

Michael A. Eggleton, Ph.D.

Associate Professor / Undergraduate Coordinator

Department of Aquaculture and Fisheries

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CAREER OBJECTIVE

My goal is to conduct applied research to solve fisheries management issues using empirical and theoretical techniques, and to educate and inspire students to be our future natural resource managers and conservationists.

EDUCATION

1996-2001. Mississippi State University - Starkville, MS. Ph.D. in Fisheries, 2001. Emphasis in fisheries management and ecology; minor in statistics. Dissertation title: "Catfish feeding ecology and bioenergetics in a large river-floodplain ecosystem." Advisor: Harold L. Schramm, Jr., Professor of Fisheries / Leader, Mississippi Cooperative Fish and Wildlife Research Unit.

1987-1989. Tennessee Technological University - Cookeville, TN. M.Sc. in Biology, 1989. Emphasis in fisheries and aquatic biology. Thesis title: "Ecological characterization of an acid-sensitive southern Appalachian stream targeted for mitigative liming." Advisor: Eric L. Morgan, Professor of Biology (ret.).

1982-1986. West Virginia State College - Institute, WV. B.Sc. in Biology, 1986. Emphasis in invertebrate zoology; minor in chemistry. Advisor: Barbara J. Oden, Professor/Chair of Biology (ret.).

EMPLOYMENT

Associate Professor / Undergraduate Coordinator, University of Arkansas at Pine Bluff, Aquaculture / Fisheries Center, 2009-present. Twelve-month tenure-track appointment classified as 45% Teaching / 45% Research / 10% Service.

Assistant Professor / Undergraduate Coordinator, University of Arkansas at Pine Bluff, Aquaculture / Fisheries Center, 2003-2009. Twelve-month tenure-track appointment classified as: 45% Teaching / 45% Research / 10% Service.

Post-Doctoral Research Associate, University of Oklahoma, Sam Noble Oklahoma Museum / University of Oklahoma Biological Station, 2001-2003.

Graduate Research Assistant (Ph.D.), Department of Wildlife and Fisheries / Mississippi Cooperative Fish and Wildlife Research Unit, Mississippi State University, 1997-2001.

Research Associate / Specialist, Water Resources Center / Biology Department / Tennessee Cooperative Fishery Research Unit, Tennessee Technological University, 1989-1996.

Graduate Research Assistant (M.Sc.), Water Resources Center / Biology Department, Tennessee Technological University, 1987-89.

Water Quality/Bioassay Technician, Technical Testing Laboratories, Inc., Charleston, WV, 1986.

Aquatic Biologist Intern, West Virginia Department of Natural Resources - Division of Water Resources, Charleston, WV, 1985-86.

RESEARCH EXPERIENCE

2016-present. Effects of Asian carp invasions on fisheries and fish assemblages in the lower White River. This line of research is new, and will assess current oxbow lake fish assemblages and juvenile fish dynamics of selected species versus historical datasets that pre-date the recent invasion of Asian carps and northern snakeheads. Funded by: UAPB Aquaculture / Fisheries Center and U.S. Fish and Wildlife Service (**principal investigator**).

2016-present. Interior Least Tern surveys in lower Arkansas below Dam 2. Funded by: U.S. Army Corps of Engineers – Little Rock District (2016; **principal investigator**) and subcontract through Arkansas Tech University (2017; **primary subcontractor**).

2013-2015. Bass growth-hydrology relationships in the lower Ouachita River. This was an unfunded project done in conjunction with three AGFC district biologists at the request of an AGFC commissioner. Using otoliths available from previous studies, this project examined relationships between largemouth bass growth and river basin hydrology. Under my guidance, a UA-Little Rock senior completed their senior project on this study, and generated one publication (**principal investigator**).

2013-2015. Recruitment studies of largemouth bass in Arkansas. During the first phase of this work, we examined first-year dynamics of age-0 largemouth bass in southeastern Arkansas lakes, with special emphasis on identifying recruitment bottlenecks. Funded by: UAPB Aquaculture / Fisheries Center (**principal investigator**).

2004-2011. Arkansas River black bass fishery investigations. Multi-faceted assessment of black bass populations throughout the lower Arkansas River. This research quantified vital population statistics; assessed relations between bass and off-channel habitats; assessed bass catch and harvest, and angler effort patterns; estimated tournament-associated impacts on bass fisheries; examined bass-hydrology relationships; and modelled the effects of current and alternative length-limit regulations on the fishery. Funded by: UAPB Aquaculture / Fisheries Center and Arkansas Game and Fish Commission (**principal investigator**).

2006-2009. Arkansas River Mitigation Study. This study involved characterization of dike field habitats prior to proposed notching with respect to fish communities and aquatic habitats in the lower Arkansas River. This was a large collaborative effort that involved five universities and one federal agency across three states. Funded by: U.S. Army Corps of Engineers (**principal investigator**). (study officially on hiatus following Year 1 pending further availability of federal funding)

2003-2004. White River floodplain lake fisheries assessment. Assessment of fish assemblage-environment relationships in selected floodplain lakes of the lower White River, Arkansas. Funded by: USDA—Agriculture Research Service and UAPB Aquaculture / Fisheries Center.

2001-2003. Lake Texoma (Oklahoma-Texas) assimilative capacity study. Assessment of spatial and temporal patterns in littoral- and riparian-zone biotic assemblages of Lake Texoma relative to anthropogenic stresses, and use of Lake Texoma as a model reservoir ecosystem in relation to a wide variety of anthropogenic stresses including agriculture, industrial discharges, oil production, marina operations, and municipal runoff. Funded by: U.S. Environmental Protection Agency and U.S. Army Corps of Engineers (**post-doctoral researcher**).

