

Daniel W. Beckman

Associate Dean, College of Natural & Applied Sciences
Professor, Department of Biology
Missouri State University
Springfield, Missouri 65897
Phone: (417) 836-5980 or (417) 836-5249
e-mail: danielbeckman@missouristate.edu

EDUCATION

Louisiana State University, Baton Rouge
Ph.D. in Marine Sciences, 1989

Kagoshima University, Japan, 1982-83
Research student (non-degree), Aquaculture & Fisheries, Faculty of Fisheries.

University of South Carolina, Columbia
M.S. in Marine Sciences, 1983.

University of North Alabama, Florence
B.A. in Marine Biology and Chemistry, 1979

Tennessee Technological University, Cookeville
Biology major, 1976-77

AREAS OF RESEARCH SPECIALIZATION

Fish Life Histories, Population & Community Ecology
Aquatic/Marine Ecology and Conservation
Environmental Impacts on Aquatic Ecosystems
Fisheries Biology
Fish Age & Growth Determination

TEACHING

COURSES TAUGHT

1991-present, (Southwest) Missouri State University

<u>Lecture & Lab Classes</u>	<u>Years Taught</u>
Biology 532 Fisheries Management	1992-present (yearly)
Biology 575 Ichthyology	1992-present (yearly)
Biology 597 Advanced Fisheries Science	1996,1999
Biology 630 Age & Growth Analysis	1994
<u>Classroom Lecture</u>	
Biology 373 Principles of Wildlife Management	1991-present (yearly)
Biology 598 Fish Ecology	1993-present (yearly)
Biology 485/685 Marine Conservation	1997-present (yearly)
Biology 587 Caribbean Ecosystems	2003-2004
<u>Lab Courses</u>	
Biology 167 General Zoology Lab	1991
<u>Capstone Course</u>	
GEP 397 Public Affairs – Ocean Resources	2000-2008 (yearly)

On-Line Courses

Biology 485/685 Marine Conservation on-line course	2008-2012 (summer)
GEP 397 Ocean Resources Interactive CD Course	2004-2008 (yearly)

Study Away Field Courses

Biology 525 Tropical Marine & Field Biology: Galapagos	2013 (summer intersession)
Biology 525 Tropical Marine & Field Biology: Jamaica	2010-2012 (summer/intersession)
Biology 525 Tropical Marine & Field Biology: Belize	2007-2009 (summer)
Biology 527 Caribbean Field Ecology (Puerto Rico)	2003-2004 (summer)
Biology 527 Gulf Coast Field Ecology	2003 (intersession)

Graduate Seminar Courses

Biology 597 Fishes of Missouri	1995,1997
Biology 628 Advances in Fish Biology	1996,1998
Biology 628 Ozark Streams Biodiversity	1995
Biology 628 Environmental Biology of Fishes	1995
Biology 630 Aquaculture Techniques	1993
Biology 630 Fisheries Techniques	1992

UNDERGRADUATE RESEARCH MENTORING

1991-2009: Supervisor: 29 undergraduate independent research projects

GRADUATE STUDENT MENTORING

1991-2013: Major advisor: 28 graduated. Current: 3 MS Biology, 1 Professional Science Master (see below).

1991-2013: Thesis committee member: 25 graduated, 3 current.

AWARDS AND HONORS

PROFESSIONAL AWARDS

2008: State of Missouri Governor's Award for Outstanding Teaching

2007: Missouri State University (MSU) Foundation Award in Teaching

2006: MSU College of Natural and Applied Sciences Research Award

2004: Southwest Missouri State University (SMSU) College of Natural and Applied Sciences Teaching Award

2003: SMSU University Research Award

2001: SMSU College of Natural and Applied Sciences Research Award

2000: SMSU College of Natural and Applied Sciences Teaching Award

1999: SMSU College of Natural and Applied Sciences Service Award

1998: SMSU College of Natural and Applied Sciences Teaching Award

EXTERNAL RESEARCH GRANT SUPPORT

Principle Investigator. Ozark Cavefish Distribution and Life History Related to Mining in Jasper and Newton Counties. (2 years). Missouri Department of Conservation. 2009-2011.

