
PAUL ANTHONY VENTURELLI

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PROFESSIONAL EXPERIENCE

UNIVERSITY OF MINNESOTA, ST PAUL, MINNESOTA, USA

*Assistant Professor in the Department of Fisheries, Wildlife and Conservation Biology
August 2011 to present*

LOUISIANA STATE UNIVERSITY, BATON ROUGE, LOUISIANA, USA

Post-doctoral Research Associate in the Department of Oceanography and Coastal Sciences with Dr. Kenny Rose, September 2009 to July 2011

Using individual-based, spatial modeling and habitat suitability indices to predict the response of fish and crustaceans to coastal wetland restoration.

FISHERIES AND OCEANS CANADA, BURLINGTON, ONTARIO, CANADA

Contract modeler for Dr. Marten Koops, January 2009 to December 2009

Endangered species: life history summaries, matrix population modeling, risk assessment and recovery potential, SARA Science Advisory reports.

EDUCATION

UNIVERSITY OF TORONTO, TORONTO, ONTARIO, CANADA

Doctor of Philosophy, Dept. of Ecology and Evolutionary Biology, July 2009

Matrix population modeling, life history, density-dependence, databases, meta-analyses

Dissertation: Life history, maternal quality and the dynamics of harvested fish stocks

Advisors: Dr. Brian Shuter and Dr. Peter Abrams

UNIVERSITY OF ALBERTA, EDMONTON, ALBERTA, CANADA

Master of Science, Department of Biological Sciences, December 2003

Food web manipulations, predator-prey dynamics, stable isotopes, multivariate statistics

Thesis: Response of northern pike and their macroinvertebrate prey to manipulation: a study of predation, winterkill, and food web dynamics in boreal lakes

Advisor: Dr. William Tonn

YORK UNIVERSITY, TORONTO, ONTARIO, CANADA

Bachelor of Science, Environmental Science, May 2000

Life sciences major (organismal biology and physical geography)

Thesis: Potential effects of climate warming on fish populations in northern Canada

Advisor: Dr. Donald McQueen

PROFESSIONAL TRAINING AND WORKSHOPS

UNIVERSITY OF MINNESOTA, MINNEAPOLIS, MN, USA

Research at the Intersection of Marine/Hydrokinetic Energy & the Environment (workshop), Sept. 2011

Sponsored by the National Science Foundation and the U.S. Department of Energy

CENTER FOR ECOLOGICAL & EVOLUTIONARY SYNTHESIS, UNIVERSITY OF OSLO, NORWAY

Effects of Fishing-Induced Alterations in Population Structure and Life History Traits on the Response of Worldwide Fisheries to Climate (workshop), September 2011

NORDIC MARINE ACADEMY, UNIVERSITY OF BERGEN, NORWAY

Modeling Marine Populations: from Physics to Evolution (international graduate course), October 2005.

Global circulation models, bio-geo-chemical models, dynamic programming, vector models, spatial models, predator-prey models, individual-based models, adaptive dynamics, life history theory, fisheries-induced evolution.

PUBLICATIONS

(student co-authors underlined)

Published

Loppnow GL, **PA Venturelli** (2014) Stage-structured simulations suggest that removing young of the year is an effective method for controlling invasive smallmouth bass. *Transactions of the American Fisheries Society* 143:1341-1347

Chezik KA, NP Lester, **PA Venturelli** (2014a) Fish growth and degree-days I: Selecting a base temperature for a single-population study. *Canadian Journal of Fisheries and Aquatic Sciences* 71:47-55

Chezik KA, NP Lester, **PA Venturelli** (2014b) Fish growth and degree-days II: Selecting a base temperature for an among-population study. *Canadian Journal of Fisheries and Aquatic Sciences* 71:1303-1311

Lester NP, BJ Shuter, **PA Venturelli**, D Nadeau (2014) Life history plasticity and sustainable exploitation: a theory of compensation applied to regional management of walleye. *Ecological Applications* 24: 38-54.

