Shawn P. Young, *PhD, Research Faculty*

103A Natural Resources Building
Fish and Wildlife Resources
University of Idaho
Moscow, ID 83844

Office: (208) 885 - 6001
Cell: (765) 427 - 3997
syoung@uidaho.edu

EDUCATION

PhD	Fisheries Sciences	May 2005	Clemson University, Clemson, SC
MS	Fisheries Sciences	Aug 2001	Clemson University, Clemson, SC
BS	Environmental Studies	May 1996	Northland College, Ashland, WI

PROFESSIONAL EXPERIENCE

Research Faculty/Lecturer	University of Idaho	Aug 2008 - Present
Visiting Scientist	University of Iceland	July 2008 - Aug 2008
Visiting Assistant Professor	Purdue University	Aug 2007- May 2008
Postdoctoral Researcher	Clemson University	Oct 2006 - Aug 2007
Consultant / Expert	At-will	Jan 2005 - Present
Biologist/Facility Manager	Clemson University	Jun 1999 - May 2006
Fisheries Technician	Idaho Fish and Game	Apr 1997 - June 1999

TEACHING

Lecturer – Fisheries Management (Fall 2008)
University of Idaho; Department of Fish and Wildlife Resources; Moscow, ID

FISH 418 – Fisheries Management

Visiting Assistant Professor - Fisheries and Aquatic Sciences (Aug 2007 – May 2008)
Purdue University; Department of Forestry and Natural Resources; West Lafayette, IN

FNR 546 - Fish Ecology
FNR 545 - Fisheries Management
FNR 501 – Limnology
FNR 371 – Watershed Hydrology Practicum
FNR 103 - Introduction to Environmental Conservation

Lecturer – Fisheries and Aquatic Ecology (Fall 2005 – Spring 2007)
Clemson University; Department of Forestry and Natural Resources; Clemson, SC

WFB 840 Fish Ecology (Team-taught course)
ENR 302 Natural Resource Measurements (Team-taught course)
WFB 300 Wildlife and Fisheries Biology (Team-taught course)

RESEARCH

Research Faculty – Fisheries Biology and Ecophysiology (December 2008 – Present)
Fish and Wildlife Resources Department; University of Idaho, Moscow, ID

Adjunct Professor – Fisheries/Aquatic Ecology/Aquaculture (August 2005 – Present)
Department of Biological Sciences; Clemson University, Clemson, SC

Committees:

Age, growth, and fecundity of Alabama shad in the Apalachicola River. Thesis. T. Ingram. 2006.
Population estimate of spawning Alabama shad in the Apalachicola River. Thesis. P. Ely. 2007.
Genotype-specific spawning behavior of striped bass in the Apalachicola River. Thesis. M. Noad. 2007.
Paleochannel delineation of the Neuse River, North Carolina. Thesis. B. Wrege. 2007.

Post-Doctoral Researcher (October 2006 – August 2007)
Department of Forestry and Natural Resources; Clemson University, Clemson, SC

My research focused on fish ecology and behavior in altered rivers. I conducted research on anadromous and resident fish species in the Apalachicola River. Research objectives were to estimate Alabama shad spawning population size; monitor behavior/movement during spawning migration; and determine passage efficiency at lock-and-dam facilities. I also studied the age, growth, and reproductive ecology of three catostomids and skipjack herring. As another aspect of studying altered river systems, I also conducted studies of freshwater mussels to evaluate tagging methods, movement after relocation, and behavior in fluctuating flow regimes. *(please refer to Publications)*.

Research Biologist/Facility Manager (June 2000 – May 2006)
Aquatic Animal Research Laboratory; Clemson University, Clemson, SC

I conducted research and managed facilities at a leading fisheries/aquaculture research laboratory. Our research specialized in identifying factors that affect fish and aquatic invertebrate physiology, behavior, and population dynamics. I conducted research on habitat requirements of marine, estuarine, anadromous, and freshwater species at the larval, juvenile, and adult life-history stages. *(please refer to Publications and Presentations).* I also assisted with the research and preparation of the following:

