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**Dana M. Infante**

Department of Fisheries and Wildlife  
Center for Systems Integration and Sustainability  
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13 Natural Resources  
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**Research Interests**

- ◆ Effects of landscape-scale features and processes (i.e., geology, land use, climate) on physical and biological features of fluvial systems
- ◆ Catchment hydrology and stream channel geomorphology
- ◆ Ecological assessment
- ◆ Sustainable management of fluvial systems

**Current Position****Assistant Professor, Fisheries Landscape Ecology**

Department of Fisheries and Wildlife, Michigan State University, East Lansing, Michigan  
January 2007 to Present

**Education**

**Ph.D.**, 2005, Resource Ecology and Management, School of Natural Resources and Environment,  
University of Michigan

**M.S.**, 2001, Resource Ecology and Management, School of Natural Resources and Environment,  
University of Michigan

**B.S.**, 1994, Scientific Writing, College of Literature, Science, and Arts, University of Michigan

**Post-Doctoral Experience**

**Research Associate**, Department of Fisheries and Wildlife, Michigan State University East Lansing,  
Michigan, August 2006 to December 2006

Responsibilities: Advised graduate students, supported research efforts of Dr. K. Millenbah, and encouraged and participated in collaborative efforts within the Department.

**Research Associate**, Institute for Fisheries Research, Ann Arbor, Michigan, January 2005 to July 2006  
Developed protocols for assessing physical habitat in nonwadeable rivers and monitoring bed load movement through coldwater streams for Streams Status and Trends Program (SSTP) of Michigan Department of Natural Resources (MDNR).

## Current Research Projects

- ◆ Department of Fisheries and Wildlife, Michigan State University, “**A landscape-scale analysis of factors limiting distributions and abundances of Arctic grayling (*Thymallus arcticus*) in Michigan rivers**”
- ◆ U.S. Fish and Wildlife Service, “**An initial national assessment of the status of fish habitats.**” <http://www.fishhabitat.org/>
- ◆ U.S. Geological Survey, “**Aquatic GAP Analysis Program: A search for new paradigms to guide future research.**” <http://gapanalysis.nbio.gov/portal/server.pt>
- ◆ Michigan Department of Natural Resources, “**Effects of temperature on functional relationships among Michigan’s fluvial fish assemblages: Identifying management opportunities in the face of environmental changes**”
- ◆ U.S. Geological Survey, “**Managing the Nations fish habitat at multiple spatial scales in a rapidly changing climate**”

## Teaching Experience

### Instructor

**Hydrology for Watershed Management**, FW454, Department of Fisheries and Wildlife, Michigan State University, Spring 2009

**Aquatic Ecosystem Management**, FW414, Department of Fisheries and Wildlife, Michigan State University, Fall 2007, 2008, and 2009

### Guest Lecturer

**Landscape Ecology**, FW840, Department of Fisheries and Wildlife, Michigan State University, Fall 2007

**Global Issues in Fisheries and Wildlife Resources**, FW481, Department of Fisheries and Wildlife, Michigan State University, Spring 2007, 2008, and 2009

**Stream Ecology**, FW420, Department of Fisheries and Wildlife, Michigan State University, Fall 2008 and Fall 2009

**Uplands Ecosystem Management**, FW410, Department of Fisheries and Wildlife, Michigan State University, Spring 2008 and 2009

**Introduction to Science, Technology, Environment, and Public Policy**, FW181, Department of Fisheries and Wildlife, Michigan State University, Fall 2006

**Fundamentals of Fisheries and Wildlife Ecology and Management**, FW101, Department of Fisheries and Wildlife, Michigan State University, Fall 2008, Spring 2009, and Fall 2009

### Graduate Student Instructor

**Fluvial Ecosystems Lab**, University of Michigan, Fall Semester 1998, 2002, and 2003

**Undergraduate Honors Thesis Seminar**, University of Michigan, Fall Semester, 2002 and Winter Semester, 2003

**Introduction to Aquatic Ecosystems Lab**, University of Michigan, Winter Semester, 1998

## **Mentoring Experiences**

### **Student Committees – Primary Advisor**

**Darren J. Thornbrug**, Doctoral student, Michigan State University. Project: TBD.

**Arthur R. Cooper**, MS student. Michigan State University. Project: TBD.

**Ralph W. Tingley III**, MS student. Michigan State University. Project: A landscape-scale analysis of factors limiting distributions and abundances of Arctic Grayling (*Thymallus arcticus*) in Michigan rivers.