Loppnow GL, K Vascotto, **PA Venturelli** (2013) Invasive smallmouth bass (*Micropterus dolomieu*): history, impacts, and control. *Management of Biological Invasions* 4: 191-206

Popowich RC, **PA Venturelli**, R Taylor, J Stelfox (2011) Validation of morphological characteristics used for field identification of bull trout x brook trout hybrids. *North American Journal of Fisheries Management* 31: 548-553

Venturelli PA, NP Lester, TR Marshall, BJ Shuter (2010) Consistent patterns of maturity and density-dependent growth among populations of walleye (*Sander vitreus*): application of the growing-degree-day metric. *Canadian Journal of Fisheries and Aquatic Sciences* 61: 1057-1067

Venturelli PA, CA Murphy, BJ Shuter, TA Johnston, PJvC deGroot, PT Boag, JM Casselman, R Montgomerie, MD Wiegand, WC Leggett (2010) Maternal influences on population dynamics: evidence from an exploited freshwater fish. *Ecology* 91: 2003-2012

Venturelli PA, BJ Shuter, CA Murphy (2009) Evidence for harvest-induced maternal influences on the reproductive rates of fish populations. *Proceedings of the Royal Society of London*, B 276: 919-924
Media: Aqua Globe (internet), Arts & Science Year in Review (print), CBC's Airplay (radio), Presstext (internet), Science Daily (internet), The Environment Report (radio), Ontario Out of Doors (print), Outdoor Canada (print), U of T Magazine (print), YES magazine (print), various blogs

Venturelli PA, WM Tonn (2006) Diet and growth of northern pike in the absence of prey fishes: initial consequences for persisting in disturbance-prone lakes. *Transactions of the American Fisheries Society* 135: 1512-1522
Media: In Fisherman (print)

Venturelli PA, WM Tonn (2005) Invertivory by northern pike, *Esox lucius*, regulates communities of littoral macroinvertebrates in small, boreal lakes. *Journal of the North American Benthological Society* 24: 904-918

Book Chapters

Rennie, MD, **PA Venturelli** (in press) The ecology of lifetime growth in percid fishes. *In* Kestemont, P (ed.) *Biology and culture of percid fishes - principles and practices*. Springer.

Non-refereed

Venturelli PA, LA Vélez-Espino, MA Koops (2010) Recovery potential modeling of Channel Darter (*Percina copelandi*) in Canada. *Fisheries and Oceans Canada*. Canadian Science Advisory Secretariat Research Document 2010/096 v + 34 p.

Venturelli PA, LA Vélez-Espino, MA Koops (2010) Recovery potential modeling of Pugnose Shiner (*Notropis anogenus*) in Canada. *Fisheries and Oceans Canada*. Canadian Science Advisory Secretariat Research Document 2010/007 iv + 22 p.

Arlinghaus R, S Matsumura, **PA Venturelli** (2008*) Potential effects of size-selective angling on population dynamics: a challenge for fisheries management? *Association of German Sport Fishers - Fisheries and Nature Conservation Series* 10: 83-104

*published in German

RESEARCH GRANTS**Received**

Venturelli PA (co-PI), P Novak (PI) and 2 others (2014) Wastewater estrogen: removal options, fish abundance, and cost. *Environmental and Natural Resources Trust Fund*. \$500,000 (3 years)

Venturelli PA (co-PI), D Mohrig (PI) and 12 others (2011) A delta dynamics collaboratory. *National Science Foundation Frontiers in Earth System Dynamics*. \$4,800,002 (5 years)

Venturelli PA (2012) A study to measure critical spawning habitat for walleye on selected lakes in the Namakan Reservoir and assess how this habitat has been affected by the IJC 2000 rule curve. *International Joint Commission*. \$122,099 (3 years)

Venturelli PA (2001) Responses of littoral fauna to fish disturbances. *Alberta Conservation Association/University of Alberta (Challenge Grants in Biodiversity)*. \$7,925 (2 years)

Venturelli PA, WM Tonn (2001) The response of littoral fauna to changes in fish abundance resulting from large-scale disturbances. *National Sciences and Engineering Research Council Industrial Fellowship*. \$19,300 (2 years)

Venturelli PA, WM Tonn (2001) The response of littoral fauna to changes in fish abundance resulting from large-scale disturbances. *Mountain Equipment Co-op Environmental Fund*. \$4,173 (1 yr)

Venturelli PA, WM Tonn (2001) The response of littoral fauna to changes in fish abundance resulting from large-scale disturbances. *Alberta Sport, Recreation, Parks, and Wildlife Foundation Development Initiatives Grant*. \$4,000 (1 year)

PRESENTATIONS

(student co-authors underlined)

Invited (A=Agency, C=conference, D=external departmental seminar, K=keynote)

