

# Todd D. Crail

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## PROFESSIONAL PREPARATION

Ph.D. University of Toledo, Biology (Ecology track); 2012  
M.S. University of Toledo, Biology (Ecology track); 2007  
B.A. Bluffton University, Biology; 1995

## APPOINTMENTS

2012 – Present Lecturer, Department of Environmental Sciences, University of Toledo  
2011 – 2012 Research assistant, Lake Erie Center, University of Toledo  
2010 – 2012 Teaching assistant, University of Toledo  
2008 – 2010 National Science Foundation GK-12 Graduate Fellow, University of Toledo  
2007 - 2008 Research assistant, Lake Erie Center, University of Toledo  
2005 - 2007 Teaching assistant, University of Toledo  
2003 - 2005 Internet technologies developer, LearnShare, Toledo, OH  
2001 - 2003 Internet technologies developer, Owens Corning, Toledo, OH  
1999 - 2000 Sole proprietor – Sylvania Tropical Aquarium Store, Sylvania, OH  
1995 - 1999 Internet technologies developer, Northshore Computer Solutions, Toledo, OH

## TEACHING EXPERIENCE

Instructor for Down to Earth Environmental Science (EEES-1130 Univ. of Toledo) 2012 – Present  
Instructor for Environmental Problems Lab (EEES-1140 Univ. of Toledo) FA, SP 2012 - Present  
Instructor for Introduction to Environmental Studies (EEES-2010 Univ. of Toledo) 2012 - Present  
Instructor for Biodiversity Lab (EEES-2060 Univ. of Toledo) FA, SP 2012  
Instructor for Ecology Lab (EEES 3060 Univ. of Toledo) FA 2012 – Present  
Instructor for Advanced Field Ecology (EEES 4890 Univ. of Toledo) SP 2013 – Present  
Instructor for Graduate Field Ecology (EEES 68/8890 Univ. of Toledo) SU 2013  
Teaching Assistant for Environmental Problems (EEES-1140 Univ. of Toledo) SP 2011.  
Teaching Assistant for General Ecology Laboratory (EEES-3060 Univ. of Toledo) FA 2010, 2011.  
Teaching Assistant for Special Topics: Diversity & Environmental Gradients (EEES-6980 Univ. of Toledo) SU 2010.  
Teaching Assistant for Special Topics: Applying Ecological Theory (EEES-6980 Univ. of Toledo) SU 2010.  
National Science Foundation GK-12 Fellow – High School Environmental Science, Biology. Scott High School, Toledo, OH, Aug 2008 – May 2010. Teaching and science mentorship ten hours weekly at an urban high school.  
Teaching Assistant for Aquatic Ecology Laboratory (EEES-4740, EEES-5740 Univ. of Toledo) FA 2007.  
Teaching Assistant for Biodiversity Laboratory (EEES-2160 Univ. of Toledo) FA 2005, SP, FA 2006.

## GRADUATE STUDENTS CO-DIRECTED:

Nicholas Bryan (MS 2013 - Moorhead), Christina Florence (MS in progress - Moorhead)

## GRADUATE STUDENT COMMITTEES:

Michelle Reed (MS 2012), Kelly Meinart (MS in progress), Blake Parquette (MS in progress), Adam Russel (MS in progress), Gwen McLaughlin (MS in progress), Jamie Redway (MS in Progress), Christa Leopold (MS in Progress), Aaron Svoboda (MS in progress).

## UNDERGRADUATE STUDENTS CO-DIRECTED:

Philip Mathias (2009 - Bossenbroek), Lance Olsen (2011- Bossenbroek), Kirk Zmijewski (2011- Becker), Kelsey Navarre (2011- Bossenbroek), Kelsey Friemoth (in progress - Moorhead), James Moriarity (in progress - Gottgens), Darian Marinis (in progress - Weintraub), Jonathan Sanders (in progress - Becker)

## PUBLICATIONS

### Peer Reviewed First Author:

**Crail, T.D.** R.A. Krebs & D.T. Zanatta 2011. Unionid mussels from the nearshore zones in Lake Erie. Journal of Great Lakes Research 37:199-202.

