

Christopher Graham Mull
Department of Biological Sciences
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Education:

- 2004–2007 Master of Science in Biology, California State University Long Beach.
Thesis: Temporal cycles in reproductive activity of the round stingray (*Urobatis halleri*) and regulation by environmental cues.
- 1999-2003 Bachelor of Science in Environmental Biology and Management with an emphasis in Aquatic Biology, University of California Davis

Publications:

Christopher Mull, Christopher Lowe and Kelly Young (2008). Photoperiod and Water Temperature Regulation of Seasonal Reproduction in Male Round Stingrays. *Comp. Biochem. Phys. Part A*. 151: 717-725.

Mason Dean, **Chris Mull**, Stanislav Gorb, and Adam Summers (2009). Ontogeny of the tessellated skeleton: Insight from the skeletal growth of the round stingray *Urobatis halleri*. *J. Anat.* 215:227-239.

Christopher Mull, Christopher Lowe and Kelly Young (2009). Steroid Hormone Profiles and the Seasonal Reproductive Cycle of Female Round Stingrays (*Urobatis halleri*). In prep.

Professional Experience:

July 2006-Present. Microbeam technician for the Institute for Integrated Research in Materials, Environments, and Society (IIRMES) at California State University Long Beach. Duties included the management of the laboratory and instrumentation including: Quadrapole ICP-MS, Laser ablation TOF ICP-MS, High Performance Liquid Chromatography, light gas stable isotope MS, GC/MS, ESEM, EDS/WDS x-ray systems, all ancillary equipment, and to a limited extent assistance with MALDI TOF/TOF MS. In addition duties included training of students, visiting researchers and new technicians on the use of instrumentation, laboratory procedures, QA/QC of sample analyses. In addition conducted contract analyses, scheduling and organizing visiting researchers, bookkeeping, compilation and analysis of data, and compilation of contract and annual reports, demonstrations to university and local school courses.

July 2006- July 2008. Microanalytical Support Technician for CSUPERB Facility for Elemental Micro-Chemical Analysis (FEMCA). Duties included the analysis of samples for CSUPERB customers including ICP-MS analysis of liquid and solid samples via microwave assisted acid digestion and laser ablation, ESEM imaging and EDX/WDX analysis of solid samples, training of visiting researchers and students in the general operation of instruments, analysis of samples and interpretation of data, maintenance of the facility and instrumentation for daily operation, and bookkeeping, organization and implementation of outreach with

camps and courses. In addition to regular duties, assisting with contract analyses of samples on the GC/MS.

May 2005 – Present. CSULB YOY White Shark Rapid Response team member. Assisted in the RRT response to captured YOY white sharks in southern California. Duties prepping tags for deployment, responding to calls from fishermen, rapidly assessing shark condition, deploying PAT and SPOT tags. In the case of sharks dead upon capture performing necropsies and collecting tissues for various researchers.

September 2003 – August 2004. Post-graduate Researcher for Spring Rivers Ecological Services and the University of California, Davis. Building, designing, and testing a physical/velocity barrier as part of the Federally-listed, Endangered Shasta Crayfish (*Pacifastacus fortis*) species recovery plan.

Presentations:

Chritopher Mull, Christopher Lowe, and John O’Sullivan. Trace elements and heavy metals in the tissue of juvenile white sharks (*Carcharodon carcharias*) from the southern California Bight. Poster presented at the 25th Annual Meeting of the American Elasmobranch Society, Portland, OR.

Christopher Mull, Christopher Lowe and Kelly Young. Using Ultrasounds and Steroid Hormones to Determine Pregnancy in Seasonal Aggregations of Female Round Stingrays (*Urobatis halleri*) in a Coastal Estuary. 24th Annual Meeting of the American Elasmobranch Society. July 23-28. Montreal, Canada.

Christopher Mull, Kate Jirik, Christopher Lowe and Kelly Young . Seasonal Aggregations of Female Round Stingrays (*Urobatis halleri*) in a Coastal Estuary: Using Ultrasound and Hormone Levels to Determine Pregnancy. 2007 Annual Meeting of the Western Society of Naturalists. November 8-11, 2007. Ventura, CA.

