

Dr. Gregory R. Moyer

Curriculum Vitae

Regional Geneticist, U.S. Fish and Wildlife Service
 Conservation Genetics Lab, Warm Springs Fish Technology Center
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Education

- Ph.D. Southern Illinois University at Carbondale, 2002.
 Dissertation Title: *Molecular systematics of the thorny catfishes* (Siluriformes, Doradidae). Advisors: Drs. Carey Krajewski and Brooks M. Burr.
- M.S. Zoology, Southern Illinois University at Carbondale, 1998.
 Thesis Title: *A survey of genetic variation of the genus Perca* (Teleostei: Percidae). Advisors: Drs. Neil Billington and Brooks M. Burr.
- B.S. Fisheries Biology, Mansfield University, 1995. Advisor: Dr. Richard Soderberg.

Professional Experience

- 2006-Present **Director**, Conservation Genetics Laboratory, United States Fish and Wildlife Service, Warm Springs, GA 31830. Supervisor: Dr. William Wayman
- 2004-2006 **Postdoctoral Research Associate**, Oregon State University/Hatfield Marine Science Center, Newport, OR 97365. Dr. Michael Banks
- 2003-2004 **Postdoctoral Associate**, University of New Mexico, Biology Department and Museum of Southwestern Biology, Albuquerque, NM 87131. Dr. Thomas Turner
- 2002-2003 **Teaching Assistant**, Ichthyology, Southern Illinois University, Department of Zoology, Carbondale, IL 62901.
- Teaching Assistant**, Molecular Techniques, Southern Illinois University, Department of Zoology, Carbondale, IL 62901
- 1998-2001 **Research Assistant**, Southern Illinois University, Department of Zoology, Carbondale, IL 62901.
- 1996-1997 **Teaching Assistant**, Introductory Biology, Southern Illinois University, Department of Zoology, Carbondale, IL 62901.
- 1995 **Hatchery Technician**, Haskins Shellfish Research Laboratory, 6959 Miller Avenue, Port Norris, NJ 08349-3167. Mr. Gregory Debrosse
- 1994 **U.S. Biological Survey Volunteer Hatchery Technician**, USGS – LSC Research and Development Laboratory Research and Development Laboratory, Wellsboro, PA 16901. Supervisors: Drs. Harold Kincaid and Bill Krise.

1992 **Hatchery technician (intern)**, Sunburst Trout Company, 128 Raceway Place, Canton, NC 28716. Supervisor: Mr. Dick Jennings

Teaching Experience

Courses at Auburn University

- Guest Lecturer in Conservation of Aquatic Organisms. Topic: Conservation Genetics.

Courses at USFWS

- Conservation Genetics and Threatened/Endangered Species.
- Conservation Genetics and Hatchery Augmentation/Reintroduction.

Courses at Oregon State University / Coastal Marine Experiment Station

- Guest Lecturer in Coastal Marine Population Genetics. Topic: Maximum likelihood & Bayesian Phylogenetic Inference.
- Guest Lecturer in Coastal Marine Population Genetics. Topic: Coalescence.

Courses at University of New Mexico

- Guest Lecturer in Molecular Ecology. Topic: Effective Population Size.

Courses at Southern Illinois University

- Teaching Assistant. Ichthyology.
- Teaching Assistant. Molecular Techniques.
- Guest Lecturer in Curatorial Techniques. Topic: Collection and Preservation of Tissue Samples
- Guest Lecturer in Systematic Biology. Topic: Molecular Systematics.
- Teaching Assistant. General Biology 115.

Advising

- Joshua D. Rousey, Graduate Committee Member, M.S. Valdosta State (enrolled in PhD program at the Medical College of Georgia).
- Sharon Clemmenson, Student Conservation Association intern (enrolled in MS program at University of Florida Dept. of Biology).
- Sandra Deitz, Student Conservation Association intern.
- Allison Fritts-Penniman, Student Conservation Association intern (enrolled in PhD program at University of California – Los Angeles Dept. of Biology).
- Sheena Holley. Graduate Committee Member, M.S. Columbus State University
- John Robinson. Post doctoral researcher (Postdoctoral Fellow, Biology, City College of New York).
- Sandra Bohn, Graduate Committee Member, M.S., University of Southern Mississippi, Laboratory (current)
- Edgardo Diaz-Ferguson. Post doctoral researcher (current).