**Crail, T.D.,** J.F. Gottgens & A.E. Krause 2011. Fish community response to evolving channel complexity in an agricultural system. *Journal of Soil and Water Conservation* 66(5): 295-302.

#### **Peer Reviewed Co-Author:**

Bryan, N.J., C. Florence, D.L. Moorhead & **T.D. Crail** (*in press* to the *Journal of Great Lakes Research*). The presence of a native unionid mussel fauna in an exotic bivalve substrate.

Becker, R.H., K.A. Zmijewski & **T.D. Crail** 2013. Seeing the forest for the invasives: mapping buckthorn in the Oak Openings. *Biological Invasions* 15: 315-326.

#### **In Preparation:**

**Crail, T.D.,** J.M. Bossenbroek & J.F. Gottgens (*in prep* to *Fisheries*). Shifts in resource utilization among a benthic fish community.

Bossenbroek, J.M., D.T. Zanatta & **T.D. Crail** (*in prep* to *Journal of Great Lakes Research*). Using niche modeling to identify unionid refugia in the Great Lakes.

Navarre, K.M., J.M. Bossenbroek & **T.D. Crail** (*in prep* to *Rhodora*) Mapping the habitat characteristics of a population of yellow fringed orchid (*Plantanthera ciliaris*) in the Oak Openings Region.

#### **Other Publications:**

Grabarkiewicz J.D. & **T.D. Crail**, 2008. Three Years of Unionid Surveys in Swan Creek, Lower Maumee River Watershed, Lucas Co., OH. Final Report to the Ohio Division of Wildlife, Toledo Naturalists Association, and Metroparks of the Toledo Area: 41pp.

Grabarkiewicz J.D. & **T.D. Crail**. 2007. A new population of rayed bean (*Villosa fabalis*) in a small tributary of the Maumee River, Lucas County, OH. *Ellipsaria* 11(1):7.

**Crail, T.D.,** J.F. Gottgens & P.T. Mathias. 2007. Status and distribution of native unionid mussels (Unionidae) in the coastal wetlands of the Winous Point Marsh Conservancy. Final Report to the Winous Point Marsh Conservancy: 21 pp.

**Crail, T.D.** & J.F. Gottgens. 2007. Testing the impact of plant colonization on the fish community in headwaters of the Ottawa River, northwest Ohio. Final report to Ohio Lake Erie Commission: 41 pp.

**Crail T.D.** 2006. System design for the ultimate native fish aquarium. *American Currents*, Vol. 32, No. 2.

### **FUNDED PROPOSALS**

*Conservation of native freshwater mussel refuges in Great Lakes coastal zones.* Great Lakes Fish and Wildlife Restoration Act Pre-Proposal FY 2010. Multiple University & Agency Proposal, \$348,181.

- D. Zanatta, Central Michigan U, L. Burlakova, Buffalo State College, A. Karatayev, Buffalo State College, R. Krebs, Cleveland State U, M. Hoggarth, Otterbein College, F. A. de Szalay, Kent State U., J. Bossenbroek, U of Toledo, E. Meyer, PA Nat. Heritage Prog., M. Walsh, PA Nat. Heritage Prog., M. Schlesinger, NY Nat. Heritage Prog., R. Haas, MI DNR, **T. Crail**, U. of Toledo, P. Badra, MI Nat. Features Inventory, N. Welte, PA Fish and Boat Comm., L. Holst, NY Dept. of Env. C.

**T.D. Crail** 2010. Documenting hidden fish diversity in the Maumee Watershed. Toledo Naturalists Association, \$700.

Gottgens J.F. & **T.D. Crail**, 2008. The Honey Creek Targeted Watershed Program Proposal. U.S Environmental Protection Agency (\$60,000 – UT share)

Gottgens J.F. & **T.D. Crail** 2007. Mussel Survey of Winous Point Marshes. Winous Point Marsh Conservancy, \$5,000.