- Using mixed-ion supplementation in Pacific white shrimp culture. 2007. Thesis. K. Parmenter.
- Multi-scale habitat associations of selected primary burrowing crayfish. 2006. Dissertation. S. M. Welch.
- Low-salinity resistance of juvenile cobia (Rachycentron canadum). 2006. Thesis. K. L. Burkey.
- Responses of Pacific white shrimp (Litopenaeus vannamei) to water containing low concentrations of total dissolved solids. 2005. Thesis. A. D. Sowers.
- Responses of hybrid striped bass exposed to waterborne and dietary copper in fresh- and saltwater. 2003. Dissertation. G. K. Bielmyer.
- Ecology and culture of Procambarus acutus acutus. 2003. Dissertation. Y. Mazlum.
- Effects of environmental and dietary factors on tolerance of Nile tilapia Oreochromis niloticus to low temperature. 2002. Dissertation. H. L. Atwood.
- Low-temperature tolerance of southern flounder Paralichththys lethostigma: effect of salinity. 2000. Thesis. W. E. Taylor.

Graduate Research Assistant (June 1999 – May 2005)
SC Cooperative Fish and Wildlife Research Unit; Clemson University, Clemson, SC.

My dissertation and thesis utilized several telemetry field studies to identify seasonal migration patterns, daily movement patterns, and seasonal habitat selection in relation to reservoir limnology/ hydroelectric generation; sources and magnitude of mortality; temporal and spatial patterns of mortality; and, potential to successfully live-release striped bass angled during fishing tournaments. *(please refer to Publications and Presentations)*. Through graduate coursework, I also acquired extensive knowledge of fisheries science and management; physiology, ecology and conservation of aquatic organisms; limnology and hydrology; and experimental statistics *(please see transcripts)*. I also assisted with the following:

- Reproductive ecology and seasonal migrations of robust redhorse (Moxostoma robustum) in the Savannah River, Georgia and South Carolina. 2006. Dissertation. T. B. Grabowski.
- A behavioral comparison of hatchery-reared and wild shortnose sturgeon in the Savannah River, South Carolina-Georgia. 2003. Thesis. D. Trested.
- Diel movement of hatchery-reared and wild shortnose sturgeon in the Savannah River, South Carolina-Georgia. 2003. Thesis. T. E. Griggs.
- Movement of migrating American shad in response to flow near a low head lock and dam. 2003. Thesis. S. T. Finney.
- Population size and movement of American shad at New Savannah Bluff Lock and Dam. 2002. Thesis. M. M. Bailey.
- Seasonal and diel movement of largemouth bass in a South Carolina stream. 2001. Thesis. T. A. Jones.
- Habitat utilization by striped bass in Lake Murray, South Carolina. 2001. Thesis. J. J. Schaffler.

Fisheries Technician (April 1997 - May 1999) Idaho Dept of Fish & Game; Bonners Ferry, ID

I conducted research on the effects of hydroelectric generation on behavior and survival of salmonids (rainbow trout and bull trout), burbot, and white sturgeon in the Kootenai River, ID-MT. Major responsibility was to conduct large-scale radio-telemetry and trapping studies to acquire knowledge of seasonal movements, migratory behavior, and recruitment.

CONSULTING: Aquatic Ecology / Fisheries Expert

Southern Environmental Law Center, Charlotte, NC. (September 2008 – Present): I am providing scientific review and affidavit opinion concerning the environmental impacts on fisheries from proposed changes in river discharge due to FERC re-licensing at Tillery Dam on the Yadkin-Pee Dee Rivers, NC.

Southern Alliance for Clean Energy, Atlanta/Savannah, GA (March 2008 - Present): I am providing expert review and affidavit opinion concerning the environmental impacts on fisheries and aquatic resources due to nuclear expansion in the Tennessee River, AL. I am currently the fisheries and aquatic resources expert in the Bellefonte nuclear expansion case.

Turner Environmental Law Clinic, Emory University; Atlanta, GA. (November 2006 – Present): I am providing review and affidavit opinion concerning the environmental impacts on fisheries and aquatic resources due to nuclear expansion in the middle Savannah River, GA/SC. Also, I provided review on draft petition to designate critical habitat for the endangered goldline darter and blue shiner. I am currently the fisheries and aquatic resources expert in the Vogtle Plant nuclear expansion case.

Southern Environmental Law Center, Charlottesville, VA. (January 2005 – August 2006): I provided scientific review and affidavit opinion concerning the environmental impacts on fisheries and aquatic resources due to nuclear expansion in the North Anna/Pamunkey River, VA.