Professional Service

- 2014 Ad-hoc reviewer: *Journal of Fish and Wildlife Management*
- 2013 Ad-hoc reviewer: *Conservation Genetics, Evolutionary Applications, North American Journal of Fisheries Management, Journal of Fish and Wildlife Management*, NOAA Species Recovery Grants to States, Great Lakes Fishery Trust
- 2012 Ad-hoc reviewer: *Freshwater Science, Conservation Genetics, Transactions of the American Fisheries Society, Aquatic Biology, Aquatic Conservation: Marine and Freshwater Ecosystems, Journal of Fish and Wildlife Management*
- 2011 Ad-hoc reviewer: *Transactions of the American Fisheries Society, Aquatic Biology*, National Marine Fisheries Service's Marine Fisheries Initiative, DOC/NOAA Aquaculture policy.
- 2010 Member - South Atlantic Landscape Conservation Cooperative advisory team
- Participant – Strategic Habitat Conservation Workshop for the Appalachian and South Atlantic Landscape Conservation Cooperative
- Ad-hoc reviewer: *Transactions of the American Fisheries Society, Journal of Marine Biology, Aquatic Conservation*, NOAA Protected Species Cooperative Conservation Grant
- 2009 Organizer and lecturer:
- Conservation Genetics and Threatened/Endangered Species. FWS Region 4 Ecological Services, National Parks Service and Tennessee Wildlife Resource Agency personnel. Location: Ecological Services Office, Cookeville, TN
- Committee chair for Robust Redhorse Genetics Technical Working Group
- Ad-hoc reviewer: *Bioinvasions, Canadian Journal of Fisheries and Aquatic Sciences*.
- 2008 Organizer and lecturer:
- Conservation Genetics and Hatchery Augmentation/Reintroduction. USFWS Region 4 project leaders. Location: USFWS Regional Office, Atlanta, GA.
 - Conservation Genetics and Threatened/Endangered Species. USFWS Region 4 Regional Office personnel. Location: USFWS Regional Office, Atlanta, GA.
 - Conservation Genetics and Threatened/Endangered Species. FWS

Region 4 Ecological Services personnel. Location: Ecological Services Office, Panama City, FL

- Organizer: Freshwater mussel noninvasive tissue sampling workshop. FWS Region 4 biologists. Location: Warm Springs National Fisheries Research Center, Warm Springs, GA

Committee chair for Robust Redhorse Genetics Technical Working Group

Ad-hoc reviewer: National Marine Fisheries Service's Marine Fisheries Initiative, State and FWS management plans (3), *Southeastern Naturalist* (1), *North American Journal of Fisheries Management* (1).

2007 Ad-hoc reviewer: Great Lakes Fish and Wildlife Restoration Act proposal (1), *Canadian Journal of Fisheries and Aquatic Sciences* (1), *Genetica* (2), *Journal of the World Aquaculture Society* (1), *Transactions of the American Fisheries Society* (1), *North American Journal of Fisheries Management* (1).

2006 Ad-hoc reviewer: National Marine Fisheries Service's Marine Fisheries Initiative, *Biological Letters* (1), *Conservation Genetics* (2), *Canadian Journal of Fisheries and Aquatic Sciences* (2), *Genetica* (1), *Journal of Fish Biology* (2), *Southeastern Naturalist* (1), *Transactions of the American Fisheries Society* (1),

2005 Organizer and lecturer: Fisheries Genetics Workshop, Continuing Education for Wisconsin Fisheries Society chapter. Location: University of Wisconsin - Stevens Point.

Organizer and lecturer: Fisheries Genetics Workshop, Oregon Department of Fish and Wildlife Umpqua Watershed District personnel. Location: Oregon State University, Hatfield Marine Science Center.

Ad-hoc reviewer: CALFED Ecosystem Restoration and Science Initiatives.

Ad-hoc reviewer: *Journal of Marine Biology*.

