

A. Title Page:

Professional Development Grant Report
Arkansas Tech University

Travel Funds to the 2013 Annual Meeting of the Southern Division of the
American Fisheries Society in Nashville, TN

by

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B. Restatement of Problem Researched or Creativity:

The American Fisheries Society (AFS), founded in 1870, is the oldest and largest professional society representing fisheries scientists and managers. AFS promotes scientific research and enlightened management of resources for optimum use and enjoyment by the public. It also encourages a comprehensive education for fisheries scientists and continuing on-the-job training. Nashville, TN was the location for the 2013 Annual Meeting of Southern Division of the AFS that was held February 7th to 10th. Funding was provided through Arkansas Tech University: Professional Development Grant to attend and participate in this meeting.

C. and D. Brief Review of the Research Procedures and Summary:

I attended selected symposia, workshops, and other professional activities while at the meeting that provided the opportunity for me to gain important knowledge of current fisheries related issues. I attended a leadership training workshop and the business and Executive Board meeting as Vice President of the Southern Division of AFS. In addition, I served as a judge during the Best Student Presentation Session on Friday afternoon and served as a professional mentor for a student during the meeting. This was a rewarding experience where I meet and exchanged ideas with the leadership of the American Fisheries Society.

E. Conclusions and Recommendations:

The interactions with other fisheries professionals and students through this meeting increased my motivation to conduct top quality research and provided me with

knowledge of current information that I have since disseminated to my graduate and undergraduate students in the classroom. This trip also provided opportunity for discussion of future collaboration with fisheries professionals at other universities and federal agencies.

MEETING AGENDA

Friday Morning, 8 February 2013 Capital 4

Black Bass Diversity Symposium: Multidisciplinary Science for Conservation

8:00 **Introductory Comments.** Wes Porak

8:10 **Black Bass Management in the 21st Century: Staying Relevant.** Fred Harris, Freshwater Fisheries Foundation (Abstract No.13200)

Session 1: Biology, Ecology, and Life History requirements Moderator: Jim Long

8:40 **History of Black Bass Management in the United States.** James Long*, Oklahoma Cooperative Fish and Wildlife Research Unit; Mike. Allen, University of Florida; Wes Porak, Florida Fish and Wildlife Conservation Commission; and Cory Suski, University of Illinois (13215)

9:00 **Associated Habitat of Nesting Shoal Bass *Micropterus cataractae* in the Chipola River, Florida.** Roger Bitz*, Tennessee Wildlife Resources Agency; Andy Strickland, Ted Alfermann, and Jennifer Bock, Florida Fish and Wildlife Conservation Commission (13202)

9:20 **The effects of Disease-Related Mortality on the Recruitment of Young-of-Year Smallmouth Bass in the Susquehanna River Basin, Pennsylvania.** Geoffrey Smith*, Pennsylvania Fish and Boat Commission; Vicki Blazer, U.S. Geological Survey; Heather Walsh, West Virginia University; Cliff Starliper and Luke Iwanowicz, U.S. Geological Survey; and Adam Sperry, W. Virginia University (13203)

9:40 **Drivers of Brood Abandonment in Largemouth Bass.** Cory Suski*, Zachary Zuckerman, and David Philipp, University of Illinois and Illinois Natural History Survey (13204)

BREAK

10:20 **Evaluation of a Five-Year Shoal Bass *Micropterus cataractae* Conservation-Stocking Program in the Upper Chattahoochee River, Georgia.** Michael Porta* and James Long, Oklahoma Cooperative Fish and Wildlife Research Unit (13205)

10:40 **Natural Gene Expression Changes During the Reproductive Season in Largemouth Bass.** Nancy Denslow*, University of Florida and six coauthors (13206)

11:00 **What are Field and Mesocosm Studies with Black Bass Telling Us About Endocrine Disruption?** Donald Tillitt*, Diana Papoulias, Cathy Richter, and Jo Ellen Hinck, U.S. Geological Survey; and Nancy Denslow, University of Florida (13207)

11:20 **Factors Associated With Intersex Bass in the Southeastern U.S.** Robert Bringolf* and Kristen Kellock, University of Georgia; and Brian Irwin, Georgia Cooperative Fish and Wildlife Research Unit (13208)

11:40 **Common Diseases of the Black Basses and their Impact in Conservation and Management.** Jeffery Terhune*, Auburn University; and Benjamin Beck, Stuttgart National Aquaculture Research Center (13209)

Friday Afternoon, 8 February 2013 Capital 4

Black Bass Diversity Symposium:

Multidisciplinary Science for Conservation

1:20 **Biology and Ecology of Genetically Distinct Neosho and Ouachita Smallmouth Bass.** Shannon Brewer* and James Long, Oklahoma Cooperative Fish and Wildlife Research Unit (13210)

1:40 **Largemouth Bass in Coastal Estuaries: A Comprehensive Study from the Mobile-Tensaw River Delta, Alabama.** Dennis DeVries*, Auburn University; and six coauthors (13211)

2:00 **Population and Individual Responses of Alabama Bass *Micropterus henshalli* and Redeye Bass *Micropterus coosae* to Altered Flow Regimes in a Regulated Portion of the Tallapoosa River, Alabama.** Laurie Earley*, U.S. Fish and Wildlife Service; and Steve Sammons, Auburn University (13212)

2:20 **Movement and Habitat Selection of Redeye Bass *Micropterus coosae* from the Regulated Tallapoosa River and Hillabee Creek (Alabama, USA).** John Knight*, Taconya Goar, and Elise Irwin, Alabama Cooperative Fish and Wildlife Research Unit (13213)

2:40 **A Tale of Two Rivers: Population Characteristics of Shoal Bass in the Chattahoochee and Flint Rivers.** Steve Sammons, Auburn University (13214)

3:00 BREAK

Session 2 – Fish Populations, Fisheries, and Human Dimensions Moderator: Mike Allen

3:20 **Fisheries Induced Evolution in Largemouth Bass – Reductions in Parental Care and Vulnerability to Angling.** David Philipp and Julie Claussen*, Illinois Natural History Survey; Jeff Koppelman, Missouri Department of Conservation; Steve Cooke, Carleton University; Cory Suski and David Sutter, University of Illinois; and Robert Arlinghaus, Leibniz Institute of Freshwater Ecology (13201)

3:40 **Population Assessment and Exploitation of Shoal Bass *Micropterus cataractae* in the Lower Flint River.** Travis Ingram* and John Kilpatrick, Georgia Department of Natural Resources (13216)

4:00 **Stock Assessment of Shoal Bass *Micropterus cataractae* in the Chipola River, Florida.** Katie Woodside*, Christopher Paxton, and Nicole Kierl, Florida Fish & Wildlife Conservation Commission (13217)

4:20 **Largemouth Bass Management in a Multi-species Sport Fishery: Implications for Intra-specific Growth and Walleye Populations in Northern Wisconsin.**

Jonathan Hansen and Greg Sass*, Wisconsin Department of Natural Resources, and seven coauthors (13218)

4:40 **Biology and Fisheries of Smallmouth Bass in Lake Erie** Kevin Kayle, Ohio Department of Natural Resources (13219)

Friday Afternoon, 8 February 2013 Davidson Room Finalists for Best Student Paper Award

(First author is student presenter; abstract number is in parentheses)

1:20 **Effects of temperature, salinity, and suspended solids on the development and buoyancy of Arkansas River shiner eggs.** Julia Mueller (Texas Tech), Tim Grabowski, Shannon Brewer, and Thomas Worthington (13014)

1:40 **Effects of cold winters on the genetic diversity of spotted seatrout *Cynoscion nebulosus* in Charleston Harbor, South Carolina.** Tim O'Donnell (College of Charleston), Michael Denson, and Tanya Darden (13024)

2:00 **Use of underwater video cameras to assess fish communities in dense submersed aquatic vegetation.** Kyle Wilson (University of Florida), Mike Allen, and Mike Netherland (13034)

2:20 **Spawning habitat choices by river chubs indicate response to "flashy" tailwater hydrology.** Brandon Peoples (Virginia Tech), Ryan McManamay, Don Orth, and Emmanuel Frimpong (13026)

2:40 **Effect of pulsed gastric lavage on apparent survival of a juvenile fish in a natural system.** Andrew Barbour (University of Florida), Ross Boucek, and Aaron Adams (13040)

3:00 BREAK

3:20 **Evaluations of the growth and habitat use of Guadalupe bass at a landscape scale in the South Llano River, Texas.** Jillian Groeschel (Texas Tech), Tim Grabowski, and Gary Garrett (13075)

3:40 **Impact of fish movement between areas vulnerable and invulnerable to angling on fisheries sustainability.** Bryan Matthias (University of Florida), Christopher Monk, Mike Allen, and Daniel Gwinn (13080)

4:00 **Effects of stocking hatchery-reared largemouth bass on wild juvenile largemouth bass in small impoundments.** Kyle Rachels (University of Arkansas at Pine Bluff) and Steve Lochmann (13086)

4:20 **Discerning smallmouth bass movement between the James River and Blue Ridge tributaries using otolith isotope chemistry.** Sasha Doss (Washington and Lee University), Caroline Wass, Forest Behne, Simon Thorrold, and Robert Humston (13106)