### **Committee Member**

**Shikha Singh**, Doctoral Student. Dr. Daniel Kramer, primary advisor. Project: TBD.

**Mustafa Mazher**, MS Student. Dr. Joan Rose, primary advisor. Project: TBD.

**Amy Schueller**, Doctoral Candidate. Dr. Daniel Hayes, primary advisor. Project: Evaluation of lake sturgeon rehabilitation strategies using an individual-based model of demographics and genetics (defended Summer 2009).

**Kerryann Waco**, MS Student. Dr. William W. Taylor, primary advisor. Project: Relationship of groundwater extraction to brook trout populations in Twin and Chippewa Creeks, Cedar Township, Osceola County, Michigan (defended Summer 2009).

**Steven Sutton**, MS student, Dr. William W. Taylor, primary advisor. Project: Effectiveness of the Michigan Natural Rivers Program (defended Spring 2009).

**Kristine Boley-Morse**, MS student, Dr. William W. Taylor, primary advisor. Project: A classification of stream types and regional reference curves for Michigan (defended Spring 2009).

### **Undergraduate Research Projects**

**Mart Williams**. Topic: Brown and Rainbow trout movement patterns in the Pine River, Manistee County, Michigan, relative to the removal of Stronach Dam. Spring Semester, 2008.

### **Independent Study**

**Betsy Puchala**, Undergraduate Student. Project: Hydrology for watershed management. Spring 2010.

**Ralph W. Tingley III**, MS Student. Project: Multivariate statistics. Fall 2009.

**Kerryann Waco**, MS Student. Project: Michigan hydrology, focus on groundwater. Summer 2008.

**Katrina B. Mueller**, PhD student. Project: Landscape effects on rivers with emphasis on coastal rivers of Maine. Spring 2007.

### **Academic Recognitions**

- ◆ The Fishery Alumni Memorial Award, 2005, School of Natural Resources and Environment, University of Michigan
- ◆ Outstanding Graduate Student Instructor Award, 2003, Rackham Graduate School, University of Michigan
- ◆ The Superior Teaching Award, 2003, School of Natural Resources and Environment, University of Michigan
- ◆ Karl Kidder Scholarship, 1997, School of Natural Resources and Environment, University of Michigan

### **Professional Memberships**

- ◆ American Fisheries Society
- ◆ Michigan Chapter of the American Fisheries Society
- ◆ North American Benthological Society
- ◆ Society for Conservation Biology

### **Committees and Boards**

- ◆ University Appeals Board, Michigan State University
- ◆ Curriculum Committee, Department of Fisheries and Wildlife, Michigan State University
- ◆ Janice Lee Fenske Excellence in Fisheries Management Fellowship Committee
- ◆ Membership and Rivers and Streams Committees, Michigan Chapter of the American Fisheries Society
- ◆ Technical Advisory Group, Huron River Watershed Council

### **Ad Hoc Reviewer**

#### **Journals**

Biological Conservation  
Environmental Management  
Fisheries  
Fisheries Management and Ecology  
Hydrobiologia  
Journal of the North American Benthological Society  
Landscape Ecology  
North American Journal of Fisheries Management  
Transactions of the American Fisheries Society

#### **Research Projects and Proposals**

Exxon Valdez Oil Spill Trustee Council  
Center for Water Science, Michigan State University  
Michigan Agricultural Experiment Station, Michigan State University