2004 Ad-hoc reviewer: *Systematic Biology*.

2000 Ad-hoc reviewer: *Journal of the Linnean Society*.

1997 Ad-hoc reviewer: Proceedings of the Congress of European Ichthyologists (CEI9). *Italian Journal of Zoology*.

University and Program Services

2013 Gulf Coast Science Assessment (two month detail)
Graduate Committee Member, M.S., University of Southern Mississippi
Gulf coast striped bass executive committee
Robust redhorse genetics working group

- Pallid sturgeon recovery team
 Bluemask darter recovery team
 Yellowfin madtom recovery team
 Lake sturgeon Management Plan Working Group
- 2012 Graduate Committee Member, M.S. Columbus State University
 Gulf coast striped bass executive committee
 Robust redhorse genetics working group
 Pallid sturgeon recovery team
- 2011 Gulf coast striped bass executive committee
 Robust redhorse genetics working group
 Pallid sturgeon recovery team
- 2010 Robust redhorse genetics working group
 Pallid sturgeon recovery team
- 2009 Robust redhorse genetics working group
- 2008 Graduate Committee Member, M.S. Valdosta State University
- 2000 SIUC Population Geneticist Search Committee - graduate representative

Grants and Contract Support

- 2014 Fisheries genetics contract for Tennessee Wildlife Resource Agency. **G.R. Moyer (PI)**. 40,000 – *awarded by the State of Tennessee.*
- 2013 Developing detection probabilities in flowing water environments to improve environmental DNA (eDNA) surveys. M.E. Hunter (PI), **G.R. Moyer (CO-PI)**. \$174,240 – *awarded by USFWS/USGS Science Support Partnership program.*
- Genetic evaluation of broodfish for the establishment of native walleye in Fort Patrick Henry Reservoir, Tennessee. **G.R. Moyer (PI)**. \$7,497.60 – *awarded by Tennessee Wildlife Resource Agency.*
- Aquatic species identification via genetic barcoding. **G.R. Moyer (PI)**. \$10,000 - *awarded by USFWS Aquatic Invasive Species program.*
- Develop eDNA sampling standard operating procedures. E. Diaz-Ferguson (PI), **G.R. Moyer (Co-PI)**. \$60,000 – *awarded by USFWS Aquatic Invasive Species program.*
- 2012 Expanding USFWS eDNA monitoring capabilities for aquatic invasive species in Region 4. **G.R. Moyer (PI)**, E. Diaz-Ferguson (Co-PI). \$80,000 – *awarded by USFWS Aquatic Invasive Species program.*

Implementation of environmental DNA surveys and integration of standardized

protocols for baseline fishery population assessment on Savannah National Wildlife Refuge. Jeff Herod (PI), **G.R. Moyer** (Co-PI). \$105,000 – *awarded by USFWS National Wildlife Refuge Inventorying and Monitoring Program.*

Assessment of genetic diversity of yellowfin madtom (*Noturus flavapinnis*) populations to determine their distinctiveness for reintroduction efforts. **G.R. Moyer** (PI). \$10,008 – *awarded by Cooperative Endangered Species Conservation Fund in conjunction with Virginia Department of Game and Fish.*

Determine the genetic diversity and resiliency for flatwood salamander populations in northwest Florida. **G.R. Moyer** (PI). \$27,975.74 – *awarded by USFWS Panama City Fish and Wildlife Conservation Office.*

Aquatic invasive species identification using DNA barcoding. **G.R. Moyer** (PI). \$20,000 -- *awarded by USFWS Aquatic Invasive Species program.*

2011 Identifying priority areas for land protection in the south Atlantic: a landscape genetics pilot study. **G.R. Moyer** (PI), Jason Duke (Co-PI), Greg Rhinehart (Co-PI). \$71,750 – *awarded by South Atlantic Landscape Conservation Cooperative.*

Development of biometric and environmental DNA standardized protocols for early detection and population assessment of aquatic invasive species for Loxahatchee National Wildlife Refuge. J. Herod, S. Pelizza, **G. Moyer** (Co-PI), J. Galvez. \$174,956 – *awarded by National Wildlife Refuge Inventorying and Monitoring Program.*

2010 Assessment of hybridization between northern and southern subspecies of largemouth bass in Chickamauga Reservoir, Tennessee. **G.R. Moyer** (PI). \$10,798 – *awarded by Tennessee Wildlife Resource Agency.*

2009 Delineating and prioritizing conservation units for the federally endangered bluemask darter (*Etheostoma akatulo*). **G.R. Moyer** (PI). \$35,138 – *awarded by Tennessee Valley Authority.*

Assessment and monitoring of genetic diversity in natural and augmented American shad (*Alosa sapidissima*) of the Santee-Cooper Basin of South Carolina. **G.R. Moyer** (PI). \$41,964 – *awarded by Santee Basin Cooperative Accord.*

