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Education

- Ph.D., Fisheries. 2003. University of Florida (UF) Dept. of Fisheries and Aquatic Sciences.
Advisor: William J. Lindberg. Dissertation Title: “**Genetic variation at different taxonomic levels in the groupers** (Osteichthyes, Serranidae: Epinephelinae).”
- M.Sc., Zoology. 1995. Louisiana State University (LSU) Dept. of Zoology and Physiology.
Advisor: David A. Good. Thesis Title: “**Variation in long-tailed (*Eurycea longicauda*) and three-lined (*E. guttolineata*) salamanders.**”
- B.S., Marine Biology. 1991. University of North Carolina at Wilmington (UNCW).
Biology major, 1987-1989. Purdue University at Fort Wayne.

Peer-Reviewed Publications

- Ramírez MA, Patricia-Acevedo J, Planas S¹, **Carlin JL**, Funk SM and McMillan WO. 2006. New microsatellite resources for groupers (Serranidae). *Molecular Ecology Notes* 6(3):813-817.
- Bowen BW, Bass AL, Muss AJ, **Carlin JL** and Robertson DR. 2006. Phylogeography of two Atlantic squirrelfishes (family Holocentridae): exploring links between pelagic larval duration and population connectivity. *Marine Biology* 149(4):899-913.
- Morato T¹, Afonso P¹ and **Carlin JL**. 2004. First record of scamp, *Mycteroperca phenax*, in the north-eastern Atlantic. *Journal of the Marine Biological Association of the United Kingdom* 84(1):281-282.
- Carlin JL**, Robertson DR and Bowen BW. 2003. Ancient divergence and recent connections in the tropical Atlantic reef fishes *Epinephelus adscensionis* and *Rypticus saponaceus* (Percoidei: Serranidae). *Marine Biology* 143(6):1057-1069.
- Ball AO, Sedberry GR, Zatzoff M, Chapman RW and **Carlin JL**. 2000. Population structure of wreckfish (*Polyprion americanus*) determined using microsatellite genetic markers. *Marine Biology* 137(5-6):1077-1090.
- Sedberry GR, Andrade CAP, **Carlin JL**, Chapman RW, Luckhurst BE, Manooch III CS, Menezes G, Thomsen B and Ulrich GF. 1999. Wreckfish (*Polyprion americanus*) in the North Atlantic: Fisheries, biology, and management of a widely distributed and long-lived fish. *American Fisheries Society Symposium* 23:27-50.
- Sedberry GR, **Carlin JL** and Ulrich GF. 1998. Movements of a pelagic-phase wreckfish, *Polyprion americanus*, as indicated by tag and recapture. *Arquipélago* 18:69-72.
- Carlin JL**. 1997. Morphological and genetic differentiation between long-tailed (*Eurycea longicauda*) and three-lined (*E. guttolineata*) salamanders (Caudata: Plethodontidae). *Herpetologica* 53(2):206-217.
- Sedberry GR, **Carlin JL**, Chapman RW and Eleby B. 1996. Population structure in the pan-oceanic wreckfish, *Polyprion americanus* (Teleostei: Polyprionidae), as indicated by mtDNA variation. *Journal of Fish Biology* 49 (Supplement A):318-329.

¹undergraduate author at time of article submission

Reports and Theses

- Carlin JL.** 2003. Genetic variation among populations and species of epinephelin fishes (Percoidei: Serranidae). Ph.D. Dissertation, University of Florida. 101 pp.
- Carlin JL.** 2002. Evolution of cytochrome *b* in epinepheline fishes (Percoidei: Serranidae). Pp. 1-12 in (Howard K and MacKinlay D, eds.): *Fish Performance: Studies in Fish Biology* International Congress on the Biology of Fish. University of British Columbia, Vancouver.
- Sedberry GR, Ball AO, **Carlin JL**, Chapman RW, Ulrich GF and Zatcoff MS. 1999. Stock structure in wreckfish, *Polyprion americanus*, determined by tagging and molecular genetic techniques. MARFIN Project Number NA57FF0290 Final Report. 69 pp.
- Carlin JL.** 1995. Variation in long-tailed (*Eurycea longicauda*) and three-lined (*E. guttolineata*) salamanders. MS Thesis, Louisiana State University, Baton Rouge. 68 pp.

