

JONATHAN D. MAUL

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Education

- 1999-2004 Ph.D. in Environmental Sciences, Arkansas State University
Advisor: Dr. J.L. Farris
- 1994-1997 M.S. in Biological Sciences, The University of Mississippi
Advisor: Dr. J.A. Kushlan
- 1990-1994 B.S., Biology, State University of New York at Stony Brook

Professional Experience

2004-Present	Post-Doctoral Fellow	Southern Illinois University, Carbondale, IL
1999-2004	Research Assistant	Arkansas State University, State University, AR
1997-1999	Biologist	USDA, Agricultural Research Service, Oxford, MS
1994-1997	Research Assistant	The University of Mississippi, University, MS
1994, 1997	Teaching Assistant	The University of Mississippi, University, MS
1993-1994	Undergrad. Res. Asst.	Marine Science Research Ctr, SUNY Stony Brook

Peer-Reviewed Publications

- Maul, J.D., L.J. Schuler, J.B. Belden, M.R. Whiles, and M.J. Lydy. 2006. Effects of the antibiotic ciprofloxacin on stream microbial communities and detritivorous macroinvertebrates. *Environmental Toxicology and Chemistry* (In Press).
- 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* (In Press).
- Maul, J.D., J.L. Farris, and M.J. Lydy. 2005. Interaction of chemical cues from fish tissues and organophosphorous pesticides on *Ceriodaphnia dubia* survival. *Environmental Pollution* (In Press).
- Maul, J.D., J.P. Gandhi, and J.L. Farris. 2005. Community level physiological profiles of cloacal microbes in songbirds (Order: Passeriformes): variation due to host species, host diet, and habitat. *Microbial Ecology* 50:19-28.
- Maul, J.D., and J.L. Farris. 2005. Monitoring exposure of Northern Cardinals, *Cardinalis cardinalis*, to Cholinesterase (ChE)-inhibiting pesticides: ChE activity, reactivations, and indicators of environmental stress. *Environmental Toxicology and Chemistry* 24:1721-1730.
- Maul, J.D., P.C. Smiley, and C.M. Cooper. 2005. Patterns of avian nest predators and a brood parasite among restored riparian habitats in agricultural watersheds. *Environmental Monitoring and Assessment* 108:133-150.
- Maul, J.D., J.L. Farris, C.D. Milam, C.M. Cooper, S. Testa III, and D.L. Feldman. 2004. The influence of stream habitat and water quality on macroinvertebrate communities in degraded streams of northwest Mississippi. *Hydrobiologia* 518:79-95.

- Maul, J.D. and J.L. Farris. 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* 47:253-258.
- Maul, J.D. and J.L. Farris. 2004. Monitoring exposure of passerines to acephate, dicotophos, and malathion using cholinesterase reactivation. *Bulletin of Environmental Contamination and Toxicology* 73:682-689.
- Maul, J.D. and J.L. Farris. 2003. Unusual occurrence of worm-eating warbler (*Helmitheros vermivorus*) in an intensive agricultural landscape in northeastern Arkansas. *Southwestern Naturalist* 48:297-299.
- Maul, J.D. and C.M. Cooper. 2000. Water quality of seasonally flooded agricultural fields in Mississippi, USA. *Agriculture, Ecosystems, and Environment* 81:171-178.
- Maul, J.D., C.M. Cooper, and J.A. Meador. 1997. Seasonal flooding by water control/water retention devices: Waterfowl usage of agricultural and managed areas in the Mississippi Delta. Pages 898-902 *In: Wang, S.Y., Langendoen, E.J., and Shields F.D. Jr., (eds.). Management of Landscapes Disturbed by Channel Incision, Stabilization, Rehabilitation, and Restoration, The University of Mississippi, University, MS.*
- Horn, D.J. and J.D. Maul. 1997. Northern Harrier (*Circus cyaneus*) builds nest on top of depredated mallard (*Anas platyrhynchos*) nest. *Prairie Naturalist* 29:49.

Technical Reports

- Maul, J.D. and C.M. Cooper. 1997. Seasonal wetland / waterfowl habitats created by water retention structures: A comparison. *National Sedimentation Laboratory Research Report* 6:1-47.
- Maul, J. D. 1997. Non-breeding passerine and waterfowl communities at Bagley Bottoms Wildlife Management Area in Holly Springs National Forest. Technical Report to the USDA Forest Service, Holly Springs National Forest.
- Maul, J. D. and D. J. Horn. 1996. Waterfowl habitat use and behavior at a wildlife management area in Northern Mississippi. Technical Report to the USDA Forest Service, Holly Springs National Forest.