2008 Alabama shad (*Alosa alabamae*) restoration for the Apalachicola-Chattahoochee-Flint River basin. Rob Weller (PI), J.J. Isely (Co-PI), **G.R. Moyer** (Co-PI). \$457,679 – *awarded by NOAA Proactive Species Conservation Grant.*

Delineating and prioritizing conservation units for freshwater mussel conservation hatchery implementation programs in the ACF. **G.R. Moyer** (PI). \$80,000 – *awarded by USFWS deferred allocation funds.*

Molecular marker development for estimating genetic diversity within and

among populations of eastern Gulf Slope threatened and endangered freshwater mussels. **G.R. Moyer** (PI) and B.L Sloss (Co-PI). \$24,420 – *awarded by USGS Quick Response Program.*

Estimating genetic diversity of sicklefin redhorse of the Little Tennessee River. **G.R. Moyer** (PI). \$2000 – awarded by FWS Ecological Services Office, Asheville, NC

Genetic monitoring of four federally threatened fish species for the Chilhowee Fishway Passage Strategy. **G.R. Moyer** (PI). \$40,780 – awarded by Tennessee Wildlife Resource Agency.

2006 Conservation Hatchery Implementation Program: OSU Component for Nonpareil Dam Adult Trap and Genetic Pedigree. **G. Moyer** (PI), M. Banks (Co-PI). \$142,948 – awarded by Oregon Watershed Ecosystem Board.

2000 Organization of Tropical Studies Principles of Conservation Biology Fellowship. **G. Moyer** (PI). \$2,000 – awarded by Organization of Tropical Studies.

American Society of Ichthyology and Herpetology Raney Award. **G. Moyer** (PI). \$648 - awarded.

Awards and Honors

2011 United States Department of the Interior Star Award.

2010 United States Department of the Interior Star Award.

2008 United States Department of the Interior Star Award.

2004 Richard Kudo Award (SIUC outstanding dissertation award).

2003 Richard E. Blackwelder Award (presented for conspicuous development as a scholar, dedication to research, outstanding teaching, meritorious publication or presentation, or leadership).

1999 Richard Kudo Award (SIUC outstanding thesis award).

1995 Certificate of Excellence in Biology –presented by the Commonwealth of Pennsylvania University Biologists.

Mansfield University's Outstanding Senior Biology Student.

Publications

Refereed Journal Articles

1. Diaz-Ferguson, E., Herod, J., Galvez, J., **Moyer, G** (accepted) Development of Molecular

Markers for eDNA Detection of the Invasive African jewelfish (*Hemichromis letourneuxi*): A New Tool for Monitoring Aquatic Invasive Species in National Wildlife Refuges. Management of Biological Invasions.

2. Diaz-Ferguson, E. **Moyer, G.R.** (accepted). History, applications, methodological issues and perspectives for the use environmental DNA (eDNA) in marine and freshwater environments. *International Journal of Tropical Biology and Conservation*.
3. **Moyer, G.R.**, Williams, A.W, Jolley, M.L, Ragland, B.J., and Churchill, T.N. (accepted). Genetic confirmation and assessment of an unauthorized fish introduction in Parksville Reservoir, Tennessee. *The Proceedings of the Southeastern Association of Fish and Wildlife Agencies* (MS # 13-67-07).
4. Robinson, J and **Moyer, G.R.** 2013. Linkage disequilibrium and effective population size when generations overlap. ***Evolutionary Applications*** 6:290-302.
5. Robinson JD, Simmons JW, Williams AS, **Moyer G.R.** 2013. Population structure and genetic diversity in the endangered bluemask darter (*Etheostoma akatulo*). ***Conservation Genetics*** 14:79-92.
6. **Moyer G.R.** and Williams A.S. 2012. Assessment of genetic diversity for American shad in the Santee-Cooper river basin of South Carolina prior to hatchery augmentation. ***Marine Coastal Fisheries*** 4:312-26.
7. Wang, R., C. Li, J.A. Stoeckel, **G. Moyer**, Z. Liu, and E. Peatman. 2012. Rapid development of molecular resources for a freshwater mussel, *Villosa lienosa* (Bivalvia: Unionidae) using a RNA-seq-based approach. ***Freshwater Science*** 31:695-708.
8. **Moyer, G.R.** and Diaz-Ferguson, E. 2012. Identification of endangered Alabama lampmussel (*Lampsilis virescens*) specimens collected in the Emory River, Tennessee, USA via DNA barcoding. ***Conservation Genetics*** 13:885-889.
9. **Moyer, G.R.**, Sweka, J, and D Peterson. 2012. Past and present processes influencing genetic diversity and effective population size in a natural population of Atlantic sturgeon, *Acipenser oxyrinchus oxyrinchus*. ***Transactions of the American Fisheries Society*** 141:56-67.
10. Williams, A.S. and **Moyer, G.R.** 2012. Isolation and characterization of 21 microsatellite loci for the federally threatened yellowfin madtom (*Noturus flavipinnis*) with cross species amplification in *N. baileyi* ***Conservation Genetic Resources*** 4:221-223.
11. Véronique T, **Moyer, G.R.**, Blouin, M.S, and Banks, M.A. 2011. Reduced reproductive success of hatchery coho salmon in the wild: insights into most likely mechanisms. ***Molecular Ecology*** 20:1860-1869.
12. **Moyer, G.R.** and A.S. Williams. 2011. Isolation and characterization of microsatellite loci for the oval pigtoe mussel, *Pleurobema pyriforme* (Lea 1857). ***Conservation Genetic Resources*** 3:255-257.