Principal Investigator, Spatial and Temporal Dynamics of Habitat Use and Seasonal Movements by Niangua Darters. (3 years). Missouri Department of Conservation. 2007-2010.

Principal Investigator. City of Springfield Biological Assessment of Urban Streams. (~18,000 each year for 10 years). City of Springfield, Missouri. 2004-2013.

Principal Investigator: The ecological health of the upper White River Basin using the Index of Biotic Integrity.. James River Basin Partnership. 2002.

Principal Investigator: The use of fish surveys to determine the ecological health of the upper white river basin..

Wildlife Conservation & Restoration Fund, Missouri Dept. of Conservation. 2002.

Principal Investigator: Ecological Health of Upper White river Basin Tributaries in Missouri Using the Index of Biotic Integrity of Fish Communities. James River Basin Partnership by National Fish & Wildlife Foundation, Bass Pro Shops, SMSU, Drury Univ., Doe Run, Wonders of Wildlife. 2001.

Co-Principal Investigator: Robbins, L., Beckman, D.W. et al. Fish Survey of Prairie Stream, Camp Clark Training Site, Nevada, Missouri. Missouri National Guard. 1995.

Co-Principal Investigator: Robbins, L., Beckman, D.W. et al. Fish Survey of Prairie Stream, Camp Clark Training Site, Nevada, Missouri. Missouri National Guard. 1994.

Principal Investigator: Reproduction, Early Life History, and Survival of the White Sucker in Lake Taneycomo, Missouri, and Implications for Population Management. (2 years). Missouri Department of Conservation. 1993-1995.

Co-Principal Investigator: Age Structure and Reproductive Potential of the Red Drum Population Offshore of Louisiana Not Vulnerable to Purse Seine Capture: The Missing Fish? U.S. Department of Commerce, NOAA, Marine Fisheries Initiative (MARFIN) Program. 1990-91.

Co-Principal Investigator: The Variation of Year-Class Strength and Annual Reproductive Output of Red Drum, *Sciaenops ocellatus*, and Black Drum, *Pogonias cromis*, from the Northern Gulf of Mexico. (3 yrs.) U.S. Department of Commerce, NOAA, Marine Fisheries Initiative (MARFIN) Program. 1989-92.

Principal Investigator: Age Structure, Growth Rates, and Reproductive Biology of Black Drum in the Northern Gulf of Mexico. U.S. Department of Commerce, NOAA, Marine Fisheries Initiative (MARFIN) Program. 1988-89.

Principal Investigator: Age Structure, Growth Rates, and Reproductive Biology of Black Drum in the Northern Gulf of Mexico off Louisiana. U. S. Department of Commerce, NOAA, Marine Fisheries Initiative (MARFIN) Program. 1987-88.

Co-Principal Investigator: The Age Structure and Reproductive Biology of Sheepshead (*Archosargus probatocephalus*) Landed in Louisiana. Louisiana Board of Regents. 1987-88.

Principal Investigator: Age, Growth, and Reproductive Biology of Black Drum in Louisiana Waters. Louisiana Board of Regents. 1986-87.

MASTER'S THESES SUPERVISED, MISSOURI STATE UNIVERSITY

3 IN PROGRESS:

Shields, Robert. (2014). Variability in age and growth of black drum in the Missouri River.

Johnson, Joseph. (2014). Effect of exotic trout introductions on behavior and diversity of native Missouri stream fishes.

Exner, Makayla. (2015). Effect of stream modification and anthropogenic inputs on madtom fish populations.

28 COMPLETED:

28. Fisher, Robert. 2013. Effects of habitat on population density of centrarchids species in the James River, Missouri.

27. Light, Nathan. 2013. Microhabitat selection by Caribbean damselfish in a marine protected area, Bluefield's Bay, Jamaica.

26. Rudolph, Joshua. 2012. Effects of artificial reef implementation on fish populations in a marine protected area: Bluefields Bay, Jamaica.

25. Ettinger, Sarah. 2012. Springs as thermal refugia in the Ozark Highlands Eco-Region: Development of baseline habitat use patterns of fish in a time of impending climate change.

