

Chiara Zuccarino-Crowe

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OBJECTIVE: To help society establish a balance between the use of natural resources and the necessity of maintaining the beauty, health, and sustainability of the Earth's marine and freshwater ecosystems.

SUMMARY OF QUALIFICATIONS:

- Experienced in scientific research and communication of results affecting aquatic ecosystems, as evidenced by development of multiple publications, presentations, government reports, and outreach products
- Trained in natural resource management leadership, fisheries assessments, environmental policy, and applications of GIS to aquatic systems
- Cultivated suite of strong interpersonal and organizational skills, with a rigorous work ethic
- Commitment to community outreach and education

EDUCATION:

MICHIGAN STATE UNIVERSITY, East Lansing, MI, USA

M.S. in Fisheries and Wildlife, 2011

National Science Foundation Graduate Research Program Fellow; University Distinguished Fellow

Master's Thesis: *Assessment of lake trout refuge effects on trends in relative abundance of select native fish species in the Apostle Islands region, Lake Superior*

BOSTON COLLEGE, Chestnut Hill, MA, USA

B.A. in Biology, (Studio Arts Minor), *cum laude*, Arts and Sciences Honors Program, 2004

Senior Honors Thesis: *Australian Environmental History: A review of methods for assessment of European settlement's impact on native ecology*

UNIVERSITY OF NEW SOUTH WALES, Sydney, NSW, Australia

Marine Science Concentration; Study Abroad - Two semesters for Boston College credit, 2002/2003

Study Abroad Merit Scholarship Recipient, 2003; Coastal Geomorphology field research assistant, 2002

PROFESSIONAL EXPERIENCE:

NOAA, Office of National Marine Sanctuaries

Silver Spring, MD

Sea Grant Knauss Fellow – Class of 2014

February 2014 - present

Leads program office's Travel & Tourism Initiative and supports communications team

- Coordinates implementation of National Travel & Tourism Strategy across the sanctuary system
- Developed and administered internal funding program to promote sustainable tourism projects
- Supports World Parks Congress' Marine Theme planning team
- Assisted with program planning for Capitol Hill Ocean Week – DC's premier ocean policy event

The Nature Conservancy – Michigan Field Office

Lansing, MI

Great Lakes Research Assistant via Michigan State University

September 2013 - January 2014

Developed web content for the Great Lakes Information and Management Delivery System (IMDS)

- Researched and authored articles about ecosystems and species of conservation priority
- Coordinated design of web-based information portal with Conservation Science Team

Fenner Nature Center

Lansing, MI

Lead Naturalist

September 2012 - June 2013

Led and developed environmental education programs to promote stewardship and appreciation of nature

- Enhanced aquatic ecology and wildlife management curricula
- Managed volunteers, coordinated animal husbandry duties, and delivered administrative support

Center for Systems Integration and Sustainability - Michigan State University

East Lansing, MI

Project Support Student Contractor

September - December 2012

Provided administrative support for Coupled Human and Natural Systems (CHANS-Net) symposia

PROFESSIONAL EXPERIENCE (continued):

Michigan State University **East Lansing, MI**
Graduate Assistant August 2009 - August 2012

Supported activities of Dr. William W. Taylor, Distinguished Professor in Global Fisheries Systems

- Coordinated multi-state research team in development of a successful proposal for: *Understanding constraints to achieving sustainable fisheries resource policy and management*
- Created geo-referenced maps of aquatic protected area boundaries in Lake Superior
- Developed session on the role of marine reserves in fisheries management for globalization course
- Provided program support for study abroad Environmental Science & Policy courses
- Awarded fellowship with the Great Lakes Fishery Commission to review aquatic protected areas
- Educated youth in various volunteer-based experiential education programs

U.S. EPA, Great Lakes National Program Office **Chicago, IL**

Research Fellow via *Oak Ridge Institute for Science and Education* February 2007 - July 2009