PUBLICATIONS:

Fish Ecology and Management:

1. Barczak, S., and **S. P. Young**. 2009. Water use impacts from increased energy production on Georgia's aquatic resources. 2009 Georgia Water Resources Conference.

2. Grabowski, T. B., **Young**, **S. P.,** Libungan, L. A., Steinarsson, A., and G. Marteinsdottir. (*in press*). Evidence of phenotypic plasticity and local adaption in metabolic rates between components of the Icelandic cod (*Gadus morhua* L.) stock. Submittal: Environmental Biology of Fishes.

3. Ely, P. and **Young, S. P.**, and J. J. Isely. (*in press*). Population size and relative abundance of Alabama shad reaching Jim Woodruff Lock and Dam, Apalachicola River, Florida. Submittal: North American Journal of Fisheries Management.

4. Ely, P. and **Young, S. P.**, and J. J. Isely. (*in press*). Passage of spawning Alabama shad at Jim Woodruff Lock and Dam, Apalachicola River, Florida. Submittal: Transactions of the American Fisheries Society.

5. **Young, S.P.**, P. Ely, T. Grabowski, and J. J. Isely. (*in press*). Discovery of highfin carpsuckers in the Apalachicola River, Florida. Submittal: Southeastern Naturalist.

6. **Young**, **S. P.**, P. Ely, M. Noad, and J. J. Isely. (*in review*). Age, growth, and relative abundance of skipjack herring in the Apalachicola River, Florida.

7. **Young**, **S. P.**, P. Ely, T. Grabowski, and J. J. Isely. (*in review*). Age, growth, fecundity, and reproductive strategy of catostomids in the Apalachicola River, Florida. Submittal: Ecology of Freshwater Fish.

8. **Young, S. P.**, J. Kilpatrick, and J. J. Isely. (*in revision*). Pure and hybrid striped bass habitat selection strategies to maximize metabolic scope under different limnological conditions. Submittal: Striped bass symposium - American Fisheries Society.

9. Welch, S. M., **S. P. Young,** and N. T. Grzych. (*in review*). Historical inland migration of several diadramous fishes in South Carolina waters. Submittal: Southeastern Naturalist.

10. **Young, S.P.**, T. A. Ingram, J. J. Isely, and J. J. Schaffler. (*future work*). Use of otolith microchemistry to determine juvenile outmigration timing and adult repeat spawning of Alabama shad in the Apalachicola River, Florida.

11. **Young, S. P.**, and J. J. Isely. (*future work*). Comparison of CPUE and size-selectivity of electrofishing and angling of riverine clupeids.

12. **Young, S. P**. and J.J. Isely. 2007. Summer diel behavior of striped bass using tailwater habitat as summer refuge. Transactions of the American Fisheries Society 136: 1104-1112.

13. **Young**, **S. P.**, and J.J. Isely. 2006. Post-tournament live-release survival, dispersal, and behavior of adult striped bass. North American Journal of Fisheries Management 26: 1030-1033.

14. **Young**, **S. P.**, and J.J. Isely. 2004. Temporal and spatial estimates of adult striped bass mortality from telemetry and transmitter return data. North American Journal of Fisheries Management 24: 1112-1119.

15. **Young, S. P.** and J.J. Isely. 2002. Striped bass annual site fidelity and habitat utilization in J. Strom Thurmond Reservoir, South Carolina-Georgia. Transactions of the American Fisheries Society. 131: 828-837.

16. Isely, J. J., **S. P. Young**, T. A. Jones, and J. J. Schaffler. 2002. Effects of antenna placement and antibiotic treatment on loss of simulated transmitters and mortality in hybrid striped bass. North American Journal of Fisheries Management. 22: 204-207.

Fish physiology and aquaculture:

17. Burkey, K. B., **S. P. Young**, J. R. Tomasso, and T. I. J. Smith. 2007. Low-salinity resistance of juvenile cobia. North American Journal of Aquaculture 69: 271-274.

18. **Young, S. P.**, J.R. Tomasso, and T.I.J. Smith. 2007. Survival and water balance of black sea bass held in a range of salinities and calcium-enhanced environments after abrupt salinity change. Aquaculture 258: 646-649.