Non-Peer-Reviewed Publications

- Maul, J.D. and C.M. Cooper. 1999. Interspecific interaction between a European Starling and a Green-winged Teal. *Mississippi Kite* 29:1-3.
- Maul, J.D. and C.M. Cooper. 1998. Aspects of seasonal field flooding: Water Quality and Waterfowl. *Proc. of the 28th Mississippi Water Resources Conf.* Pages 79-85.
- Maul, J.D. and C.M. Cooper. 1997. Escape behavior of Blue-winged Teal from predatory attack by a Northern Harrier. *Mississippi Kite* 27:21-22.

Presentations

- Maul, J.D., L.J. Schuler, J.B. Belden, M.R. Whiles, and M.J. Lydy. 2005. Effects of the fluoroquinolone antibiotic ciprofloxacin on stream microbial communities and detritivorous macroinvertebrates. Society of Environmental Toxicology and Chemistry 26th Annual Meeting, Baltimore, MD.
- Maul, J.D., J.B. Belden, B.A. Schwab, M.R. Whiles, B. Spears, J.L. Farris, and M.J. Lydy. 2005. Bioaccumulation and trophic transfer of polychlorinated biphenyls (PCBs) from aquatic and terrestrial insects to tree swallows. Society of Environmental Toxicology and Chemistry 26th Annual Meeting, Baltimore, MD.

- Belden, J.B., J.D.Maul, and M.J. Lydy. 2005. Partitioning of Ciprofloxacin in Aquatic Systems. Society of Environmental Toxicology and Chemistry 26th Annual Meeting, Baltimore, MD.
- Maul, J.D., L.J. Schuler, J.B. Belden, M.R. Whiles, and M.J. Lydy. 2005. The influence of the fluoroquinolone antibiotic ciprofloxacin on stream microbial communities and growth of selected stream macroinvertebrates. Mid-south Ozark-Prarie Joint Regional SETAC Annual Meeting, Carbondale, IL.
- Maul, J.D., J.L. Farris, and M.J. Lydy. 2004. Interaction of an ecological stressor (predation) and organophosphorous pesticides on *Ceriodaphnia dubia* survival. Society of Environmental Toxicology and Chemistry 25th Annual Meeting, Portland, OR. (Invited).
- Schwab, B.A., J.B. Belden, J.D. Maul, and M.J. Lydy. 2004. Trophic transfer of polychlorinated biphenyls (PCBs) at Crab Orchard Lake, Williamson County, Illinois. Society of Environmental Toxicology and Chemistry 25th Annual Meeting, Portland, OR.
- Wacksman, M.N., J.D. Maul, J.B. Belden, and M.J. Lydy. 2004. Age-dependent variation in mixture toxicity of an organophosphate insecticide and atrazine on *Pimephales promelas*. Society of Environmental Toxicology and Chemistry 25th Annual Meeting, Portland, OR.
- Maul, J.D., J.L. Farris, C.D. Milam, C.M. Cooper, S. Testa III, and D.L. Feldman. 2004. The influence of stream habitat and water quality on macroinvertebrate communities in Mississippi. Arkansas Soil & Water Education Conference, Arkansas State University, Arkansas.
- Maul, J.D., J.L. Farris, and M.J. Lydy. 2004. Interaction of an ecological stressor (predation) and organophosphorous pesticides on *Ceriodaphnia dubia* survival. Mid South Regional Chapter of the Society of Environmental Toxicology and Chemistry. Annual Meeting, Oxford, MS.
- Maul, J.D. and J.L. Farris. 2003. The effect of sex on avian plasma cholinesterase enzyme activity. Society of Environmental Toxicology and Chemistry 24th Annual Meeting, Austin, TX.
- 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.
- Maul, J.D. and J.L. Farris. 2003. Monitoring exposure and reproductive success of songbirds (Passerines) at sites receiving organophosphorus pesticide applications. Environmental Sciences Program Fall Research Preview. Arkansas State University, State University, AR.
- Maul, J.D. and J.L. Farris. 2003. Monitoring exposure and reproductive success of songbirds (Passerines) at sites receiving organophosphorus pesticide applications. Mid South Regional Chapter of the Society of Environmental Toxicology and Chemistry. Annual Meeting, Nashville, TN.
- 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.
- 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.
- 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.
- 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. Arkansas Biosciences Institute Fall Research Symposium, October 24, 2002, Little Rock, AR.
- 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.
- 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. Arkansas Environmental Federation Meeting, Little Rock, AR.
- 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.
- Maul, J.D. and J.L. Farris. 2001. Plasma Cholinesterase activity in the Northern Cardinal, *Cardinalis cardinalis*. Mid South Regional Chapter of the Society of Environmental Toxicology and Chemistry. Annual Meeting, Jonesboro, AR.
- Maul, J.D. and C.M. Cooper. 2000. Water quality of runoff retained on agricultural fields and impounded wetlands in Mississippi, USA. Arkansas Soil and Water Education Conference 2000, Jonesboro, AR.
- 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.
- Maul, J.D. and C.M. Cooper. 2000. Water quality of runoff retained on agricultural fields and impounded wetlands in Mississippi, USA. Society of Environmental Toxicology and Chemistry 21st Annual Meeting, Nashville, TN.
- 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.
- Maul, J.D. and C.M. Cooper. 1998. Non-breeding dabbling duck use of flooded rice and moist soil impoundments. 2nd North American Ornithological Conference, St. Louis, MO.
- Maul, J.D. and C.M. Cooper. 1998. The influence of water retention structures and associated riparian areas on avian communities within agricultural and forested sites. 2nd North American Ornithological Conference, St. Louis, MO.
- Smiley, P.C., Jr., C.M. Cooper, J.D. Maul, and S.S. Knight. 1998. Comparisons of small mammal and bird communities within impacted and created riparian habitats. 1998 joint meeting of the American Society of Limnology and Oceanography and the Ecological Society of America.
- Maul, J.D. and C.M. Cooper. 1998. The influence of seasonally flooded cropland on non-breeding waterfowl and water quality. The 1998 Mississippi Water Resources Conference, Jackson, MS.
- Maul, J.D., M.T. Moore, C.M. Cooper, and M.M. Holland. 1998. Water quality: An essential component of a field station database. University of Mississippi Field Station Science Conference, Oxford, MS.
- Maul, J.D. and C.M. Cooper. 1997. Time-activity budgets of non-breeding waterfowl using rice fields and non-agricultural areas in the Mississippi Delta. The First North American Duck Symposium & Workshop, Baton Rouge, LA.
- Maul, J.D., C.M. Cooper, and J.A. Meador. 1997. Seasonal flooding by water control/water retention devices: Waterfowl usage of agricultural and managed areas in the Mississippi