13. Diaz-Ferguson, Williams, A.S, and **Moyer, G.R.** 2011. Isolation and characterization of microsatellite loci for the federally endangered fat threeridge mussel (*Amblema neislerii*). **Conservation Genetic Resources** 3: 757-759.
14. Inoue, K, **Moyer, G.R.**, Williams, A.S, Monroe, E., and Berg, D. 2011. Isolation and characterization of 17 polymorphic microsatellite loci in the spectaclecase, *Cumberlandia monodonta* (Bivalvia: Margaritiferidae). **Conservation Genetics Resources** 3:57-60.
15. Díaz-Ferguson, E, Williams, A.S, and **Moyer, G.R.** 2011. Isolation and characterization of microsatellite loci for the fat pocketbook mussel (*Potamilus capax*). **Molecular Ecology Resources** 11:219–222.
16. Véronique T, **Moyer, G.R.**, and Banks, M.A. 2010. Survival and life-history characteristics among wild and hatchery coho salmon returns: how do unfed fry differ from smolt releases? **Canadian Journal of Fisheries and Aquatic Sciences** 67:486-497.
17. **Moyer, G.R.**, J.D. Rousey and M. Cantrell. 2009. Evaluation of genetic diversity and relatedness of hatchery and wild sicklefin redhorse (*Moxostoma* sp.) of the Little Tennessee River. **North American Journal of Fisheries Management** 29:1438-1443.
18. **Moyer, G.R.**, R. Remington, and T. Turner. 2009. Incongruent gene trees, complex evolutionary processes, and the phylogeny of a group of North American minnows (*Hybognathus* Agassiz 1855). **Molecular Phylogenetics and Evolution** 50:514-525.
19. **Moyer, G.R.**, B.L. Sloss, B.R. Kreiser, and K.A. Feldheim. 2009. Isolation and characterization of microsatellite loci for alligator gar (*Atractosteus spatula*) and their variability in two other species (*Lepisosteus oculatus* and *L. osseus*) of Lepisosteidae. **Molecular Ecology Resources** 9: 1-4.
20. **Moyer, G.R.**, M. Blouin, and M. Banks. 2007. Differential family success and survival of supplemented coho salmon (*Oncorhynchus kisutch*). **Canadian Journal of Fisheries and Aquatic Sciences**. 64:1258-1265.
21. Turner T.F., M.J. Osborne, **G.R. Moyer**, M.A. Benavides, D. Alò. 2006. Life-history dependent genetic consequences of habitat fragmentation as measured by the effective size to census size ratio. **Philosophical Transactions of the Royal. Society of London, Series B, Biological Sciences** 273:3065-3073.
22. **Moyer G.R.**, K.O. Winemiller, M.V. McPhee, and T.F. Turner. 2005. Historical demography, selection and coalescence of mitochondrial and nuclear genes in *Prochilodus* species of northern South America. **Evolution** 59:599-610.
23. **Moyer G.R.**, M. Osborne, and T.F. Turner. 2005. Genetic and ecological dynamics of species replacement in an arid-land river system. **Molecular Ecology**. 14:1263-1273.
24. **Moyer, G.**, B. Burr, and C. Krajewski. 2004. Phylogenetic relationships of thorny catfishes (Siluriformes: Doradidae) inferred from molecular and morphological data. **Zoological Journal of the Linnean Society**. 140:551-575.