Grabarkiewicz, J.D. & **T.D. Crail**, 2007. *The travellin' fish show.* The North American Native Fishes Association, \$1000.

Gottgens J.F. & **T.D. Crail**, 2006. Survey Fish Diversity: Testing the Impact of Vegetative Encroachment. Lake Erie Protection Fund, Lake Erie Commission, \$9,576.

### **INVITED PRESENTATIONS**

#### **2012**

- Therapeutic Landscapes for Healing: Using New AGE (Active Green Environment) to Create Outdoor Experiences. Discussion Panel - GreenTown Conference, Toledo, OH
- It takes a village: beneficial interactions among North American fish communities. Banquet speaker – North American Native Fishes Association annual convention, Salt Fork State Park and Conference Center, Cambridge, OH Sept. 2012

#### **2011**

- War and peace in benthic fish communities: Habitat utilization and assemblage across a varying resources base. Virginia Tech, Blacksburg, VA.

## 2010

- From nowhere to naturalist – The interpretation of Mr. Todd Crail. Bluffton University, Bluffton, OH.
- A tale of two streams. Invited lab activity with the Aquatic Ecology course. University of Toledo, Toledo, OH.
- Ecological dimension and adaptation of fish community in Ten Mile Creek. Invited field trip and lab activity with the Fall Field Ecology course. Lourdes College, Sylvania, OH
- Aquatic Diversity of the Toledo Area. GK-12 Summer Course for Fellows and Teachers, University of Toledo, Toledo, OH.
- Ecological dimension and adaptation of fish community in Ten Mile Creek. Invited field trip and lab activity with the Spring Field Ecology course. Lourdes College, Sylvania, OH.

## 2009

- Aquatic Diversity of the Toledo Area. GK-12 Summer Course for Fellows and Teachers, University of Toledo, Toledo, OH.

## 2006

- Ecology of the Unionidae of Southeast Michigan. Invited seminar and field trip, Washtenaw Community College, Ann Arbor, MI.
- Ecology of the Oak Openings Region. Invited seminar and field trip, Owens Community College, Toledo, OH.