24. Recktenwald, Nathan. 2011. Variability in growth and age of the dusky stripe shiner along a stream gradient.

23. Waters, Jacob K. 2011. Fish community structure and associated habitat in the James River, southwest Missouri.

22. Pearson, Bailey S. 2010. Association of lead and zinc of fish diversity in the Spring River Basin, Missouri.
21. McCleary, Cody. 2010. Spatial and Temporal Dynamics of Habitat Use and Seasonal Movements of the Niangua Darter.
20. Canter, Stephen. 2009. Growth and population evaluation of walleye (*Sander vitreus mitchill*) using scales and otoliths as aging structures in Norfolk and Bull Shoals Lakes, North Arkansas-South Missouri.
19. Mixon-Hinsey, Janice. 2008. Assessment of aquatic invertebrate communities of tributaries of the Buffalo River, Arkansas, and evaluation of indices of community integrity.
18. Klotz, Curtis. 2007. Dissolved oxygen tolerances of selected small stream fishes of southwest Missouri: field vs. laboratory measurements.
17. Risley, Jeremy. 2006. Growth and population assessment of spotted bass (*Micropterus punctulatus*) in Beaver, Table Rock, and Bull Shoals Lakes, northern Arkansas-southern Missouri.
16. Cribbs, Tyler. 2006. In-stream habitat and riparian conditions of stream reaches favored by Topeka shiner (*Notropis topeka*) on the Tallgrass Prairie National Preserve.
15. Kromrey, Mike. 2006. A biological assessment of the fish and benthic macroinvertebrates from two urban streams in Springfield, Missouri.
14. Parnell, Ben. 2005. Physical and biological impacts of gravel mining on three southwest Missouri streams.
13. Keener, Matt. 2003. An assessment of bridge crossings as refuges for fishes in an Ozark stream.
12. Dunaway, Shane. 2003. Comparison of fish assemblages in different habitat types as indicators of stream health in Swan Creek, southwest Missouri.
11. Gunter, Jason. 2002. Physical habitat characteristics and fish diversity as indicators of stream health in Bull Creek, southwest Missouri.
10. Kirkland, Fawn. 2002. A comparison of water quality analyses and the index of biotic integrity in Bull Creek, southwest Missouri.
9. Piercy, M. Kelly. 2001. A comparison of otolith growth to somatic growth in largemouth bass
8. Hutson, Christian. 1999. Aging validation, growth and comparison of four age estimators of the river redhorse
7. Howlett, David. 1999. Age, growth, and population structure of black redhorse (*Moxostoma duquesnei*) and golden redhorse (*Moxostoma erythrurum*) in southwest Missouri.
6. Simmons, Bryan R. 1999. Age, growth, reproduction and population structure of the striped shiner (*Luxilus chrysocephalus*) and dusky stripe shiner (*Luxilus pilsbryi*) in the James River, Missouri.
5. Wakefield, Carl K. 1996. Maturation and reproduction of the white sucker in Lake Taneycomo, Missouri.
4. Kiner, Lisa K. 1996. The aging of two madtom catfish species from a southwest Missouri stream.
3. Calfee, John W. 1995. Early life history of the white sucker (*Catostomus commersoni*) in Lake Taneycomo
2. Long, James M. 1995. Habitat selection by size classes of largemouth bass.
1. Thompson, Kip R. 1993. Validation of age estimates and comparisons of growth rates of the white sucker, *Catostomus commersoni*, in three southwest Missouri populations.