## Publications

- Esselman, P. C., **D. M. Infante**, L. Wang, D. Wu, A. Cooper, and W. W. Taylor. *In Review*. An initial assessment of integrated landscape disturbance on river fish habitats in the conterminous United States. *Restoration Ecology*.
- Esselman, P. C., **D. M. Infante**, L. Wang, D. Wu, A. Cooper, and W. W. Taylor. *Accepted for Publication*. An initial assessment of integrated human disturbances on stream fish habitats in the conterminous United States. Report by the Assessment Team to the Science and Data Committee and Board of the National Fish Habitat Action Plan.
- Infante, D. M.**, and J. D. Allan. *Accepted for Publication*. Response of stream fish assemblages to local-scale habitat as influenced by landscape: A mechanistic investigation of stream fish assemblages. In: *Community ecology of stream fishes*. K. Gido and D. Jackson, editors. American Fisheries Society, Bethesda, Maryland.
- Ostroff, A. C., A. J. Loftus, J. Kopaska, **D. M. Infante**. *Accepted for Publication*. Use of informatics in fisheries sustainability. In: *Sustainable Fisheries: Multi-level Approaches to a global problem*. W. W. Taylor, A. Lynch, and A. Schroeder, editors. American Fisheries Society, Bethesda, Maryland.
- Wang, L., **D. M. Infante**, A. Cooper, J. Lyons, and J. Stewart. *Accepted for Publication*. Effects of dams in river networks on fish assemblages in non-impoundment sections of rivers in Michigan and Wisconsin, USA. *River Research and Applications*.
- Wehrly, K. E., L. Wang, **D. M. Infante**, C. Geddes, L. Stanfield, and E. R. Rutherford. *Accepted for Publication*. Landscape change and its influences on aquatic habitat and fisheries in the Great Lakes basin. In: *Great Lakes policy and management*. W. W. Taylor and N. Leonard, editors. American Fisheries Society, Bethesda, Maryland.
- Wills, T. C., T. G. Zorn, A. J. Nuhfer, and **D. M. Infante**. *In Press*. Stream Status and Trends Program sampling protocols. Chapter 26 in Schneider, J. C., editor. 2000. *Manual of fisheries survey methods II: with periodic updates*. Michigan Department of Natural Resources, Fisheries Special Report 25, Ann Arbor.
- Infante, D. M.**, J. D. Allan, S. Linke, and R. Norris. 2009. Relationship of fish and macroinvertebrate assemblages to environmental factors: Implications for community concordance. *Hydrobiologia*: 623:87-103.
- Infante, D. M.**, M. J. Wiley, and P. Seelbach. 2006. Relationships among channel shape, catchment characteristics, and fish in lower Michigan streams. In: *Influences of landscape on stream habitats and biological assemblages*. R. M. Hughes, L. Wang, and P. W. Seelbach, editors. American Fisheries Society, Bethesda, Maryland.
- Diana, M. J., J. D. Allan, and **D. M. Infante**. 2006. The influence of habitat and land use on fish assemblages of streams in southeastern Michigan. In: *Influences of landscape on stream habitats and biological assemblages*. R. M. Hughes, L. Wang, and P. W. Seelbach, editors. American Fisheries Society, Bethesda, Maryland.
- Nassauer, J. I., J. D. Allan, T. Johengen, S. Kosek, and **D. M. Infante**. 2004. Exurban residential subdivision development: Effects on water quality and public perception. *Urban Ecosystems* 7:267-281.
- Freedman, P. L., V. K. S. Breidenbach, **D. M. Infante**, and A. S. Kumar. 2004. A retrospective look at watershed management, reflected through six WEF sponsored conferences. *Proceedings of the 2004 Water Environment Federation (WEF)*, Dearborn, Michigan.