Grants and Scholarships

2007	Sigma Xi Grants-in-Aid *	\$ 400
2007	Greater Gustavus Fund: Summer Research *	\$ 2500
2007	International Studies Course Development Grant	\$ 2000
2005	Sigma Xi Grants-in-Aid *	\$ 875
2005	Whitman College Perry Fund for Undergraduate Research *	\$ 5345
2005	NASA Undergraduate Research Award *	\$ 3000
2001	The PADI Foundation, Inc.	\$ 800
2000	Int'l Women's Fishing Assoc. Ryan Kelley Scholarship Trust	\$ 1000
2000	PADI Project AWARE Foundation MicroGrant	\$ 5000
1999	ASIH Edward C. Raney Fund	\$ 870
1999	Int'l Women's Fishing Assoc. Ryan Kelley Scholarship Trust	\$ 1000
1999	Sigma Xi Grants-in-Aid	\$ 870
1998	Int'l Women's Fishing Assoc. Ryan Kelley Scholarship Trust	\$ 1000
1993	Sigma Xi Grants-in-Aid	\$ 500

* student co-investigator(s)

Awards

- Certificate of Appreciation for Service. 2006. The American Fisheries Society Genetics Section. Received at the 2006 annual meeting of the American Fisheries Society.
- Stoye Award for Best Student Oral Presentation. 2001. The American Society of Ichthyologists and Herpetologists. \$250.
- Jim Wright Graduate Student Award. 2001. American Fisheries Society Genetics Section. \$400.
- Rottman Achievement Award for graduate student members. 1999. Florida Chapter of the American Fisheries Society. \$500.

Teaching Experience

Gustavus Adolphus College Department of Biology. 2006-present. Assistant Professor.

Bio 101 Principles of Biology (Fall 2006, 2007). A general introduction to the study of biology. Topics include the structural organization of organisms, cellular reproduction, basic metabolism, genetics, ecology and evolution. Four lectures and one two-hour laboratory per week. Lectures include pre-exam reviews via case studies exploring marine symbioses, catatonia in goats, Burkitt's lymphoma and cancer genomics. Laboratory skills taught include statistical concepts, microscopy and critical thinking in experimental design.

Bio 102 Organismal Biology (Spr 2007, 2008). This course covers the basics of plant and animal organization. Topics include phylogeny, development and the structural-functional relationships of plants and animals. Four lectures and one three-hour laboratory weekly. Course includes small group work, discussions of science publishing and online discussion forums. Laboratory skills taught include scientific writing and statistical concepts.

Bio 121 Biology and Conservation of Wolves (Jan 2008). We will study the fields of evolution, genetics, community ecology and conservation biology with a well-studied socially complex predator as a single case study. Class activities include extensive writing, mathematical modelling as well as guided discussions. First-hand experiences of wolf behavior and wildlife ecology, including tracking and radiotelemetry, will be undertaken at the International Wolf Center in Ely, Minnesota.

Bio 382 Evolution (Spring 2008). Morphological, behavioral and genetic changes are discussed on the scales of populations, species and higher order taxa. Lecture periods include primary literature discussions. Special topics include evolutionary psychology, coalescence theory, Bayesian analysis, hominid evolution, and AIDS. Four lectures weekly.

Bio 383 Aquatic Biology (Fall 2007). A study of the success and distribution of organisms in aquatic habitats. Lecture periods include primary literature discussions and guest lecturers. Laboratory work explores water chemistry, catchment morphometry, aquatic adaptations, and fisheries science with an emphasis upon aquatic habitat sampling and experimental design. Three lectures and one three-hour laboratory weekly.

Future courses include Bio 100 Fish and Fisheries (Fall 08) and Natural History of Ecuador and the Galapagos (J-term 2009).

Whitman College Department of Biology. 2003-2006. Visiting Assistant Professor.

Biol 111 Biological Principles (Fall 2005, Fall 2004). A survey of biological chemistry, cell biology, genetics and mammalian physiology. Lectures included pre-exam reviews via case studies, exploring the biochemistry and cell biology of phototropism, the cell biology and genetics of Burkitt's lymphoma, and an integration of the whole semester by examining the biology of dogs. Laboratory skills taught included scientific writing, peer-reviewed presentations on scientific literature, and basic concepts in statistics.

