

Corey A. Krabbenhoft

3177 Bio Science Bldg.
Department of Biological Sciences
5047 Gullen Mall
Detroit, MI 48202

Email: ckrab@wayne.edu
Phone: (313) 577-8107
Web address: www.unm.edu/~clove1

RESEARCH INTERESTS

I am interested in aquatic ecology and conservation. My previous research has been largely in the area of community interactions in aquatic ecosystems. I have studied food web dynamics, life history strategies and long-term changes in water quality and chemistry. I have experience in field and laboratory procedures for ecological studies, taxonomic identification of aquatic invertebrates and fishes and statistical interpretation of large data sets including community and isotopic data.

EDUCATION

- Ph.D. Biology (*in progress*)
Major Advisor: Donna R. Kashian
Wayne State University
Detroit, Michigan
- M.S. with Biology, 2012
Distinction *The contribution of young-of-year fishes to aquatic food web dynamics in an arid-land river system (Rio Grande, New Mexico)*
Major Advisor: Thomas F. Turner
University of New Mexico
Albuquerque, New Mexico
- B.S. Biology, 2009
Minor: Anthropology
University of New Mexico
Albuquerque, New Mexico

RESEARCH EXPERIENCE

- August 2014 – present Ph.D. Student, Department of Biological Sciences, Wayne State University
- May – August 2014 Instructional Assistant, Department of Biological Sciences, Wayne State University
- April 2013 – March 2014 Research Assistant, Department of Wildlife and Fisheries Sciences, Texas A&M University
- February – April 2013 Research Technician, Department of Biology, University of New Mexico
- August – December 2012 Research Technician, Museum of Southwestern Biology, Division of Fishes, University of New Mexico

June – August 2012	International Research Experience for Students program participant, funded by the National Science Foundation: Mongolia
August 2010 – July 2012	MS Student, Department of Biology, University of New Mexico
January – August 2010	Laboratory and Field Technician, Museum of Southwestern Biology, Division of Fishes, University of New Mexico
August – December 2009	Undergraduate Research Assistant, Department of Biology, University of New Mexico
May – August 2009	Research Experience for Undergraduates (REU) Student, Department of Biology, University of New Mexico
January – May 2009	Curatorial Assistant, Museum of Southwestern Biology, Division of Fishes, University of New Mexico

RELEVANT SKILLS

Analytical Skills	Statistical analysis and graphical presentation in R, SAS, PRIMER, MiniTab and SigmaPlot; database creation and management
Laboratory & Field Skills	<p>Identification of North American freshwater fishes (including larvae)</p> <p>Aquatic invertebrate identification</p> <p>Preparation of stable isotope samples</p> <p>Otolith microchemistry preparation</p> <p>DNA extraction, gel electrophoresis, PCR and Big Dye reactions</p> <p>Maintenance, calibration and deployment of water chemistry/quality equipment including YSI, Sonde, Cycle P, SUNA and turbidity instruments</p> <p>Certified scuba diver (PADI)</p> <p>Training and management of student workers</p>

PUBLICATIONS

Turner, T.F., Krabbenhoft, T.J., Collyer, M.L., **Krabbenhoft, C.A.**, Edwards, M.S., Sharp, Z.D. Retrospective stable isotope analysis reveals ecosystem responses to river regulation over the last century. (*Submitted*)

MANUSCRIPTS IN PREPARATION

Krabbenhoft, C.A., Turner, T.F., Burdett, A.S. The contribution of young-of-year fishes to aquatic food web dynamics in an arid-land river system (Rio Grande, New Mexico). (*In prep*)

Turner, T.F., **Krabbenhoft, C.A.**, Burdett, A.S. Trophic interactions and nutrient cycling in refugial pools depend on pool location and persistence time in an intermittent river. (*Invited contribution for special issue; in prep*)

Alò, D., Correa, C., Turner, T.F., **Krabbenhoft, C.A.** Analysis of life history strategies of *Aplocheilichthys* (Galaxiidae) species in Chile and the impact of hydroelectric dams as determined by otolith microchemistry. (*In prep*)