2001-2002. Zebra mussel modeling. Assessing the potential of fish predation to impact zebra mussel *Dreissena polymorpha* populations across a latitudinal gradient using a bioenergetic-based modelling approach. Funded by: U.S. Army Corps of Engineers (**principal investigator**).

1996-2001. Lower Mississippi River fisheries and floodplain investigations. Assessed spatial and temporal variation in riverine fish assemblages in response to different river trainment strategies; evaluation of catfish bioenergetics in different riverine habitats and in relation to seasonal flooding regimes (dissertation topic). Funded by: U.S. Army Corps of Engineers (**graduate student**).

1999-2000. Analysis of floodplain inundation patterns in the lower Mississippi River using a geospatial (Geographic Information System) approach. Funded by: U.S. Fish and Wildlife Service and U.S. Geological Survey.

1992-1996. Influence of seasonal water-level management strategies and habitat manipulations on recruitment of black basses and crappies in Chickamauga Reservoir, Tennessee. Funded by: Tennessee Wildlife Resources Agency and Tennessee Valley Authority.

1990-1994. Assessment of stocking strategies, harvest patterns, and angler satisfaction with put-and-take rainbow trout fisheries in several Tennessee streams. Funded by: Tennessee Wildlife Resources Agency (**co-principal investigator**).

1991-1993. Assessment of land use and environmental influences on fish and macroinvertebrate communities of an undeveloped interstate river basin (Clinch River, TN-VA) with several threatened and endangered aquatic species. Funded by: Tennessee Wildlife Resources Agency and U.S. Fish and Wildlife Service.

1988-1990. Use of GIS/spatial information technology for development of stream management strategies in coal-producing regions of Kentucky and Tennessee. Funded by: U.S. Office of Surface Mining Reclamation and Enforcement.

1987-1991. Laurel Branch Acid Precipitation Mitigation Program (NAPAP National Demonstration Study). Assessment of protective liming on an upland stream ecosystem as compared to an unmanipulated reference stream in the southern Appalachian Mountains (thesis topic); evaluation of a hydraulic turbine limestone doser for wide scale implementation. Funded by: U.S. Fish and Wildlife Service and Tennessee Department of Health and Environment (**graduate student / co-principal investigator**).

TEACHING EXPERIENCE

Fall 2003 – present:

AQFI 1102 Topics in Aquaculture and Fisheries: Introductory survey course that exposes first-term freshmen to the spectrum of careers in aquaculture and fisheries biology. Students also develop a four-year college “Career Plan” under the guidance of their advisors. UG – taught every fall.

AQFI 2247/2147 Fisheries Techniques and Laboratory: Introduction to the methods and techniques used in the collection of fishes and fisheries data. Students are exposed to various sampling gears, analytical approaches, and considerations of using such equipment and procedures. UG – taught every fall.

AQFI 4201 Senior Seminar: This is a senior-level capstone course required of all fisheries majors during their senior years. UG – taught jointly every spring with two other departments.

AQFI 3371 Fisheries Management: A continuation of Fisheries Techniques. This course integrates Fisheries Techniques with approaches used to manage fisheries, specifically emphasizing inland freshwater systems. Methods of harvest and population manipulation are discussed as they pertain to addressing management in different aquatic systems. UG – taught every spring.

AQFI 2601-2602-2603 Aquaculture and Fisheries Internship: These credits can be earned by students enrolled in a bonafide internship in aquaculture or fisheries biology. Course is administered in conjunction with UAPB Career Services office. UG – taught every summer.

GAQF 5325 Fish Population Dynamics: This course provides students with the basic principles and foundational theories from the field of population dynamics, with emphasis on freshwater sport fishes. Students learn standard methods to estimate fish population size, growth, mortality, recruitment, production, and yield. Fishery simulation modeling and study of stock-recruitment relationships also are covered. GR – taught fall of even years.

GAQF 5445 Stream Ecology: Students study the chemical, physical, and biotic factors that affect stream organisms in addition to studies of how stream ecosystems function. Stream habitat management, impact assessment, and watershed factors are emphasized. Connections with fisheries and habitat management issues are made as applicable. GR – taught fall of odd years.

GAQF 5300 Research Methods and Scientific Writing: This course is team-taught by the entire faculty. The two main objectives of the course are: 1) to familiarize students with planning and execution of scientific experiments and 2) to enable students to convey research results effectively through written communications. My responsibility is usually 5-6 separate lectures and labs on topics such as writing introductions, cover letters, and resumes. GR – team-taught every spring.

Occasional:

AQFI 2247 Web-based Fisheries Techniques: Blackboard-based section of the Fisheries Techniques lecture. UG – taught every fall semester during six of eight years from 2007-2014.

HLPE 1124 Recreational Fishing: Course is designed to introduce students to recreational fishing. Students develop the basic skills, techniques, and knowledge involved with recreational fishing. Fishing trips are conducted to local ponds, lakes, and streams. UG – Two sections team-taught every spring from 2009-2012.

GAQF 5195/5916 Graduate Seminar: Theme-based seminars are presented each week by faculty, staff, students, and guest lecturers. Approaches include recent perspective and historical overviews, and critiques of recent research in aquaculture and fisheries. GR – team-taught every spring.