Biol 172 Fish and Fisheries (Spring 2006, Spring 2005). A non-majors science course covering the evolution, physiology and ecology of fishes, as well as fisheries economics, law and management. Fisheries of Alaska, eastern Africa, Nova Scotia, Polynesia and Washington state were used as case studies. A laboratory section concentrated upon fish anatomy, physiology and evolution, including field trips and talks with state and tribal fisheries biologists.

Biol 112 The Biological World (Spring 2005; half semester). A survey of organismal biology emphasizing diversity and adaptation; I taught the first half of both lecture and labs, introducing evolution and reviewing non-animal life. Required course for biology majors.

Teaching Experience (continued)

Biol 278/279 Marine Biology (Spring 2006). A majors elective that stressed anatomical, physiological and biochemical adaptations to the marine environment. Assignments included critical reviews of recent peer-reviewed papers in marine biology. An optional laboratory was taught for a week at University of Washington's Friday Harbor Marine Laboratory (San Juan I., WA), emphasizing hypothesis testing, natural history observation, intertidal and nearshore sampling methods.

Biol 471 Island Biogeography (Fall 2004). A majors elective which combined lectures with discussions of Quammen's *Song of the Dodo*. Lectures explored floral and faunal insularism as well as experimental design in modern biogeography, featuring metapopulation theory, GAP analysis, MVP's, PVA, reserve design and phylogeography.

Biol 130 Conservation Biology (Fall 2003, Spring 2004). A lecture and laboratory course complementing the Environmental Studies program, providing a strong biological foundation to non-science majors. Essay writing was emphasized, as was the use of biology data for informed management practices. Labs were a mixture of field and analysis experiences.

Biol 205 Genetics (Fall 2003, Spring 2004; half semester each). I taught the non-molecular half of the lecture, including cellular, population, and evolutionary genetics and genomics within an evolutionary framework. Primary literature, popular science writing, examples from human medicine and biodiversity conservation supplemented the lecture material.

Biol 350 Evolutionary Biology (Spring 2004). Lectures covered a review of population genetics, hominid evolution and speciation theory. A third of course involved journal article discussion, and an optional field trip to John Day Fossil Bed National Monument was provided. Course emphasized experimental design and current issues in evolution.

University of Florida Honors Program / Wildlife Ecology and Conservation. 2002. Instructor.

WIS 2552H Global Perspectives in Biodiversity Conservation (Spring). A special topics course I designed to explore politics, economics and ethics as well as ecology and genetics. Course included weekly discussions, oral presentations, and extensive essays.

University of Charleston Grice Marine Biological Laboratory. 1997-1998. Associate Instructor.

Guest lecturer, Bio 600 **Molecular Physiology**. Service on textbook and student committees.

Charleston County Worlds of Wonder Natural History Youth Programs. 1996, 1997. Instructor.

Stories in the Sky. Sky mythologies, stellar astronomy, and general relativity for grades 3-6.

The Wonderful World of Amphibians and Reptiles. Herpetology for grades 3-6.

Louisiana State University Summer Youth Program. 1995. Instructor.

Marine Biology (Lecture, lab). I designed the lectures and lab experiences for grades 6-8 to cover physical oceanography, morphological adaptations, and coastal ecology.

Louisiana State University Dept. of Zoology and Physiology. 1992-1995. Teaching Assistant.

Bio 2153 **Principles of Genetics**. I taught problem-solving sessions (recitations) which applied current issues and historical experimental results to lecture topics.

Bio 1002 **Introductory Biology for Biology Majors Laboratory**. I led basic investigations, taught scientific method and introductory data analysis.

Institutional Service

Gustavus Adolphus College Department of Biology. 2006-present. Assistant Professor.
Co-principal investigator for combined Biology and Chemistry faculty-student projects. 2007.
Merck / AAAS Undergraduate Science Research Program.
Committee Member, Environmental Studies program, 2006-present.
Committee Member (Natural Sciences and Mathematics representative), Curriculum Committee.
2007.
Chair, Bio 101 Principles of Biology Course Revision Committee. 2006-present.
Chair, Visibility Subcommittee of the Summer Student Research Committee. 2007.
Presenter. 2006, 2007. "The Biology major at Gustavus." Explore Gustavus! presentations.
Project Leader. 2007. Development of a watershed management plan integrated with current and
future Gustavus Environmental Studies course offerings.
Faculty advisor. 2007. Women's lacrosse team.

