ZACHARY R. SHATTUCK
Texas State University – San Marcos
601 University Drive, Aquatic Station, Box #11
San Marcos, Texas 78666
E-mail: zach.shattuck@txstate.edu

EDUCATION

January 2007 – Present
Texas State University – San Marcos, Texas
Master of Science in Aquatic Biology
Cumulative GPA: 3.68, GRE score: 1090 (V:500, Q:590, A:4.5)

January 2000 – August 2004
Colorado State University – Fort Collins, Colorado
Bachelor of Science in Fishery Biology, minor in Zoology
Major & Minor GPA: 3.0

EXPERIENCE

January 2007 – Present
Texas State University – San Marcos, Texas
Graduate Research Assistant

Currently working on a master's thesis titled, "The spatiotemporal patterns of fish and macroinvertebrates in the Pedernales River, Texas, U.S.A. with comments on the life history of Texas logperch Percina carbonaria." Collected fish, macroinvertebrates and environmental data seasonally for one year to further understand the assemblage make-up, community dynamics, and habitat associations in the Pedernales River basin. Diet and prey selectivity, gonadal development, habitat associations, and population structure for Texas logperch were explored, and similar information was sought in collaborative work with other graduate students gathering life history information for four Texas native species: ironcolor shiner Notropis chalybaeus in the San Marcos River, and Guadalupe dusky darter Percina apristis, river darter Percina shumardi, and Burrhead chub Macrhybopsis marconis in the Guadalupe River. Additionally, a collaborative role was taken working with a fellow graduate student on a radio telemetry study tracking Guadalupe bass Micropterus treculii in the Pedernales and South Llano Rivers. Information regarding microhabitat associations and movement, seasonally and diurnally, was gathered to help bring fine-scale resolution to habitat use and habitat preference. Multi-dimensional habitat modeling will be created in conjunction with the tracking data to better make suggestions in the management of Guadalupe bass and recommendations for instream flow. Finally, research was synthesized and interpreted for oral and written presentations to stakeholder groups, funding and governmental agencies, and professional peers. During a wide range of field-work many types of vehicles and technical equipment were used including: electroshocking boats, jon boats, kayaks, YSI water quality sensors, Marsh-McBirney flowmeters, Lotek tracking receivers, and Trimble GPS surveying units to name a few. Programs used in research statistical analyses included the latest versions of: ArcGIS, Canoco, FiSAT, PRIMER, R, SigmaPlot, and Windows Excel.

June 2008 – July 2008, January 2009 – May 2009

Texas State University – San Marcos, Texas

Ichthyology (BIO-4415/5415), Zoology (BIO-2411) Laboratory Teaching Assistant

Taught an upper-level undergraduate/graduate laboratory in ichthyology and a lower-level undergraduate laboratory in zoology. Lectured on various lab materials pertaining to the fishes of Texas and their evolution and life histories, as well as the form, structure and evolution of other representative invertebrate and vertebrate organisms. Led hands-on laboratories, specimen and test preparation, grading, tutoring, specimen preservation, and field trips. Curriculum included the anatomy and physiology of fishes, phylogenies and identification of 200+ species found in Texas, likewise the anatomy and physiology, and phylogenies of taxonomically important invertebrate and vertebrate organismal groups.

March 2006 – September 2006

Colorado State University – Fort Collins, Colorado/
University of Wisconsin – Madison, Wisconsin

Research Assistant

Developed a comprehensive database of ecological and life history traits (17) for native and nonnative freshwater fishes of the United States and Canada (915). Worked cooperatively with multiple authors and academic institutions to create a conceptual model linking specific environmental drivers to specific species traits and to biological processes. Conducted a vast literature search using multiple libraries and existing trait databases to acquire data on life history traits for each species. Co-wrote the methods and discussion sections of a manuscript in development. Additionally, collected data for a non-related study/publication in Écoscience. (Olden, J.D. 2007. How do ecological journals stack-up? Ranking of scientific quality according to the h index. Écoscience 14:370-376.)

March 2006 – September 2006

Freshwaters Illustrated – Fort Collins, Colorado

Underwater Photographer

Photographed freshwater ecosystems and their aquatic fauna for use in education, conservation and outreach. Assisted in photo preparation, archiving, online posting, and the contacting of landowners for stream access.