PAPERS AND PUBLICATIONS:

REFEREED JOURNAL PUBLICATIONS

19. Beckman, D.W. and D.T. Howlett. 2013. Otolith annulus formation and growth of two redhorse suckers (*Moxostoma*: Catostomidae). *Copeia* 2013:390-395.
18. Beckman, D.W. and C.A. Hutson. 2012. Validation of aging techniques and growth of the river redhorse, *Moxostoma carinatum*, in the James River, Missouri. *Southwestern Naturalist* 57:240-247.
17. Simmons, B.R. and D.W. Beckman. 2012. Age determination, growth, and population structure of the striped shiner and dusky stripe shiner. *Transactions of the American Fisheries Society* 141:846-854
16. Wakefield, C. and D.W. Beckman. 2005. Life History attributes of white sucker (*Catostomus commersoni*) in

- Lake Taneycomo and associated tributaries in southwest Missouri. *Southwestern Naturalist* 50:423-434.
15. Beckman, D.W. 2002. Comparison of aging methods and validation of age estimates for the rainbow darter, *Etheostoma caeruleum*. *Copeia* 2002:830-835.
 14. Thomas, R.B., D.W. Beckman, K. Thompson, K.A. Buhlmann, J.W. Gibbons, and D.L. Moll. 1997. Estimation of age for *Trachemys scripta* and *Deirochelys reticularia* by counting annual growth layers in claws. *Copeia* 1997:842-845.
 13. Beckman, D.W. and R.G. Schulz. 1996. A simple method for marking fish otoliths with alizarin compounds. *Transactions of the American Fisheries Society* 125:146-149.
 11. Thompson, K.R. and D.W. Beckman. 1995. Validation of age estimates from white sucker otoliths. *Transactions of the American Fisheries Society* 124:637-639.
 10. Beckman, D.W. and C.A. Wilson. 1995. Seasonal timing of opaque zone formation in fish otoliths. Pages 27-44 in Secor, D.H., J.M. Dean, S.E. Campana (editors). *Recent Developments in Fish Otolith Research*. University of South Carolina Press, Columbia.
 9. Beckman, D. W., A. L. Stanley, J. H. Render, and C. A. Wilson. 1991. Age and growth-rate estimation of sheepshead *Archosargus probatocephalus* in Louisiana waters using otoliths. *Fishery Bulletin* 89:1-8.
 8. Beckman, D. W. 1990. Book review of *Red Drum Aquaculture* by C.R. Arnold, G.J. Holt and P. Thomas (eds.). *Copeia* 1990:1193-1195.
 7. Beckman, D. W., A. L. Stanley, J. H. Render, and C. A. Wilson. 1990. Age and growth of black drum in Louisiana Waters of the Gulf of Mexico. *Transactions of the American Fisheries Society* 119:537-544.
 6. Beckman, D. W., C. A. Wilson, F. Lorica, and J. M. Dean. 1990. Variability in incorporation of calcein as a fluorescent marker in fish otoliths. *American Fisheries Society Symposium* 7:547-549.
 5. Beckman, D. W., C. A. Wilson, and A. L. Stanley. 1989. Age and growth of red drum, *Sciaenops ocellatus*, from offshore waters of the northern Gulf of Mexico. *Fishery Bulletin* 87:17-28.
 4. Beckman, D. W., G. A. Fitzhugh, and C. A. Wilson. 1988. Growth rates and validation of age estimates of red drum, *Sciaenops ocellatus*, in a Louisiana salt marsh impoundment. *Contributions in Marine Science* 30(supp.):93-98.
 3. Wilson, C. A., D. W. Beckman, and J. M. Dean. 1987. Calcein as a fluorescent marker of otoliths of larval and juvenile fish. *Transactions of the American Fisheries Society* 116:668-670.
 2. Beckman, D. W., and J. M. Dean. 1984. The age and growth of young-of-the-year spot *Leiostomus xanthurus* (Lacepede) in South Carolina. *Estuaries* 7:487-496.
 1. Dean, J. M., C. A. Wilson, P. W. Haake, and D. W. Beckman. 1983. Microstructural features of teleost otoliths. in P. Westbroek and E. W. de Jong (eds.). *Biom mineralization and Biological Metal Accumulation*. p. 353-359.

TECHNICAL REPORTS

- Beckman, D.W., B. Davis, J.M. Wakeman, C. Luquet, Jr., and D.L. Nieland. 1993. Species synopsis: A biological and fisheries profile of black drum, *Pogonias cromis*. Louisiana Department of Wildlife and Fisheries Technical Report.
- Hoese, H.D., D.W. Beckman, H. Blanchet, D. Drullinger, and D.L. Nieland. 1991. A biological and fisheries profile of red drum, *Sciaenops ocellatus*. Louisiana Department of Wildlife and Fisheries, Office of Fisheries. Fisheries Management Plan Series. Number 4, Part 1.

