosms. North American Benthological Society annual meeting. Lacrosse, WI.
- Farris, J.L., C.D. Milam, J.L. Harris, and R. Shelton. 2002. Mussel propagation projects: facilities and techniques used at the Mammoth Spring National Fish Hatchery. Freshwater Mussel Conservation Society Propagation Workshop. Invited talk. National Conservation Training Center, Shepherdstown, WV.
- Moore, M.T., C.M. Cooper, S. Smith, Jr., E.R. Bennett, R. Schulz, J.L. Farris, and F.D. Shields,

- Jr. 2002. Influence of vegetation in mitigation of methyl parathion runoff. 6th International Conference on Diffuse Pollution, Amsterdam, The Netherlands. (also published proceedings p. 111-118)
- Cooper, C.M., M.T. Moore, E.R. Bennett, S. Smith, Jr., J.L. Farris, C.D. Milam, and F.D. Shields, Jr. 2002. Innovative uses of vegetated drainage ditches for reducing agricultural runoff. 6th International Conference on Diffuse Pollution, Amsterdam, The Netherlands (also published proceedings p. 119-126).
- Milam, C.D., P. Scheuerman, J.L. Farris, A. McBride, and J.L. Bouldin. 2002. Characterization of sediment associated microbial enzyme activity from agricultural drainage systems. 23rd Annual Meeting of the Society of Environmental Toxicology and Chemistry, Salt Lake City, Utah.
- Hobbs, M.S., R.S. Grippo, J.L. Farris, B.R. Griffin, and L.L. Harding. 2002. Environmental fate and effects of the aquaculture therapeutic potassium permanganate. 23rd Annual Meeting of the Society of Environmental Toxicology and Chemistry, Salt Lake City, Utah.
- Harding, L.L., J.L. Farris, and W.D. Snyder. 2002. Assessment of instream conditions for two deltaic streams receiving treated municipal effluent. 23rd Annual Meeting of the Society of Environmental Toxicology and Chemistry, Salt Lake City, Utah.
- Maul, J.D. and J.L. Farris. 2002. Relationship among asymmetry, condition index, reproductive success, and cholinesterase activity of Northern Cardinals. Society of Environmental Toxicology and Chemistry 23rd Annual Meeting, Salt Lake City, UT.
- Maul, J.D., J.P. Gandhi, and J.L. Farris. 2002. Cloacal microbial flora in breeding and wintering birds: Overall prevalence and relationship to condition index, fluctuating asymmetry, and habitat. 3rd North American Ornithological Conference, New Orleans, LA.
- Bennett, E.R., M.T. Moore, C.M. Cooper, S. Smith, Jr., J.L. Farris, C.D. Milam, R. Schulz, and R.L. Letcher. 2002. Mitigation of pesticide-associated runoff in vegetated agricultural drainage ditch systems. 12th Annual Meeting of the Society of Environmental Toxicology and Chemistry - Europe, Vienna, Austria.
- Maul, J.D., J.L. Farris, and P.A. Stewart. 2002. An opinion survey on hormesis and perceived risk of low contaminant exposure concentrations. Mid South Regional Chapter of the Society of Environmental Toxicology and Chemistry. Annual Meeting, Vicksburg, MS.
- Maul, J.D. and J.L. Farris. 2002. Patterns in Northern Cardinal (*Cardinalis cardinalis*) plasma cholinesterase enzyme activity and relationship to condition index and fluctuating asymmetry. 3rd North American Ornithological Conference, New Orleans, LA.
- Posey, W.R., II, J.L. Farris, C.D. Milam, and J.L. Harris. 2002. Development of a geographic information system (GIS) database for native Arkansas mussels. American Fisheries Society, Southern Division Symposium, Little Rock, AR.
- Winterringer, R., J.L. Farris, and J.L. Harris. 2002. Reproductive behavior and population dynamics of the endangered freshwater mussel, *Lampsilis streckeri* (Frierson 1927), in the Middle Fork Little Red River, Arkansas. American Fisheries Society, Southern Division Symposium, Little Rock, AR.

- Gandhi, J.P., A.D. Christian, and J.L. Farris. 2002. The effects of freshwater mussel filter feeding on seston and microbial biomass and diversity from a successful mussel refuge. American Fisheries Society, Southern Division Symposium, Little Rock, AR/
- Milam, C.D., J.L. Harris, J.L. Farris, and L.G. Morris. 2002. Electronic key for identifying Arkansas freshwater mussel species. American Fisheries Society, Southern Division Symposium, Little Rock, AR.
- Maul, J.D. and J.L. Farris. 2002. Does avian body condition, fat score, fluctuating asymmetry, and cloacal bacteria loads predict oxime reactivations of cholinesterase and cholinesterase activities below diagnostic thresholds? Mid South Regional Chapter of the Society of Environmental Toxicology and Chemistry. Annual Meeting, Vicksburg, MS.
- Scott, M., J.D. Maul, and J.L. Farris. 2002. Characterization of Northern Cardinal (*Cardinalis cardinalis*) nest structure and nest site vegetation. Arkansas State University Undergraduate Scholars Day Poster Presentation, State University, AR.
- Maul, J.D. and J.L. Farris. 2002. Plasma Cholinesterase inhibition in the Northern Cardinal, *Cardinalis cardinalis*. Arkansas Soil and Water Education Conference, Jonesboro, AR.
- Stephens, W.W., P.A. Stewart, and J.L. Farris. 2002. Nutrient Contributions from Aquatic Animal Production Facilities and Mechanisms for Describing and Understanding Their Impacts. Arkansas Political Science Conference-Environmental Policy Panel. Arkansas State University. Jonesboro, Arkansas.
- Stephens, W.W. and J.L. Farris. 2002. A Biomonitoring Approach to Aquaculture Effluent Characterization in Channel Catfish Fingerling Production. SETAC Mid South Region Annual Meeting. "Environmental Quality Issues in the South". Waterways Experiment Station, U.S. Army Corps of Engineers, Vicksburg, Mississippi.
- Bouldin, J.L., C.D. Milam, J.L. Farris. 2002. Application of instream biomonitoring to a watershed assessment in Northwest Arkansas. Society of Environmental Toxicology and Chemistry 23rd Annual Meeting, Salt Lake City, UT.
- Bouldin J.L., J.L.Farris, M.T.Moore, S. Smith,Jr, P. Hendley, C.D.Milam, C.M.Cooper, 2002. Evaluating fate and effects of atrazine and l-cyhalothrin in vegetated and unvegetated ditch mesocosms. Society of Environmental Toxicology and Chemistry 23rd Annual Meeting, Salt Lake City, UT.
- Stephens, W.W. and J.L. Farris. 2002. Instream Community Assessment and Biomonitoring of Associated Aquaculture Effluents. 23rd. Annual Meeting of Society of Environmental Toxicology and Chemistry. Salt Lake City, Utah.
- Bouldin, J.L., C.D. Milam, J.L. Farris, M.T.Moore, E.R. Bennett, S. Smith, Jr., and C.M. Cooper. 2002. Effects of esfenvalerate on aquatic and sediment dwelling organisms, in agricultural ditch mesocosms. 4th Annual Arkansas Soil and Water Education Conference, Jonesboro, Arkansas
- Milam, C.D., J.L. Bouldin, J.L. Farris, R. Schulz, M.T.Moore, E.R. Bennett, S. Smith, Jr., and C. M. Cooper. 2002. Methyl parthion effects to aquatic organisms following a simulated storm event in constructed wetland mesocosms. 4th Annual Arkansas Soil and Water Education Conference, Jonesboro, Arkansas.
- Bouldin, J.L., J.L. Farris, M.T. Moore, C.M.Cooper. 2003. Vegetative and structural