## CONTRIBUTED PRESENTATIONS

- T.D. Crail** 2013. The magnificent classroom: project-based science and service learning in the Oak Openings region. Metroparks Oak Openings Research Forum, Toledo, OH.
- C.E. Beck, R.L. Mapes, **T.D. Crail** 2013. Opening the Oak Openings: Review and Summary of the Oak Openings Literature. Metroparks Oak Openings Research Forum, Toledo, OH
- D.N. Marinis, **T.D. Crail** 2013 The effect of two soil organic matter removal treatments at the Southview Savanna. Metroparks Oak Openings Research Forum, Toledo, OH.
- K. Friemuth, D.L. Moorhead, **T.D. Crail** 2013. Stem density and biomass of invasive buckthorn in Irwin Prairie State Nature Preserve. Metroparks Oak Openings Research Forum, Toledo, OH
- J.D. Sanders, R.H. Becker, **T.D. Crail** 2013. Inundation potential from agricultural ditches in Irwin Prairie State Nature Preserve. Metroparks Oak Openings Research Forum, Toledo, OH.
- C. Florence, N. Bryan, D.L. Moorhead, **T.D. Crail** 2013. Are thermal plumes from Coal-fired Power Plants creating a refuge for Unionid mussels in the Western Basin of Lake Erie?" International Association of Great Lakes Research, Lafayette, IN.
- N.J. Bryan, C.V. Florence, D.L. Moorhead, **T.D. Crail** 2013. Impacts of Water discharge from a coal-fired power plant on Native Unionids in Western Lake Erie. International Association of Great Lakes Research, Lafayette, IN.
- A. Russell, D.L. Moorhead, **T.D. Crail** 2013. The relationship between the round goby and fish communities of Lake Erie tributaries. International Association of Great Lakes Research, Lafayette, IN.
- N.J. Bryan, C.V. Florence, D.L. Moorhead, **T.D. Crail** 2012. Impacts of water discharge from a coal-fired power plant on native unionids in Western Lake Erie. IAGLR annual conference. Cornwall, ON, Canada.
- T.D. Crail**, J.M. Bossenbroek, J.L. Wilson & J.A. Coombs 2011. Habitat utilization benchmarks of benthic fish in the Pigeon River Restoration. Southeastern Fishes Council, Chattanooga, TN
- T.D. Crail** & J.M. Bossenbroek 2011. Different Riffles, Same Species Space: Habitat Utilization and Partitioning in Darter Communities of the Ohio River Basin. Joint Meeting of Ichthyologists and Herpetologists, Minneapolis, MN.
- L.R. Merry, L.T. Olsen, **T.D. Crail** & J.M. Bossenbroek 2011. Quantifying the Habitat Utilization of Darters in the Central Great Lakes Region. Joint Meeting of Ichthyologists and Herpetologists, Minneapolis, MN.
- Gottgens JF, N.R. Tessler **T.D. Crail** & J.D. Selden 2011. Fishes and ditches: Enhancing ecological functions of agricultural drainage channels. Conference of the Society of Wetland Scientists, Prague, CR.
- Zmijewski, K.A., **T.D. Crail** & R.H. Becker 2011. Hydrologic controls on the distributional characteristics of glossy buckthorn (*Frangula alnus*) thickets: a study in the Oak Openings Regions of NW Ohio. Joint Northeastern/North-Central Section Meeting of the Geologic Society of America, Pittsburgh, PA.
- Navarre, K, **T.D. Crail** & J.M. Bossenbroek, 2011. Mapping the habitat characteristics of a population of orange fringed orchid (*Plantanthera ciliaris*) in the Oak Openings Region. Oak Openings Research Forum, Toledo, OH.

