**Chelsea R. Gilliland**

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**STATEMENT OF OBJECTIVES:** Achieve employment working with fisheries and aquatic sciences.

**SUMMARY OF QUALIFICATIONS:**

* Highly motivated and hard-working graduate student
* Diverse experiences gained through undergraduate education, two summer internships, and volunteer opportunities
* Successful at conducting independent research and working as a valued team member
* Knowledge of management and conservation practices for fisheries and related sciences
* Capable of effective communication to a variety of audiences

**EDUCATION:**

**M.S. in Wildlife, Fisheries, and Aquaculture**

Mississippi State University, College of Forest Resources: Starkville, MS

Expected Graduation: May 2018

GPA: 4.00

**B.S. in Environmental Studies: Fisheries and Wildlife Biology**

California University of Pennsylvania: California, PA

Graduated, Summa Cum Laude: May 2015

GPA in Major: 4.00 GPA Overall:3.76

**FISHERIES AND WILDLIFE EMPLOYMENT:**

Fall 2015-Current

**Graduate Research Assistant**

**Advisor:** Michael E. Colvin, PhD

Mississippi State University, College of Forest Resources, Department of Wildlife, Fisheries, and Aquaculture

* Set and retrieve multifilament gill nets for capturing adult Paddlefish *Polyodon spathula* from below National Wildlife Refuge water control structures.
* Lead and organize sampling crews on a weekly basis.
* Surgical implantation of acoustic telemetry transmitters.
* Deploy and offload acoustic telemetry receivers (Vemco VR2W) using VUE software.
* Sample using larval drift nets.

Summer and Fall 2015

**Seasonal Fisheries Technician**

**Supervisors:** Andrew F. Casper, PhD

Illinois Natural History Survey, Illinois River Biological Station

* Aided biologists with boat electrofishing surveys throughout Illinois River Watershed
* Operated YSI to collect water chemistry data (temperature, pH, specific conductance, dissolved oxygen), Secchi disk to measure water clarity, and a Marsh McBirney Flow Meter to measure surface velocity.
* Deployed, retrieved, and repaired fish sampling nets (hoop, mini-hoop, fyke, mini-fyke).
* Extracted pharyngeal teeth, tooth pads, and otoliths from young-of-year Silver Carp (*Hypopthalmicthys molitrix)* for graduate research*.*
* Collected water quality data per Long Term Resource Monitoring Program protocols.
* Tagged Largemouth Bass (*Micropterus salmoides*) and Black Crappie (*Pomoxis nigromaculatus*) for a mark-recapture study seeking to estimate population sizes.
* Launched, trailered, and performed routine maintenance on boats.

Summer 2014

**National Great Rivers Research and Education Center Intern**

**Supervisors:** Mark W. Fritts and Jason A. DeBoer, Large River Fisheries Ecologists

Illinois Natural History Survey, Illinois River Biological Station

* Completed independent research comparing fecundity and body condition of Largemouth Bass.
* Assisted with statewide long term monitoring projects.
* Recorded length and weight measurements for fish samples.
* Collected freshwater mussels using snorkeling equipment.
* Operated IsoMet Low Speed Saw to cross section freshwater mussel shells using schlerochronological techniques for further analyses.
* Navigated large rivers.

Summer 2013

**Blackwater National Wildlife Refuge Intern**

**Supervisors:** Matt Whitbeck, Supervisory Biologist and Amanda Bessler, Wildlife Biologist

Blackwater National Wildlife Refuge, Cambridge, MD

* Worked as part of a team to conduct salt-marsh elevation transects using Trimble 8 RTK Rovers for Adaptive Management Project.
* Navigated to remote predetermined transects using maps, GPS, and compasses.
* Collected timber stand data (species, DBH, azimuth, crown class, merchantable height).
* Conducted Quality Assurance/ Quality Control on multiple databases.
* Monitored and maintained water control structures throughout refuge property.
* Aided with Colonial Water Bird Census.
* Planted and monitored submerged aquatic vegetation.
* Assisted biologists with Brown Pelican banding.
* Operated YSI for groundwater salinity surveys.
* Set up and monitored deer exclusion fence for pilot study.