(D) **Venturelli PA** et al (2014) Department of Biological Sciences Seminar Series, University of Alberta, Edmonton AB

(A) **Venturelli PA** (2014) MN DNR Fisheries Research Group bi-annual meeting, Brainerd MN

(D) **Venturelli PA** et al (2014) Department of Biological Sciences Seminar Series, Minnesota State University, Mankato MN

(D) **Venturelli PA** et al (2014) Department of Biology Seminar Series, University of Minnesota,

Duluth MN

- (A) **Venturelli PA** & lab (2012) MN DNR Fisheries Research Group bi-annual meeting, Itasca MN
- (D) **Venturelli PA** (2012) Department of Ecology and Evolutionary Biology Seminar Series, University of Minnesota, St Paul MN
- (C) **Venturelli PA** et al (2012) AFS, St Paul MN
- (A) **Venturelli PA** & lab (2012) MN DNR Fisheries Research Group bi-annual meeting, Lanesboro MN
- (D) **Venturelli PA** et al (2012) School of Mathematics Mathematical Biology Seminar Series, University of Minnesota, Minnesota MN
- (D) **Venturelli PA** et al (2012) St Anthony Falls Laboratory Seminar Series, University of Minnesota, Minnesota MN [[view presentation](#)] (refresh to remove echo, sound quality improves at 4:38)
- (A) **Venturelli PA** & lab (2011) MN DNR Fisheries Research Group bi-annual meeting, Cloquet MN
- (A) **Venturelli PA** et al (2010) ON MNR Seminar, Peterborough ON
- (A) **Venturelli PA** et al (2010) DFO Seminar, Freshwater Institute, Winnipeg MB
- (K) **Venturelli PA** et al (2008) World Fisheries Congress (Symposium: Early Life History and Recruitment Dynamics), Yokohama, Japan
- (A) **Venturelli PA** et al (2007) Interagency Ecological Program annual workshop, Monterey CA
- (C) **Venturelli PA** et al (2006) AFS, Lake Placid NY
- (C) **Venturelli PA**, WM Tonn (2006) AFS, Lake Placid NY

A Selection of Other Conference Presentations (by me or members of my lab)

- American Fisheries Society (2014), Quebec City QC (2 talks)
- Ecological Society of America (2013), Minneapolis MN (4 talks)
- 8th Symposium for European Freshwater Sciences (2013), Munster Germany (1 talk)
- American Fisheries Society (2012), St Paul MN (5 talks, 1 poster)
- International Congress on the Biology of Fish (2012) Madison WI (4 talks)
- Upper Midwest Invasive Species Conference (2012) La Crosse WI (1 talk)
- Midwest Fish and Wildlife Conference (2010) Minneapolis MN (1 talk)
- American Fisheries Society (2008) Ottawa ON (1 talk)
- NAFO/PICES/ICES joint symposium on Reproductive and Recruitment Processes of Exploited Marine Fish Stocks (2007) Lisbon, Portugal (1 talk)
- American Fisheries Society (2007) San Francisco CA (1 talk)
- Canadian Society for Ecology and Evolution (2007) Toronto ON (1 talk)
- Canadian Conference for Fisheries Research (2007) Montreal PQ (1 talk)
- Canadian Conference for Fisheries Research (2006) Calgary AB (1 talk)
- American Fisheries Society (2003) Quebec City PQ (1 talk)
- Canadian Conference for Fisheries Research (2003) Ottawa ON (1 talk)
- Canadian Conference for Fisheries Research (2002) Vancouver BC (1 poster)

AWARDS AND SCHOLARSHIPS

- EJ Crossman Award for Best Student Oral Presentation, Ontario Chapter of the American Fisheries Society, 2008
- Frederick P. Ide Graduate Fellowship, University of Toronto, 2004–2005
- D. Allan Birdsall Memorial Scholarship, University of Alberta, 2003
- NSERC-IP Scholarship (with Alberta Pacific Forest Industries), 2001–2002

TEACHING

Courses at UMN (* = course development, ** = course development via a competitive grant)

Aquaponics: Integrated Fish and Plant Food Systems (2015) UMN (co-instructor, 4th year course)**
Fish Physiology and Behavior (2013 and 2014) UMN (4th year and graduate course)*
Field Methods in Research and Conservation of Vertebrate Populations (2014) UMN (co-instructor, 2nd year course)
Analysis of Populations (2013-2014) UMN (co-instructor, 4th year and graduate course)**
Experience and Training in a Field Setting (2013) UMN (co-instructor, 4th year course)
Fisheries Population Analysis (2011) UMN (instructor, 4th year and graduate course)*