- characteristics of agricultural drainages in the Mississippi Delta landscape. 5th Annual Arkansas Soil and Water Education Conference. Jonesboro, AR.
- Maul J.D., J.L. Farris, C.D. Milam, C.M. Cooper, S. Testa III, and D.L. Feldman. 2003. The influence of stream habitat and water quality on macroinvertebrate communities. Society of Environmental Toxicology and Chemistry 24th Annual Meeting, Austin, TX.
- Bouldin J.L., J.L.Farris, M.T.Moore, and C.M.Cooper. 2003. Vegetative and structural characteristics of agricultural drainages in the Mississippi Delta landscape. Society of Environmental Toxicology and Chemistry. Austin, TX.
- Stephens, W.W. and J.L. Farris. 2003. Regional considerations of instream community assessments associated with nutrient contributions from aquaculture discharges in the Delta Ecoregion. North American Benthological Society, Athens, Georgia
- Bouldin J.L., J.L.Farris, M.T.Moore, and C.M.Cooper. 2003. Physical and vegetative characteristics of agricultural drainages in the Mississippi Delta landscape. Platform session. MidSouth Regional Society of Environmental Toxicology and Chemistry Society annual meeting. Nashville, TN.
- McBride, A.S., J.L. Farris, R.A. Kuhnle, D.G. Wren. 2003. Freshwater mussel response to various flow conditions. 3rd Biennial Symposium Freshwater Mollusk conservation Society. Durham, NC.
- Seagraves, J.H., J.L. Farris, J.L. Harris. 2003. Life history and habitat characterization of the federally endangered freshwater mussel *Arkansia wheeleri*. 3rd Biennial Symposium Freshwater Mollusk conservation Society. Durham, NC.
- Winterringer, R., J.L. Farris, J.L. Harris. 2003. Population dynamics and reproductive behaviors of *Lampsilis streckeri* (Frierson 1927), in a geographically isolated stream in Arkansas. 3rd Biennial Symposium Freshwater Mollusk conservation Society. Durham, NC.
- McCann, M.T., J.L. Farris, R.J. Neves. 2003. Impacts on early lifestages of freshwater mussels from sediments and contributed metals associated with surface mining in Southwest Virginia. 3rd Biennial Symposium Freshwater Mollusk conservation Society. Durham, NC.
- Stephens, W.W. and J.L. Farris. 2003. Assessment of instream communities associated with nutrient contributions from aquaculture discharges in the Delta Ecoregion. 24th Annual Meeting of Society of Environmental Toxicology and Chemistry, Austin, Texas.
- Stephens, W.W. and J.L. Farris. 2003. Community assessments of streams receiving aquaculture effluents in the Arkansas Delta. SETAC Mid-South Region Annual Meeting. Delineation of Environmental Issues: Local Aspects. Center in Molecular Toxicology, Vanderbilt University, Nashville, Tennessee.
- Scott, M.C., J.L. Farris, A.D. Christian. 2003. Propagation of the Arkansas fatmucket, *Lampsilis powellii* (Lea, 1852). Arkansas State Wildlife Society Meeting, Jonesboro, AR.
- Seagraves, J.H., J.L. Farris, J.L. Harris. 2003. Life history and habitat characterization of the federally endangered freshwater mussel *Arkansia wheeleri*. Arkansas State Wildlife Society Meeting, Jonesboro, AR.
- Stephens, W.W. and J.L. Farris. 2003. Biomonitoring: a tool to analyze & characterize effluents from channel catfish fingerling production. World Aquaculture Society at the Aquaculture

- America Conference, Louisville, Kentucky.
- Stephens, W.W. and J.L. Farris. 2003. Relating instream community assessments to aquaculture effluents. World Aquaculture Society at the Aquaculture America Conference, Louisville, Kentucky.
- Stephens, W.W. and J.L. Farris. 2003. Instream community assessment of aquaculture effluents. Catfish Farmers of Arkansas Annual Meeting, Hot Springs, Arkansas.
- Bouldin J.L., J.L.Farris, M.T.Moore, and C.M.Cooper. 2003. Physical and vegetative characteristics of agricultural drainages in the Mississippi Delta landscape. North American Benthological Society annual meeting. Athens, GA.
- Hobbs, M.S., R.S. Grippo, J.L. Farris, L. Harding. 2003. Responses of Non-Target Organisms to Aqueous Potassium Permanganate Exposure. 24th North American SETAC Annual Meeting, Austin TX.
- Hobbs, M.S., R.S. Grippo, J.L. Farris, L. Harding. 2003. Responses of Non-Target Organisms to Aqueous Potassium Permanganate Exposure. Arkansas Wastewater and Water Environment Associations, Hot Springs, AR.
- Moore, M.T., J.R. Pierce, and J.L. Farris. 2004. Water Quality Analysis of an Intensively Used Agricultural Reservoir. Mississippi Water Resources Research, Raymond, MS. (also published in proceedings).
- Bouldin, J.L., J.L. Farris, M.T. Moore, S. Smith Jr. and C.M. Cooper. 2004. Evaluating toxicity of diazinon in agricultural associated runoff through constructed wetlands. North American Benthological Society annual meeting, Vancouver, BC.
- Stephens, W.W., M.T. Moore, J.L. Farris, J.L. Bouldin, and C.M. Cooper. 2004. Considerations for evaluating water body condition in agriculturally dominated drainage systems in the Mississippi and Arkansas deltas. North American Benthological Society, Vancouver, BC.
- Stephens, W.W., M.T. Moore, J.L. Farris, J.L. Bouldin, and C.M. Cooper. 2004. Considerations for assessments of Wadeable drainage systems in the agriculturally dominated deltas of Arkansas and Mississippi. SETAC Mid-South Region Annual Meeting. "Education and Environment in the Mid-South". University of Mississippi, Oxford, Mississippi..
- Bouldin, J.L., J.L. Farris, M.T. Moore, S. Smith Jr. and C.M. Cooper. 2004. Evaluating toxicity of diazinon in agricultural associated runoff through constructed wetlands. MidSouth Society of Environmental Toxicology and Chemistry. Oxford, MS.
- Scott, M.C., J.L. Farris, A.D. Christian J.L. Harris. 2004. Propagation of the Arkansas Fatmucket, *Lampsilis powellii* (Lea, 1852). Arkansas Academy of Science Meeting, Jonesboro, AR.
- Scott, M.C., J.L. Farris, A.D. Christian J.L. Harris. 2004. Potential host determination and propagation of the Arkansas Fatmucket, (*Lampsilis powellii*), from the Ouachita and Saline River drainages. Southern District American Fisheries Society Meeting, Oklahoma City, OK.
- Farris, J.L., J.H. Seagraves, J.L. Harris. 2004. Freshwater mussel propagation at Arkansas State University and Mammoth Spring National Fish Hatchery. Coolwater Fish Culture Workshop, Hot Springs, AR

