

SOLOMON R. DAVID

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EDUCATION

- Ph.D. 2012 University of Michigan, Ann Arbor**
Aquatic Resource Ecology Management
Dissertation title: Life history, growth, and genetic diversity of the Spotted Gar (*Lepisosteus oculatus*) from peripheral and core populations

Dissertation Committee: Michael Wiley (chair), James Diana, Edward Rutherford, Barry OConnor
- M.S. 2008 University of Michigan, Ann Arbor**
Aquatic Sciences: Research and Management
Thesis title: The Influence of physical habitat factors on a near-shore fish community in the lower Muskegon River, Michigan
- B.S. 2000 Ohio Northern University, Ada**
Biology
Thesis title: A survey of the salamanders of genus *Ambystoma* and macroinvertebrate species in two woodland vernal pools, Hardin County, Ohio

PROFESSIONAL EXPERIENCE

- 2017-present **Assistant Professor**, Nicholls State University Department of Biological Sciences (Great Lakes, Migratory, and Ancient Fishes Ecology & Conservation; Science Communication)
- 2017 **Research Associate**, Michigan State University Department of Integrative Biology (Dr. Ingo Braasch; Evolution, Genomics, Ecology of Gars & Other Ancient Fishes)
- 2016-2017 **Research Scientist**, U.S. Geological Survey Great Lakes Science Center & John G. Shedd Aquarium (Dr. Kurt Newman; Great Lakes Native Fishes Restoration Ecology)
- 2012-2015 **Research Associate**, Daniel P. Haerther Center for Conservation & Research at John G. Shedd Aquarium and University of Wisconsin Center for Limnology (Drs. Peter McIntyre & Charles Knapp; Great Lakes Migratory Fishes Research)
- 2012 **Postdoctoral Research Fellow**, University of Michigan School of Natural Resources & Environment (Dr. James Diana; Aquaculture & Aquatic Ecology)

- 2010-2012 **Research Analyst**, University of Michigan School of Natural Resources & Environment (Dr. James Diana; Aquaculture & Aquatic Ecology)
- 2010 **Research Associate**, Michigan Sea Grant – University of Michigan (Dr. James Diana; Asian carp, Michigan native species & habitat conservation fact sheet publications & web content)

PUBLICATIONS

Peer-reviewed Publications

- David, S.R.**, S.M. King, and J.A. Stein. 2018. Introduction to a special section: Angling for dinosaurs – Status and future study of the ecology, conservation, and management of ancient fishes. *Transactions of the American Fisheries Society* 147: 623-625.
- Claussen, J., **S.R. David**, K. O'Reilly, E. Henry, N. Sopinka. 2018. #Welcome: Introducing the Science Communication Section. *Fisheries* 43: 121-122.
- King, S.M., **S.R. David**, J.A. Stein. 2018. Relative bias and precision and utility of hard structures used to age Longnose, Shortnose, and Spotted Gars. *Transactions of the American Fisheries Society* 147: 626-638.
- Farley, N.J., A.A. Vasquez, R.S. Kik IV, **S.R. David**, A.S. Katailaha, J.L. Ram. 2018. Primer designs for identification and environmental DNA (eDNA) detection of gars (*Lepisosteidae*). *Transactions of the American Fisheries Society* 147: 687-695.
- Loh, T.L., E.R. Larson, **S.R. David**, L.S. de Souza, R. Gericke, M. Gryzbek, A.S. Kough, P.W. Willink, C.R. Knapp. 2018. Quantifying the contribution of zoos and aquariums to peer-reviewed scientific research. *FACETS* 3: 287-299.
- David, S.R.** and J.J. Wright. 2017. Genetic variation and biogeography of the Spotted Gar *Lepisosteus oculatus* from core and peripheral populations. *Journal of Experimental Zoology Part B: Molecular and Developmental Evolution* 328: 596-606.
- Bronte, C.R., D.B. Bunnell, **S.R. David**, R. Gordon, D. Gorsky, M.J. Millard, J. Read, R.A. Stein, and L. Vaccaro. 2017. Report from the Workshop on Coregonine Restoration Science: U.S. Geological Survey Open-File Report 2017-1081, 23 p., <https://doi.org/10.3133/ofr20171081>.
- Rypel, A.L., **S.R. David**. 2017. Pattern and scale in latitude-production relationships for freshwater fishes. *Ecosphere* 8:e01660. doi: 10.1002/ecs2.1660