**VOLUNTEER EXPERIENCE:**

Fall 2015-Spring 2016

**Largemouth Bass Angling Trials**

Kevin Keretz, G.R.A, and Colin Dinken, G.R.A

Mississippi State University, Starkville, MS

* Assisted graduate students with research looking at effects of angling tournaments on Largemouth Bass survival, mortality, and physiologic stress response.
* Euthanized Largemouth Bass for blood extraction.
* Operated a blood-gas meter and calculated hematocrit percent.

Fall 2015- Spring 2016

**Fine-Scale Movement Patterns of Eastern Wild Turkey across Mississippi**

Wesley Tucker, G.R.A.

Mississippi State University, Starkville, MS

* Tracked movement patterns of Eastern Wild Turkey using GPS and VHF telemetry.
* Checked camera traps and baited trapping sites.

Summer 2012 -2015

**Endangered Species Research Assistant/ Crew Leader**

Dr. Carol Bocetti, Endangered Species Biologist

Blackwater National Wildlife Refuge, Cambridge, MD

* Conducted mark-recapture study monitoring population dynamics of Delmarva Fox Squirrels and Grey Squirrels.
* Independently operated Tomahawk live traps to capture squirrels.
* Recorded body metric data (weight, sex, age, presence of parasites).
* Implanted PIT-tags on non-marked animals using federal protocol.
* Served as a crew leader to supervise and train new assistants- 3 years.

Spring 2015

**Muskellenge Spawning**

Pennsylvania Fish and Boat Commission

Pymatuning State Park, Pymatuing, PA

* Removed fish from trap nets.
* Monitored anesthetized muskellunge for signs of extreme stress.
* Collected eggs and milt from expressing individuals.

Spring 2015

**Stream Clean Up**

Jason White, Marianna Outdoorsmen Association

Tenmile Creek, Marianna, PA

* Navigated tributary via canoe to remove debris along stream.

**UNDERGRADUATE INDEPENDENT RESEARCH:**

Spring 2012-2015

**Examining genetic diversity among Rainbow Darters (*Etheostoma caeruleum*) in the Monongahela River**

Advised by: Dr. Louise Nicholson and Dr. David Argent, California University of Pennsylvania

* Collected Rainbow Darters using backpack electrofishing units.
* Extracted DNA from caudal fin tissue.
* Used Polymerase Chain Reaction to amplify extracted DNA at highly polymorphic microsatellite sequences.
* Visualized PCR results using agarose gel-electrophoresis under UV light.

Fall 2014

**Examining the conductivity threshold for fish assemblages throughout the Monongahela River Watershed**

Advised by: Dr. David Argent, California University of Pennsylvania

* Compiled water chemistry and fish species datasets in Excel from the Monongahela River.
* Determined upper and lower conductivity threshold for each species.

**Effects of body condition and environmental variation on fecundity of Largemouth Bass (*Micropterus salmoides)* in the upper Illinois River Watershed**

Summer 2014

Advised by: Mark W. Fritts and Jason A. DeBoer, Illinois Natural History Survey

* Extracted oocytes from ovarian tissue.
* Enumerated oocytes using Bogorov counting chamber under dissecting microscope.
* Calculated estimates of fecundity.
* Compared estimates of fecundity to body condition variables (total length, condition factor, hepatosomatic index, gondadosomatic index, age) using simple linear regression models.

Spring 2013

**Creating a taxonomic classification of genus *Gobenia* (Begoniaceae), endemic to Ecuador**

Advised by: Dr. Mark Tebbitt, California University of Pennsylvania

* Used photographed herbarium specimens to visually compare morphological plant characters to type specimens and flora descriptions.

**PRESENTATIONS:**

**Paddlefish *Polyodon spathula* spawning and migratory habitat use in the Noxubee River System with focus on the Noxubee National Wildlife Refuge**

Advised by: Michael E. Colvin, PhD, Mississippi State University

* September 2016: Audubon Society, Starkville, MS

-*Invited Speaker*

* September 2016: Thesis Research Proposal Seminar, Starkville, MS

**Examining genetic diversity among Rainbow Darters (*Etheostoma caeruleum*) in the Monongahela River**

Advised by: Dr. Louise Nicholson and Dr. David Argent, California University of Pennsylvania