Christopher Mull, Christopher Lowe and Kelly Young. Sexual Segregation and Utilization of Coastal Saltmarsh Mitigation by Pregnant Female Round Stingrays (*Urobatis halleri*). 23rd Annual Meeting of the American Elasmobranch Society. July 11-16, 2007. St. Louis, MO.

Christopher Lowe, **Christopher Mull**, Hayley Zemel. Occurrence and Distribution of Stingray-related Injuries at Seal Beach, CA. 23rd Annual Meeting of the American Elasmobranch Society. July 11-16, 2007. St. Louis Missouri.

Christopher Mull, Christopher Lowe and Kelly Young. Seasonal Aggregations of Female Round Stingrays (*Urobatis halleri*) in a Coastal Estuary. 2007 Annual meeting of the Southern California Academy of Sciences. California State University Fullerton. Fullerton, CA.

Christopher Mull, Christopher Lowe and Kelly Young. Plasma Testosterone Levels Correlate with Spermatogenesis but not GSI in Male Round Stingrays (*Urobatis halleri*). 22nd Annual Meeting of the American Elasmobranch Society. July 12-17, 2006. New Orleans, LA.

Christopher Mull, Jennifer Granneman, Kelly Young. Gonadal Histology of Male Round Stingrays (*Urobatis halleri*): Seasonal Patterns in Testes Morphology and Spermatogenesis. 3rd Workshop on Gonadal Histology of Fishes at the 86th Annual Meeting of the American Society of Ichthyologists and Herpetologists. July 12-17, 2006. New Orleans, LA.

Christopher Mull, Christopher Lowe and Kelly Young. Plasma Testosterone Levels Correlate with Spermatogenesis but not GSI Male Round Stingrays (*Urobatis halleri*). 2006 Annual Meeting of the Southern California Academy of Sciences. Pepperdine University, Malibu, CA.

Christopher Mull. 2002. The Ecology of juvenile *Embiotocidae* within the eelgrass beds of Bodega Harbor. Howard Hughes Medical Institute SHARPS Undergraduate Research Symposium, Bodega Marine Laboratory. August 22-23.

Christopher Mull. 2002. The effects of brackish salinity on the resting metabolic rate of the leopard shark (*Triakis semifasciata*). Bodega Marine Laboratory Spring 2002 Undergraduate Research presentations. June 12-13.

Teaching Experience:

August 2004 – Present. Teaching Assistant, Department of Biology of California State University Long Beach. Teaching Laboratory course, Biology 153: Introduction to Marine Biology, covering introduction of marine topics including marine processes, and survey of major marine taxa.

Professional Skills:

Field collection of elasmobranchs and various marine species, husbandry of elasmobranchs, histology, radioimmunoassay, electron microscopy, mass spectrometry (ICP-MS, GC-MS), high performance liquid chromatography, scientific diving.

Relevant Research/Volunteer Experience:

Assisted graduate students and undergraduate students with acoustic tracking of barred sand bass, acoustic tracking of round stingrays, field collections of various elasmobranchs, spearfishing collections of CA sheephead, underwater fishing collections of rockfish, CA sheephead and Cabazon, survey/safety diver for survey conducted on offshore oil platforms in southern California, underwater cage retrievals/blood sampling of various rockfish species, CLEAN program director for the Friends of Colorado Lagoon community restoration project.

Awards:

Department Honors, Department of Biological Sciences, California State University Long Beach, 2007.

Graduate Dean's List, California State University Long Beach, 2007.

Best Student Paper in Fisheries Biology, presented by the American Institute of Fisheries Research Biologists at the 2007 annual meeting of the Southern California Academy of Sciences, 2007.

California State University Graduate Research Fellowship, 2005-2006.

Southern California Academy of Sciences Grants in aid of Research, 2006.

Southern California Tuna Club Marine Biology Educational Scholarship, 2004.

SHARP Summer research scholarship, Howard Hughes Medical Institute, 2002.

Professional Organizations:

Student Member, American Elasmobranch Society, 2004-Present.

Certifications:

AAUS Scientific Research Diver