David, S.R., R.S. Kik IV, J.S. Diana, E.S. Rutherford, and M.J. Wiley. 2015. Evidence of countergradient variation in growth of Spotted Gar *Lepisosteus oculatus* from core and peripheral populations. *Transactions of the American Fisheries Society* 144: 837-850.

Madenjian, C.P., R.R. Rediske, J.P. O'Keefe, and **S.R. David**. 2014. Laboratory estimation of net trophic transfer efficiencies of PCB congeners to lake trout (*Salvelinus namaycush*) from its prey. *Journal of Visualized Experiments* 90: e51496 doi: 10.3791/51496.

Madenjian, C.P., **S.R. David**, R.R. Rediske, and J.P. O'Keefe. 2012. Net trophic transfer efficiencies of polychlorinated biphenyl congeners to lake trout (*Salvelinus namaycush*) from its prey. *Environmental Toxicology and Chemistry* 31: 2821-2827.

Madenjian, C.P., **S.R. David**, and S.A. Pothoven. 2012. Effects of activity and energy budget balancing algorithm on laboratory performance of fish bioenergetics models. *Transactions of the American Fisheries Society* 141: 1328-1337.

Wright, J.J., **S.R. David**, and T.J. Near. 2012. Gene trees, species trees, and morphology converge on a similar phylogeny of living gars (Actinopterygii: Holostei: Lepisosteidae), an ancient clade of ray-finned fishes. *Molecular Phylogenetics and Evolution* 63: 848-856.

Madenjian, C.P., **S.R. David**, and D.P. Krabbenhoft. 2012. Trophic transfer efficiency of methylmercury and inorganic mercury to lake trout *Salvelinus namaycush* from its prey. *Archives of Environmental Contamination and Toxicology* 63: 262-269.

Kwon, S.Y., J.D. Blum, M.J. Carvan, N. Basu, J.A. Head, C.P. Madenjian, and **S.R. David**. 2012. Absence of fractionation of mercury isotopes during trophic transfer of methylmercury to freshwater fish in captivity. *Environmental Science and Technology* 46: 7527-7534.

David, S.R. 2011. [Review of] An empirical synthetic pattern study of gars (Lepisosteiformes) and closely related species, based mostly on skeletal anatomy. The resurrection of holostei. Grande, L. *Copeia* 4: 612-613.

Bunnell, D.B., **S.R. David**, and C.P. Madenjian. 2009. A decline in bloater fecundity between 1981 and 2006: the role of adult condition. *Journal of Great Lakes Research* 35: 45-49.

Manuscripts in Preparation

David, S.R., R.S. Kik IV, A.M. Ferrara, W.R. Glass, J.M. Roos, J.S. Diana, and M.J. Wiley. [In Preparation]. Variation in life history patterns of the spotted gar *Lepisosteus oculatus* from core and peripheral populations.

David, S.R., and E.S. Rutherford. [In Preparation]. The Influence of physical habitat factors on a near-shore fish community in the lower Muskegon River, MI.

Non-peer Reviewed Publications (abridged)

David, S.R. 2018. [Jurassic World Fishes \[Swimming Today\]](#). The Fisheries Blog.

David, S.R. 2018. [Fisheries Science “Unplugged”](#). The Fisheries Blog.

David, S.R. 2017. [Conserving Chicago’s Lungfish Legacy](#). Southern Fried Science.

David, S.R. 2016. [Conservation of Ancient Fishes: Reintroducing the Alligator Gar; and What About Those Carp?](#) National Geographic Water Currents.

David, S.R. 2015. [Adventures with Bowfin, North America’s Underdog\(fish\)](#). The Nature Conservancy Cool Green Science.