- Zmijewski, K.A., **T.D. Crail** & R.H. Becker 2011. The distributional characteristics of glossy buckthorn (*Frangula alnus*) thicket in the Oak Openings Region. Oak Openings Research Forum, Toledo, OH.
- Crail, T.D.** & J.M. Bossenbroek, 2010. Interspecific induced shifts of habitat usage among a benthic community of fishes. Southeastern Fishes Council. Athens, GA.
- Crail, T.D.**, J.M. Bossenbroek & J.F. Gottgens, 2010. Wind-derived seiches as a means for detecting and monitoring the unionid community in the western basin of Lake Erie. Millennium Conference. Windsor, ON.
- Crail, T.D.**, J.M. Bossenbroek & J.F. Gottgens, 2009. Niche dimension of *Etheostoma* darters in the Ohio River Basin at multiple scales. American Fisheries Society, Nashville, TN.
- Crail, T.D.**, J.M. Bossenbroek & J.F. Gottgens, 2009. A multiscale analysis of *Etheostoma* darter habitat in the Ohio River Basin. Southeastern Fishes Council, Lake Guntersville, AL.
- Crail, T.D.**, J.M. Bossenbroek & J.F. Gottgens, 2009. Wind-derived seiches as a means for detecting and monitoring the unionid community in the western basin of Lake Erie. International Association for Great Lakes Research, University of Toledo, Toledo, OH.
- Tessler, N.R., J.D. Selden, **T.D. Crail** & J.F. Gottgens, 2009. Use of Agricultural Streams in Northwestern Ohio as Spawning Habitat by Native Fishes: Impact of Habitat Heterogeneity. 2009 Annual NANFA Convention, Tampa, Florida.
- Blosser J., B. Bodamer, **T. Crail**, C. Kolinski, G. Mentzer, W. Penamon & C. Stepien 2009. River of Shame Lesson Plan. Lesson Plan Session, National Science Foundation Annual GK-12 Conference, Washington D.C.
- Crail, T.D.** & J.F. Gottgens, 2009 Testing the impact of vegetative colonization on fish community in the headwaters of the Ottawa River, northwest Ohio. STEM Science Poster Session, National Science Foundation Annual GK-12 Conference, Washington, D.C.
- Crail, T.D.** & J.F. Gottgens, 2008. Testing the impact of vegetative colonization on fish community in the headwaters of the Ottawa River, northwest Ohio. Annual Meeting of the Ohio Academy of Science, Toledo, OH.
- Gottgens J.F., **T.D. Crail** & A.I. Arceo, 2008. Contrasting fish communities upstream and downstream of a dam in the Ottawa River, Northwest Ohio. Phase I of a dam removal study. Annual Meeting of the Ohio Academy of Science, Toledo, OH.
- Crail, T.D.** & J.F. Gottgens, 2008. Testing the impact of vegetative colonization on fish community in the headwaters of the Ottawa River, northwest Ohio. Ecological Society of America, Milwaukee, WI.
- Gottgens J.F., **T.D. Crail** & A.I. Arceo, 2008. Contrasting fish communities upstream and downstream of a dam in the Ottawa River, Northwest Ohio. Phase I of a dam removal study. Annual Meeting of the Ohio Academy of Science, Toledo, OH.
- Crail T.D.** & J.F. Gottgens, 2007. Testing the impact of plant colonization on fish communities in agricultural ditches of the Ottawa River, Northwest Ohio. Joint Meeting of Ichthyologists and Herpetologists, St. Louis, MO.
- Crail T.D.** & J.F. Gottgens, 2007. Testing the impact of plant colonization on fish communities in agricultural ditches of the Ottawa River, Northwest Ohio. Conference of the International Association of Great Lakes Researchers, College Station, PA.
- Crail T.D.** & J.F. Gottgens, 2006. Testing the impact of vegetative colonization on the fish community in the headwaters of the Ottawa River, northwest Ohio. Lake Erie Conference, Lorain, OH.
- Crail T.D.** & J.F. Gottgens, 2006. Testing the impact of vegetative colonization on the fish community in the headwaters of the Ottawa River, northwest Ohio. Conference of the International Association of Great Lakes Researchers, Windsor, ON.
- Crail T.D.** & J.D. Grabarkiewicz, 2005. Aquatic Fauna of the Oak Openings Region. Metroparks of the Toledo Area Oak Openings Research Forum, Toledo, OH.
- Gottgens J.F., **T.D. Crail** & A.I. Arceo, 2005. Quantifying the fish community response to dam removal: The case of the Ottawa River, northwest Ohio. Geology Society of America Abstracts with Programs Vol. 38, No. 4., Akron, OH.

## AWARDS

2010 – Dr. Robert Brundage Scholarship

## OUTREACH and PUBLIC ENAGAGEMENT

### 2013

- The geologic context for, well, everything in the Toledo Area. Toledo Naturalists Association, Toledo, OH.
- Spring Peeper Fever at Irwin Prairie. Toledo Naturalists Association, Toledo, OH
- Swim with the Fishes at Sharon Mills Park, Manchester, OH. Toledo Naturalists Association, Toledo, OH
- Prairie Delights, Oh My! Kitty Todd Preserve. Toledo Naturalists Association, Toledo, OH

### 2012

- Fishes of the western basin (for all ages!) University of Toledo Lake Erie Center, Toledo, OH

- It Takes a Village: Beneficial Interactions Among North American Fish Communities, Toledo Naturalists Association, Toledo, OH
- The Geology, Ecology and Restoration of Irwin Prairie Irwin State Nature Preserve, Oak Openings Blue Weekend, Toledo, OH

## 2011

- The Secret Sex Lives of Unionid Mussels. Toledo Area Student Watershed Watch 2011, Toledo, OH.
- From creek-crawling kid to fish professor : One man's journey through multiple tiers of scientific engagement (And how his experience relates to you). North American Native Fishes Association, Roanoke, VA.
- Darters – The Warblers of the Water World. Toledo Naturalists Association, Toledo, OH.
- Lucas County Big Day for Fishes - Field trip sampling four aquatic environments across Lucas County for Fishes, Toledo Naturalists Association, Toledo, OH.