GRANTS

Research (external):

Asian carp effects on age-0 fish dynamics in the lower White River, Arkansas. U.S. Fish and Wildlife Service – Gulf States Marine Fisheries Commission. \$25,360. 2016-2017. (grant matched by UAPB Aquaculture/Fisheries Center).

Long-term fisheries and habitat monitoring for the Arkansas River Navigation Project – Tasks 2 and 3. U.S. Army Corps of Engineers. \$197,228. 2006-2009 (approximately 1/3 received – study on hiatus pending further federal funding).

Assessing the potential of fish predation to impact zebra mussel *Dreissena polymorpha* populations using a bioenergetics models. U.S. Army Corps of Engineers. \$10,000. 2001-2002.

Assessment of stocking strategies harvest patterns, and angler satisfaction with put-and-take rainbow trout fisheries in several Tennessee streams. Tennessee Wildlife Resources Agency. \$8,400. 1990-1994.

Laurel Branch Acid Precipitation Mitigation Program (NAPAP National Demonstration Study). Assessment of protective liming on an upland stream ecosystem as compared to an unmanipulated reference stream in the southern Appalachian Mountains (thesis topic); evaluation of a hydraulic turbine limestone doser for wide scale implementation. U.S. Fish and Wildlife Service and Tennessee Department of Health and Environment. \$800,000. 1986-1991.

Research (internal):

Fisheries responses to Asian carp invasions in lower White River oxbow lakes. UAPB Aquaculture/Fisheries Center. \$93,000 (assistantship + supporting funds). 2016-2019.

Examination of stock-recruit relationships and characterization of factors influencing largemouth bass age-0 dynamics and year-class strength in selected Arkansas lakes. UAPB Aquaculture/Fisheries Center. \$93,000 (assistantship + supporting funds). 2013-2015.

Assessment of length-limit regulations, relationships with hydrology, and stock structure of Arkansas River largemouth bass populations. UAPB Aquaculture/Fisheries Center. \$95,000 (assistantship + supporting funds). 2010-2012.

Arkansas River largemouth bass exploitation study. UAPB Aquaculture/Fisheries Center and Arkansas Game and Fish Commission. \$84,000 (assistantship + supporting funds). 2007-2010.

Arkansas River black bass fishery assessment. UAPB Aquaculture/Fisheries Center. \$84,000 (assistantship + supporting funds). 2004-2006.

Non-Research:

U.S. Army Corps of Engineers – Little Rock District, subcontract through Arkansas Tech University. Least tern survey of the lower Arkansas River below Dam 2. \$5,769. 2017.

U.S. Army Corps of Engineers – Little Rock District. Least tern survey of the lower Arkansas River below Dam 2. 2016. \$2,996.

Arkansas Game and Fish Commission internship program (administered for AGFC). \$3,800. 2009.

National Cooperative Fisheries Scholars program (renewal). U.S. Geological Survey – Biological Resources Division. \$750,000. 2008-2012.

Development of a Spanish language undergraduate recruitment brochure for the Department of Aquaculture and Fisheries. University of Arkansas at Pine Bluff – Title III. \$850. 2008-2009.

U.S.D.A. – APHIS Wildlife Services Scholarship program. US Department of Agriculture – Animal Plant Health Inspection Service – Wildlife Services. \$48,000. 2008-2011.

Integrating teaching and learning (INTEL) laboratory: creating a high-tech learning environment for students. US Department of Agriculture. \$199,017. 2006-2009.

National Cooperative Fisheries Scholars program (renewal). U.S. Geological Survey – Biological Resources Division. \$276,642. 2005-2007.

PUBLICATIONS

Book editor:

Chen Y., D.C. Chapman, J.R. Jackson, D. Chen, Z. Li, K.J. Killgore, Q.E. Phelps, and M.A. Eggleton, editors. 2016. Fishery Resources, Environment, and Conservation in the Mississippi and Yangtze River Basins. American Fisheries Society Special Symposium No. 84. American Fisheries Society, Bethesda, MD.

Peer-reviewed articles: (*graduate student co-authored, **undergraduate student co-authored)

Eggleton, M.A., Q.C. Fontenot, and J.R. Jackson. 2016. The Lower Mississippi River floodplain ecosystem: current status and future potential. Pages 235-262 in Y. Chen, D.C. Chapman, J.R. Jackson, D. Chen, Z. Li, K.J. Killgore, Q.E. Phelps, and M.A. Eggleton, editors. Fishery resources, environment, and conservation in the Mississippi and Yangtze river basins. American Fisheries Society Special Symposium No. 84. American Fisheries Society, Bethesda, MD.

Hecke, K.B.**, E.L. Brinkman, B.A. Timmons, J.A. Olive, and M.A. Eggleton. 2016. Relationships between growth and hydrology for largemouth bass in the Ouachita River, Arkansas. *Journal of the Southeastern Assn. of Fish and Wildlife Agencies* 3:104-111. (senior project at University of Arkansas at Little Rock)

Fernando, A.V.*, J.N. Ford**, and M.A. Eggleton. 2014. Assessment of the feasibility of using consumer-grade webcams for stereophoto measurement of fish lengths. *Arkansas Environmental, Agricultural and Consumer Sciences Journal* 14:7-12. (undergraduate internship project at UAPB)