September 2004 – March 2006

Colorado Division of Wildlife, Rifle Falls Fish Hatchery – Rifle, Colorado

Wildlife Technician III (Fish Culturist)

Raised numerous salmonid species and several million individual fish annually at the state's largest trout production unit. Monitored and evaluated fish: growth, physiology, health, and hatchery economics. Operated heavy machinery, assisted in auto mechanic repair and repair using arc welding and an acetylene torch, achieved and upheld a Colorado Commercial Driver's License, supervised two non-professional employees, and volunteered in spawning wild and captive fish. Helped transplant fish using large trucks, helicopters, small airplanes, packhorses, and drift boats. In addition, received positive reviews in annual performance evaluations, earned pay grade increases, and tested for state biologist and water quality specialist positions with placement in the top 10 candidates.

May 2002 – May 2004
Colorado State University – Fort Collins, Colorado/
Virginia Polytechnic and State University – Blacksburg, Virginia
Fisheries Technician/Lab Assistant

Worked on a PhD student's study, "Spatial recovery of stream fish assemblages downstream and upstream of the physical disturbances imposed by Gathright Dam on the Jackson River, Virginia." Sampled two rivers and several tributaries using shore/grid electrofishing and field identified the 60+ species found in the basin. Habitat was visually and physically assessed, macroinvertebrates were collected using a Slack sampler according to NAWQA protocol, and electrofishing equipment was constructed and maintained. Additionally two other technicians were supervised and collaborative roles were taken with multiple governmental and academic institutions. In the lab, aquatic macroinvertebrate samples were subsampled and processed for later identification, again using NAWQA protocol.

August 2002 – November 2002
Colorado State University – Fort Collins, Colorado
Fisheries Technician/Lab Assistant

Worked on a PhD student's study, "Interacting effects of temperature regime and sympatric brook trout on cutthroat trout recruitment." Performed field surveys of cutthroat trout fry recruitment, assessed habitat and fry refugia, and fed and maintained fry in a hatchery setting.

August 2001 – June 2004
Colorado State University – Fort Collins, Colorado
Ichthyology Laboratory (FW-301) Teaching Assistant

Helped teach an upper-level undergraduate course with a hands-on ichthyology laboratory. Assisted in test preparation, grading, tutoring, specimen preservation, and lab lectures. Curriculum included the life histories and identification of 20+ taxonomically significant species and the 80+ species found in Colorado.

June 2001 – August 2001
Colorado State University – Fort Collins, Colorado
Fisheries Technician

Worked on a PhD student's study, "Effects of nonnative brook trout on Colorado River cutthroat populations." Used triple-pass backpack electrofishing in quantified sections of four alpine streams in the Southern Rocky Mountains. Enclosed stream reaches and installed stream passage weirs to observe longitudinal movement of trout, marked fish using Floy, VIE, and PIT tagging methods, performed habitat surveys, and maintained equipment and weirs in a backcountry setting, often times alone.

May 2001 – June 2001
Colorado State University – Fort Collins, Colorado
Fisheries Technician

Worked on a master's student's study, "Critical habitat requirements for the brassy minnow." Identified Colorado's eastern plains fishes while sampling streams using

seines, made habitat assessments, took water quality and physical measurements, and maintained equipment for use in the field.

May 2000 – August 2000
Colorado Department of Natural Resources – Denver, Colorado
Executive Director's Office Intern

Wrote letters for Executive Director Greg Walcher, the Assistant Directors, and one for Governor Bill Owens designating the Colorado State Forest Service as the lead agency for the Forest Legacy Program in Colorado. Coordinated interview panels for hiring of the Director position of the Colorado Division of Wildlife, attended meetings with the Upper Colorado River Endangered Fish Recovery Program to negotiate fish rearing habitat, and gathered information for the Directors from judicial libraries and public offices.

INVOLVEMENT

1999 – Present

American Fisheries Society

2007 – Present, Texas Chapter

2000 – 2007, Colorado – Wyoming Chapter

Leadership: Awards Committee Co-Chairman 2006 – 2007

2000 – 2004, Colorado State University Student Chapter

Leadership: President 2002 – 2003, Treasurer 2001 – 2002, and Aquarium Curator 2003 – 2004

1999 – 2000, Texas A&M Chapter

2007 – Present

Aquatic Biology Society of Texas State University – San Marcos

2008 – Present

Fishbase

2008 – Present, Partner/Collaborator

2005 – Present

Freshwaters Illustrated

1999 – 2005

Trout Unlimited

2000 – 2004

Colorado State University Men's Water Polo Team

2001 – 2004

Sigma Phi Epsilon Fraternity

2001 – 2004, Colorado Gamma Chapter

Leadership: Vice President of Communications 2002-2003

1997 – 1999

National Interscholastic Swimming Coaches Association All American

1997 – 1999, 3-time automatic qualifier

1998 – 1999, 3-time honorable mention

AWARDS

2008 – 2009

Texas State University, Department of Biology

Fred and Yetta Richan Aquatic Biology Award for significant contributions to the Aquatic Resources Program ($1,300)