Krabbenhoft, C.A., Turner, T.F., Burdett, A.S. The trophic effects of adult and young-of-year fishes in a drying, aquatic food web: a mesocosm study. (*In prep*)

GRANTS AND AWARDS

May 2012	IRES student stipend, NSF: \$2000
March 2012	Alvin R. & Caroline G. Grove Summer Research Scholarship, UNM Biology: \$1000
March 2012	Clifford Crawford Scholarship, UNM Biology: \$1500
June 2011	Student Conference Award Program, UNM Career Services: \$600
April 2011	Clifford Crawford Scholarship, UNM Biology: \$900
March 2011	Graduate Research Allocations Committee, UNM Biology: \$400

TEACHING

Fall 2014	Basic Life Mechanisms 1510L, Professors: Robert Thomas and Nataliya Turchyn Wayne State University, 57 students (2 sections)
Spring 2012	Limnology 496L, Professor: Clifford Dahm University of New Mexico, 6 students
Fall 2011	Genetics 202L, Professors: Ulfar Bergthorsson and Kelly Howe University of New Mexico, 70 students (3 sections)
Spring 2011	Ichthyology 487L, Professor: Thomas Turner University of New Mexico, 19 students

ORAL PRESENTATIONS (*presenter indicated by asterisk*)

September 2013	Seminar, Department of Wildlife and Fisheries Sciences, Texas A&M University, College Station, TX. Krabbenhoft, C.A.* , Burdett, A.S., Turner, T.F. The contribution of young-of-year fishes to aquatic food web dynamics in an arid-land river system (Rio Grande, New Mexico).
July 2013	American Society for Ichthyologists and Herpetologists, Albuquerque, NM Krabbenhoft, T.J.*, Krabbenhoft, C.A. , Mendsaikhan, B., Mercado-Silva, N., Jensen, O.P. Evolution and ecology of Mongolian grayling species (<i>Thymallus</i> spp.): an individual-based approach.
November 2012	Desert Fishes Council, Death Valley, CA

- Krabbenhoft, C.A.***, Burdett, A.S., Turner, T.F. The contribution of young-of-year fishes to food web dynamics in the Rio Grande.
- May 2012 Society for Freshwater Science, Louisville, KY
Turner, T.F.*, **Krabbenhoft, C.A.**, Burdett, A.S. Trophic interactions and nutrient cycling in refugial pools depend on pool location and persistence time in a dryland river system.
- November 2011 Brown Bag Seminar, Department of Biology, UNM, Albuquerque, NM
Krabbenhoft, C.A.* The contribution of larval fishes to aquatic food web dynamics.
- July 2011 American Society for Ichthyologists and Herpetologists, Minneapolis, MN
Love, C.A.*, Burdett, A.S., Turner, T.F. The feeding habits of larval fishes: abiotic influences and food web impact.
- July 2011 American Society for Ichthyologists and Herpetologists, Minneapolis, MN
Turner, T.F.*, **Krabbenhoft, T.J.**, **Love, C.A.** New insights from old specimens: Effects of intensive river regulation in the Rio Grande revealed from stable isotopes of preserved material.
- June 2010 North American Benthological Society Meeting, Santa Fe, NM
Turner, T.F.*, **Krabbenhoft, T.J.**, Collyer, M.L., **Love, C.A.** A new hypothesis testing framework for stable isotope ratios in ecological studies with examples from the Rio Grande.