Environmental Careers Organization Associate May 2006 - February 2007

Placed within the Monitoring, Indicators, and Reporting Branch

- Conducted offshore water quality monitoring and analysis from a long-range research vessel
- Trained junior interns in field sampling and lab techniques
- Taught field course in aquatic benthic ecology to teachers in collaboration with Sea Grant staff
- Authored and edited peer-reviewed scientific manuscripts, environmental indicators, and reports
- Prepared briefing materials for senior administrators on issues affecting ecosystem health
- Organized multiple binational *State of the Lakes Ecosystem Conferences*
- Reviewed Ecological Protection and Restoration Grants Program
- Administered Invasive Species database
- Coordinated interdisciplinary response to environmental botulism outbreaks
- Launched and maintained Chemical Integrity web portal

Pacific States Marine Fisheries Commission **San Diego, CA**

Fisheries Technician May - December 2005

Conducted field research for the California Recreational Fisheries Survey to compile estimates of marine catch and fishing effort

Manpower and Associates – On-site at Pfizer, Inc. **La Jolla, CA**

Animal Lab Technician March - April 2005

Performed animal husbandry tasks for species in vivarium

Boston College - Biology Department **Chestnut Hill, MA**

Research Assistant October - December 2003

Assisted Dr. David Krauss with paleontological field research, data collection and initial analysis

Lincoln Park Zoo – Department of Conservation and Science **Chicago, IL**

Research Intern May - August 2002

Investigated changing birth seasonality trends of Maned Wolves (*Chrysocyon brachyurus*) in captivity

PUBLICATIONS:

Zuccarino-Crowe, C. 2012. Spotlight on the Janice Lee Fenske Excellence in Fisheries Management Fellowship. *MSU Fisheries & Wildlife SPOTLIGHT* 8:17.

Zuccarino-Crowe, C. 2011. Assessment of lake trout refuge effects on trends in relative abundance of select native fish species in the Apostle Islands region, Lake Superior. Master's Thesis, Michigan State University, East Lansing, MI.

Lynch, A.J., **C. Zuccarino-Crowe**, W.W. Taylor, E.A. Puchala. 2011. Sustainable Fisheries: An Overview Addressing a Global Problem. Pages XIII-XXIV in W.W. Taylor, A. J. Lynch, M. G. Schechter, eds. Sustainable Fisheries: Multilevel Approaches to a Global Problem. AFS Press: Bethesda, MD.

International Association for Great Lakes Research (IAGLR). 2009. Eds. Chadde, J., F. Lichtkoppler, J. Gannon, A. Bhullar, F. MacDonald, R. Sturtevant, R. Sweeney, **C. Zuccarino-Crowe**, J. Jentes-Banicki, and H. Elmer. The Great Lakes at a Crossroads: Preparing for a Changing Climate.

Publications (continued):

- Zuccarino-Crowe, C.**, E.W. Murphy, E.K. Hinchey, A. DeWeerd, and W. Bolen. 2008. Great Lakes Basinwide Botulism Coordination Workshop Report. *The Botulinum Journal* 1(2):247-255.
- Great Lakes Sea Grant Network. 2007. Eds. **Zuccarino-Crowe, C.**, E.K. Hinchey Malloy, H. Domske, E. Obert, E. LaPorte, M. Breederland, and B. Schroeder. Botulism In the Great Lakes – Frequently Asked Questions. <http://www.miseagrant.umich.edu/explore/coastal-habitat/avian-botulism-faq.html>
- Zuccarino-Crowe, C.** 2004. Australian Environmental History: A study into the methods for assessment of European settlement's impact on native ecology. Undergraduate Senior Honors Thesis, Boston College, Chestnut Hill, MA.