### Manuscripts in Preparation

- Wu, D., **D. M. Infante**, L. Wang, and W. W. Taylor. *In Preparation*. Gaps in the Aquatic GAP Analysis Program: Similarities, differences, applications, and recommendations.
- L. Wang, **D. M. Infante**, D. Wu., W. W. Taylor, and D. Beard. *In Preparation*. A hierarchical spatial framework and database for national river fish habitat status assessment.
- Infante, D. M.**, T. Zorn, T. Wills, and L. Wang. *In Preparation*. Development of a physical habitat rating system for Michigan's nonwadeable rivers.
- Infante, D. M.**, and J. D. Allan. *In Preparation*. Habitat quality and its relationship to landscape pattern in exurbanizing watersheds of southeast Michigan.

### Presentations (lead author or student work)

- Tingley III, R. W., **D. M. Infante**, and D. Schemske. Identification and evaluation of fluvial habitat for Arctic grayling (*Thymallus arcticus*) in Michigan. North American Benthological Society, Annual Meeting, May 17-22, 2009, Grand Rapids, Michigan.
- Infante, D. M.**, L. Wang, W. W. Taylor, A. Cooper, and P. Esselman. Assessment of the status of habitat in the Nation's aquatic ecosystems. North American Benthological Society, Annual Meeting, May 17-22, 2009, Grand Rapids, Michigan.
- Infante, D. M.**, and L. Wang. Integrating advances in ecological theory into assessment approaches and management applications: Session introduction. North American Benthological Society, Annual Meeting, May 17-22, 2009, Grand Rapids, Michigan
- Infante, D. M.** Links among landscape, habitat, and biology. Michigan State University Extension, Water Area of Expertise. February 18, 2009.
- Infante, D. M.**, L. Wang, D. Wu, W. W. Taylor, and A. Cooper. Update on the Initial Assessment of the Status of Fish Habitat: Supporting SARP. WEBEX Conference for National Fish Habitat Action Plan Partnerships. December 17, 2008.
- Infante, D. M.**, L. Wang, D. Wu, W. W. Taylor, and A. Cooper. Update on the Initial Assessment of the Status of Fish Habitat: Supporting NFHAP Partnerships. WEBEX Conference for National Fish Habitat Action Plan Partnerships. November 24, 2008.
- Infante, D. M.**, D. Wu, L. Wang, W. W. Taylor, and A. Cooper. Initial Assessment of the Status of Fish Habitat for the National Fish Habitat Action Plan. National Fish Habitat Board Meeting, October 7-8, 2008, Arlington, Virginia.
- Infante, D. M.**, and J. D. Allan. *Invited*. The response of stream fish assemblages to local-scale habitat as influenced by landscape: A mechanistic investigation of stream fish assemblages. American Fisheries Society, 138<sup>th</sup> Annual Meeting, August, 2008, Ottawa, Canada.
- Infante, D. M.**, D. Wu, and L. Wang. Initial assessment of the status of fish habitats: The need for stressor ratings. Stressor Rating Work Group Meeting, May 22-23, 2008, Reston, Virginia.
- Williams, M., **D. M. Infante**, and D. Hayes. Brown and rainbow trout movement patterns in the Pine River, Manistee County, Michigan, relative to the removal of Stronach Dam. Michigan State University Undergraduate Research and Arts Forum, April 11, 2008.
- Tingley III, R. W., **D. M. Infante**, and D. Schemske. The Arctic grayling in Michigan: A landscape analysis to identify suitable habitat. Michigan State University Graduate Student Research Symposium, March 21, 2008.