David, S.R. 2014. [IUCN Releases First Online Global Freshwater Biodiversity Atlas](#). The Huffington Post Blog.

David, S.R. 2005. The Elusive tropical gar. Tropical Fish Hobbyist 54: 84-92.

GRANTS AND RESEARCH SUPPORT

2015-2017	Great Lakes Research (\$450,000); ArcelorMittal Corporation (co-PI with M.Parker, L.Joyce; dam removal & habitat restoration)
2015	Great Lakes Fishes Research (\$20,000); Abra Prentice Foundation (co-PI with P.Willink; dam removal & habitat restoration)
2014	Dam Removal & Habitat Restoration (\$7,500); James E. Dutton Foundation (PI)
2013-2015	Dam Removal & Habitat Restoration (\$30,000); Herrick Foundation (PI)
2013-2015	Great Lakes Research & Sustainability (\$120,000); HSBC Foundation (co-PI with P.Willink, M.Parker, L.Joyce)
2013-2015	Great Lakes Research & Sustainability (\$121,000); Institute of Museum and Library Sciences Grant (co-PI with J.Sandor, M.Parker, D.Rizzo; dam removal & habitat restoration)
2013	Dam Removal & Habitat Restoration (\$15,000); The Nature Conservancy Wisconsin (co-PI with P.Forsythe)
2012-2014	Great Lakes Research & Sustainability (\$375,000); ArcelorMittal Corporation (co-PI with M.Parker, L.Joyce; Great Lakes migratory fishes)
2011-2012	Air-breathing Fishes Aquaculture Research Grant (\$61,400); AquaFish Collaborative Research Support Program (co-PI with J.S. Diana)
2010	Rackham Graduate School Spring/Summer Research Grant (\$6,000)
2009	School of Natural Resources & Environment Research Grant (\$4,000)

- 2009 Rackham Graduate Student Research Grant (\$3,000)
- 2009 Conservation Research Grant (\$750)
North American Native Fishes Association
- 2008-2010 Travel Grants (\$2,950); Awarded for presentations at research meetings such as 2nd and 3rd International Meetings on Lepisosteid Research & Management, Midwest Fish & Wildlife Meeting, Southern Division American Fisheries Society, American Fisheries Society Annual Meeting.

PRESENTATIONS AND SEMINARS

Invited Presentations

- 2018 Louisiana State University Aquaculture and Fisheries Club, Baton Rouge
- 2018 OceanDotComm18, Louisiana Universities Marine Consortium, Cocodrie
- 2017 International Association for Great Lakes Research, Detroit
- 2016 American Fisheries Society, Kansas City
- 2015 Alliance for the Great Lakes Seminar, Chicago
- 2015 State of Lake Michigan, Traverse City
- 2015 Department of Biology Seminar, North Central College, Naperville, Illinois
- 2015 Department of Biology Seminar, Loyola University, Chicago
- 2015 National Science Teachers Association Meeting, Chicago
- 2015 University of Michigan School of Natural Resources & Environment Job Trek Panel, Chicago
- 2015 University of Wisconsin-Madison Center for Limnology Seminar
- 2014 Shedd Aquarium Trustees Leadership Series, Chicago
- 2014 University of Wisconsin-Green Bay American Fisheries Society
- 2014 Biology Department, Ohio Northern University Nature Center, Stone Creek
- 2014 Pacific Coast Cichlid Association, San Francisco
- 2014 East Coast Monster Fish Konvention 2, Parsippany, New Jersey
- 2014 Shedd Aquarium Science Pub, Chicago
- 2014 Upper Mississippi River Conservation Committee, La Crosse, Wisconsin
- 2013 Elliott Donnelley Chapter of Trout Unlimited, Chicago
- 2013 East Coast Monster Fish Konvention, Parsippany, New Jersey
- 2013 American Fisheries Society, Little Rock
- 2013 Alliance for the Great Lakes, Chicago
- 2013 Wildlife Conservation Club, University of Illinois Urbana-Champaign
- 2012 University of Michigan Hooper Aquatic Seminar Series, Ann Arbor
- 2012 4th Meeting of the International Network for Lepisosteid Research & Management, Villahermosa, Mexico
- 2011 NOAA Scientific Advisory Board, Ann Arbor
- 2010 3rd Meeting of the International Network for Lepisosteid Research & Management, Thibodaux, Louisiana
- 2010 Stewardship Network Webcast, Ann Arbor
- 2008 2nd Meeting of the International Network for Lepisosteid Research & Management, Heredia, Costa Rica