GOVERNMENT REPORTS:

Contributed as Report Author:

- Zuccarino-Crowe, C.** 2009. "Type E Botulism," In: *Nearshore Areas of the Great Lakes 2009*. A background paper prepared for the State of the Lakes Ecosystem Conference, October 2008, Niagara Falls, Ontario. U.S. EPA and Environment Canada (EC). ISBN 978-1-100-13563-2.
- Wormstead, S. and **C. Zuccarino-Crowe**. 2009. "Forest Lands - Conservation and Maintenance of Soil and Water Resources," In: *State of the Great Lakes 2009*. U.S. EPA and EC. ISBN 978-1-100-14102-2.
- Wormstead, S. and **C. Zuccarino-Crowe**. 2009. "Forest Lands - Maintenance of Productive Capacity of Forest Ecosystems," In: *State of the Great Lakes 2009*. U.S. EPA and EC. ISBN 978-1-100-14102-2.
- Wormstead, S. and **C. Zuccarino-Crowe**. 2009. "Forest Lands - Conservation of Biological Diversity," In: *State of the Great Lakes 2009*. U.S. EPA and EC. ISBN 978-1-100-14102-2.
- Zuccarino-Crowe, C.** 2007. "Forest Lands - Conservation and Maintenance of Soil and Water Resources," In: *State of the Great Lakes 2007*. U.S. EPA and EC. ISBN 978-0-662-47328-2.
- Zuccarino-Crowe, C.** 2007. "Forest Lands - Maintenance of Productive Capacity of Forest Ecosystems," In: *State of the Great Lakes 2007*. U.S. EPA and EC. ISBN 978-0-662-47328-2.
- Zuccarino-Crowe, C.** and Han, M. 2007. "Forest Lands - Conservation of Biological Diversity," In: *State of the Great Lakes 2007*. U.S. EPA and EC. ISBN 978-0-662-47328-2.
- Zuccarino-Crowe, C.** and Greenberg, T. 2007. "Wastewater Treatment and Pollution," In: *State of the Great Lakes 2007*. U.S. EPA and EC. ISBN 978-0-662-47328-2.

Contributed as Editor:

- U.S. EPA and EC. 2009. *Nearshore Areas of the Great Lakes 2009*. ISBN 978-1-100-13563-2.
- U.S. EPA and EC. 2009. *State of the Great Lakes 2009*. ISBN 978-1-100-14102-2.
- U.S. EPA and EC. 2007. *State of the Great Lakes 2007 Highlights* Report. ISBN 978-0-662-46106-7.
- U.S. EPA and EC. 2007. *State of the Great Lakes 2007*. ISBN 978-0-662-47328-2.

PRESENTATIONS:

- Zuccarino-Crowe, C.**, W.W. Taylor, M.J. Hansen, and C.C. Krueger. Expanding from marine to freshwater protected area assessments: A case study evaluation of lake trout refuges in Lake Superior. *Invited Oral Presentation*. American Fisheries Society (AFS) 142nd Annual Meeting, St. Paul, MN, August 22, 2012.
- Fish – The final frontier for a biologically diverse and sustainable future. Taylor, W.W., K.M. Schlee, **C. Zuccarino-Crowe**, and K.B. Mueller. AFS 142nd Annual Meeting, St. Paul, MN, August 21, 2012.
- Zuccarino-Crowe, C.**, W.W. Taylor, M.J. Hansen, and C.C. Krueger. Lake trout refuge effects on select fish species in the Apostle Islands region, Lake Superior. *Oral Presentation*. World Fisheries Congress, Edinburgh, Scotland, UK, May 11, 2012; Michigan State University Fisheries and Wildlife Graduate Student Organization Symposium, East Lansing, MI, February 24, 2012; Wisconsin and Michigan Chapters of the American Fisheries Society Joint Meeting, Marinette, WI, February 8, 2012; American Fisheries Society 141st Annual Meeting, Seattle, WA, September 8, 2011.
- Zuccarino-Crowe, C.**, and A.J. Lynch. State of the Oceans. *Invited Oral Presentation*. Peoples Church Environmental Series. East Lansing, MI, April 11, 2012.
- Taylor, W.W., **C. Zuccarino-Crowe**, N.J. Leonard, J.M. Robertson. Great Lakes Fisheries Ecosystems – yearning for the good old days within the realities of tomorrow. *Invited Oral Presentation* delivered by W.W. Taylor. American Fisheries Society 141st Annual Meeting, Seattle, WA, September 8, 2011.