- Moore M.T., C.M. Cooper, S. Smith, Jr., R.W. Steinriede, Jr., J.L. Farris, and W.W. Stephens. 2003. Drainage ditch monitoring of the Delta Conservation Demonstration Center (DCDC), Mississippi, USA. Abstracts of the 24th Annual Meeting of the Society of Environmental Toxicology and Chemistry, Austin, TX. p. 200-201.
- Ashcraft, E.A., J.L. Farris and R. Hannigan. 2004. Use of relic unionid shells to determine time since mortality. Mid South Regional Chapter of the Society of Environmental Toxicology and Chemistry Annual Meeting, Oxford, MS.
- Walker, B.W., J.L. Farris, M.A. Nelson. 2004. Characterization and biomonitored responses to turbidity in a NE Arkansas River. Mid South Regional Chapter of the Society of Environmental Toxicology and Chemistry Annual Meeting, Oxford, MS.
- Ogendi, G.M., Hannigan, R.E., Farris, J.L, Smith, D. 2004. The impact of black shale weathering on sediment quality. Mid South Regional Chapter of the Society of Environmental Toxicology and Chemistry Annual Meeting, Oxford, MS.
- Ogendi, G.M., Farris, J.L, Hannigan, R.E. 2004. Black shale trace metal concentrations and Toxicity: Preliminary findings. 11th International Symposium on Water Rock Interaction. Saratoga Springs, NY.
- Ogendi, G., Abanda, A., Hannigan, R., and Farris, J. 2004. Chemical weathering of black shales and their ecological impacts on streams. Geol. Soc. Am. Ann. Meeting. Denver, CO.
- Ashcraft, E.A., J.L. Farris, R. Hannigan. 2004. Use of historic relic records to determine damage and causality in events of industrial discharge. Arkansas Water Works and Water Environmental Association 73rd Annual Conference, Hot Springs, AR.
- Walker, B.W., J.L. Farris, M.A. Nelson. Characterization and biomonitored responses to turbidity in a NE Arkansas River. Arkansas Water Works and Water Environmental Association 73rd Annual Conference, Hot Springs, AR.
- Ogendi, G.M., Hannigan, R.E., Farris, J.L, Smith, D. 2004. The impact of black shale weathering on sediment quality: Preliminary findings. 88th Annual Meeting of the Arkansas Academy of Science. Jonesboro, AR.
- Hobbs, M.S., R.S. Grippo, J.L. Farris, L.L. Harding, B.R. Griffin. 2004. Environmental effects of the aquaculture therapeutant potassium permanganate. Mid-South Regional Chapter of SETAC, Oxford, Mississippi.
- J.L. Harris, J.L. Farris, and A.D. Christian. 2005. Conservation of the special concern Ouachita Creekshell [*Villosa arkansasensis* (Lea 1852)]: life history, ecology, and conservation implications. Oral Platform Session 24 of the 4th Biennial Symposium of the Freshwater Mollusk Conservation Society, May 15-18 2005. St. Paul, Minnesota, USA. Abstract published on page 42 of the Meeting Program.
- Seagraves, S.E., J.L. Harris, J.L. Farris, and A.D. Christian. 2005. Conservation of the special concern Ouachita Creekshell [*Villosa arkansasensis* (Lea 1852)]: life history, ecology, and 15 conservation implications. Oral presentation 582 of the 2005 Joint Assembly of the Annual Meeting of the North American Benthological Society, May 22-27, 2005. New Orleans, Louisiana, USA. Abstract published on page 447 of NABS Bulletin Volume 22(1).
- Peck, A. J., H. E. McIntire, J. L. Farris, J.L. Harris, R.J. Looney, and A. D. Christian. 2005. Habitat restoration plan and programmatic biological assessment plan for *Potamilus capax*

- (Green 1832) in Arkansas. International Conference on Ecology and Transportation. San Diego, California.
- Peck, A.J. , J.L. Harris, and A.D. Christian. 2005. A reach scale comparison of fluvial geomorphological conditions of freshwater mussel (*Bivalvia*: *Unionoidea*) beds: Differences between the haves and have nots. Joint Assembly of the Annual Meeting of the North American Benthological Society, May 22-27, 2005. New Orleans, LA. Abstract published on page 447 of NABS Bulletin Volume 22(1).
- Hannigan, R.E. and Farris, J.L. 2005. Research Internships in Science of the Environment (RISE) at Arkansas State University. Invited presentation at Annual Meeting of the American Chemical Society, March 13-17. San Diego CA.
- Ogendi, G.M., Hannigan, R.E. and Farris, J.L., 2005. Trace metal concentrations and macroinvertebrate assemblages in black shale-draining streams. The joint North American Benthological Society and American Geophysical Union meeting, 23-27 May, 2005 in New Orleans, LA.
- Ogendi, G.M., Hannigan, R.E., and Farris, J.L. 2005. The toxicity of metal-enriched black shale-draining surface water to *Ceriodaphnia dubia* and *Pimephales promelas*. Society of Environmental Toxicology and Chemistry, Baltimore MD.
- Ogendi, G., Hannigan, R.E, and Farris, J.L. 2005. Effects of acid volatile sulfide on black shale sediment-metal bioavailability and toxicity to *Chironomus tentans*. Geological Society of America Annual Meeting, Salt Lake City, UT.
- Ashcraft, E.A., Farris, J.L., Walker, B.L., and Hannigan, R. 2005. Use of relic shells to determine time since mortality. The joint North American Benthological Society and American Geophysical Union meeting, 23-27 May, 2005 in New Orleans, LA.
- Guerra, B., J.L. Farris, M.T. Moore, N. Enger-Luster. Acute lethal concentrations of caffeine on non-target freshwater organisms. 4th Annual Undergraduate Research Conference of the Colonial Academic Alliance, James Madison University. 2006.
- Christian, A.D., A.J. Peck, J.L. Harris, and J.L. Farris. 2006. Movement patterns of freshwater mussels following relocation: a case study of *Potamilus capax* and *Quadrula quadrula* in an Arkansas drainage ditch. 54th Annual Meeting of the North American Benthological Society, Anchorage Alaska. June 4-8, 2006. Abstract 483 on page 284 of Bulletin of the North American Benthological Society 23(1).
- Seagraves, S.E., J.L. Harris, J.L. Farris and A.D. Christian, A.D. 2006. Conservation of the Ouachita Creekshell [*Villosa arkansasensis* (Leal852)]: reproduction and host fish suitability. 54th Annual Meeting of the North American Benthological Society, Anchorage Alaska. June 4-8, 2006. Abstract 484 on page 285 of Bulletin of the North American Benthological Society 23(1).
- Peck, A.J., J.L. Harris, J.L. Farris and A.D. Christian. 2006. Movement patterns of freshwater mussels following relocation: a case study of *Potamilus capax* and *Quadrula quadrula* in an Arkansas drainage ditch. Annual meeting of the Arkansas Chapter American Fisheries Society, DeGray Lake Resort State Park, February 1-3, 2006. Abstract on page 28 of meeting program.
- Allen, R.A., A.J. Peck, J.M. Loutsch, J.L. Farris, and A.D. Christian. 2006. The use of relative glycogen concentrations to assess fitness of freshwater mussels (*Mollusca*: *Bivalvia*) fitness.