- Fernando, A.V.*, C.R. Peacock, B.W. Baker, and M.A. Eggleton. 2014. Ageing precision and error analysis of whole-view and sectioned otoliths in largemouth bass and spotted bass. *Journal of the Southeastern Assn. of Fish and Wildlife Agencies* 1:75-82.
- Fernando, A.V.** and M.A. Eggleton. 2013. Comparison of the modern fish assemblage in Mound Pond (Lonoke County) with the archeological record. *Journal of the Arkansas Academy of Science* 67:46-52. (undergraduate class project)
- Eggleton, M.A., B.G. Batten, C.R. Peacock*, and S.E. Lochmann. 2012. Spotted bass population characteristics and relationships with macrohabitat variables in the Arkansas River, Arkansas. *Proceedings of the Southeastern Assn. of Fish and Wildlife Agencies* 66:49-56.
- Peacock, C.R.*, B.G. Batten*, and M.A. Eggleton. 2011. Comparison of various minimum-length limits for the largemouth bass fishery in the Arkansas River, Arkansas. *Proceedings of the Southeastern Assn. of Fish and Wildlife Agencies* 65:148-155.
- Eggleton, M.A., J.R. Jackson, and B.J. Lubinski*. 2010. Comparison of gears for sampling littoral-zone fishes in floodplain lakes of the lower White River, Arkansas. *North American Journal of Fisheries Management* 30:928-939.
- Eggleton, M.A., B.G. Batten*, and S.E. Lochmann. 2010. Largemouth bass fishery characteristics in the Arkansas River, Arkansas. *Proceedings of the Southeastern Assn. of Fish and Wildlife Agencies* 64:160-167.
- Eggleton, M.A., J.R. Jackson, and B.J. Lubinski*. 2009. Potential for a minimum-length limit regulation to improve floodplain lake crappie fisheries in Arkansas. *Proc. of the Southeastern Assn. of Fish and Wildlife Agencies* 63:97-103.
- Neal, J.W., M.A. Eggleton, and A.E. Goodwin. 2009. The effects of largemouth bass virus disease on a quality largemouth bass population in Arkansas. *Journal of Wildlife Diseases* 45:766-771.
- Fontaine, B.V.*, C.P. Hutt, and M.A. Eggleton. 2009. Assessment of catch and exploitation of largemouth bass (*Micropterus salmoides*) fisheries in the lower Arkansas River: potential impacts of competitive tournaments. *Proceedings of the Southeastern Assn. of Fish and Wildlife Agencies* 63:111-118.
- Lubinski, B.J.*, J.R. Jackson, and M.A. Eggleton. 2008. Relationships between floodplain lake fish communities and environmental gradients in a large river-floodplain ecosystem. *Trans. of the American Fisheries Society* 137:895-908.
- Hargrave, C.W.*, R. Ramirez**, M.A. Brooks**, M.A. Eggleton, K.G. Sutherland, P.R. Deaton*, and H.S. Galbraith*. 2006. Species-specific ecosystem effects enhance production of a primary consumer through indirect food web interactions. *Freshwater Biology* 51:1901-1910.
- Schramm, H.L., Jr. and M.A. Eggleton. 2006. Applicability of the flood-pulse concept to temperate floodplain river ecosystems: thermal and temporal components. *Rivers Research and Applications* 22:543-553.
- Eggleton, M.A., R. Ramirez**, C.W. Hargrave*, K.B. Gido, J.R. Masoner, G.D. Schnell, and W.J. Matthews. 2005. Predictability of littoral-zone fish assemblages through ontogeny in Lake Texoma, Oklahoma-Texas, USA. *Environmental Biology of Fishes* 73:21-36.
- Eggleton, M.A., L.E. Miranda and J.P. Kirk. 2004. The potential for fish predation to impact zebra mussels *Dreissena polymorpha*: insight from bioenergetics models. *Ecology of Freshwater Fish* 13:85-95.
- Eggleton, M.A.* and H.L. Schramm, Jr. 2004. Feeding ecology and energetic relationships with habitat of blue catfish *Ictalurus furcatus* and flathead catfish *Pylodictis olivaris* in the lower Mississippi River, USA. *Environmental Biology of Fishes* 70:107-121.
- Eggleton, M.A., K.B. Gido, W.J. Matthews and G.D. Schnell. 2004. Assessment of anthropogenic influences on littoral-zone aquatic communities of Lake Texoma, Oklahoma-Texas, USA. *Ecohydrology and Hydrobiology* 4:103-117.

Leao, M.*, M.A. Eggleton, and E.R. Buckner. 2004. Fish utilization and diversity associated with created wetlands within the White River watershed. *Proceedings of the Southeastern Assn. of Fish and Wildlife Agencies* 58:162-173.

Eggleton, M.A.* and H.L. Schramm, Jr. 2003. Energetic gradients in catfish feeding in the lower Mississippi River, USA. *Ecohydrology and Hydrobiology* 3:27-38.

Eggleton, M.A.* and H.L. Schramm, Jr. 2002. Caloric densities of selected fish prey organisms from the lower Mississippi River. *Journal of Freshwater Ecology* 17:409-414.

Eggleton, M.A. and E.L. Morgan. 2000. Rainbow trout production and relations with abiotic factors in two southern Appalachian streams. *Journal of Freshwater Ecology* 15:251-268.

Schramm, H.L., Jr., M.A. Eggleton*, and R.M. Mayo*. 2000. Habitat conservation and creation: invoking the flood-pulse concept to enhance fisheries in the Lower Mississippi River. *Polskie Archiwum Hydrobiologii* 47:45-62.

Eggleton, M.A., E.L. Morgan and W.L. Pennington. 1996. Effects of liming on an acid-sensitive southern Appalachian stream. *Restoration Ecology* 4:247-263.