4:40 **Use of occupancy models to determine seasonal distribution and habitat use of stocked robust redhorse in the upper reaches of the Ocmulgee River, Georgia.** William Pruitt (University of Georgia), James Peterson, and Cecil Jennings (13117)

**Saturday
Morning 9
February 2013**

Session

Room

Moderator

8:00

8:20

8:40

9:00

9:20

9:40

10:00

**Sportfish Biology &
Mng't**

Capital 3

Grant Scholten

Channel and blue catfish recruitment patterns in Colorado River reservoirs, Texas. Smith*, N.G., Buckmeier, D.L., & Daugherty, D.J. (13107)

Evaluating age and growth of blue catfish in Kerr Reservoir, Virginia. Adkins*, N., Murphy, B., & McMullin, S. (13095)

Angler exploitation of black and white crappie at Lake Overcup, Arkansas.

Schroeder*, M.D., Horton, M.L., & Bly, T.R. (13065)

Microhabitat and crappie gradients in reservoir coves. Kaczka*, L., & Miranda, S. (13019)

Riverine smallmouth bass management: historic and current efforts for western North Carolina rivers and streams. Goodfred*, D.W., Bushon, A.M., Hining, K.J., & Yow, D.L. (13115)

Smallmouth bass fishing in Missouri: results from the 2011 survey. Ackerson*, J.R., Fuller, C.J., Gironde, J.A., Meneau, K.J., & Reitz, R.A. (13156)

Black Bass Symposium

Capital 4

Mike Allen

Balancing recruitment and fishing mortality to protect largemouth bass populations in the Potomac River. Love*, J.W., & Groves, M. (13220)

Understanding and using bass tournament anglers and tournaments as a component of fisheries management.

Clough, N. (13221)

Post-tournament movement and fate of shoal bass translocated from the lower Flint River into Lake Worth, Georgia. Taylor*, A.T., & Peterson, D.L. (13222)

Recreational effort and economic impact of Guadalupe bass angling in central Texas streams.

Thomas*, Z.A., Arsuffi, T.L., & Magnelia, S. (13223)

Is catch and release angling a potential disturbance of recruitment processes? The importance of parental care in determining largemouth bass recruit abundance. Stein*, J.A. and Philipp, D.P. (13224)

Year-class production of black bass before and after opening of a spring catch and release season in New York: case studies from three lakes.

Jackson*, J.R. & Einhouse, D.W. (13225)

BREAK

Imperiled Species

Davidson

Hayden Mattingly

Effects of temperature, salinity, and suspended solids on the development and buoyancy of Arkansas River shiner eggs Mueller*, J.S., and three coauthors (13014)

Nocturnal microhabitat use of the diamond darter (*Crystallaria cincotta*).

Welsh*, S.A., Smith, D.M., & Taylor, N.D. (13079)

Occupancy modeling as a tool for evaluating the status and distribution of darters in the Elk River, Tennessee. Potoka*, K., Shea, C.P., & Bettoli, P.W. (13066)

Use of dynamic occupancy models to assess the response of darters to varying hydrological and thermal conditions in the Elk River. Shea*, C.P., and 4 coauthors (13060)

Use of occupancy models to determine seasonal distribution and habitat use of stocked robust redhorse in the Ocmulgee River, Georgia.

Pruitt*, W.A., Peterson, J.T., & Jennings, C.A. (13117)

Multi-scale habitats and stressors influencing Wadeable Stream Fishes in the Lake Pontchartrain Basin, with emphasis on the rare broadstripe topminnow.

Alford*, J.B. (13081)