Whitman College Department of Biology. 2003-2006. Visiting Assistant Professor.
Alumni Educator. 2006. The biology and politics of high-seas fishing. Whitman College Summer
College, Walla Walla WA.
Faculty advisor. 2005-2006. KΚΓ Sorority, Whitman College chapter.
Peer Mentor. 2004-2006. Whitman College Working Class discussion group.
Co-advisor. 2003-2006. Co-advisor on combined-major undergraduate theses with Dept. of
Psychology and Environmental Studies Program.

Professional Service

Chair, AFS Web Advisory Committee, 2007. Also served as editorial advisor, 2003-2006.
Responsible for societal website content, online data sharing, and annual meeting websites.
Service acknowledged in the Aug 2007 issue of *Fisheries*.
Manuscript reviews. *Marine Biology*, 2005; *Conservation Biology*, 2004; *Contributions in Marine
Science*, 2001; *Journal of Herpetology*, 1997, 1999; *Transactions of the American Fisheries
Society*, 2001.
Grant reviewer. 2007. Florida Sea Grant. One grant application reviewed.
Grant reviewer. 2006. North Pacific Research Board. One grant application reviewed.
Newsletter editor. 1999-present. The American Fisheries Society Genetics Section. Received
Certificate of Appreciation for Service at the 2006 annual meeting.
Education committees, 2002-present. The American Fisheries Society, The Society for the Study
of Evolution. Member, Association of College and University Biology Educators.
Review of project final reports. 2001. World Wide Fund for Nature (WWF-UK). In conjunction with
Dr. Robert Buschbacher, UF Dept. of Wildlife Ecology and Conservation, Gainesville FL.
Scientific Meeting Presentations. 1989-present. Eighteen presentations (incl. 2 posters) given to
16 national or regional meetings of professional scientific societies. Workshop chair, 2007,
Annual Meeting of the American Fisheries Society. Session co-chair, 2004, Annual Meeting of
the Society for Integrative and Comparative Biology. Winner, 2001 ASIH Stoye Award for Best
Student Paper in Genetics/ Morphology/Development session. Session chair, 2000, 8th Mid-
Year Meeting of the American Fisheries Society Southern Division.

Mentorship Experience

Gustavus Adolphus College Department of Biology. 2006-present. Assistant Professor.

I have mentored eight student projects with topics ranging from digital morphometry of fish skeletons to stream surveys for pollution-sensitive macroinvertebrates to genomic surveys of viral-mediated gene transfer. In addition, I have continued to mentor three Whitman College student senior theses, resulting in two oral presentations at regional conferences and one presentation at a national conference.

Mentor, First-year Students of Color Mentoring Program. 2007-present.

Panelist, 2007. Gustavus βββ Society's Panel on Graduate School.

Service Trip Leader, 2006. Gustavus Lacrosse Team Katrina Relief Trip.

Whitman College Department of Biology. 2003-2006. Visiting Assistant Professor.

I have mentored two Honors Senior Theses, eleven Senior Theses and twelve Independent Study projects, covering a range of topics from molecular genetics to plant conservation. In addition, I mentored undergraduate student poster presentations at three professional conferences, an oral presentation by an undergraduate at an international conference (AFS 2005, Anchorage AK September 2005) and ten oral presentations at Whitman Undergraduate Conferences.

Two students and I applied for small research grants in 2005, a total of \$9220 was received from three grants.

I have been a faculty advisor for student organizations, including the Whitman College chapter of KKIΓ sorority, and a frequent volunteer educator in the General Studies ("Core") program.

University of Florida Dept. of Fisheries and Aquatic Sciences. 2002. Research Assistant.

Alo M (post-baccalaureate). "Heritability of caudal fin color in aquaculture lines of swordtails, *Xiphophorus helleri*."

University of Charleston Grice Marine Biological Laboratory. 1997-1998. Associate Instructor. Thesis committee member for R. Wingrove (M.S.,1999). "Population structure of dolphin, *Coryphaena hippurus* L. 1758, in the west central Atlantic, eastern Caribbean Sea, and Gulf of Mexico inferred from mitochondrial DNA variation."

Public Outreach and Extension

Public Seminars. 1995-present. Eleven presentations given to: Walla Walla Watershed Council, Walla Walla Chapter of Sigma Xi, Whitman College Environmental House, UF Honors Program, UF Marine Biology Club, Univ. dos Açores, Field Museum of Natural History Urban Youth Volunteer Program, LSU Museum of Natural Science and others. A complete list is available upon request.