PH.D. DISSERTATION

- Beckman, D.W. 1989. Age and growth of red drum, *Sciaenops ocellatus*, and black drum, *Pogonias cromis*, in the northern Gulf of Mexico. Ph.D. dissertation, Louisiana State University, Baton Rouge, LA., 1989. 159 p.

MASTER'S THESIS

Beckman, D.W. 1983. The age, growth, and distribution of young-of-the-year spot *Leiostomus xanthurus* in North Inlet Estuary, South Carolina. Master's thesis, University of South Carolina, Columbia, South Carolina, 1983. 78 p.

TEXT BOOKS

Beckman, D.W. 2012. Marine Environmental Biology and Conservation. Jones & Bartlett Publishers, Sudbury, Massachusetts. 451 pages.

Beckman, D.W. 2005. Ocean Resources: Use and Protection. Interactive CD Course. Missouri State University. (On compact disk).

Beckman, D.W. 2001. Warm-Water Game Fish Management. Correspondence Course Study Unit. Harcourt Learning Direct. Scranton, Pennsylvania.

PROFESSIONAL PRESENTATIONS

67. Ozark Cavefish Distribution Related to Mining and Water Quality in the Tri-State Mining District of Jasper and Newton Counties, Missouri. Natural Resources Conference, Osage Beach, Missouri, January 30, 2013. (co-author/by poster).
66. Ozark Cavefish Distribution and Life History Related to Mining in Jasper and Newton Counties. Ozark Cavefish Meeting. Wildcat Glade Audubon & Conservation Nature Center, Joplin, Missouri. November, 2010. (co-author)
65. Ozark Cavefish Distribution and Life History Related to Mining in Jasper and Newton Counties. 2010. Ozark Cavefish Meeting. Wildcat Glade Audubon & Conservation Nature Center, Joplin, Missouri. November 2010. (co-author)
64. Niangua darter movement past potential barriers. 2010. Missouri Natural Resources Conference, Osage Beach, Missouri, February 3-5, 2010. (co-author)
63. Assessment of Aquatic Invertebrate Communities of Tributaries of the Buffalo River, Arkansas, and Evaluation of Indices of Community Integrity. 2009. North American Benthological Society Annual Conference, Grand Rapids, Michigan, May 2009. (co-author/by poster)
62. Population Age Structure and Mortality of Fish Species in the Upper White River Watershed of Southern Missouri-Northern Arkansas. 2009. South Division of the American Fisheries Society Annual Conference, New Orleans, Louisiana, January 2009.
61. Evaluation of Buffalo River Index of Community Integrity (BRICI) and Assessment of Aquatic Invertebrate Communities of Tributaries of the Buffalo River, Arkansas. 2008. Missouri Natural Resources Conference, Osage Beach, Missouri, February, 2008. (co-author/by poster)
60. Evaluation of community integrity indices for aquatic invertebrate communities on tributaries of the Buffalo National River, Arkansas. 2008. North American Benthological Society 56th Annual Meeting (25-28 May, 2008).(co-author by poster).
59. An Interactive CD Course to Increase Awareness of Ocean Resource Issues in University Non-Science Majors. Gulf & Caribbean Fisheries Research Conference, Belize City, Belize, Nov. 2006 (by poster)
58. Impact of Gravel Mining on Southwest Missouri Gamefish Population. 2005 Missouri Natural Resources Conference, Osage Beach, Missouri, February, 2005. (co-author/by poster)
57. Effect of Water Level Fluctuation on Growth and Population Structure of Spotted Bass in Beaver Lake, Table Rock Lake, and Bull Shoals Lake, Northern Arkansas-Southern Missouri. 2005 Missouri Natural Resources Conference, Osage Beach, Missouri, February, 2005. (co-author/by poster)
56. Ecological health of the upper White River Basin, Bull Creek and Swan Creek Basins. DNR's Nonpoint Source Coordination Team Meeting, Southwest Regional Office. June 9, 2004. (co-author)
55. Using fish communities to monitor stream health. SMSU Environmental Focus Committee Public Forum. Water Quality: Concerns and Realities in Southwest Missouri. Springfield, Missouri. April 23, 2003.