Session	Sportfish Biology & Mng't	Black Bass Symposium	Imperiled Species
Moderator	John Hammonds	Timothy Birdsong	Brianna Zuber
10:20	Fish kills on Oklahoma's Red River: an unsolved mystery. Mauck*, M. (13090)	Native black bass initiative: implementing watershed-scale conservation of native fish populations in southern U.S. rivers and streams. Robinson*, S., and 6 coauthors (13226)	Movements and habitat use of southeastern blue suckers in the lower Pearl River. Oliver*, D.C., Kelso, W.E., & Kaller, M.D. (13037)
10:40	Variation in total annual reproductive effort of largemouth bass in Florida lakes. Shaw*, S.L. & Allen, M.S. (13042)	Endemic black basses as drivers of watershed conservation and restoration: combining emerging technologies and traditional fisheries techniques to evaluate the use of Guadalupe bass as a keystone species in Texas streams. Grabowski*, T.B., and 4 coauthors (13227)	The brook trout management conundrum: a genetically differentiated and punctuated distribution Kulp*, M., Moore, S., Stauffer, J., & King, T. (13157)
11:00	North Carolina's hurricane response plan: managing largemouth bass in a dynamic environment. McCargo*, J., Thomas, C., & Dockendorf, K. (13114)	Chipola River watershed threats assessment. Metcalf, C. (13228)	Nuclear evidence of population structure in Alabama shad and its conservation and management implications. Bowen*, B., Ennen, J., Kreiser, B., Mickle, P., Ross, S., Slack, W., Schaefer, J., & Adams, S. (13033)
11:20	Growth of wild brown trout in the Chattahoochee River below Buford Dam, Georgia. O'Rourke*, P. (13103)	Approaches to stream habitat restoration techniques in the southeast United States. Metcalf, C. (13229)	The difficult problem of detecting population trends of rare fishes that occur in big rivers. Hagler*, M., Freeman, M., & Freeman, B. (13099)
11:40	Case study on methods to maximize largemouth bass growth in a Georgia pond. Grimes*, G. (13094)	Providing the catalyst: accelerating your project through money, training, partnerships and information. Hastings, J. (13230)	Freshwater information network: facilitating data sharing for southeastern aquatic conservation. Collins, E.R., Kuhajda, B.R., & George*, A.L. (13093)
Noon-1:20 STUDENT - MENTOR LUNCH			

**Saturday
Afternoon 9
February 2013**

Session

Room

Moderator

1:20

1:40

2:00

2:20

2:40

3:00

3:20

3:40

4:00

4:20

4:40

**Hydrology &
Ecology of
Freshwater Species**

Capital 3

Jim Parham

Effects of a declining hydrograph on instream habitats and fish communities in a semi-arid karstic stream Curtis*, S.G., Behen, K.P., & Bonner, T.H. (13129)

Estimating seasonal demographic rates in relation to streamflow dynamics of a benthic stream fish (*Etheostoma inscriptum*) in a bedrock shoal over 5-years. Katz*, R. & Freeman, M. (13059)

Long-term changes in fish functional diversity and flow regime in the Rio Grande and its tributaries in the Trans-Pecos region in Texas. Miyazono*, S. & Taylor, C.M. (13072)

Effects of a drought of record on the fish assemblage of a prairie stream in Texas. Knabe*, D.W. & Wilde, G.R. (13091)

The biotic integrity of fish assemblages in a highly altered tailwater system. Ivasauskas*, T. & Bettoli, P. (13061)

**Reservoir
Habitat**

Capital 4

Fred Heitman

A classification system for large U.S. reservoirs and its application to the Southeast. Boxrucker*,J., Krogman, R.M., & Miranda, L.E. (13012)

Prioritizing reservoir habitat restoration efforts using the Reservoir Fisheries Habitat Partnership's assessment data. Boxrucker*,J., Krogman, R.M., & Miranda, L.E. (13013)

Friends of Reservoirs Foundation: a plan for building and growing fish habitat in our nations reservoirs. Terre*, D. & Boxrucker, J. (13038)

Table Rock Lake National Fish Habitat Initiative. Allen*, M. & Bush, S. (13035)

A risk-based method for estimating reservoir rule curves using historic water level data. Mower*, E. & Miranda, L.E. (13056)

Shoal basses, a clade of cryptic identity. Freeman*, B., Taylor, A., Oswald, K., Freeman, M., Quattro, J., & Leitner, J. (13237)

Molecular and morphological evidence for a novel black bass species native to rivers of the East Gulf Coastal Plain. Tringali*, M.D., Barthel, B.L., Seyoum, S., & Knight, J. (13238)

Addressing the evolutionary history of Santee River Drainage Bartram's bass. Quattro*, J.M., Leitner, J., & Oswald, K. (13239)

Genetic variation among Virginia smallmouth bass populations supports inference of watersheds in which they are native. Hallerman*, E.M., Johnson, N., & Dutton, D. (13240)

**Black Bass
Symposium**

Davidson

Timothy Birdsong
Smallmouth bass and Ozark hellbender in-stream habitat and stream bank remediation in the Eleven Point River with game fish responses to hydrology improvements. O'Neal*, S.R., Henry, S., Irwin, K., & Risley, J. (13231)

Guadalupe bass restoration initiative Garrett*, G., Birdsong, T., Bean, M. (13232)

Expanding public support for conservation of native black bass populations through increased recreational access and sustainable use of Texas rivers. Birdsong, T. (13233)

Re-establishment of Guadalupe Bass in two central Texas rivers Linam, G.W., Magnolia*, S., Bonner, T., McMillan, S., Craig, C.A., Moran, E., Lusk, S., Ranft, R. (13234) **REPLACEMENT TALK**