Volunteer Hurricane Relief Construction. 2006, 2007. Cleanup from Hurricane Katrina. With Gustavus Adolphus Women's Lacrosse team (2007). Ocean Springs MS.

Volunteer Labor. 2007. Chinese elm removal. Linneaus Arboretum, Gustavus Adolphus College.

Volunteer Riparian Restoration Labor. 2003-2006. Tri-State Steelheaders Fisheries Enhancement Group, Walla Walla WA. Some of my work was featured in the *Tri-City Herald*, 30 Oct 2004: A1-A2.

Volunteer Labor. 2004, 2005. Graphite and charcoal demonstrations, Walla Walla 4-H County Fair, on behalf of the Carnegie Art Center, Walla Walla WA.

Volunteer Educator. 2005. Palouse Community School, Walla Walla Co., WA.

Volunteer Docent. 2001-2002. "Fishing For Success" youth conservation education program. UF Dept. of Fisheries and Aquatic Sciences, Gainesville FL.

Volunteer Docent. 1993-1995. LSU Museum of Natural Science, Baton Rouge LA.

Professional Training and Development

- Completed Gustavus Adolphus College safety training course in operation of 11-passenger vehicles. 2007. Gustavus Adolphus College.
- Overseas field experience (Açores, Bahamas, Ecuador, Hong Kong, Madeira, Mexico, Puerto Rico) collecting genetic and life history samples. 1996-2003, 2007.
- Completed "Adapting to Multicultural Learning Styles" training. 2005. Whitman College.
- Completed "Advanced Webpage Design and Adobe Photoshop." 2002. UF Student Union Leisure Course, Gainesville FL.
- Completed "Gene Expression analysis: Microarrays and Real Time PCR." 2001. Advanced molecular biology laboratory course. UF Biotechnology Program ICBR Education Core, Gainesville FL.
- Completed SCUBA Certification, Open Water Diver. 2001. PADI.
- Training in water quality sampling and electrofishing. 1999, 2000. UF Dept. of Fisheries and Aquatic Sciences, Gainesville FL.
- Reef fish life history sampling. 1995-1998. With Marine Resource Monitoring and Assessment Program (MARMAP), MRRI, SC Dept. of Natural Resources, Charleston SC.
- Training in curatorial techniques for vertebrates and tissues. 1992-1993. With David Good of the LSU Museum of Natural Science, Baton Rouge LA.

Select Seminars and Guest Lectures

- "Scientific inquiry from a Daoist perspective." 2007. FTS 100 Religion and Science. Gustavus Adolphus College, St. Peter MN.
- "Molecular sequence alignment: process and problems." 2007. Graduate seminar in genomics, University of Minnesota at Mankato, Mankato MN.
- "Aquatic underdogs: molecular ecology and fish conservation." 2007. Departmental research seminar, University of Minnesota at Mankato, Mankato MN.
- "How to be a little fish in a big pond." 2005. Interdisciplinary faculty seminar, Whitman College, Walla Walla WA.
- "Choosing between grad schools, jobs, and ice cream." 2003. Environmental House, Whitman College, Walla Walla WA.
- "Groupers, the live reef fish trade, and wildlife forensics." 2003. Environmental House, Whitman College, Walla Walla WA.
- "Darwinian thought and its impacts." 2004, 2005, 2006. GENS 146 Antiquity and Modernity [required first-year interdisciplinary course]. Whitman College, Walla Walla WA.
- "Fish morphology." 2005. BIO 110 Fish and Fisheries. Blue Mountain Community College, Pendleton OR.
- "Research at the moment of evolution." 2005. SigmaXi, Walla Walla Chapter. Walla Walla WA.
- "Darwin, sex and gender." 2005. GENS 146 Antiquity and Modernity [required first-year interdisciplinary course]. Whitman College, Walla Walla WA.
- "Undergraduate Grantsmanship." 2005, 2003. BIOL 488 Research Preparation. Whitman College, Walla Walla WA.
- "The future of natural history." 2004. Open seminar combining BIOL 471 and ENVS 247 Literature of Nature. Whitman College, Walla Walla WA.
- "Fishery biology, life history and genetic stock structure of wreckfish, *Polyprion americanus*, in the North Atlantic Ocean." 1998. Depto. Oceanografia e Pescas, Universidade dos Açores. Horta, Açores, Portugal.