25. Krajewski, C., **G.R. Moyer**, J.T. Sipiowski, M.G. Fain, and M. Westerman. 2004. Molecular systematics of the enigmatic "phascolosoricine" marsupials of New Guinea. **Australian Journal of Zoology**. 52:389-415.
26. **Moyer, G. R.**, and N. Billington. 2004. Stock structure among yellow perch populations throughout North America determined from allozyme and mitochondrial DNA analysis. In Proceedings of Percis III: **The Third International Percid Fish Symposium** (Barry, T.P., and J.A. Malison, Eds.), pp. 96-97. University of Wisconsin Sea Grant Institute, Madison, WI.
27. Heist, E. J., J. L. Jenkot, D. B. Keeney, R. A. Lane, **G. R. Moyer**, B. J. Reading, and N. L. Smith. 2002. Isolation and characterization of polymorphic microsatellite loci in nurse shark (*Ginglymostoma cirratum*). **Molecular Ecology Notes** 3:59-61.

Books and Book Chapters

1. Burtle, G, C. Jennings, B. Lasse, **G.R. Moyer**, and B.L. Sloss. 2013. Care, handling, and examination of sampled and confined organisms. *In* (A. Zale, D. Parrish, and T. Sutton, eds.). Fisheries Techniques, III edition.

Abstracts and Proceedings

1. **Moyer, G. R.**, and N. Billington. 2004. Stock structure among yellow perch populations throughout North America determined from allozyme and mitochondrial DNA analysis. In Proceedings of Percis III: **The Third International Percid Fish Symposium** (Barry, T.P., and J.A. Malison, Eds.), pp. 96-97. University of Wisconsin Sea Grant Institute, Madison, WI.

Non-refereed Journal Articles or Technical Reports

1. **Moyer, G.R.** 2010. Feasibility of using molecular tags for use in the Roanoke River American shad hatchery program. Tech Report to North Carolina Department of Natural Resources. 29 June. 15pp.
2. **Moyer, G.R.** and J.D. Rousey. 2008. Evaluation of genetic diversity and relatedness of hatchery and wild sicklefin redhorse (*Moxostoma* sp.) of the Little Tennessee River. Tech Rep to U.S. Fish & Wildlife Service, 160 Zillicoa Street, Asheville, NC 28801. 07 May. 22pp.
3. **Moyer, G. R.** and M. Banks. 2006. Nonpareil dam adult trap and coho genetic pedigree project. Tech Rep. to Oregon Watershed Enhancement Board. 29 October. 2pp.
4. **Moyer, G. R.** and M. Banks. 2005. Nonpareil dam adult trap and coho genetic pedigree project. Tech Rep. to Oregon Watershed Enhancement Board. 29 August. 4pp.
5. **Moyer, G. R.**, B. L. Sloss, I. Mitrofanov, C. Krajewski, and N. Billington. 2005. Phylogenetic relationships among *Perca* species inferred from mitochondrial DNA sequence data. *Southeastern Biology* 52: 127
6. **Moyer, G.**, and N. Billington. 2002. The use of isozyme markers to identify stock structure in

yellow perch populations. Isozyme Bulletin 35:38.

7. Billington, N., **G. Moyer**, and B. Sloss. 1998. Mitochondrial DNA analysis of walleye (*Stizostedion vitreum*) populations from Michigan. Tech. Rep. to Michigan DNR. 20 January. 32pp.
8. Sloss B. L., **G. Moyer**, and N. Billington. 1997. Genetic analysis of striped bass, white bass and hybrid striped bass fingerlings. Tech. Rep. to Kentucky Department of Fish and Wildlife Resources. 27 January. 8pp.
9. Billington, N., **G. Moyer**, and B. Sloss. 1997. Allozyme and mitochondrial DNA analysis of sauger from the Missouri River, Montana. Tech. Rep. to Montana Department of Fish, Wildlife and Parks. 16 April. 19pp.
10. Billington, N., M. Banerjee, R. Brooks, **G. Moyer** and B. Sloss. 1997. Further evidence of hybridization and introgression between walleye and sauger from isozyme markers. Gene Families and Isozymes Bulletin. Vol. 30, 35pp.
11. Billington, N., **G. Moyer**, M. Schmidt, and D. Lightfoot. 1997. Genetic markers for the characterization of soybean cyst nematode (SCN) populations. Final Report, SIUC ORDA University Priorities and Interdisciplinary Initiative Program. 25 June. 7pp.
12. Billington, N., **G. Moyer**, and B. Sloss. 1997. Genetic analysis of pallid and shovelnose sturgeons. Final report to Max McGraw Wildlife Foundation. 23 October. 20pp.
13. Billington, N., **G. Moyer**, and B. Sloss. 1997. Molecular phylogeny of percid genera. SIUC ORDA Special Research Program Final Report. 4 December. 6pp.
14. Billington, N., R. Brooks, **G. Moyer**, and G. Thompson. 1996. Detection of hybridization and introgression between the two North American *Stizostedion* species using isozyme markers. Isozyme Bulletin. Vol. 29, 24p.
15. Billington, N., and **G. Moyer**. 1996. Genetic analysis of putative striped bass samples. Tech. Rep. to Kentucky Department of Fish and Wildlife Resources. 14 February. 6pp.
16. Billington, N., R. M. Strange, and **G. Moyer**. 1996. Population and genetic characteristics of walleye in Alabama. Tech. Rep. to Auburn University, Department of Fisheries and Allied Aquaculture. 16 March. 42 pp.