- Delta. Conference on Management of Landscapes Disturbed by Channel Incision, The University of Mississippi, MS.
- Maul, J.D. 1997. Habitat associations and behavioral analysis of non-breeding waterfowl in the Mississippi Delta. Departmental Seminar, The University of Mississippi, MS.
- Mikuska, T., J.D. Maul, and C.M. Cooper. 1997. Diurnal time-activity budgets of wintering Mallards, Northern Shovelers, Gadwalls, and Green-winged Teal. 6th Congress of Croatian Biologists; Croatian Biological Society, Zagreb.
- Maul, J.D. and C.M. Cooper. 1996. Waterfowl use of agricultural and managed areas in the Mississippi Delta. The Delta: Connecting points of view for sustainable natural resources, Memphis, TN.
- Maul, J.D. 1994. Effect of season and latitude on lipid levels in the Atlantic Silverside, *Menidia menidia*. Department of Biology Open House, The University of Mississippi, MS.

Research Grants

- Sigma Xi Grant In Aid of Research, 2003. "Interactions among contaminant and ecological stressors: a test for synergistic and antagonistic effects". PI: Maul, J.D.
- United States Forest Service, 1996. "Passerine and Waterfowl communities at a wildlife management area in Northern Mississippi". PI: Maul, J.D.
- United States Forest Service, 1995. "Effects of edge on time-activity budgets of wintering waterfowl at Holly Springs National Forest". PI: Maul, J.D.; Co-PI: Horn, D.J.