54. The index of biotic integrity to assess stream health in Bull Creek and Swan Creek, southwest Missouri 2003 Missouri Academy of Sciences annual meeting. (co-author).
53. A comparison of the Index of Biotic Integrity by habitat type in Swan Creek, southwest Missouri. 2003 Southwest Area Naturalists (SWAN) Conference, Norman Oklahoma, April 17, 2003. (co-author).
52. Using the index of biotic integrity to assess stream health in Bull Creek and Swan Creek, southwest Missouri, 2003 Missouri Academy of Science annual meeting. (co-author).
51. Use of the index of biotic integrity to assess stream health in Bull Creek and Swan Creek, southwest Missouri. 2003 Missouri Natural Resources Conference, Osage Beach, Missouri, January 30, 2003.
50. The effect of bridge crossings on fish assemblages in a southwest Missouri stream. 2003 Missouri Natural Resources Conference, Osage Beach, Missouri, January 30, 2003. (co-author/by poster). *Awarded as best poster: Missouri Chapter of the Society of Conservation Biology.*
49. An index of biotic integrity using fish composition from individual habitats in Swan Creek, Southwest Missouri. 2003 Missouri Natural Resources Conference, Osage Beach, Missouri, January 30, 2003. (co-author/by poster).
48. A comparison of water quality and the Index of Biotic Integrity in Bull Creek, southwest Missouri. 2002 Missouri Academy of Science, Springfield, Missouri, April 20, 2002. (co-author).
47. The effect of stream depth and stream order on fish assemblages in Bull Creek, Southwest Missouri. 2002 Missouri Academy of Science, Springfield, Missouri, April 20, 2002. (co-author).
46. Age, growth, reproduction and population structure of the striped shiner (*Luxilus chrysocephalus*) and dusky stripe shiner (*Luxilus pilsbryi*) in the James River, Missouri. 2000 Missouri Natural Resources Conference, Lake of the Ozarks Missouri, Feb. 2-4, 2000. *Awarded as Best Student Poster Presentation, Missouri Chapter of the American Fisheries Society.*
45. Otoliths - Reliable estimators of age for the dusky stripe shiner. 1999 Missouri Natural Resources Conference, Lake of the Ozarks Missouri, Feb. 1-3, 1999. (co-author / by poster).
44. The opercle bone as an indicator of age in river redhorse, *Moxostoma carinatum*. 1999 Missouri Natural Resources Conference, Lake of the Ozarks Missouri, Feb. 1-3, 1999. (co-author / by poster)
43. Validation of annulus formation in otoliths, and growth of black redhorse (*Moxostoma duquesnei*) and golden redhorse (*Moxostoma erythrurum*) in the James River, Missouri. Missouri Natural Resources Conference, Lake of the Ozarks Missouri, Feb. 1-3, 1999. (co-author / by poster)
42. Validation of otolith age estimates for the rainbow darter, *Etheostoma caeruleum*, in the James River of the southwest Missouri Ozarks. American Society of Ichthyologists and Herpetologists' 78th Annual Meeting, Geulph, Ontario, Canada, July 16-July 22, 1998.
41. Differences in male and female growth and mortality rates in a southwest Missouri population of white suckers *Catostomus commersoni*. presented at 76th Annual Meeting of American Society of Ichthyologists and Herpetologists. June 13-19, 1996, New Orleans, Louisiana. (co-author)
40. Estimation of age for *Trachemys scripta* and *Deirochelys reticularia* by counting annual growth layers in claws. presented at 76th Annual Meeting of American Society of Ichthyologists and Herpetologists. June 13-19, 1996, New Orleans, Louisiana. (co-author)
39. Aging of madtom catfishes in a southwest Missouri stream. presented at 1995 Prairie States Ecology Conclave. April 21-23, 1995, Prairie State Park, Missouri. (co-author)
38. Variation of fecundity and GSI in white sucker (*Catostomus commersoni*) populations in Lake Taneycomo, Missouri. presented at 1995 Missouri Forest, Fish and Wildlife Conference. February 1-3, 1995, Lake of the Ozarks, Missouri. (by poster)
37. The use of otoliths in daily age assessment in young-of-the-year white suckers (*Catostomus commersoni*). presented at 1995 Missouri Forest, Fish and Wildlife Conference. February 1-3, 1995, Lake of the Ozarks, Missouri. (by poster)
36. Habitat selection between size groups of largemouth bass. presented at 1995 Missouri Forest, Fish and Wildlife Conference. February 1-3, 1995, Lake of the Ozarks, Missouri. (co-author)