19. Atwood, H.L.; **S.P. Young**, J.R. Tomasso, and T.I.J. Smith. 2004. Resistance of cobia, *Ranchycentron canadum*, juveniles to low salinity, low temperature, and high environmental nitrite concentrations. Journal of Applied Aquaculture 15: 191-195.

20. Atwood, H.L.; **S.P. Young**, J.R. Tomasso, and T.I.J. Smith. 2004. Information on selected water quality characteristics for the production of black sea bass, *Centropristis striata*, juveniles. Journal of Applied Aquaculture 15: 183-190.

21. Atwood, H.L.; **S.P. Young**, J.R. Tomasso, and T.I.J. Smith. 2003. Effect of temperature and salinity on survival, growth, and condition of juvenile black sea bass. Journal of the World Aquaculture Society 34: 398-402.

22. Atwood, H. L.; **S. P. Young**, J. R. Tomasso, and T.I.J. Smith. 2001. Salinity and temperature tolerances of black sea bass juveniles. North American Journal of Aquaculture 63: 285-288.

Aquatic invertebrate conservation:

23. **Young, S. P**. and J. J. Isely. (*in press*). Tag retention, relocation probability, and mortality of passive integrated transponder and dummy transmitter tagged *Elliptio complanata* in a South Carolina Piedmont stream. Submittal: Molluscan Research.

24. **Young, S. P**. and J. J. Isely. (*in revision*). Behavioral response of the freshwater mussel *Elliptio complanata* to fluctuating water levels. Submittal: Journal of North American Benthological Society.

25. **Young, S. P**. and J. J. Isely. (*in progress*). Behavior of translocated freshwater mussels *Elliptio complanata* in a South Carolina piedmont stream.

Aquatic invertebrate physiology and aquaculture:

26. Parmenter, K. and Bisesi, J., **S. P. Young**, J. R. Tomasso, and C. L. Browdy. (*in press*). Survival and growth of pacific white shrimp, *Litopenaeus vannamei*, postlarvae in a variety of mixed-salt environments comprised of multiple ion ratios. Submittal: Journal of the World Aquaculture Society.

27. Sowers, A. D. and **Young, S. P.,** M. Grosell, C. L. Browdy , and J. R. Tomasso. 2006. Hemolymph osmolality and cation concentrations in *Litopenaeus vannamei* during exposure to low concentrations of dissolved solids: Relationship to potassium flux. Comparative Biochemistry and Physiology 145(2): 176-180.

28. Sowers, A. D.**,** D. M. Gatlin, **S. P. Young**, J. J. Isely, C. L. Browdy, and J. R. Tomasso. 2005. Responses of *Litopenaeus vannamei* (Boone) in water containing low concentrations of total dissolved solids. Aquaculture Research 36: 819-823.

29. Sowers, A. D. and **Young, S. P.,** J. J. Isely, C. L. Browdy , and J. R. Tomasso. 2004. Nitrite toxicity to *Litopenaeus vannamei* in water containing low concentrations of sea salt or mixed salts. Journal of the World Aquaculture Society 35: 445-451.

30. Atwood, H.L.; **S.P. Young**, J.R. Tomasso, and C. L. Browdy. 2003. Survival and growth of pacific white shrimp, *Litopenaeus vannamei*, postlarvae in low salinity and mixed-salt environments. Journal of the World Aquaculture Society 24: 518-523.

SELECTED PRESENTATIONS:

Young, S.P. 2008. Eco-physiology of Iceland's Atlantic cod stocks. University of Idaho. Moscow, ID.

Young, S.P. 2007. Thermal biology of fish. Penn State University. State College, PA.

Young, S.P. 2007. Population estimates and passage of Alabama shad at Jim Woodruff Lock and Dam, Apalachicola River - Florida. Purdue University. West Lafayette, IN.

Young, S.P. 2006. Behavioral thermoregulation and metabolic scope of striped bass in various aquatic environments. Austin Peay University. Clarksville, TN.

Young, S.P. 2006. Behavioral thermoregulation and metabolic scope – Lecture for comparative anatomy and physiology. Clemson University. Clemson, SC.