## 2010

- The Secret Sex Lives of Unionid Mussels. Toledo Area Student Watershed Watch 2010, Toledo, OH.
- Darters – The Warblers of the Water World. Toledo Naturalists Association, Toledo, OH.
- Macroinvertebrate Casserole! – Lecture and lab activity, Lake Erie Center Summer Camp, Oregon, OH.
- The Maumee River Drainage Network - It Flows Downhill. Friends Earthcare Witness, Bowling Green, OH.
- Lucas County Big Day for Fishes - Field trip sampling four aquatic environments across Lucas County for Fishes, Toledo Naturalists Association, Toledo, OH.
- Geologic and Botanical Context for the Michigan Botanical Society Spring 2010 Foray, Perrysburg, OH.
- Licking the Wounds – An overview of Toledo Area streams: Their Provenance, Perils & Progress, Start High School, Toledo, OH.
- Meet Your Stream – Fishes of the Blanchard River. Field trip with the Toledo Naturalists Association, Findlay, OH.
- The Secret Lives of Unionid Mussels. Washtenaw County Parks, Milan, MI.
- Enhancing Environmental Education and Careers: Restoration Project for the Ottawa River at the University of Toledo. Toledo Early College High School, Toledo, OH.

## 2009

- The Secret Sex Lives of Unionid Mussels. Royal Oak Nature Society, Royal Oak, MI.
- The Secret Sex Lives of Unionid Mussels. Toledo Area Student Watershed Watch 2009 Keynote Speaker, Toledo, OH.
- Meet Your Stream – Fishes of the Maumee River. Field trip with the Maumee Valley Chapter of the National Wild Turkey Federation Annual Kids Day, Grand Rapids, OH.
- Meet Your Stream – Fishes and Mussels of the River Raisin. Field trip with the Toledo Naturalists Association, Toledo, OH.
- See Real Live Fish Up Close – the Field Trip! Field trip with Steps For Kids, Ann Arbor, MI.
- Farmertodd Institute for Senior Hiatus (FISH). Field trip with area high school Seniors during their Senior Projects to understand local fish ecology. Toledo, OH.
- An Aquatic Primer – Careers in Aquatic Systems, Northview High School, Sylvania, OH.
- Mussel Fauna of the Swan Creek Watershed. Toledo Naturalists Association, Toledo, OH.
- See Real Live Fish Up Close! Steps for Kids, Ann Arbor, MI. <http://www.stepsforkids.org>

## 2008

- Discovering hidden life in the Maumee River watershed. Annual Banquet Keynote, Lucas County Soil and Water District, Toledo, OH.
- The Oak Openings Region from the Ground Up: Geological Processes Founding Incredible Biodiversity. Ohio Prairie Conference Keynote Speaker, Toledo, OH.
- Meet Your Stream – Fishes and Mussels of the Maumee River. Field trip with the Toledo Naturalists Association, Toledo, OH.
- *A Guide to the Common Fishes of the Toledo Area.* <http://www.farmertodd.com/fishguide>
- Snorkeling North America's Waterways. Southwest Michigan Aquarium Society, Kalamazoo, MI.

## 2007

- The Oak Openings Region from the Ground Up: Geological Processes Founding Incredible Biodiversity. Michigan Botanical Society, Ann Arbor, MI.
- North American Pearly Mussels: Who you callin' Fat Mucket?! Toledo Naturalists Association, Toledo, OH.
- Fear Not the Deep Substrate! Convention of the North American Native Fishes Association, Banquet Speaker, Greensboro, NC.

- *The travellin' fish show*. Interpretive poster printed with a grant from the North American Native Fishes Association.
- *40 feet at the Southview Prairie*. Interpretative sign placed along the University Parks Bike Path at the Sylvania Southview prairie remnant.