Contributed Presentations

- 2016 Joint Meeting of Ichthyologists and Herpetologists, New Orleans
- 2015 Joint Meeting of Ichthyologists and Herpetologists, Reno
- 2014 American Fisheries Society, Quebec City
- 2014 International Association for Great Lakes Research, Hamilton, Ontario

Symposia and Workshops Organized

- 2018 One Size Does Not Fit All: Tailoring Science Communication for Diverse Audiences; American Fisheries Society, Atlantic City
- 2017 From the Field to The Hill: Science Communication with Policymakers; American Fisheries Society, Tampa
- 2017 #SocialGreatLakes: Communicating Great Lakes science through social media; International Association for Great Lakes Research, Detroit
- 2017 A tribute to Jim Diana and his influence on Great Lakes research and management; International Association for Great Lakes Research, Detroit
- 2016 Department of Interior Coregonine Restoration Science Workshop, Ann Arbor
- 2016 Angling for Dinosaurs: Status and future study of the ecology, conservation and management of ancient fishes; American Fisheries Society, Kansas City

TEACHING EXPERIENCE

Assistant Professor

- 2017-present Basic Biology for Non-majors (BIOL 105), Nicholls State University
- General Biology (BIOL 155), Nicholls State University
- Biology of Fishes (BIOL 348), Nicholls State University
- Evolution & Ecology (BIOL 370), Nicholls State University
- Teaching Internship (BIOL 500), Nicholls State University

Lecturer

- 2015 Ichthyology (BIO 368), Ohio Northern University, fall semester
- 2012 Biology of Fishes (EEB 440), University of Michigan, fall semester
- 2011 Ichthyology (BIO 482, 582), Eastern Michigan University, fall semester

Invited Guest Lecturer

- 2018 Vertebrate Biodiversity and Conservation (BI458), Levi Moore, Wilfred Laurier University
- 2017 Honors Colloquium in Biological Sciences (BIOL 406), Dr. Gary LaFleur, Nicholls State University
- 2015 Molecular Aquatic Ecology (BIO 5180), Dr. Jeff Ram, Wayne State University
- 2014-2015 Ecology of Fishes (ZOO 510), Dr. Peter McIntyre, University of Wisconsin-Madison
- 2014 Ichthyology (BIO 341) Field Lab, Dr. Patrick Forsythe,

- 2005 University of Wisconsin-Green Bay
Ecology of Fishes (EEB 487), Dr. James Diana,
University of Michigan
- 2003-2004 Ecology of Fishes (EEB 487), Dr. Edward Rutherford,
University of Michigan

Teaching Assistant

- 2001-2008 Parasitology (EEB 341), Dr. Barry OConnor,
University of Michigan
- 2003-2004 Biology of Fishes (EEB 440), Dr. Kevin Wehrly,
University of Michigan
- 2000 Biological Photography (BIO 290), Dr. Erik Nelson,
Ohio Northern University
- 1999 Invertebrate Zoology (BIO 223), Dr. Erik Nelson,
Ohio Northern University
- 1998-1999 Biology/Zoology/Botany (BIO 121,122,123), All Sections,
Ohio Northern University
- 1998-1999 Developmental Anatomy (BIO 301), Dr. Nelson Moore,
Ohio Northern University