**Presentations (lead author or student work) Continued**

- Infante, D. M.**, and L. Wang. Nationwide assessment of the status of fish habitats: Discussion, thoughts, and insights. 2<sup>nd</sup> Annual GAP Program NCEAS Workshop, January 15-18, Santa Barbara, California.
- Infante, D. M.**, D. Wu, L. Wang, P. W. Seelbach, A. Cooper, and W. W. Taylor. Update: Initial Assessment of the Status of Fish Habitats. Science and Data Committee Meeting, National Fish Habitat Action Plan, February 4-7, San Antonio, Texas.
- Infante, D. M.**, D. Wu, J. Cushing, D. Beard, G. Whelan, L. Wang, W. W. Taylor. Update: National Fish Habitat Assessment. National Fish Habitat Board Meeting, October 2-3, 2007, Arlington, Virginia.
- Infante, D. M.**, D. Wu, G. Canonico, D. Beard, L. Wang, and W. W. Taylor. Importance of the Aquatic GAP Program to the National Fish Habitat Action Plan: Providing data, approaches, and resolution to the initial assessment of the status of fish habitats. National GAP Conference, September 10-13, 2007, Asheville, North Carolina.
- Infante, D. M.**, T. Zorn, T. Wills, and L. Wang. Development of a physical habitat assessment protocol and rating system for Michigan's nonwadeable rivers. Department of Fisheries and Wildlife Graduate Student Speaker Symposium, April 20, 2007/
- Infante, D. M.**, T. Zorn, T. Wills, and L. Wang. Development of a physical habitat assessment protocol and rating system for Michigan's nonwadeable rivers. 67<sup>th</sup> Midwest Fish and Wildlife Conference, December 3-6, 2006, Omaha, Nebraska.
- Infante, D. M.**, and J. D. Allan. *Invited*. Links among landscape, habitat, and stream biology: Hierarchical relationships in streams of southeastern Michigan. North American Benthological Society, Annual Meeting, June 4-9, 2006, Anchorage, Alaska.
- Infante, D. M.**, T. Wills, T. Zorn, and L. Wang. Physical habitat and fish assemblages in Michigan's nonwadeable rivers. Annual Meeting of the Michigan Chapter of the American Fisheries Society, March 6-7, 2006, Lansing, Michigan.
- Infante, D. M.**, T. Zorn, T. Wills, J. D. Allan, and L. Wang. Habitat assessment in Michigan's nonwadeable rivers: Identifying factors relevant to fish assemblages. 66<sup>th</sup> Midwest Fish and Wildlife Conference, December 11-14, 2005, Grand Rapids, Michigan.
- Infante, D. M.**, and J. D. Allan. *Invited*. Natural versus anthropogenic landscape controls on stream habitat. American Fisheries Society, 135<sup>th</sup> Annual Meeting, September 11-15, 2005, Anchorage, Alaska.
- Infante, D. M.**, M. J. Wiley, and P. W. Seelbach. The effects of channel incision and watershed land cover on fish assemblage structure in lower Michigan. American Fisheries Society, 134<sup>th</sup> Annual Meeting, August 22-26, 2004, Madison, Wisconsin.
- Infante, D. M.**, J. D. Allan, S. Linke, and R. H. Norris. Environmental factors shaping fish and macroinvertebrate assemblages in streams of southeastern Michigan. North American Benthological Society, Annual Meeting, June 6-10, 2004, Vancouver, British Columbia.
- Infante, D. M.**, and J. D. Allan. Does landscape variability influence stream habitat? Society for Conservation Biology, Annual Meeting, June 28-July 2, 2003, Duluth, Minnesota.
- Infante, D. M.**, and J. D. Allan. Habitat quality and its relationship to landscape pattern in exurbanizing watersheds of southeast Michigan. North American Benthological Society, Annual Meeting, May 28-June 1, 2002, Pittsburgh, Pennsylvania.

**Presentations (lead author or student work) Continued**

**Infante, D. M.**, M. J. Wiley, and P. W. Seelbach. Investigation of fish assemblages, invertebrates, and channel shape using covariance structure analysis. North American Benthological Society, Annual Meeting, June 3-9, 2001, LaCrosse, Wisconsin.

**Infante, D. M.**, M. J. Wiley, and P. W. Seelbach. Effects of channel incision and low flow hydraulic radius on stream fish assemblages. 62<sup>nd</sup> Midwest Fish and Wildlife Conference, December 3-6, 2000, Minneapolis, Minnesota.

**Infante, D. M.**, M. J. Wiley, and P. W. Seelbach. The effects of channel incision on fish communities in Michigan's Lower Peninsula. 61<sup>st</sup> Midwest Fish and Wildlife Conference, December 5-8, 1999, Chicago, Illinois.