Teaching Experience

- 2005 Guest Lecturer: Fundamentals of Toxicology, Southern Illinois University (3 h lecture)
- *Basic toxicological concepts and terms, dose-response curve, log-probit analysis, and utility of toxicity tests*
- 2004 Developed laboratory for Aquatic Toxicology, Southern Illinois University
- *Students learned the theory and application of the cholinesterase (ChE)-inhibition biomarker assay for indicating organism exposure to ChE-inhibiting pesticides*
- 2003 Guest Lecturer: Ecology, Arkansas State University
- *Structure of communities in space and time, succession, intermediate disturbance hypothesis, and fundamental and realized niche*
- 2002 Guest Lecturer: Ecology, Arkansas State University
- *Structure of communities in space and time, scale dependence, succession, intermediate disturbance hypothesis, and fundamental and realized niche*
- 2002 Guest Lecturer: Ecology, Arkansas State University
- *Community dynamics, edge effects, habitat fragmentation, metapopulations, island biogeography*
- 2001 Guest Lecturer: Ecology, Arkansas State University
- *Structure of communities in space and time, succession, intermediate disturbance hypothesis, and fundamental and realized niche*
- 1997 Teaching Assistant: The University of Mississippi, Ornithology
- *Assisted with field trips and organized / taught laboratory component of the class*
- 1995 Teaching Assistant: The University of Mississippi, NSF funded Young Scholars Program (Summer)
- *Assisted with training students in aquatic field data collection and analysis*

- 1994 Teaching Assistant: The University of Mississippi, Genetics
- *Graded exams containing essay and worked problem style questions, developed a study guide based on lecture material, and assisted with laboratories*

Scholarships, Honors, and Awards

2003 Best Student Poster Presentation Award, 24th Annual meeting of the Society of Environmental Toxicology and Chemistry, Austin, TX (2003).
Society of Environmental Toxicology and Chemistry Student Travel Award (2003).
Best Student Poster Award, Mid South Regional Chapter Meeting of The Society of Environmental Toxicology and Chemistry (2002, 2003).
American Ornithologists' Unions' Marcia Brady Tucker Travel Award (2002).
Best Student Paper Award, Mid South Regional Chapter Meeting of the Society of Environmental Toxicology and Chemistry (2001, 2002).
Arkansas Environmental Federation Scholar (2001).
Mid South SETAC Student Travel Award (2001).
Northeast Arkansas Environmental Association Scholarship (2000-2001).
Performance Award, USDA-ARS (1998, 1999).
Sigma Xi, Associate member (1998).
Graduate Student Travel Award from the University of Mississippi (1996, 1997).

Membership in Professional Societies

American Association for the Advancement of Science (2004-2006)
American Ornithologists' Union (1995-2006)
Association of Field Ornithologists (1998-2004)
Cooper Ornithological Society (1995-2006)
Mid South Society of Environmental Toxicology and Chemistry (1999-2006)
Sigma Xi, Associate member (1998-2006)
Society of Environmental Toxicology and Chemistry (SETAC) (1999-2006)
Wilson Ornithological Society (1995-2004)

Peer-Reviewer for Society Journals

Archives of Environmental Contamination and Toxicology
Ecological Indicators
Environmental Research
Journal of the American Water Resources Association
Wilson Bulletin

Service for Societies and Public

Vice President of the Mid South SETAC Chapter (2004-2005).
Chair of platform session of the Mid-South Ozark-Prairie Joint Regional Chapter of the Society of Environmental Toxicology and Chemistry (SETAC), Annual Meeting. Carbondale, IL. (2005).
Co-organizer and Chair of registration committee for the Mid-South Ozark-Prarie Joint Regional Chapter of SETAC. Annual meeting, Carbondale, IL. (2005).
Science Fair Judge – Northeast Arkansas Regional Science Fair, Environmental Sciences (2004).
Chair of the Physiology session at the 3rd North American Ornithological Conference, New Orleans, LA. (2002).

Chair of platform session of the Mid South Regional Chapter of SETAC. Annual Meeting, Vicksburg, MS. (2002).
Science Fair Judge – 46th Northeast Arkansas Regional Science Fair (2002).
Board Member of the Mid South SETAC Chapter (2001-2003).
President of the Mid South SETAC Student Chapter (2002-2003).
Vice President of the Mid South SETAC Student Chapter (2001).
Arkansas State University Deans Student Advisory Committee, Environmental Sciences Program representative (2001).
Chair of the registration committee for the 2000 Annual Meeting of the Raptor Research Foundation (2000).
Search committee member for the Arkansas State University Environmental Sciences Program director (1999-2000)
Invited speaker, Career Day at Pontotoc High School, Pontotoc, MS (1998, 1999)
Science Fair Judge – Lafayette High School Science Fair, Oxford, MS (1999)
Guest speaker, STRIDE project for junior and high school students (1998)
Secretary/Treasurer - Biology Graduate Student Association (1995-1997)