PRESENTATIONS (continued):

- Zuccarino-Crowe, C.**, T. Nettesheim, E. Murphy, et al. Pharmaceuticals and Personal Care Products (PPCPs), Hormones, and Alkylphenol Ethoxylates (APEs) in the North Shore Channel of the Chicago River - Part II: Concentrations in Effluent and the Receiving Stream. *Oral Presentation*. 51st Conference of IAGLR, Peterborough, ONT, May 22, 2008.
- Zuccarino-Crowe, C.**, J.M. Adams, P.E. Bertram, J.C. May, and P.J. Horvatin. State of the Great Lakes - A Mixed Message. *Oral Presentation*. 50th Conference of IAGLR, State College, PA, May 29, 2007.
- May, J.C., J.M. Adams, P.E. Bertram, P.J. Horvatin and **C. Zuccarino-Crowe**. A Retrospective Look at the Assessment of the Great Lakes. *Oral Presentation* delivered by J.C. May. 50th Conference of IAGLR, State College, PA, May 29, 2007.
- Hinchey Malloy, E.K., C. McConaghy, and **C. Zuccarino-Crowe**. U.S. EPA Great Lakes Research. Co-presented *Invited Oral Presentation*. University of Illinois at Chicago (UIC), Women in Science and Engineering (WISE) Program, Chicago, IL, April 25, 2007.
- Zuccarino-Crowe, C.** Australian Environmental History: A study into the methods for assessment of European settlement's impact on native ecology. *Poster Presentation*. 61st Eastern New England Biological Conference, Quincy, MA, April, 2004.
- Zuccarino-Crowe, C.** Birth Seasonality Trends of the Maned Wolf (*Chrysocyon brachyurus*) in Captivity. *Oral Presentation*. Lincoln Park Zoo, Dept. of Conservation and Science Meeting, Chicago, IL, July 2002.

AWARDS and HONORS:

- John A. Knauss Marine Policy Fellowship, 2014
- Michigan State University (MSU) Graduate School Fellowship, 2012
- MSU Travel Grants: Graduate School Travel Fellowship, 2012; International Studies and Programs, Graduate Student International Travel Grant, 2012; Ecology, Evolutionary Biology, and Behavior Program Travel Fellowship, 2012; College of Agriculture and Natural Resources Travel Grant, 2012; Department of Fisheries and Wildlife Travel Grant, 2012; Department of Fisheries and Wildlife Graduate Student Organization Travel Grant, 2011
- Best Student Paper Presentation, Michigan Chapter Meeting of the American Fisheries Society, 2012
- American Institute of Fishery Research Biologists Clark Hubbs Associate Research Award, 2011
- MSU, Janice Lee Fenske Excellence in Fisheries Management Fellowship, 2010-2011
- MSU, Department of Fisheries and Wildlife Special Recognition Fellowships, 2010, 2011
- MSU Graduate School, Theodore Roosevelt Conservation and Environmental Leadership Fellowship, 2010
- MSU, College of Agriculture and Natural Resources, Graduate Office Fellowship, 2010
- National Science Foundation, Graduate Research Fellowship, 2009-2012
- MSU, University Distinguished Fellowship, 2009-2012
- National Society of Collegiate Scholars honors, 2003
- Boston College Honors Program Invitee, Member, and Graduate, 2000-2004
- University of New South Wales Study Abroad Program, Study Abroad Merit Scholarship, 2003
- *Summa cum Laude* Honors Society, Oak Park River Forest High School, 2000

SERVICE APPOINTMENTS AND ACTIVITIES:

- Environmental Education Staff, Parks in Focus program, Udall Foundation, 2012
- Educational Program Staff, 4-H Great Lakes Natural Resources Camp, 2011-12
- Outreach Committee, Department of Fisheries & Wildlife Graduate Student Organization, 2009-present
- Co-Chair, Website Committee, International Association for Great Lakes Research, 2008-present
- Member, IAGLR, Outreach and Website Committees, 2007-11
- Educator, COSEE Great Lakes, Shipboard Science Workshops, 2008, 2009
- Mentor, Girls E-Mentoring in Science, Engineering and Technology (GEM-SET) Program, 2007-09
- Educator, *R/V Lake Guardian* public outreach events, 2007-08
- Volunteer, North American Ecotourism Conference, 2007
- Judge, Chicago Public Schools Science Fairs, 2006-07
- Volunteer, Forest Preserve of Cook County Fisheries Department, Walleye Stocking Program, 2006