O'Bara, C.J. and M.A. Eggleton. 1995. Evaluation of three small-scale rainbow trout put-and-take fisheries in Tennessee streams. *Proceedings of the Southeastern Assn. of Fish and Wildlife Agencies* 49:78-87.

Eggleton, M.A., E.L. Morgan, W.L. Pennington, and T.P. Weaver. 1991. Stream response to limestone additions using a hydropowered dosing apparatus in Laurel Branch, Tennessee. *Acid Rain Mitigation: Liming Technologies and Environmental Considerations* Special Symposium. American Chemical Society – Division of Environmental Chemistry 31:153-157.

Other articles:

Eggleton, M.A. and S.H. Jones. 2017. "Length-limit regulations in fisheries: the science behind the regulation." UAPB Cooperative Extension Program – Miscellaneous Publication Series (in review).

Eggleton, M.A., B.G. Batten, B.V. Fontaine, and C.R. Peacock. 2015. "Long-term Arkansas River fishery investigation leads to change in largemouth bass minimum-length limit." *Arkansas Aquafarming* 32(1):1-2.

Peacock, C.R., B.G. Batten, B.V. Fontaine, and M.A. Eggleton. March-April 2013. "Current trends: bass growth comes and goes with the flows." *Arkansas Wildlife* 44(2):10-12.

Batten, B. and M. Eggleton. May-June 2009. "Seeing spots: don't forget the black bass family's other member." *Arkansas Wildlife*, pp. 10-11.

Batten, B. and M. Eggleton. 8 April 2009. "Current state of the Arkansas River largemouth bass fishery." *Arkansas Outdoors* (<http://www.agfc.com/news/arkansasoutdoors.aspx>).

Batten, B. and M. Eggleton. 27 April 2005. "Sizing up largemouth bass in Arkansas River." *Arkansas Outdoors* (<http://www.agfc.com/news/arkansasoutdoors.aspx>).

Selected Technical Reports:

Eggleton, M.A., S.H. Jones, C.R. Colen, and O.C. Duffy. 2016. Least Tern survey – lower Arkansas River below Dam 2. Completion report submitted to the U.S. Army Corps of Engineers – Little Rock District, Contract No. W9127S-14-P-0127.

Eggleton, M.A., B.G. Batten, and B.V. Fontaine. 2008. Task 2 – Arkansas River Mitigation Study: Characterization of dike fields prior to proposed notching with respect to fish communities and aquatic habitats in the lower Arkansas River – 2007 project report. U.S. Army Corps of Engineers – Little Rock District and Waterways Experiment Station.

Schnell, G.D., W.J. Matthews, M.A. Eggleton, K.B. Gido, and D.W. Pogue. 2003. System assimilative capacity (SAC) study, Lake Texoma (Oklahoma-Texas): determination of aquatic and sediment eco-effects. Final project report (1999-2001). U.S. Environmental Protection Agency - Kerr Research Laboratory and U.S. Army Corps of Engineers - Tulsa District.

Eggleton, M.A., L.E. Miranda, and J.P. Kirk. 2003. The potential for fish predation to impact zebra mussels *Dreissena polymorpha* across a latitudinal gradient: insight from bioenergetics models. U.S. Army Corps of Engineers Technical Report ERDC/EL TR-03-22.

Schnell, G.D., W.J. Matthews, M.A. Eggleton, K.B. Gido, and D.W. Pogue. 2002. System assimilative capacity (SAC) study, Lake Texoma (Oklahoma-Texas): determination of aquatic and sediment eco-effects. Interim project report (1999-2001). U.S. Environmental Protection Agency - Kerr Research Laboratory and U.S. Army Corps of Engineers - Tulsa District.

Schramm, H.L. Jr. and M.A. Eggleton. 2002. Lower Mississippi River fisheries investigations. Final report (1994-97). U.S. Army Corps of Engineers - Lower Mississippi Valley Division.

Schramm, H.L., Jr., M.A. Eggleton, and R.B. Minnis. 2000. Spatial analysis of floodplain habitat critical to lower Mississippi River fishes using a Geographic Information Systems (GIS) approach. Final report (1999-2000). U.S. Fish and Wildlife Service and U.S. Geological Survey.

O'Bara, C.J., M.A. Eggleton, C.R. Drumwright, and C.S. Loftis. 1996. Influence of water-level fluctuations and habitat enhancement on recruitment of black basses and crappies in Chickamauga Reservoir, Tennessee. Interim project report (1992-95). Tennessee Wildlife Resources Agency.

Morgan, E.L., M.A. Eggleton, V.D. Adams, and W.L. Pennington. 1993. Laurel Branch acid precipitation mitigation program (APMP). Laurel Branch, Tennessee Acid Precipitation Mitigation Program (APMP). Final report (1985-91). U.S. Fish and Wildlife Service.

MASTER'S THESES SUPERVISED

Kaiser, Joseph E. 2018 (current). Asian carp effects on age-0 fish dynamics in the lower White River, Arkansas. Email: kaiserj0724@uapb.edu.

Salzmann, Cody J. 2018 (current). Fish assemblage structure in relation to an Asian carp density gradient in White River oxbow lakes (tentative). Email: salzmac5384@uapb.edu.

Skoog, Matthew L. 2016. Characteristics of water quality and biological communities in third-order and fourth-order streams draining agricultural watersheds in the Mississippi Alluvial Plain. Employed: Oklahoma Department of Wildlife Conservation. Email: matthew.skoog@odwc.ok.gov.