Student Mentorship

- 2018-present Sarah Fontana, Graduate Advisor (MS)
Nicholls State University
- 2018-present Andrew Cumberland, Graduate Committee (MS)
Nicholls State University
- 2017 Sarah Rogers, Undergraduate Seminar
Nicholls State University
- 2015-present Olivia King, Conservation Research Intern
North Central College
- 2014-present Amy Cottrell, Field and Lab Research Assistant
University of Wisconsin-Green Bay, Auburn University
- 2014 Kayla Obremski, Aquatic Ecology Term Research Project
University of Wisconsin-Green Bay
- 2013-2015 Rachel Van Dam, Graduate Committee (MS)
University of Wisconsin-Green Bay
- 2013 Jon Bitner, Conservation Research Intern
North Central College
- 2012 Jayme Wagner, AquaFish Collaborative Research Support Program
Eastern Michigan University
- 2009-2010 Madison Schaeffer, Howard Hughes Medical Foundation Fellow
Bryn Mawr College
- 2009 Amy Poopat, Creative Scientific Inquiry Experience Program
Eastern Michigan University

RESEARCH EXPERIENCE

- 2010 Research Assistant, USGS Great Lakes Science Center
(Dr. Charles Madenjian; Lake Trout Bioenergetics Modeling)
- 2009 Research Assistant, University of Michigan
(Dr. David Jude; Great Lakes Larval Fishes Analyses)
- 2008 Research Assistant, USGS Great Lakes Science Center
(Dr. Kurt Kowalski; DIDSON Analysis of Fishes Movement in Crane
Creek, high-resolution acoustics)
- 2007 Research Assistant, NOAA Great Lakes Environmental Research
Laboratory (Dr. Carlo DeMarchi; Water Quality Modeling)
- 2006 Research Assistant, USGS Great Lakes Science Center
(Dr. David Bunnell; Bloater Condition & Fecundity Project)
- 2005 Research Assistant (Crew Leader), University of Michigan
(Dr. Michael Wiley; Muskegon River Project, Crane Creek Wetlands
Project)
- 2001-2004 Research Assistant (Crew Leader), University of Michigan
(Drs. Michael Wiley & Edward Rutherford; Muskegon River Projects,
salmonid, fish community, and habitat assessment)
- 2000 Research Assistant, University of Michigan
(Dr. Edward Rutherford; Muskegon River Steelhead Parr Assessment)

PROFESSIONAL MEMBERSHIPS

Alpha Lambda Delta Honor Society
American Fisheries Society
American Society of Ichthyologists and Herpetologists
International Association for Great Lakes Research
International Network for Lepisosteid Research and Management
International Union for Conservation of Nature Freshwater Fish Specialist Group
Lepisosteid Research and Management Committee/Alligator Gar Technical Committee
North American Native Fishes Association
World Fish Migration Foundation

SERVICE, OUTREACH, AND AWARDS

- 2018 Search Committee Member, Department of Biological Sciences tenure-track Faculty Search
- 2017-present Biology Department Representative and Social Media for Give-N-Day fundraising through Nicholls Foundation
- 2017-present President, Science Communication Section of American Fisheries Society