Undergraduate Scholars Day 2006. Arkansas State University

- A.J. Peck, J.L. Harris, J.L. Farris and A.D. Christian. 2006. Movement patterns of freshwater mussels following relocation: a case study of *Potamilus capax* and *Quadrula quadrula* in an Arkansas drainage ditch. Annual meeting of the Arkansas Chapter American Fisheries Society, DeGray Lake Resort State Park, February 1-3, 2006.
- Seagraves, S.E., J.L. Harris, J.L. Farris and A.D. Christian, A.D. 2006. Conservation of the Ouachita Creekshell [*Villosa arkansasensis* (Lea1852)]: reproduction and host fish suitability. Annual meeting of the Arkansas Chapter American Fisheries Society, DeGray Lake Resort State Park, February 1-3, 2006.
- Gopalan, M. B., Bouldin, J.L., Farris, J.L. 2006. Use of biomonitoring at farm-scale to formulate and assess the impacts of improved cotton farming practices upon reduction of ecological risk. Proceedings of an International Perspective on Environmental and Water Resources, New Delhi, India.
- Gopalan, M.B., Farris, J.L., Bouldin, J. L., 2006. Risk assessment of integrated management: selected measures of benefits. Arkansas Water Works & Water Environment Association Annual meeting, Hot Springs, AR.
- Moore, M.T., C.M. Cooper, S. Smith, Jr., E.R. Bennett, R.E. Lizotte, Jr., R.F. Cullum, R. Kröger, M.A. Locke, and J.L. Farris. 2006. Edge-of-field wetland management practices for agricultural non-point source pollution mitigation: Is greener better? Managing Agricultural Landscapes for Environmental Quality: Strengthening the Science Base (organized by the Soil and Water Conservation Society), Kansas City, Missouri.
- Greenway, S.L., B. Guerra, J.L. Farris, and M.T. Moore. 2006. Assessing caffeine as an emerging environmental concern using conventional approaches. Annual Meeting of the Mid-South Regional Society of Environmental Toxicology and Chemistry, Jonesboro, Arkansas. p. 19.
- Bouldin, J.L., J.L. Farris, M.T. Moore, S. Smith, Jr., W.W. Stephens, and C.M. Cooper. 2006. Microcosm evaluation of the fate and effects of atrazine and lambda-cyhalothrin in unvegetated and vegetated monocultures. Annual Meeting of the Mid-South Regional Society of Environmental Toxicology and Chemistry, Jonesboro, Arkansas. p. 17.
- Farris, J., R. Dexter, J. Kern, T. Goeks, N. Beckvar. 2006. Adaptive management in long-term biomonitoring programs: Bivalve bioaccumulation correlation analysis. 27th Annual Meeting of SETAC North America, Montréal, Quebec, Canada. Abstract on p. 172
- Hudson, T. and J.L. Farris. 2006. Biomonitoring of an urbanized watershed to help establish and achieve locally developed management goals. 27th Annual Meeting of SETAC North America, Montréal, Quebec, Canada, November 5-9, 2006. Abstract on p. 296 of the meeting abstract book.
- Greenway, S., B. Guerra, J. Farris, M. Moore. 2006. Establishing conventional species sensitivity data for caffeine as an emerging contaminant posing risk to aquatic environments. 27th Annual Meeting of SETAC North America, Montréal, Quebec, Canada. Abstract on p. 367 of the meeting abstract book.
- Hobbs, M.S., Grippio, R.S., Farris, J.L., Griffin, B.R. 2006. Aquatic mesocosm assessment of the aquaculture therapeutant potassium permanganate – effect on ionoregulation of target animals. 27th Annual Meeting of SETAC North America, Montréal, Quebec, Canada. Abstract

on p. 251 of the meeting abstract book.