Fernando, Anthony V. 2015. Largemouth bass recruitment in southeastern Arkansas lakes. Employed: Arkansas Game and Fish Commission. Email: anthony.fernando@agfc.ar.gov.

Shrestha, Sagar. 2015. Influences of watershed land uses on biotic and abiotic conditions in southeastern Arkansas streams of the lower Mississippi River basin. Pursuing Ph.D. at Texas A&M – Corpus Christi since 2015. Email: sagarshrestha12@gmail.com.

Peacock, Clint R. 2011. Assessment of length-limit regulations and fish-hydrology relationships with largemouth bass *Micropterus salmoides* in the Arkansas River. Employed: Georgia Department of Natural Resources. Email: clint.peacock@ga.dnr.gov.

Fontaine, Bradley V. 2009. Assessment of catch and exploitation of largemouth bass *Micropterus salmoides* on the lower Arkansas River. Employed: Florida Fish and Wildlife Conservation Commission. Email: bradley.fontaine@myfwc.com.

Batten, Benjamin G. 2008. Population dynamics and relationships with off-channel habitats of black basses *Micropterus* spp. in the lower Arkansas River. Employed: Arkansas Game and Fish Commission. Email: ben.batten@agfc.ar.gov.

Lubinski, Benjamin J. 2004. Characterization of floodplain lake fish communities in the lower White River, Arkansas. Employed: Illinois Natural History Survey. Email: blubinsk@illinois.edu.

Additional note: I have served on the graduate advisory committees of 17 other M.Sc. and Ph.D. students, 10 of which have graduated plus six that are current. Additionally, three of my past undergraduate advisees/mentees are employed full-time with the Arkansas Game and Fish Commission, one works full-time with the Missouri Department of Conservation, one works full-time with the U.S. Fish and Wildlife Service, and two have earned M.S. degrees.

INVITED SPEAKER

2016. Training future fish hatchery scientists: three decades of experience at the University of Arkansas at Pine Bluff. Invited paper presented at the *Hatchery Fish Biologist: a Career for the Future* symposium at the American Fisheries Society annual meeting, August 23, 2016, Kansas City, MO.

2016. Fish assemblage responses to different secondary channel designs in the lower Mississippi River: a template for river restoration. Invited paper presented at the *Application of Methods and Techniques and Collaborations in Managing and Conserving Large River Basin Fishery Resources and Environment* at the American Fisheries Society annual meeting, August 25, 2016, Kansas City, MO.

2013. The National Cooperative Fisheries Scholars program: challenges for post graduates. Invited paper presented in the *A Big Tent: Building a Stronger Society and Workforce Through Professional Diversity* symposium at the American Fisheries Society annual meeting, September 9, 2013, Little Rock, AR.

2011. The National Cooperative Fisheries Scholars program: a model for producing minority fisheries professionals. Invited paper presented in the *Managing Diversity in a Changing World* symposium at the American Fisheries Society annual meeting, September 6, 2011, Seattle, WA.

2004. Catfish energetics in the lower Mississippi River: Implications towards floodplains and flood-pulses in regulated temperate rivers. Invited seminar presented to the Department of Natural Resources, Ohio State University, May 20, 2004, Columbus, OH.

2004. Catfish feeding ecology and bioenergetics in the lower Mississippi River. Invited seminar presented at the *Arkansas Large Rivers Symposium* of the Arkansas Chapter of the American Fisheries Society annual meeting, February 3, 2004, Pine Bluff, AR.

2003. Assessment of stress on aquatic communities in Lake Texoma, Oklahoma-Texas. Invited seminar presented to the Biology Department, Emporia State University, April 9, 2003, Emporia, KS.

2000. Thermal dimension of the "flood-pulse" concept in the lower Mississippi River. Invited paper presented in the *Mississippi River Basin: Ecology, Issues, and Management* symposium at the American Fisheries Society annual meeting, August 23, 2000, St. Louis, MO.

1999. *Sampling fishes in large rivers*. Workshop conducted at the Southern Division American Fisheries Society Mid-Year Technical Meeting, February 26, 1999, Chattanooga, TN.

1999. Habitat conservation and creation: invoking the “flood-pulse” concept to enhance fisheries in the Lower Mississippi River. Invited paper presented at the 6th annual meeting of the Lower Mississippi River Conservation Commission, May 10, 1999, Memphis, TN.

1995. Status of reservoir fisheries in the middle Tennessee River. Invited paper presented in the *Current Status of Tennessee Fisheries* symposium at the Tennessee Chapter of the American Fisheries Society annual meeting, February 27, 1995, Crossville, TN.

1991. Stream response to limestone additions using a hydropowered dosing apparatus in Laurel Branch, Tennessee. Invited paper presented in the *Acid Rain Mitigation: Liming Technologies and Environmental Considerations* symposium at the International Meeting of the American Chemical Society, April 5, 1991, Atlanta, GA.

SELECTED PRESENTATIONS (Last 7 years)

Skoog, M.L., Y. Chen, and M.A. Eggleton. 2016. Water quality and fish community structure characteristics in middle-order, low gradient streams in the Mississippi Alluvial Plain. Paper given at the Oklahoma Natural Resources Conference, Oklahoma City, OK.

Lochmann, S.E., M.A. Eggleton, G.F. Farris, and K.B. Hecke. 2016. Lake Saracen bank angler creel survey and management implications. Paper given at the Arkansas Chapter AFS meeting, Fairfield Bay, AR.