POSTER PRESENTATIONS

- July 2014 American Society for Ichthyologists and Herpetologists, Chattanooga, TN
Rodger, A.W.*, **Krabbenhoft, C.A.**, Winemiller, K.O. Intra-annual flow variation and its impact on larval fish abundance in two Texas Gulf Coast rivers.
- July 2013 American Society for Ichthyologists and Herpetologists, Albuquerque, NM
Krabbenhoft, C.A.*, Burdett, A.S., Turner, T.F. A mesocosm study of trophic interactions in a desert river (Rio Grande, New Mexico).
- April 2011 Research Day, Department of Biology, UNM, Albuquerque, NM
Love, C.A.*, Burdett, A.S., Turner, T.F. The feeding habits of larval fishes: abiotic influences and food web impact.
- April 2011 Research Day, Department of Biology, UNM, Albuquerque, NM
Peralta, M.F.*, Burdett, A.S., **Love, C.A.**, Turner, T.F. Influences of habitat and predatory fish on mosquito abundance in a mesocosm experiment.
- October 2009 Desert Fishes Council, Death Valley, CA
Bishara, R.K.*, Johnson, E.L.*, **Love, C.A.***, Burdett, A.S. and Turner, T.F. Aquatic invertebrate ecology in the Rio Grande, New Mexico: A comprehensive undergraduate training program.
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MANUSCRIPT/BOOK REVIEWS

American Midland Naturalist (1)

Ecology of North American Freshwater Fishes, Chapter 15, Stephen T. Ross (Univ. of California Press)

PROFESSIONAL ACTIVITIES

- November 2013 Lab Seminar, Department of Wildlife and Fisheries Sciences, Texas A&M
“An Introduction to R”
- April 2012 Guest lecturer (3 lectures), Limnology 496, Department of Biology, UNM
“Benthic Invertebrates”, “Aquatic Insects”, “Paleolimnology”
- April 2011 Poster judge, 20th Annual Research Day, Department of Biology, UNM
- October 2011 Reviewer, Graduate Resource Allocations Committee, Department of Biology, UNM
- September 2010 Graduate student reviewer, Undergraduate Academic Portfolio Workshop,
Department of Biology, UNM
- April 2010 Poster judge, 19th Annual Research Day, Department of Biology, UNM
- Fall 2009 Developed an Aquatic Invertebrate Reference Collection, Museum of Southwestern
Biology, Division of Fishes and Division of Arthropods, UNM
-Reference collection available online at <http://msb.unm.edu/fishes/aquatic.htm>
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INTERNATIONAL EXPERIENCE

- Jun – Aug 2012 Mongolia
I was chosen for the International Research Experience for Students program, funded by NSF. Each student participated in all projects including long term data collection, individual student projects and collaboration with Mongolian researchers. My research was on the food webs of the tributaries to Lake Hovsgol.
- October 2009 Panama
As part of an upper-level, undergraduate herpetology course, 5 days were spent in El Cope, Panama collecting herpetology specimens with a focus on the genus *Anolis*.
- March 2008 Costa Rica
As part of an upper-level, undergraduate tropical biology course, 9 days were spent traveling around Costa Rica collecting specimens for herpetology, mammalogy, ornithology and botany.
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OUTREACH

- April 2014 Friends of the Rouge Annual Bug Hunt, Detroit, MI

FOTR conducts biannual macroinvertebrate sampling of the Rouge River as part of an ongoing monitoring program for water quality and habitat. I assisted invertebrate collection with a team of community volunteers.

- August 2012 Project website, IRES research, Mongolia
I assisted the development of a web page accessible to the non-scientific community to relate our experiences and research in Mongolia.
<http://maaeri.weebly.com/>
- July 2012 Community day, Uur River/Erdenebulgan, Mongolia
Outreach day organized to introduce local grade school students to the aquatic research going on in the Eg and Uur rivers and the potential for community involvement.
- October 2010 Seminar, Albuquerque Biological Park Aquarium, Albuquerque, NM
Burdett, A.S.*, **Love, C.A.*** Finding Nematodes: Food web ecology in the middle Rio Grande, New Mexico. (*Invited presentation*)
- August 2010 Museum donation, Explora, Albuquerque, NM
Caught and donated live fish to a local children's science learning center. Fishes were included in an aquarium exhibit displaying the native fish fauna of the Rio Grande.
- June 2010 Middle school outreach day, Sevilleta NWR, NM
Hosted a group of local middle school students at a field site. Students participated in data collection and were taught about aquatic ecology in the Rio Grande.
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