- Gopalan, M.B., Farris, J.L., Bouldin, J.L. 2006. Assessing ecological risk of improved management practices at a farm – scale using laboratory biomonitoring. 27th Annual Meeting of SETAC North America, Montréal, Quebec, Canada. Abstract on p. 339 of the meeting abstract book.
- Peck, A.J., J.L. Harris, J.L. Farris and A.D. Christian. 2007. Assessment of freshwater mussel relocation as a conservation strategy 5th Biennial Freshwater Mollusk Conservation Society Symposium. Direction in Freshwater Mollusk Conservation: molecules to ecosystems. Little Rock, Arkansas. Abstract on Page 83.
- Wentz, N.J., A.D. Christian, J.L. Harris, and J.L. Farris. 2008. The use of biotic and habitat indices as indicators of freshwater mussel habitat in the Tyronza River, Arkansas. Oral presentation at the Joint Arkansas and Mississippi Annual meeting of the Arkansas Chapter American Fisheries Society, Tunica, Mississippi. Abstract on page 74 of meeting program.
- Wentz, N.J., A.D. Christian, J.L. Harris, and J.L. Farris. 2009. Can rapid bioassessment protocols be used as indicators of mussel communities?. Abstract on page 99 of the 2009 International Symposium of the Freshwater Mollusk Conservation Society Program. Baltimore, MD
- Harris, J.L., W.R. Hoeh, W.R. Posey, C.L. Davidson, S. Rogers Oetker, J.L. Farris, J.M. Serb, K. Inoue, D.L. Hayes, M.E. Gordon, and A.D. Christian. 2009. Species richness and conservation status of Arkansas' unionoid bivalves. Abstract on page 64 of the 2009 International Symposium of the Freshwater Mollusk Conservation Society Program. Baltimore, MD
- Peck, A.J., J.L. Harris, J.L. Farris, and A.D. Christian. 2009. Assessment of the short and moderate term effects of relocation on the fitness and behavior of *Potamilus capax* (Green, 1832) and *Quadrula quadrula* (Rafinesque, 1820). Platform presentation #PL29. Abstract on page 35 of the 2009 International Symposium of the Freshwater Mollusk Conservation Society Program. 19-23 April 2009. Baltimore, Maryland.
- Harris, J. L., W. R. Posey, C. L. Davidson, J. L. Farris, S. O. Rogers, J. N. Stoeckel, B. G. Crump, Barnett, H. C. Martin, M. W. Matthews, J. Seagraves, N. J. Wentz, R. Winterringer, C. Osborne, and A. D. Christian. 2009. Unionoida (Mollusca: Margaritiferidae, Unionidae) in Arkansas, Third Status Review. 93rd Annual Meeting of the Arkansas Academy of Science. University of the Ozarks, Clarksville, Arkansas.
- Moore, M.T., Kroger, R., Locke, M.A., Cooper, C.M., Farris, J.L., Bennett, E.R., Denton, D.L. 2010. From vegetated ditches to rice fields: Thinking outside the box for pesticide mitigation. 239th National Meeting of the American Chemical Society, March 21-25, San Francisco, CA. Picogram v. 78: 104.
- Bennett, E.R., M.T. Moore, R. Kröger, C.M. Cooper, K.G. Drouillard and J.L. Farris. 2010. Vegetated agricultural drainage ditches and pesticide mitigation: A North American perspective. ArtWET Meeting, Mitigation of agricultural nonpoint-source pesticide pollution and phytoremediation in artificial wetland ecosystems, Landau, Germany.
- Bennett, E.R., M.T. Moore, R. Kroger, M.A. Locke, J.L. Farris, C.M. Cooper, D.L. Denton and P.B. Rodrigue. 2010. Vegetated agricultural drainage ditches: A new conservation practice utilizing current landscape features. 2nd Annual Remediation and Prevention Conference, Winnipeg, Manitoba.
- Littlejohn, K.A., Kroger, R., Moore, M.T., Farris, J.L. 2011. Low-grade weirs in agricultural drainage ditches: An experimental approach to decreasing nitrate-N. Abstracts of the Joint

- Meeting of the Society of Wetland Scientists, Wetpol and Wetland Biogeochemistry Symposium, Prague, Czech Republic, 3-8 July, 2011. p. 417.
- Moore MT, Locke MA, Kroger R, Farris JL, Tyler HL, and Hudson TC. 2013. Vegetation's role in mitigation of phosphorus from agricultural ditch systems. ASA, CSSA, & SSSA International Annual Meetings, November 3-6, Tampa, Florida.
- Farris JL, PR Scheuerman and DS Cherry. 2013. Patterns of macroinvertebrate responses in South Indian Creek and tributaries receiving mineral contributions throughout an elaborate interstate construction project for Tennessee and North Carolina. Invited presentation to Entomological Society of America, 61st Annual Meeting, November 10-13, Austin, Texas.
- Iseyemi, O.O, JL Farris, MT Moore and S.Choi. 2014. The influence of landscape properties on agricultural drainage system metabolism. Society of Environmental Toxicology and Chemistry (SETAC) North America 36th Annual Meeting, Vancouver, BC Canada, November 2014.
- Iseyemi, O.O, JL Farris, VS Green, MT Moore and S. Choi. 2015. Carbon sequestration potential in agricultural drainage ditches. Society of Environmental Toxicology and Chemistry (SETAC) North America 36th Annual Meeting, Salt Lake City, Utah, November 2015.
- Reba, M.L., K. Kahill, J. Czarnecki, J.R. Rigby Jr, and J.L. Farris. 2015. Early findings from artificial recharge efforts of the Mississippi River Valley Alluvial Aquifer. The American Society of Agricultural and Biological Engineers Annual International Meeting. July 2015, New Orleans, LA.
- Reba, M.L., E.Leonard and J.L. Farris. 2016. Water quality characterization of an on-farm storage reservoir-tailwater recovery system associated with agricultural production in the Mid-South US (Invited). American Geophysical Union Fall Meeting, December 2016, San Francisco, CA.
- Moore, M., J. Taylor, M. Locke, J. Farris, E. Bennett and R. Kroger. 2016. Drainage ditch mitigation strategies: The past, present, and future of water quality improvement. Annual Water Resources Conference for Universities Council on Water Resources and The National Institutes for Water Resources, June, 2016, Pensacola Beach, FL.
- Farris, J.L., T.C. Hudson, O.O. Iseyemi, M.T. Moore, R. Kroger. 2016. Considerations for scaling investigative designs of mitigation efficiency in agricultural drainage ditches: Manipulating landscape properties and hydrology. Annual Water Resources Conference for Universities Council on Water Resources and The National Institutes for Water Resources, June, 2016, Pensacola Beach, FL.
- Faucheux, N.M., L.E. Miranda, J.M. Taylor and J.L. Farris. 2019. Defying expectations: tributary fish assemblages are similar above and below impoundments. Southeastern Fishes Council Annual Meeting, November 2019 in Knoxville, TN.
- Matthew T. Moore, Jason M. Taylor, Erin R. Bennett, Jerry L. Farris, Robbie Kröger, and Martin A. Locke. 2022. Vegetated Agricultural Drainage Ditches (VADDs) for agricultural runoff mitigation: Two decades of USDA-ARS Research. The 11th International Drainage Symposium, August 2022 in Des Moines, Iowa.
- Geoffrey K. Payne, Matthew T. Moore, Kevin J. Krajcir, and Jerry L. Farris. 2022. Evaluation of wood-chip bioditch reactors as a nutrient reduction conservation strategy. The 2022 Alabama Water Resources Conference and Symposium, September 2022, Orange Beach, AL.

Invited Symposia:

ASU dedication of the Delta Studies Center, Jonesboro, AR, 1997. Environmental concerns for the Delta.

Mississippi River Research Consortium Meeting, La Crosse, WI, 1998. Lower Mississippi River / Delta Environmental Research Consortium: The concept and progress.

The University of Mississippi, Department of Biology, Oxford, MS, 1998. Complexities of assessing the condition of freshwater mussels.

Jonesboro Noon Rotary Club, Luncheon address, Jonesboro, AR, 1999. When things go environmental in the night.

NE Arkansas Conservation District Meeting, Luncheon address, Jonesboro, AR, 1999. Resource assessment in agricultural production.