## 2006

- Native Plant Gardens – Tomorrow's Home? Toledo Chapter of Wild Ones, Toledo, OH.
- A Simple Headwater Sample Design for Amateurs (That the Professionals Will Want to Use Too). Convention of the North American Native Fishes Association, Cape Girardeau, MO.
- Meet Your Stream – Fishes and Mussels of the River Raisin. Field trip with the Washtenaw County Park district, Ann Arbor, MI.
- *Freshwater Mussels of the Maumee River*. Interpretative display in the Department of Environmental Sciences, University of Toledo, Toledo, OH.
- *Freshwater Mussels of the Maumee Drainage*. Field guide to the Unionid fauna of the Maumee River, co-written with Jeff Grabarkiewicz and printed by the Ohio Environmental Education Fund and the Lucas Soil and Water Conservation District. <http://www.farmertodd.com/musselguide>

## 2005

- The Karner Blue Butterfly Reintroduction to the Oak Openings Region - A Look at a Successful Federally Endangered Animal Reintroduction. Toledo Chapter of Wild Ones, Toledo, OH.
- North American Pearly Mussels: Who you callin' Fat Mucket?! Toledo Chapter of Wild Ones, Toledo, OH.
- Native Plants – A weed by any other name. Toledo Seed Swap, Toledo, OH.

## 2004

- Meet Your Stream - University of Toledo Honors Service Learning/Community Service After School Enrichment Program
- Native Fish – Jewels in our Streams. Lourdes College, Sylvania, OH.
- Native Fish – Jewels in our Streams. Maumee Valley Country Day School, Toledo, OH.

## MEDIA COVERAGE

Quoted in "Steelhead big man on UT campus", Toledo Blade, Jan 6, 2013.

Quoted in Irwin Prairie Preserve benefits from ecology students' volunteer, research efforts", May 4, 2012

Quoted and photography in "Students get back to their roots", The Independent Collegian, April 28, 2011.

Quoted and photography in "UT students discover state-listed fish in Ottawa River", UT News, October 26, 2010.

Quoted and photography in "Bite Sized Fish", full page color Sunday Feature, Toledo Blade, May 30, 2010.

Interviewed on *Environmentally Sound with Larry Burns*. WJR760 April 27, 2010.

Quoted in "High school students help investigate large fish kill." Ohio Outdoor News, February 26, 2010.

Quoted in "UT student to receive Brundage Scholarship", The Toledo Blade, January 18, 2010.

Quoted in "Scott's watershed team gets immersed in work". The Toledo Blade, December 13, 2009.

"Fishing for Knowledge at UT". The Toledo Blade, September 20, 2007.

Quoted in "Wild Ones Relocate Native Plants, Soil from Development Sites." The Maumee Mirror, March 22, 2007.

Quoted in "Ottawa River at UT Shows Signs of Life", The Toledo Blade, September 18, 2003.

## PUBLISHED PHOTOGRAPHY

Corkum, L.D. 2010. *Fishes of Essex County and Surrounding Waters*. Essex County Naturalists Association, Windsor, Ontario, Canada.

Smith, G.R. 2010. *Guide to Great Lakes Fishes*. University of Michigan Press, Ann Arbor, MI.

Holm, E., N.E. Mandrak & M.E. Burridge 2009. *The ROM Field Guide to Freshwater Fishes of Ontario*. Royal Ontario Museum, Toronto, Canada.

Grabarkiewicz, J.D. & W.S. Davis, 2008. An introduction to freshwater mussels as biological indicators. EPA-260-R-08-015. U.S. Environmental Protection Agency, Office of Environmental Information, Washington, DC.

Grabarkiewicz, J.D. and W.S. Davis. 2008. An introduction to freshwater fishes as biological indicators. EPA-260-R-08-016. U.S. Environmental Protection Agency, Office of Environmental Information, Washington, DC.

## PROFESSIONAL MEMBERSHIPS

- American Society of Ichthyologists and Herpetologists
- Ecological Society of America
- Freshwater Mollusk Conservation Society
- International Association for Great Lakes Research
- Southeastern Fishes Council