Effects of large-scale habitat enhancement strategies on Florida largemouth bass populations. Dotson*, J.R., and 7 coauthors (13235)

The genetics of black bass conservation - historical perspectives of the good, the bad, and the ugly. Philipp, D.P. (13236)

**Sunday Morning 10
February 2013** Session

Room
Moderator
8:00

**Life History & Ecology
of Freshwater Fishes**

Capital 3
Mark Thurman
**Trophic ecology of channel catfish
from six Oklahoma reservoirs.**
Stewart*, D.R. & Long, J.M. (13036)

8:20
**Movement and habitat use of alligator
gar in Escambia River Florida.**
Wegener*, M., Knight, J., & Harriger, K.
(13087)

8:40
**Discerning smallmouth bass movement
between the James River and Blue
Ridge tributaries using otolith isotope
chemistry.** Doss*, S., Wass, C., Behne,
F., Thorrold, S., & Humston, R. (13106)

9:00
**Movement of riverine smallmouth bass
in a thermally heterogeneous system.**
Westhoff*, J.T., & Paukert, C.P. (13068)

9:20
**Comparison of sympatric redbreast
sunfish and bluegill sunfish
populations in Nickajack Creek,
Georgia.** Griffin*, N.N. & Sakaris, P.C.
(13111)

9:40
**Morphological and behavioral induced
changes in the redbreast sunfish in
response to a native predator.** Bishop*,
H.M. & Sakaris, P.C. (13058)

Black Bass Symposium

Capital 4
Mike Tringali
**Range-wide genetic study of endemic
populations of Suwannee bass
Micropterus notius.** Barthel*, B.L.,
Porak, W., Tringali, M.D., Philipp, D.P.,
& Near, T. (13241)

**Hybridization as a natural,
confounding phenomenon in black
bass conservation.** Koppelman, J.
(13242)

**Genetic analysis and conservation
status of native populations of
largemouth bass in northeastern
Mexico.** García-de-León*, F.J.,
Rodríguez-Martínez, R.I., &
Hendrickson, D.A. (13243)

**Hybridization between largemouth
bass and Florida bass in the Devils
River, Texas: influence of reservoir
stocking on upstream populations.**
Bean*, P.T., Bean, M.G., Lutz-Carrillo,
D., & Garrett, G.P. (13244)

**Conservation impacts of hybridization
between native "Bartram's bass"
Micropterus sp. Cf. *M. coosae* and two
introduced species, Alabama bass and
smallmouth bass in the Savannah
Basin.** Leitner*, J., Oswald, K., &
Quattro, J. (13245)

**Distribution and amount of
hybridization between shoal bass and
the invasive spotted bass in the lower
Flint River, GA.** Alvarez*, A., Taylor,
A., Tringali, M.D., & Bathel, B.L.
(13246)

Session	Life History & Ecology of Freshwater Fishes	Black Bass Symposium
Moderator	Ryan McManamay	Mike Tringali
10:20	Intra-annual variation in river-reservoir interface fish assemblages: implications for fish conservation and management in regulated rivers. Buckmeier*, D.L., Smith, N.G., Fleming, B.P., & Bodine, K.A. (13017)	Hybridization threatens shoal bass populations in the upper Chattahoochee River Basin. Dakin*, B., Porter, B., Freeman, B., & Long, J.M. (13247)
10:40	Evaluations of the growth and habitat use of Guadalupe bass at a landscape scale in the South Llano River, Texas. Groschel*, J.R., Grabowski, T.B., & Garrett, G.P. (13075)	Inferred reproductive behavior of captive Guadalupe bass. Lutz-Carrillo*, D.J., and six coauthors (13248)
11:00	Evaluating habitat associations of a fish assemblage at multiple scales in a minimally disturbed stream on the Edwards Plateau. Cheek*, B.D., & Grabowski, T.B. (13071)	Reducing hybridization and introgression in wild populations of Guadalupe bass through supplemental stocking. Fleming*, P., Garrett, G.P., & Smith, N.G. (13249)
11:20	Fish assemblages in connected and isolated floodplain lakes of Bear Creek watershed, Mississippi. Andrews*, C., Miranda, L.E., & Kröger, R. (13100)	Symposium summary. Slaughter, J. (13250)
11:40	Behavioral thermoregulation of fishes in relation to heated effluent from a power plant on the Cumberland River, Tennessee. Spaulding*, J., Bettoli, P., & Bevelhimer, M. (13039)	A path forward: connecting partners and moving the needle on conservation of endemic black bass populations. Wodder, R. (13251)