Young, S.P. and J.J. Isely. 2005. Post-tournament live-release survival, dispersal, and behavior of adult striped bass. American Fisheries Society annual meeting. Anchorage, AK.

Young, S.P. 2005. Behavioral thermoregulation in fish. Lake Superior State University. Sault-sainte Marie, MI.

Young, S.P. and J.J. Isely. 2005. Striped bass ecology and management. Clarks Hill Striped Bass Anglers Association. Augusta, GA.

Young, S.P. and J.J. Isely. 2005. Post-tournament live-release survival, dispersal, and behavior of adult striped bass. Trout Unlimited. Upstate South Carolina Chapter.

Young, S.P. and J.J. Isely. 2004. Temporal and spatial estimates of adult striped bass mortality from telemetry and transmitter return data. Annual meeting of the American Fisheries Society. Madison, WI.

Atwood, H.L.; **S.P. Young**, J.R. Tomasso, and T.I.J. Smith. 2004. Effect of temperature and salinity on survival, growth, and condition of juvenile black sea bass. 28th Annual Larval Fish Conference, Early Life History Section, American Fisheries Society. Clemson, SC.

Atwood, H.L.; **S.P. Young**, J.R. Tomasso, and T.I.J. Smith. 2004. Resistance of cobia juveniles to low salinity and low temperature. 28th Annual Larval Fish Conference, Early Life History Section, American Fisheries Society. Clemson, SC.

Young, S.P. 2004. Learning in Fishes: from three-second memory to culture. Department of Biological Sciences. Clemson University.

Young, S.P. 2003. Life skills training for hatchery fish: Social Learning and Survival. Department of Biological Sciences. Clemson University.

Young, S.P. 2003. Mechanisms for learning during early life stages of fish: Imprinting, Homing, and Con-specific Learning. Dept of Biological Sciences. Clemson University.

Young, S.P. 2002. Strain-specific characteristics to manage sub-populations of fish species. Department of Biological Sciences. Clemson University.

AWARDS:

- Animal Research Committee Excellence Award. 2004. Clemson University. $2,000
- Animal Research Committee Excellence Award. 2003. Clemson University. $2,000
- Outstanding Classified Employee Award. 2003. Clemson University. $1,000
- Employee Performance Award. 2003. Clemson University. $1,000

PROFESSIONAL MEMBERSHIP:

- American Fisheries Society
- North American Benthological Society
- World Aquaculture Society

REFERENCES:

Research and future potential:

Dr. Jeff Isely (Graduate Advisor)

Associate Professor
SC Cooperative Fish &Wildlife Research Unit
Clemson University, Clemson, SC
(864) 506-6070
jisely@clemson.edu

Dr. Joe Tomasso (Past Supervisor)

Department Chair
Department of Biology
Texas State University, San Marcos, TX
(512) 245-4886
jt33@txstate.edu

Dr. Quenton Fontenot
Peer, Assistant Professor of Biology
Department of Biological Sciences
Nicholls State University, Thibodaux, LA
(985) 449-7062
Quenton.Fontenot@nicholls.edu

Dr. Tim Grabowski
Peer, Assistant Research Professor
Institute of Biology
University of Iceland
(011) -354-525-4280
tbg@hi.is

Teaching:

Dr. Kerry Reese
Department Chair and Professor
Dept of Fish and Wildlife Resources
University of Idaho, Moscow, ID
(208) 885-6435
kreese@uidaho.edu

Dr. Patricia Layton
Department Chair
Dept of Forestry and Natural Resources
Clemson University, Clemson, SC
(864) 656-4829
playton@clemson.edu

Dr. Robert Swihart
Department Chair and Professor
Dept of Forestry and Natural Resources
Purdue University, West Lafayette, IN
(765) 494-3590
rswihart@purdue.edu

Environmental Consulting:

Rick Parrish or Morgan Butler, Staff Attorney
Southern Environmental Law Center
201 West Main Street, Suite 14

Larry Sanders, Staff Attorney
Turner Environmental Law Clinic
Emory University School of Law

Charlottesville, VA 22902
(434) 977 – 4090

Sarah Barczak, Safe Energy Director
Southern Alliance for Clean Energy
428 Bull Street, Suite 201
Savannah, GA 31401
(912) 201-0354

1301 Clifton Road
Atlanta, GA 30322
(404) 712-8008