Haukenes, A.H., M.A. Eggleton, S.E. Lochmann. Training future fish scientists: undergraduate research experiences. Paper given at the International Congress on the Biology of Fishes, June 12-16, 2016, San Marcos, TX.

Fernando, A.V. and M.A. Eggleton. 2015. Largemouth bass recruitment in southeastern Arkansas. Paper given at the Arkansas Chapter AFS meeting, Benton, AR.

Cauthon, D.Z., R.M. Graham, T.R. Thomas, and M.A. Eggleton. 2015. Fisheries assessment of Cummins Lake in southern Jefferson County, Arkansas. Paper given at the 2015 UAPB Research Forum, Pine Bluff, AR.

Skoog, M.L., C.T. Laskodi, Y. Chen, and M.A. Eggleton. 2015. Water quality and fish community structure characteristics of third/fourth-order streams in the Mississippi Alluvial Plain ecoregion. Paper given at the National American Fisheries Society meeting, Portland, OR.

Fernando, A.V., A. Pruhs, and M.A. Eggleton. 2014. Towards a model for largemouth bass recruitment specific to southeast Arkansas. Paper presented at the Arkansas Chapter AFS meeting, Rogers, AR.

Hecke, K.B., E.L. Brinkman, B.A. Timmons, and M.A. Eggleton. 2014. Relationships between growth and hydrology for largemouth bass in the Ouachita River, Arkansas. Paper presented at the Arkansas Chapter AFS meeting, Rogers, AR.

Fernando, A.V., C.R. Peacock, B.W. Baker, and M.A. Eggleton. 2013. Ageing precision and error analysis of whole-view and sectioned otoliths in largemouth bass and spotted bass. Paper presented at the Southeastern Assn. of Fish and Wildlife Agencies annual meeting, Oklahoma City, OK.

Eggleton, M.A., B.G. Batten, C.R. Peacock, and S.E. Lochmann. 2012. Spotted bass population characteristics and relationships with macrohabitat variables in the Arkansas River, Arkansas. Paper presented at the Southeastern Assn. of Fish and Wildlife Agencies annual meeting, Hot Springs, AR.

Peacock, C.R., B.G. Batten, and M.A. Eggleton. 2012. Exploring the utility of various minimum-length limits for the largemouth bass fishery in the Arkansas River. Paper presented at the Southern Division of AFS annual meeting, Biloxi, MS.

Peacock, C.R., B.G. Batten, and M.A. Eggleton. 2011. Comparison of various minimum-length limits for the largemouth bass fishery in the Arkansas River, Arkansas. Paper presented at the Southeastern Assn. of Fish and Wildlife Agencies annual conference, Nashville, TN.

Peacock, C.R. and M.A. Eggleton. 2011. Relationship between hydrology of the Arkansas River and the resident largemouth bass *Micropterus salmoides* population. Paper presented at the Association of 1890 Research Director's annual conference, Atlanta, GA.

Peacock, C.R., B.G. Batten, and M.A. Eggleton. 2011. Applicability of the Flood-Pulse paradigm to largemouth bass *Micropterus salmoides* in the highly regulated Arkansas River. Paper presented at the American Society of Ichthyology and Herpetology annual conference, Minneapolis, MN.

Eggleton, M.A., B.G. Batten, and S.E. Lochmann. 2010. Largemouth bass fishery characteristics in the Arkansas River, Arkansas. Paper presented at the Southeastern Assn. of Fish and Wildlife Agencies annual conference, Biloxi, MS.

I have authored or co-authored over 100 additional oral and poster presentations since 1987.

UNDERGRADUATE COORDINATOR SERVICE

- **General support to undergraduate students (2003-present)** – I provide extensive assistance to undergraduate students pursuing summer internships, cooperative education appointments, scholarships, student travel awards, departmental jobs, and graduate study. Examples of my assistance include writing recommendation letters, help with completing applications, and general networking to connect students with various opportunities. I also oversee an email listserver that distributes announcements to undergraduates, and supervise a one full-time clerical worker.
- **Science Expo Organizing Committee (2005-present)** – For the past 12 years, I have served as co-organizer for a university-sponsored science fair. This annual event is attended by an average of 10-12 schools that bring 200-300 students. My primary role includes oversight of registration, judging, and compiling post-fair data for NSF reporting purposes.
- **Oversight of Undergraduate Recruitment Committee (2003-2015)** – Following my hiring, enrollment in Fisheries Biology increased from 17 majors in 2003 to 45 by 2008, with nearly all students being from under-represented groups. Additionally, the percentage of our enrollment making the Dean's List increased dramatically during this same period. The percentage of our enrolment gaining "in the field" employment post-graduation increased from 42% to 70% following my hiring. This post required the supervision of one full-time recruiter.
- **Oversight of National Cooperative Fisheries Scholars program (2003-2012)** – I lead the administered of an eight-student nationally-competitive scholarship program designed to recruit under-represented groups into fisheries, wildlife, or natural resource careers. Through 2012, this program had attracted 27 students from around the U.S., retained 21, and graduated 13. Of the 13 graduates, six pursued M.Sc. degrees in fisheries biology or related fields, and seven are employed with state or federal natural resource agencies. This post required supervision of a full-time assistant (program was placed on hiatus by federal sequestering in 2013).
- **INTEL Computer Teaching Laboratory (2007-2009)** – With two other faculty, I secured a federal grant in 2006 that created a modern teaching classroom complete with 16 new desktop computers, a multi-functional instructor's podium, a high-speed LaserJet printer, plasma wall-screen monitor, and modular furniture. The grant also upgraded our adjacent undergraduate computer lab with new computers and a LaserJet printer.