* April 2015: University Honors Program Undergraduate Thesis Defense
* April 2015: Poster, National Conference for Undergraduate Research, Cheney, WA
* April 2015: Poster, Strike A Spark Research Conference, California, PA

*-Awarded Second Place*- Ecology and Environmental Science

* April 2015: Poster, Commonwealth of Pennsylvania University Biologists, Indiana, PA

*-Awarded First Place-* Ecology, Evolution, and Organismal Biology

* February 2015: Poster, Midwest Fish and Wildlife Conference, Indianapolis, IN
* November 2014: Poster, Student Research and Scholarship Poster Event, California, PA

*-Awarded Second Place-*Data-oriented Research: Independent Student Research

* November 2014: Poster, National Collegiate Honors Conference, Denver, CO

*-Student Poster Competition Award Winner in Environmental Science*

* April 2014: Poster, Commonwealth of Pennsylvania University Biologists, Bloomsburgh, PA

***-****Awarded Second Place-* Ecology, Evolution, and Organismal Biology

**Effects of body condition and environmental variation on fecundity of Largemouth Bass (*Micropterus salmoides)* in the upper Illinois River Watershed**

Advised by: Mark W. Fritts and Jason A. DeBoer, Illinois Natural History Survey

* February 2015: Poster, Midwest Fish and Wildlife Conference, Indianapolis, IN
* August 2014: Poster and Platform, National Great Rivers Research and Education Center Intern Symposium, Alton, IL

**Thoughts on recruitment and retention by student members of the California University of Pennsylvania Wildlife Society**

Advised by: Dr. Carol Bocetti, California University of Pennsylvania

* October 2014: Platform and Panel, Wildlife Society National Conference, Pittsburgh, PA

**ADDITIONAL EMPLOYMENT:**

Spring 2013

**Peer Tutor (Biology and Environmental Studies Courses)**

* Assisted students by enhancing understanding of biology/fisheries/wildlife concepts.
* Actively listened in order to optimize student retention and comprehension.
* Effectively communicated with students and staff to appropriately respond to needs.

Fall 2012- Spring 2013

**Community Assistant (CA/RA)**

* Managed the residence hall as an integral staff member.
* Provided care and sense of community to residents.
* Oversaw resident relationships through facilitating a safe living environment.

**ADDITIONAL SKILLS:**

**Fisheries Techniques:** Boat operation, boat electrofishing, backpack electrofishing, fish aging, macro- invertebrate sampling

**Outdoor Skills**: Orienteering using GPS and compass, hiking, living under primitive conditions, carrying heavy equipment over rugged terrain

**Training and Certifications:** CPR/AED and first aid (current), Illinois Boaters Safety (current)

**Computer Skills:** Microsoft (Word, Powerpoint, Excel, Access), ArcGIS, Trimble, Program R, Populus, RAMAS, SigmaPlot, ImageJ

**ACTIVITIES AND HONORS:**

* Academic Excellence in Environmental Sciences 2014-2015 Award
* Pennsylvania American Fisheries Society Cooper Memorial Award Winner
* Janice Lee Fenkse Memorial Award Finalist
* Presidential Scholar Award (2 years)
* Environmental Education Outreach Award
* Dean’s List (6 semesters)
* Peer Mentor (3 years)
* Office for Students with Disabilities Paid Note-taker (2 semesters)
* Pennsylvania Junior Academy of Science: Judge (3 years)
* Science Olympiad: Moderator (3 years)

**AFFILIATIONS:**

* American Fisheries Society: National Member
* Mississippi State University student Sub-Unit of the American Fisheries Society: President-Elect
* The Wildlife Society: Former National Member
* The Wildlife Society: Former Pennsylvania State Chapter Member
* California University of Pennsylvania’s Chapter of The Wildlife Society: 2014-2015 President
* Pennsylvania American Fisheries Society: 2014-2015 Student Representative
* California University of Pennsylvania Sub-Unit Chapter of American Fisheries Society: 2014-2015 President
* California University of Pennsylvania Honors Program Graduate
* Beta Beta Beta Biological Honors Society, Former Member

**REFERENCES:**

**Michael E. Colvin,** **Assistant Professor, PhD**

Mississippi State University

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**Jason A. DeBoer, MS**

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**Matt Whitbeck, MS**

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