2007 – 2008

Texas Chapter of the American Fisheries Society

Outstanding Fisheries Worker Award for a Fisheries Student, Honorable Mention

2003 – 2004
Colorado State University Student Chapter of the American Fisheries Society
Razorback Sucker Outstanding Service Award

2003 – 2004
Colorado – Wyoming Chapter of the American Fisheries Society
Gift membership for best artwork design, Colorado State University Student Chapter

2001 – 2002
Colorado – Wyoming Chapter of the American Fisheries Society
Gift membership for best artwork design, Colorado State University Student Chapter

PRESENTATIONS

January 30, 2009
Shattuck, Z.R., and T.H. Bonner. Seasonal patterns of population structure, reproductive ecology, and prey selectivity of Texas logperch in the Pedernales River, Texas. Texas Chapter of the American Fisheries Society, Annual Meeting. Fort Worth, TX. (Oral Presentation)

January 30, 2009
Folb, C.E., J.S., Perkin, **Z.R. Shattuck**, T.H. Bonner. Preliminary results on the life history of *Percina shumardi* and *Percina apristis*. Texas Chapter of the American Fisheries Society, Annual Meeting. Fort Worth, TX. (Co-Author)

January 30, 2009
Perkin, J.S., **Z.R. Shattuck**, P.T. Bean, T.H. Bonner, T.B. Hardy. Movement and microhabitat associations of Guadalupe bass in two Texas rivers. Texas Chapter of the American Fisheries Society, Annual Meeting. Fort Worth, TX. (Co-Author)

December 3, 2008
Perkin, J.S., **Z.R. Shattuck**, P.T. Bean, T.H. Bonner, T.B. Hardy. Movement and microhabitat associations of Guadalupe bass in two Texas rivers. Texas State University Aquatic Biology Society, Meeting. Texas River Center, San Marcos, TX. (Co-Author)

September 27, 2008
Perkin, J.S., **Z.R. Shattuck**, P.T. Bean, T.H. Bonner, T.B. Hardy. Movement and microhabitat associations of Guadalupe bass in two Texas rivers. North American Native Fish Association, Annual Meeting. Athens, TX. (Co-Author)

April 9, 2008
Shattuck, Z.R. Spatiotemporal patterns and habitat associations of fish and macro-invertebrates in the Pedernales River, Texas, U.S.A. Texas State University Aquatic Biology Society, Meeting. Texas River Center, San Marcos, TX. (Oral Presentation)

January 17 – 19, 2008

Shattuck, Z.R., and T.H. Bonner. Spatiotemporal patterns and habitat associations of fish in the Pedernales River, Texas, U.S.A. Texas Chapter of the American Fisheries Society, Annual Meeting. Texas Tech University – Junction Campus, TX. (Poster Presentation)

PUBLICATIONS

June 20, 2008

Shattuck, Z.R., and T.H. Bonner. 2008. Spatial and temporal patterns in the Pedernales River drainage. Draft report submitted to the River Systems Institute – Texas State University and the Nature Conservancy of Texas.

PROFESSIONAL CERTIFICATION

Certified 2007 – Present

Texas Commercial Driver License Class B

Tank vehicle and air brake endorsements

Certified 2005 – 2007

Colorado Commercial Driver License Class B

Tank vehicle and air brake endorsements

Certified 2003 – Present

Scuba Schools International

Open Water Diver (SCUBA)

REFERENCES

Major Academic Advisor, Supervisor
Dr. Timothy H. Bonner
Associate Professor and Director of the Aquatic Station
Texas State University – San Marcos
Department of Biology/Aquatic Station
Freeman Aquatic Building Room 122
San Marcos, TX 78666
(512) 245-2284
TBonner@txstate.edu

Colleague
Jeremy B. Monroe, M.S.
Director of Freshwaters Illustrated
Freshwaters Illustrated
P.O. Box 321
Mapleton, OR 97453
(970) 443-0793
jeremy@freshwatersillustrated.org

Colleague, Supervisor
Dr. Julian D. Olden
Assistant Professor
University of Washington
School of Aquatic & Fishery Sciences
Fisheries Building, Room 318A
Seattle, WA 98195
(206) 616-3112
olden@u.washington.edu