35. Aging of madtom catfishes in a southwest Missouri stream using otoliths. presented at 56th Midwest Fish and Wildlife Conference, December, 1994. Indianapolis, Indiana. (co-author)
34. Reproduction of the white sucker (*Catostomus commersoni*) in Lake Taneycomo, Missouri. 56th Midwest Fish and Wildlife Conference, Indianapolis, Indiana. December, 1994. (co-author)
33. The use of otoliths to determine daily ages in larval white suckers (*Catostomus commersoni*). 56th Midwest Fish and Wildlife Conference, Indianapolis, Indiana. December, 1994. (co-author)
32. Validation of age estimates and comparisons of growth rates of the white sucker, *Catostomus commersoni*, in three southwest Missouri populations. 18th Annual Larval Fish Conference. St. Andrews, New Brunswick, Canada. (by poster)
31. A simple method of incorporating and detecting marks in otoliths of larval and juvenile fish using alizarin red S. 18th Annual Larval Fish Conference. 1994. St. Andrews, New Brunswick, Canada. (by poster)
30. White suckers in Lake Taneycomo: A few answers and a lot of questions. at Missouri Forest Fish and Wildlife Conference. February, 1993, Lake of the Ozarks, Missouri.
29. The central stoneroller (*Campostoma anomalum*) as a bioindicator. at 1993 Great Plains Limnology Conference, Fayetteville, Arkansas. (co-author).
28. Growth rates and validation of otolith age estimates of the white sucker, *Catostomus commersoni*, in a southwest Missouri reservoir. at Southwestern Association of Naturalists 1993 Annual Meeting, Springfield, Missouri. (co-author).
27. The central stoneroller (*Campostoma anomalum*) as a bioindicator. at Southwestern Association of Naturalists 1993 Annual Meeting, Springfield, Missouri. (co-author).
26. Variation in timing of annulus formation in the sagitta of long-lived estuarine species of the northern Gulf of Mexico. at Fish Otolith Research and Application International Symposium. 23-27 January, 1993, Hilton Head Island, South Carolina. (co-author).
25. Seasonal timing of annulus formation in fish otoliths. at Fish Otolith Research and Application International Symposium. 23-27 January, 1993, Hilton Head Island, South Carolina.
24. Assessment of the application of four fluorochromes for marking red drum (*Sciaenops ocellatus*) and striped bass (*Morone saxatilis*) sagittae. at 1991 Annual Conference the American Fisheries Society, San Antonio, Texas. (co-author).
23. Recruitment variability of red drum and black drum in northern Gulf of Mexico coastal waters based on population age structure. at 1991 Annual Conference of the American Fisheries Society, San Antonio, Texas.
22. Recruitment variability of red drum and black drum in northern Gulf of Mexico coastal waters based on population age structure. at 1991 Louisiana Chapter American Fisheries Society Annual Meeting. 1 March, 1991, Covington, Louisiana;
21. Application of otolith marking techniques to hatchery reared fish. at 1991 Louisiana Chapter American Fisheries Society Annual Meeting. 1 March, 1991, Covington, Louisiana.
20. A biological and fisheries profile of Louisiana red drum. at 1991 Louisiana Chapter American Fisheries Society Annual Meeting. 1 March, 1991, Covington, Louisiana. (co-author).
19. Population age structure of black drum, *Pogonias cromis*, in Louisiana coastal waters. at 70th Annual Meeting of the American Society of Ichthyologists and Herpetologists. 14-20 June 1990. Charleston, SC.
18. Does environmental variability significantly affect red drum and black drum year-class success? at 1989 Mid-Year Workshop of Louisiana Chapter of American Fisheries Society. September 1989. Lafayette, LA.
17. Age structure, growth rates, and reproductive biology of black drum in the Northern Gulf of Mexico at Second Annual Marine Fisheries Initiative (MARFIN) Conference. September 1989. New Orleans, Louisiana.
16. Influence of environmental variables on year-class success of red drum, *Sciaenops ocellatus*, and black drum, *Pogonias cromis*, in the northern Gulf of Mexico. at 1989 Annual Conference of American Fisheries Society. September 1989. Anchorage, Alaska.