Arkansas Conference on Waterborne Transportation, Little Rock, AR, 2000. Biomonitoring considerations for assessing environmental changes in navigable rivers.

Sustainability of Wetlands and Water Resources Conference, Oxford, MS, 2000. Attributes of ditch ecosystems as constricted remnant wetlands.

Southern Division American Fisheries Society, Midyear Meeting and Southeastern Fishes Council Annual Meeting, Little Rock, AR, 2002. Aquatic Toxicology Workshop.

AWEA Water Conference, Hot Springs, AR, February 2002. Bioassessment in consideration of TMDLs.

AWW and WEA Specialty Conference, Hot Springs Convention Center, 2003. Lab Pretreatment Session, Aquatic Toxicology.

MidSouth Chapter of the Society of Environmental Toxicology and Chemistry Conference, Oxford, MS, May 26, 2004. Teach the teachers.

Aquaculture 2004 Conference, Honolulu, Hawaii. Prioritizing regional research initiatives for the conservation of Arkansas' freshwater mussels.

EPSCoR Statewide Proposals, Little Rock, AR, September 19, 2005. NanoTox- Bringing ASU's strengths to EPSCoR, with C. Cramer and R. Hannigan.

AgBio Works, Jonesboro, AR, March 31, 2005. Partnering for Water Use: ASU Agriculture and Environmental Sciences.

Society of Environmental Toxicology and Chemistry 26th Annual Meeting, Baltimore, MD, November 2005. Gauging needs and goals for careers in ecotoxicology: Academic benefits.

Propagation and Captive Care of Freshwater Molluscs, Columbus Zoo, March 5, 2006. Challenges to water quality guidance for protection and propagation of freshwater mussels.

University of Memphis Biology Seminar Series, February 9, 2006. Distinguishing disturbance from impact: The challenge for a reference condition approach.

Research and Technology Transfer Workshop, Jonesboro, AR. January 25, 2006. Growing a technology business: Environmental monitoring.

Arkansas Crop Management Conference, Session V: Soil and Water Conservation, Little Rock, AR, January 3, 2006. Agriculture runoff and alternate control measures.

EPSCoR State Meeting for ASTA considerations, Little Rock, AR, October 1, 2008. EPSCoR Center for Climate Change and Water, Nutrient, and Crop Resources.

Jonesboro Regional Chamber of Commerce, ASU Enrollment Services, High School Counselors Workshop, March 6, 2008. Academic research translated into experiential learning.

Jonesboro Noon Rotary Club, Luncheon address, Jonesboro, AR, August 19, 2008. Preparing for science and math challenges: Water for a sustainable future.

Jonesboro Regional Chamber of Commerce, Green Development Workshop, April 10, 2008. Using trees in riparian areas.

Chancellor's Office and ASU, Campus Legislative Review Day, Sustainable water issues, September 13, 2008.

Society of Environmental Toxicology and Chemistry North America, Annual Meeting Introduction and Closing Session Summary, Tampa, FL, November 2008.

Arkansas Soil & Water Education Conference, Jonesboro, AR, January 22, 2009. Overview of climate change issues facing Arkansas.

Arkansas Soil and Water Education Conference, Jonesboro, AR, January 22, 2009. Overview of climate change issues being faced by Arkansas.

ASU Center for Regional Programs, Professional Development Program, March 20, 2009, Environmental planning and maintenance for climate change impacts to Arkansas facilities; Public health and moisture issues.

Jonesboro University Rotary, Jonesboro, AR, July 16, 2009. Preparing for the challenges of a sustainable future.

ASU Beebe Science Department Mathematics Awareness Event, April 7, 2009. Preparing for challenges of a changing climate.

USDA ARS National Sedimentation Laboratory, Oxford, MS, December 10, 2009. Opening lecture in the NSL Global Climate Change Seminar Series.

MidSouth Regional SETAC Meeting, Memphis TN, May 15, 2010. Status and trends of regional chapter contributions to SETAC North America and globalization.

Jonesboro City Council Meeting, October 5, 2010. Drainage canal vegetation management plan for the City of Jonesboro.

Environmental Health Sciences Graduate Program, East Tennessee State University, Johnson City, TN, April 10, 2010. Structural and functional attributes of agroecosystems.

Green Development Workshop, Arkansas Forestry Commission, Embassy Suites, Rogers, AR, March 10, 2011. Realizing tree potential in riparian management.

ASU Newport Earth Day Seminar, December 15, 2011. Restructuring research and career paths to meet the challenges of climate change.

Chatham University, Pittsburgh, PA March 18, 2011. Visioning for School of the Environment and Sustainability at Eden Hall Campus.

MidSouth Regional SETAC Meeting, May 19, 2011. The Genesis and Evolution of the Lower Mississippi, Central, Delta, Southern- no – MidSouth Regional Chapter.

Jonesboro Exchange Club, December 13, 2013. Mentoring Science With Community Participation.

Arkansas Urban Forestry Council, October 24, 2017. Illinois River Watershed Partnership Workshop, How Trees Benefit Stormwater in the Natural State, presented: Valuing Trees for Ecosystem Services.

Other Professional Engagements:

Symposia organized, “Lower Mississippi River Delta Research Consortium Planning Session” with D. Harding, A. Grippo and R. Grippo, ASU Convocation Center, 1999. Developed from the Publication, “ Lower Mississippi River / Delta Environmental Research Consortium: The Concept and Progress” by Maier, K.J., J.W. Grubaugh, K.H. Baer, D. Schlenk, J.L. Farris and W.H. Benson. 1998.

USDA, ARS, Invited research participant to Water Quality National Program 201 Component Workshop, Minneapolis, MN 1999

USDA, ARS, Invited research participant to the Integrated Systems Management National Program Component Workshop, Denver, CO. 2000.

CEI Engineering Associates, Belz Burrow Development Group, LLC, Barrett and Deacon, P.A. and Arkansas State University, Alternate Analysis Mitigation and Retail Properties, March 29, 2004.

WERF, Workshop on Partitioning Effects from Multiple Causes of WQS Non-Attainment, Panel participant and contributor. Water Environment Research Foundation, Roaring River State Park, MO. September 27-29, 2005.

US District Court, Southern District of Ohio, The State of West Virginia and the State of Ohio versus Elkem Metals Co., L.P. Eramet, Marietta Inc. Expert Report, Exhibits and Deposition. May 4, and June 21, 2005.

Arkansas Bar Association’s 12th Annual Environmental Law Conference, Panel participant. Eureka Springs, AR, May 2-3, 2008.