- Development of Memorandums of Agreement (MOAs) (2004-present) – I have overseen the adoption of numerous MOAs that have provided internships earmarked for our students that meet academic standards. Agencies include Missouri Department of Conservation, National Park Service, U.S. Geological Survey – Columbia Science Center, USGS – Water Resources Division, and USDA-APHIS. I also work closely with USFWS personnel in guiding students at STEP and Pathways positions within that agency. These agreements in conjunction with my normal networking efforts have produced over 50 separate summer internships for our students since 2004.
- CAPLEDER Career Awareness program (2010-2014) – I assisted with a program designed to promote awareness about careers in aquaculture, fisheries, and natural resources among area high school students, teachers, and counselors. This program also contained funding for internships for existing freshmen, and prospective students. My primary role was to develop a “Career of the Month” series, give professional development seminars to interns, and mentor summer interns.

PROFESSIONAL and COMMUNITY SERVICE

2016. Chen Y., D.C. Chapman, Q.E. Phelps, M.A. Eggleton, D. Chen, and Z. Li. Symposium co-organizer and moderator for the *Application of Methods and Techniques and Collaborations in Managing and Conserving Large River Basin Fishery Resources and Environment* at the American Fisheries Society annual meeting, August 25, 2016, Kansas City, MO. I also served as the one of the peer reviewers for articles generated from the symposium for the journal *Acta Hydrobiologica Sinica*.

2011-2014. *Treasurer and Conference Organizing Committee* for the 2013 American Fisheries Society Parent Society meeting held in Little Rock, AR. The Arkansas Chapter profited about \$18,000 from the parent society after the conference. I also chaired an *ad hoc* Profit Committee for the Arkansas Chapter to survey the chapter and discuss possible uses for the profit revenue.

2013. *Workshop co-organizer* (Title: *Potential effects of climate change on Arkansas water and fisheries resources*) for the 57th Annual Rural Life Conference, Pine Bluff, AR. My section covered potential fisheries effects using Arkansas River largemouth bass as a case study.

2004-2012. *Volunteer / Instructor* for the Delta Rivers Nature Center in Pine Bluff, AR. As requested, I spoke with and gave demonstrations (e.g., fish sampling) for various public groups (e.g., churches, schools, summer camps, etc.). I also assisted in co-organizing their annual Earth Day festivities when requested.

2008-present. *Board Member and Treasurer* for the Jefferson County Single Parent Scholarship Fund. Since 2011, I have secured grants in excess of \$35,000 for this organization.

2005-2007. *Treasurer and Conference Organizing Committee* for the Arkansas Chapter of the American Fisheries Society.

2007. *Workshop co-organizer* (Title: *Stream sampling methods and design*) for the Arkansas Game and Fish Commission. My section focused on sampling design, replication, and pseudoreplication.

1993-present. I have served as peer-reviewer for various articles submitted to the following journals: *North American Journal of Fisheries Management*, *Transactions of the American Fisheries Society*, *Journal of the Tennessee Academy of Science*, *Marine and Freshwater Research*, *Acta Hydrobiologica Sinica*, *Ecohydrology and Hydrobiology*, *Aquatic Science*, *Environmental Biology of Fishes*, *Journal of Applied Ichthyology*, *Copeia*, *Journal of the Southeastern Assn. of Fish and Wildlife Agencies*, and *Science Bulletin*. I have also reviewed chapters for five different books.

1999-2001. *Volunteer* for the 4-H/MSU DawgFish Club (outreach and education program for youths) for Oktibbeha County, MS.

1997-2000. *Newsletter co-editor for the Mississippi Chapter American Fisheries Society*. I shared responsibility for publication and distribution of the Chapter newsletter, maintaining the Chapter’s membership roster, and distributing Chapter announcements via electronic mailing lists. I also co-organized the 1998, 1999, and 2000 annual meetings.

1999. *Workshop co-organizer* (Title: *Sampling fishes in large rivers*) at the Southern Division American Fisheries Society Mid-Year Technical Meeting, Chattanooga, TN. My section covered sampling methodologies, sampling gear selectivity, and statistical concerns regarding data analysis.

1997-1999. *Officer, MSU Student Sub-Unit of the Mississippi Chapter American Fisheries Society.* During my 2-year tenure as Vice-President, I was involved in initiating an annual fund-raiser, publishing the Mississippi Chapter AFS newsletter, and co-organizing more than 25 club activities.

1995-1996. *Chair - Environmental Concerns Committee, Tennessee Chapter American Fisheries Society.* My responsibility as chairman was to coordinate reviews and provide comments to applications submitted to the state of Tennessee for Aquatic Resource Alteration Permits (ARAPs).

1987-1988. *Officer/Co-Founder, Tennessee Technological University Student Fisheries Association.*

SOCIETY MEMBERSHIP

American Fisheries Society (1988-present)
Southwestern Assn. of Naturalists (2001-2011)
Ecological Society of America (1997-2010)
Tennessee Academy of Science (1987-1996)
North American Lake Management Society (1993-1996)
North American Benthological Society (1990-1993)
Association of Southeastern Biologists (1988-1992)
Sigma Xi (1993-1994)

PROFESSIONAL CERTIFICATIONS

PADI Certified Open-Water Diver (1994)
American Fisheries Society Certified Fisheries Professional (2001, renewal pending)