15. Correlation of environmental variables with year-class strength of red drum, *Sciaenops ocellatus*, and black drum, *Pogonias cromis*, in the northern Gulf of Mexico. *at* Gulf Estuarine Research Society spring, 1989 meeting. Cocodrie, Louisiana
14. Age structure, growth rates, and reproductive biology of black drum in the Northern Gulf of Mexico off Louisiana. *at* First Annual Marine Fisheries Initiative (MARFIN) Conference. September 1988. Tampa, Florida.
13. Age, growth, and reproductive biology of red drum in the Northern Gulf of Mexico. *at* First Annual Marine Fisheries Initiative (MARFIN) Conference. September 1988. Tampa, Florida.
12. Reproductive biology of red drum (*Sciaenops ocellatus*) in the northern Gulf of Mexico. *at* Gulf Estuarine Research Society Annual Meeting. 20-21 October, 1988. Lake Charles, Louisiana. (co-author)
11. Reproductive biology of black drum (*Pogonias cromis*) in the northern Gulf of Mexico. *at* Gulf Estuarine Research Society Annual Meeting. 20-21 October, 1988. Lake Charles, Louisiana. (co-author)
10. Age and growth of black drum *Pogonias cromis* in the Northern Gulf of Mexico. *at* 1988 Annual Conference of American Fisheries Society. September 1988. Toronto, Ontario, Canada.
9. The use of calcein as a fluorescent marker in fish hardparts. *at* International Symposium and Educational Workshop of Fish Marking Techniques. June 1988. Seattle, Washington.
8. Growth and validation of age estimations of 0-2 year old red drum held in a Louisiana salt marsh impoundment. *at* Red Drum Aquaculture: Research Symposium. June 1987. Corpus Christi, Texas
7. Growth and validation of age estimates of 0-2 year old red drum in a Louisiana salt marsh impoundment. *at* Louisiana Chapter of the American Fisheries Society, 1987 Annual Meeting. Baton Rouge, LA.
6. Validation and verification of age estimations of fish. *at* Sciaenid Age and Growth Workshop. March 1987. Coastal Fisheries Institute, Louisiana State University.
5. Aging validation and preliminary age estimations of schooling red drum off Louisiana. *at* Louisiana Chapter of the American Fisheries Society 1986 annual meeting. Cocodrie, Louisiana.
4. The use of calcein as a fluorescent marker of fish otoliths. *at* Louisiana Chapter of the American Fisheries Society 1986 annual meeting. Cocodrie, Louisiana.
3. Observation of daily growth increments in the sagittal otoliths of wild young-of-the-year red drum (*Sciaenops ocellatus*) caught in the near-shore waters of Louisiana. *at* Gulf Estuarine Research Society spring 1986 meeting. Cocodrie, Louisiana.
2. Age and growth of young-of-the-year spot, *Leiostomus xanthurus*, in North Inlet Estuary, South Carolina. *at* American Society of Ichthyologists and Herpetologists 62nd annual meeting. Northern Illinois University, DeKalb, Illinois.
1. Age estimates of young-of-the-year spot (*Leiostomus xanthurus*) by analysis of otolith daily growth increments. *at* South Carolina Fisheries Workers Association 1982 annual meeting. Clemson University, Clemson, South Carolina.