SERVICE ACTIVITIES (continued):

- Volunteer, Franciscan Children's Hospital, Residential Assessment Program (RAP) Unit, 2001-02
- Habitat and Community Outreach Volunteer, Boston College Appalachia Volunteers, 2001-02
- Volunteer, Oak Park Animal Care League, 1998
- Chair and Member, Pollution Control Committee of OPRF, 1996-2000

PROFESSIONAL ASSOCIATIONS AND AFFILIATIONS:

- Member, National Association for Interpretation, 2012-2013
- Member, Society for Conservation Biology, 2011-2013
- Member, International Association for Landscape Ecology, US Regional Association, 2010-2011
- Member, American Fisheries Society, 2009-present
- Student Associate Member, American Institute of Fishery Research Biologists, 2009-present
- Member, International Ecotourism Society, 2010
- Member, Toastmasters International, 2007-08
- Member, Canadian Organization for Tropical Education & Rainforest Conservation (COTERC), 2007-08
- Member, International Association for Great Lakes Research, 2006-present

COURSEWORK HIGHLIGHTS:

Graduate: Fish Population Dynamics, Landscape Ecology, Environmental Advocacy, Conservation Ethics, Applications of GIS to Natural Resources Management, Ichthyology, Statistics for Biologists, Advanced Statistics for Biologists – Linear modeling and experimental design, Great Lakes Leadership Academy, Human Dimensions Research in Fisheries & Wildlife, Global Issues in F&W, Meta-analysis, Environmental Science and Policy, Structured Decision Making in F&W Mgmt., Pedagogical Skills & Teaching Strategies for the Sciences, AD Model Builder Basics and Advanced Fishery Applications

Undergraduate: Marine & Aquatic Ecology, Ocean Biology & Fisheries, Marine Science, Coral Reef Ecology, Molecular Biology, Genetics, General Chemistry, Organic Chemistry, Ecology, Animal Behavior, Evolution, Australian Wildlife Biology, Paleontology, Science and Religion, Western Cultural Traditions, Vertebrate Cell Biology, Bioinformatics, Biostatistics

ADDITIONAL TRAINING AND SKILLS:

- Science Communications, Integration and Application Network (IAN), UMCES, 2014
- Introduction to MARXAN Course, PacMARA (Pacific Marine Analysis and Research Association), 2011
- Responsible Conduct of Research Certificate, Michigan State University Graduate School, 2010-2011
- GIS experience: Integrated use of ArcGIS throughout research and graduate coursework; Michigan American Fisheries Society Great Lakes GIS Workshop, 2009; ESRI Introduction to ArcGIS I course, 2007
- Graphics and layout design experience: Adobe InDesign, Adobe Illustrator, and Adobe Photoshop
- Certified First Responder/Lay Rescuer through Maritime Medical Access Course, 2007, 2008
- Diver, Advanced Open Water SCUBA Certification, PADI, Thailand, 2009; Open Water, 2002
- Swim Instructor & Lifeguard, Oak Park, IL, 1999-2000
- CPR and First Aid Certified
- Additional Languages: Italian (Basic)

FIELDWORK EXPERIENCE:

Fisheries: Bottom and mid-water trawling; Beam trawling; Gill netting; Marine & freshwater fish identification and measurement; Fish dissection; Sample preparation for tissue and stomach content analysis; Collection of gametes for hatchery-breeding program

Limnology and aquatic ecology: Deployment and retrieval of a rosette device, CTD profiler, ponar grab, box cores, plankton net tows, and towed vehicle array with side-scan sonar; Laboratory processing of water samples for chemical analysis; Water sample quality control

PERSONAL INTERESTS:

Travel; Dance; Snorkeling; SCUBA; Surfing; Cross-Country Skiing; Wheelthrowing & Glaze Chemistry