Arkansas Bar Association's 13th Annual Environmental Law Conference, Arkansas Global Warming Commission Panel, Rogers, AR, May 14-16, 2009.
 University-Federal Dialogue on Environmental and Energy Research and Education, Session Chair and Moderator, NCSE, Reagan Ctr., Washington, DC. January 2009.
 USDA, ARS, Invited research participant to National Program 211 (Water Availability and Watershed Management) Planning Workshop, Chicago, IL, September 2010.
 National Council for Science and the Environment, Antioch University, New England. Translating Research Into Policy, training, Pew Center, Washington, DC. January 2012.
 Delta Symposium XIX: Cultivating the Delta, Biology and Agriculture in the Delta, Invited interdisciplinary panel participant, Jonesboro, AR, March 20, 2013.
 Named a National Academies Education Fellow in the Life Sciences for participation in the National Academies Gulf Coast Summer Institute on Undergraduate Science Education held July 22-26, 2013 at Louisiana State University.

Professional Development and Training:

Basics of Ecological Risk Assessment, SETAC, Charlotte, NC, November, 1998. Funded by research funds.
 Whole Effluent Toxicity Training Course, SETAC, Oxford, MS, May 14-15, 1998. Self-funded with partial funding provided by National SETAC and Midsouth Regional SETAC.
 Vadose Zone Hydrology Short Course at the Univ. of Arkansas, Fayetteville, AR, April 1999. Self-funded.
 ArcView Course at University of Arkansas, Monticello, Spatial Analysis Laboratory, May 1999. Funded by Dean of Arts and Sciences, ASU.
 Issues in the Environment Symposium, Perspectives on Environmental Endocrine Disruption, Fogelman Executive Center, University Memphis, September, 1997. Funded by Buckman Inc.
 Arkansas Water Regulations Update Workshops, Arkansas Environmental Federation, Little Rock, AR, June 1997, 1998, 2000. Self-funded.
 Causal Determination of Biological Impairment, SETAC, Nashville, TN, November, 2000. Partial funding by Biological Sciences and research.
 Science to Support Development of Sediment TMDL's; Short Course and Workshop, Oxford, MS, May 3-4, 2000. Funded by the National Sedimentation Laboratory, USDA/ARS and MS DEQ.
 TMDL Workshop, Jackson, MS, February, 2000. Mississippi DEQ and Tetra Tech, Inc., Funded by USDA/ARS and MS DEQ.
 Ecological Assessments in Agriculture Biotechnology, November 11, 2001, Baltimore MD, SETAC NA, Short Course. Funded by research.
 Forecasting Environmental Changes, Reagan Int. Trade Ctr., Washington, DC, February 3-4, 2005, NCSE Conference on Science, Policy and Environment. Funding by research.
 Energy for a Sustainable and Secure Future, Reagan Int. Trade Ctr., Washington, DC, January 26-27, 2006, NCSE Conference on Science, Policy and Environment. College funding.
 Integrating Environment and Human Health, Reagan Int. Trade Ctr., Washington, DC, February 1-2 2007, NCSE Conference on Science, Policy and Environment. College funding.
 Climate Change: Science and Solutions, Reagan Int. Trade Ctr., Washington, DC, January 16, 2008, NCSE Conference on Science, Policy and Environment. Chancellor's funding.
 Institute on Teaching and Mentoring, The Compact for Faculty Diversity 2008-2010. Funded by Southern Regional Education Board and College of Sciences and Mathematics. Tampa, FL, Washington, DC, and Atlanta, GA.
 Ecological Risk Assessment: Theory and Practice. Nicholas School, Duke University, June 23-27, 2008. Funded by research at ASU.
 Our Changing Oceans, Reagan International Trade Ctr., Washington, DC, January 19-21, 2011, NCSE Conference on Science, Policy and Environment. Research funding.
 Environment and Security, Reagan International Trade Ctr., Washington, DC, January 18-20,

2012. NCSE Conference on Science, Policy and Environment. Research funding.
 Disasters and Environment, Reagan International Trade Ctr., Washington, DC, January 15-17,
 2013, NCSE Conference on Science, Policy and Environment. Research and Sponsored
 Programs funding.

INSTITUTIONAL COMMITTEES

University:

1997-1998	NCAA Certification, Fiscal Integrity, and Academic Integrity committees
1998-2000	Safety Advisory Committee
1998-2000	Delta Studies Advisory Committee
2000	University Promotion, Retention and Tenure Committee
2001	ASU-Jonesboro Vice Chancellor Research and AA Search Advisory Committee
2002-2008	Arkansas Biosciences Institute (ABI), Building Advisory and Planning Committee
2003	ABI Executive Director Search Committee
2004-2008	Molecular Biosciences Program Committee
2004-2005	ABI Search Committee Chair, for Metabolic Engineer
2004	Strategic Planning Council, Chair Grad Ed and Research Initiatives
2004-2005	Distinguished ASU Alumni, Selection Committee
2005-2009	Joint Executive Council, representing Sciences and Mathematics
2005-2009	Academic Deans Council
2005-2009	Research and Academic Affairs Council
2006-2008	Institutional Governance Oversight Committee
2006	ASU-Jonesboro Chancellor Search Advisory Committee
2007-2008	ASU Mascot Review Committee
2007-2008	Task Force on Better Integrating Academic Affairs and Student Affairs
2007-present	Middle East Studies Committee
2008	High Performance Computing Exploratory Committee
2008-2009	Doctoral Program Writing Group
2008	Centennial Program Committee
2008-2009	Graduate Program Committee
2008-2009	Academic Deans Council rep to Governance Oversight Committee
2009	Technology Fee Appropriations Committee

College:

1997-2000	Safety Committee
1998-1999	Doctoral Program Committee on Curriculum
1998-2000	Doctoral Program Advisory Committee
1998-2000	Promotion, Retention and Tenure Committee
1999-2000	Search Committee for Environmental Sciences Program Director
2000	College of Arts and Sciences Chairs Committee
2003-2008	Chaired Environmental Sciences Graduate Program Committee
2004-2007	ABI-Jonesboro Advisory Committee

Department:

1992-2000	Safety Committee
1995-2000	Recruitment Committee
1995-1999	Graduate Advisory Selection Committee
1998-2000	DPRT, Member and Chair
1999	Search Committee for Aquatic Biologist, Chair
2000	Environmental Sciences Program Committee, Chair
2018-present	Biodiversity Committee

2020-present Curriculum Committee
 2022-2023 10-year Programmatic Review Committee

Professional:

1993-2000 Arkansas Environmental Federation (AEF), Moderator, Professor Sessions
 1993-2002 AEF Education Subcommittee
 1993-2000 Arkansas Zebra Mussel Task Force, appointment
 1994-2001 Arkansas Wastewater Licensing Committee, ADEQ, appointment
 1995-2012 MidSouth Regional SETAC, Founding member, Board Chair and various offices
 1995-2001 SETAC NA Technical Advisory Committee
 1996-2000 AWWLC Technical Educational Subcommittee
 1996-2001 AWWLC, Technical Education Subcommittee
 1997-1999 Associate Editor, Arkansas Academy of Sciences
 1998 Session Chair, Biomonitoring Unionids, SETAC Annual Meeting, Charlotte, NC.
 1998 Chairman, Technical Education Subcommittee for AWWLC
 1999 ASU Delta Studies Center, Advisory Committee
 1999-2012 SETAC NA Faculty mentor for students
 1999-2000 SETAC NA Organizing Committee for Nashville Meeting
 2000-present Arkansas Water Resources Center, Technical Advisory Committee
 2000-2002 Arkansas Nuisance Species Task Force, appointment
 2000 SETAC NA Chairperson for poster presentations, Nashville, TN
 2000 SETAC NA Presentation and Publication Review Committee
 2000-2002 Arkansas Governor's Water Quality Task Force, appointment
 2000-2001 Arkansas Soil and Water Conservation Commission, Water Quality Committee
 2004-2021 Jonesboro Stormwater Management Board, Member and Vice-Chair
 2005-2006 Arkansas Extraordinary Resource Waterways Scientific Workgroup, appointment
 2006-2011 Council of Environmental Deans and Directors, (CEDD) member
 2007 SETAC NA Milwaukee Annual Conference, Organizing Committee member
 2007-2009 AR Governor's Commission on Global Warming, Commissioner
 2007-2009 AR GCGW, Ag, Forestry and Waste Management Technical Workgroup
 2007-2009 AR GCGW, Cross Cutting Issues Technical Workgroup
 2008 SETAC NA Tampa Annual Conference, Co-Chair
 2008-2013 SETAC NA Meetings Committee member
 2008-2021 Consortium of Universities for the Advancement of Hydrologic Sciences, ASU
 2008-2015 NCSE EnvironMentors, Director ASU Chapter
 2008-2015 Institute on Teaching and Mentoring, The Compact for Faculty Diversity, Southern
 Regional Education Board, Doctoral Mentoring for awarded fellows or scholars
 2009-2011 CEDD, Key Strategic Directions Committee member
 2009-2013 Clinton Global Initiative University Commitment Rep for EnvironMentors-ASU
 2010-2013 SETAC NA Board of Directors
 2010-2011 SETAC Board Liaison to Global Advisory Groups, Aquatic Macrophytes
 2010-2013 SETAC NA Meeting Committee Liaison to the Board
 2011-2015 NCSE EM, Strategic Planning, Working Group and Task Force subcommittees
 2012-2015 ASU Newport Renewable Energy Technology Advisory Committee
 2013-2015 NCSE EnvironMentors National Advisory Board, appointee and Chair
 2021-present A-State Faculty Association Historical Committee

PROFESSIONAL SERVICE

Program, faculty, and grant reviews furnished for:

Natural Environment Research Council, Swindon, UK
 Natural Sciences and Engineering Research Council of Canada

Oklahoma Water Resources Research Institute
Arkansas Water Resources Center, University of Arkansas, 104B USGS
Eastern Research Group, Inc. under contract to the US EPA
North Carolina Water Resources Research Institute
Louisiana Board of Regents EPSCoR
University of Portland
University of Kuwait
Southern Illinois University
University of Mississippi Biology Department
Baylor University
University of Florida IFAS-IRREC
Middle Tennessee State University College of Science
East Tennessee State University Department of Public Health
Wichita State University
Texas State University, San Marcos
University of Oklahoma
USDA ARS Peers
US EPA
Virginia Water Resources Research Center
The Nature Conservancy
University of Georgia, Warnell School of Forestry and Natural Resources

Editorial reviews for journals:

Archives of Environmental Contamination
Journal of the North American Benthological Society
Environmental Management
Journal of Environmental Quality
Environmental Toxicology and Chemistry
Bulletin of Environmental Contamination and Toxicology
Journal of Soil and Sediment Contamination
Ecohydrology
Water
Science of the Total Environment
Environmental Science and Pollution Research
Ecotoxicology and Environmental Safety
American Midland Naturalist
Aquatic Botany
Environmental Monitoring and Assessment
North American Journal of Aquaculture
Ecological Engineering
Environmental Management
Hydrobiologia
Environmental Toxicology
Arkansas Academy of Sciences
Invertebrate Reproduction and Development
Environmental Pollution
Ecological Engineering
Environmental Sciences and Technology
Journal of Irrigation and Drainage Engineering
River Research and Applications

TEACHING EXPERIENCE:

University

Aquatic Biology and Field Laboratory 5000, 6000
 Aquatic Ecology and Field Laboratory 4000, 5000
 Honors Biology Laboratory
 General Biology Laboratory (Majors and nonmajors) Coordinator
 Biology of Animals Laboratory (Zoology) and Coordinator
 Biology of Animals Lecture and Honors
 Principles of Ecology and Laboratory
 Limnology and Field Laboratory
 Making Connections Biology
 Risk Assessment
 Aquatic Ecotoxicology
 Global Change Biology
 Human Resources of Natural Resources
 Seminar in Environmental Sciences
 Biological Sciences Seminar (Graduate and Undergraduate)
 Topical Seminar in Environmental Sciences
 Environmental Sciences Internships
 Independent Studies
 Special Problems
 Special Topics
 Dissertation and Thesis Directed Studies

COMMUNITY SERVICE:

Member of the Judd Hill Plantation Field Day, Planning Committee, 1995-2004.
 Jonesboro Nature Study Center Advisory Council (worked with design, location and consultation for the Forrest L. Wood Crowley's Ridge Nature Center), 1999.
 Judge for Science Fairs, VPA, Valley View, West Elementary, Microsociety, 2001-2013.
 Judge for Undergraduate Scholars Day, Create AState, ASU-Jonesboro, AR, 2002-2014.
 Member of L'Anguille Watershed Alliance, Wynne, AR, 2004-2005.
 AR *Potamilis capax* Working Group, 2004-2008.
 Breakfast, Lunch Buddies Mentoring Program, Jonesboro Public Schools, 2005-2012.
 BEST Robotics, Regional volunteer and facilitator for Mathematics, Computer Sciences and Statistics, 2005-2009.
 ASU Representative to Shandong University of Finance in Jinan, China for the e-commerce and e-government conference and 20th anniversary with Dr. Jeff Jenness, Computer Sciences, 2006.
 ASU Student Affairs, Volunteer recruitment and presenter at Orientations, Preview Days, and campus site visits, 2008-2012.
 Nettleton Intermediate Center Career Day Instructor, 2009-2014.
 Trout Task Force Committee, ASU Mountain Home, 2009-2010.
 Jonesboro Vision 2030 Commission member and Co-Chair, Environmental Comm. , 2010-2013.
 ASU Brother to Brother mentoring program, Office of Diversity, 2010-2014.