- 2017 Science Party – Guest Host of Twitter chat on Science Communication for Conservation Underdogs
- 2017 [Zoology for Kids](#) – Q & A on Ancient Fish and Freshwater Biodiversity
- 2016-present Fisheries Science Communication
[The Fisheries Blog](#), [Southern Fried Science](#)
- 2016 World Fish Migration Day Presentation, Beaumont Middle School, Lexington, Kentucky
- 2016 University of Michigan School of Natural Resources & Environment Alumni Career Panel
- 2015-present Conservation Research Blogger
The Nature Conservancy – [Cool Green Science Blog](#)
- 2014-2016 [World Fish Migration Day](#) – Team Leader at Shedd Aquarium
- 2014 Television Special Guest – Great Lakes Native Fisheries
Great Lakes Now – The Nature Conservancy & Detroit Public TV
- 2013-2016 Guest Blogger
Huffington Post – Shedd Aquarium
- 2012-present Science Communicator – Twitter
[@SolomonRDavid](#) (verified account), [@PrimitiveFishes](#), [@FisheriesBlog](#)
- 2012-2016 Conservation Research Blogger
[National Geographic Voices](#) – Shedd Aquarium
- 2011 Alumni War Memorial Award
School of Natural Resources & Environment,
Michigan Natural Resources Society
- 2011-present Reviewer, Biological Reviews, American Midland Naturalist, Copeia, Fisheries, Journal of Great Lakes Research, Ecology of Freshwater Fish, Transactions of the American Fisheries Society, North American Journal of Fisheries Management
- 2010 James S. Diana Aquatic Ecology Scholarship
School of Natural Resources & Environment
- 2010 Reviewer, Fishes of the greater Mekong River ecosystem, University of Michigan Museum of Zoology, Miscellaneous Publications.
- 2009 Graduate Student Representative on Conservation Ecology Faculty Search Committee, School of Natural Resources & Environment
- 2009 Karl F. Lagler Award for Outstanding Scholar in Aquatic Sciences
School of Natural Resources & Environment
- 2009-2010 Doctoral Student Representative
School of Natural Resources & Environment Student Government
- 2009-2011 Co-founder, Co-editor, Writer for School of Natural Resources & Environment Aquatics Student Newsletter “The Water Column”
http://sitemaker.umich.edu/srdavid/files/thewatercolumn_vol2_issue1.pdf
- 2009-present Founder, Creator, Designer of Lepisosteid Research & Resource Website
<http://lepisosteidae.net>
- 2008-2012 Primary Consultant & Guest Lecturer
Great Lakes Ecology and Habitat display for Saline Elementary Schools
- 2008-2011 Student Representative for the Aquatics Field of Study
School of Natural Resources & Environment

- 2008-2012 Orientation Leader, Aquatics Representative
School of Natural Resources & Environment new student orientation
- 2007-2011 Aquatic Sciences Track Leader
School of Natural Resources & Environment
- 2007 SNRE Representative
Recruitment event at Howard University, Washington DC.
- 2004-2009 Co-Founder and Executive Member
Aquarium Society of Ann Arbor
- 2003-present Founder, Creator, and Designer
<http://primitivefishes.com>

Biological Photography (Fish Identification)

- David, S.R.** 2017. Back Page: Spotted Gar. *Fisheries* 42: 448.
- David, S.R.** 2016. Spotted gar. *In* D. Parichy, author. The gar is a fish...is a bird...is a mammal? *Nature Genetics* 48: 344-345.
- David, S.R.** 2011. Spotted gar (cover). *In* A. Amores, J. Catchen, A. Ferrara, Q. Fontenot, and J.H. Postlethwait, authors. Genome evolution and meiotic maps by massively parallel DNA sequencing: spotted gar, an outgroup for the teleost genome duplication. *Genetics* 188: 799-808.
- David, S.R.** 2010. Spotted gar, longnose gar. *In* L.D. Corkum, author. Fishes of Essex County and surrounding waters. Essex County Field Naturalists' Club. Windsor.
- David, S.R.** 2009. Spotted gar, Florida gar, bowfin. *In* E. Holm, N. Mandrak, and M. Burrige, authors. The Royal Ontario Museum Field Guide to Freshwater Fishes of Ontario. Royal Ontario Museum. Toronto.
- David, S.R.** 2007. Rope fish series. *In* P. Purser, author. Understanding the reedfish (*Erpetoichthys calabaricus*). *Tropical Fish Hobbyist* 55: 118-125.
- David, S.R.** 2007. Australian lungfish, *Polypterus endlicheri congicus*, crocodile gar, alligator gar, bowfin, African lungfish. *In* A. Kwasniak, author. Ancient fishes: how have they survived? *Nasze Akwarium (Poland)* 85: 5-12.
- David, S.R.** 2007. South American lungfish series. *In* J. Topfer, author. Sir John Graham Kerr and the South American lungfish (*Lepidosiren paradoxa*). *Der Makropode (Germany)* 29: 5-24.
- David, S.R.** 2006. South American lungfish. *In* D. Rojat and J. Perol, editors. Fishes with lungs? *Sciences de la Vie et de la Terre*. Editions Nathan, Paris.