Selected Presentations

1. Scholten, G., Bettoli, P, **Moyer, G.R.** 2014. Assessing stocking efficacy of sauger using genetic markers and evaluating their movement and mortality in the Cumberland River in Tennessee. American Fisheries Society, Southern Division meeting, 25 February, Charleston, SC
2. **Moyer, G.R.**, Robinson, J., Snider, M., Duke, J. 2013. Identification of Evolutionary Hotspots Based On Genetic Data and Gap Analysis of Hotspots in Protected Lands Encompassed By

- the South Atlantic Landscape Conservation Cooperative. 143rd Annual Meeting of the American Fisheries Society. 9 September, Little Rock, AR (Invited).
3. Diaz-Ferguson, E., **Moyer, G.R.** 2013. Development of Molecular Markers for Environmental DNA Detection of the Invasive African Jewel Fish (*Hemichromis letourneuxi*): A New Monitoring Tool for Loxahatchee National Wildlife Refuge. 143rd Annual Meeting of the American Fisheries Society. 12 September, Little Rock, AR (Invited).
 4. Bohn, S., Kreiser, B., **Moyer, G.R.** 2013. Range-Wide Population Structure of Alligator Gar. 143rd Annual Meeting of the American Fisheries Society. 9 September, Little Rock, AR.
 5. Moyer, G. R., 2013. eDNA: a tool for inventory and monitoring of aquatic invasive species. Gulf and South Atlantic Regional Panel on Aquatic Invasive Species Meeting, 11 April, Atlanta, GA (Invited)
 6. Williams, A., **Moyer, G.R.** 2012. Genetic assessment of Lake Sturgeon for reintroduction into the upper Tennessee River. Southeastern Fishes Council Annual Meeting. 9 November 2012. New Orleans, LA
 7. **Moyer, G.R.**, 2010. Genetic risks and recommendations for managing or conserving small, isolated populations. American Fisheries Society, Southern Division meeting, 25 February, Ashville, NC (Invited)
 8. **Moyer, G.R.**, 2010. The Use of Conservation Genetics in Hatchery Management – Addressing Questions with Answers. Genetics Workshop, American Fisheries Society, Southern Division meeting, 25 February, Ashville, NC (Invited).
 9. **Moyer, G.R.**, 2009. Use of effective population size in conservation biology. Auburn University Seminar Series. 23 October, Auburn, AL (Invited).
 10. **Moyer, G.R.**, 2009. Using conservation genetics to address conservation objectives. Southeast Region Biologists' Conference: Confronting 21st Century Challenges - Strategic Habitat Conservation. 24 February, Pine Mountain, GA (Invited).
 11. **Moyer, G.R.** 2008. Minimizing genetic risks associated with hatchery propagation and augmentation of freshwater mussel species. Society of Conservation Biology annual meeting. 15, July, Chattanooga, TN. (Invited).
 12. **Moyer, G.R.** 2007. Are good intentions enough? 68th annual meeting of the Midwest American Fisheries Society. 11 December, Madison, WI. (Invited).
 13. **Moyer, G.R.** 2007. Genetic Considerations for hatchery-based enhancement of aquatic species: are good intentions enough? Annual meeting of the Southeastern Fishes Council, 09 November, Chattanooga, Tennessee. (Invited).

Professional Organizations

- Southeastern Fish Council
- American Fisheries Society