Teaching at other Institutions (* = lab/content development)

Organisms in Their Environment (2004-2009) University of Toronto (lab TA, 1st year course)*
Environmental Biology (2005-2008) University of Toronto (field and lab TA, 2nd year course)*
Organisms in Their Environment (2000-2003) University of Alberta (lab TA, 1st year course)
Aquatic Invertebrates of Alberta (2002) University of Alberta (field and lab TA, 3rd year course)

Guest Lectures

"Reproductive Value vs. Economic Value" (2012) Environmental and Natural Resource Economics, 3rd year course in Department of Applied Economics, University of Minnesota
"Fisheries Modeling" (2012-2014) Economic and Social Aspects of Conservation Biology, graduate course in Conservation Biology, University of Minnesota
"Fish Ecology and Habitat" (2012) Introduction to Stream Restoration, graduate course in Civil Engineering, University of Minnesota
"Fisheries Management" (2012) Issues in the Environment, 1st year course in the Department of Environmental Sciences, Policy, and Management, University of Minnesota
"Fisheries Management in Minnesota" (2012 and 2014) Nature Management (visiting class of seniors from Nord Trondelag University College, Norway)

Teaching Awards

Runner-up for the Richard C. Newman Art of Teaching Award, College of Food, Agriculture and Natural Resource Sciences
Outstanding Teaching Assistant Award (2009), Department of Ecology and Evolutionary Biology, University of Toronto
Outstanding Teaching Assistant Award (2009), Organisms in Their Environment, University of Toronto
Graduate Teaching Assistantship letter of commendation (2000) University of Alberta

Advising and Mentoring

Graduate (not including committee service)
K. Chezik (defended 2013) MSc, UMN
A. Honsey (2014-present)
G. Loppnow (2011-present) PhD, UMN
T. Mosgaard (2012) visiting PhD student from the Technical University of Denmark
J. Papenfuss (2012-present) MSc, UMN

Undergraduate (independent research projects)
A. Burger (2014) fall independent study, UMN
J. Anderson (2014) summer undergrad research opportunities program, UMN
S. Keogh (2014) spring independent study, UMN
A. Lindholme (2014) spring undergrad research opportunities program, UMN
P. Leinigang (2013) fall independent study, UMN

S. Keogh (2013, co-advised) summer undergrad research opportunities program, UMN
M. Doyle (2013, co-advised) undergrad research apprenticeship program, UMN
T. Brendzel (2012) visiting from Indiana University Bloomington
T. Gabriel (2012) spring independent study, UMN
B. Moe (2012) spring independent study, UMN
K. Desousa (2009) independent study, U of T
S. Kerr (2009) independent study, U of T
L. Bauslaugh (2009) independent study, U of T
A. Cho (2004) independent study, U of T

Post-docs

M. Garcia-Quismondo (2014-present)
N. Hamda (2014-present)

Teaching Grants

Venturelli PA (co-PI), N Phelps (PI) and 6 others (2014) Proactively addressing food safety risks in Minnesota's rapidly expanding aquaponic industry. *University of Minnesota*. \$105,338 (1 year)

Venturelli PA (co-PI), N Anderson (PI) and 2 others (2013) Aquaponics: To fish and plant...for life! *College of Food, Agriculture and Natural Resource Sciences, UMN*. \$40,000 (1 year)

Venturelli PA (co-PI), T Arnold (PI) and 3 others (2012) Integrating experiential learning into the Fisheries and Wildlife curriculum. *College of Food, Agriculture and Natural Resource Sciences, UMN*. \$63,000 (1 year)

Formal Training

Teaching with Writing, UMN Center for Writing (5-day workshop, 2013)
Fundamentals of Theory and Best Practices in Experiential Education, National Society for Experiential Education (1-day workshop, 2013)
Teaching Assistant's Training Program, University of Toronto (15 hours of instruction, 2004)
Teaching Program, University of Alberta (50 hours of instruction, 2000-2003)

SERVICE

Society Membership

American Fisheries Society (including subsections and chapters)
Canadian Society for Ecology and Evolution
Fisheries Society of the British Isles

Journal Reviews (29 reviews for 20 journals)

American Midland Naturalist, Aquatic Ecology, Biological Conservation, Canadian Journal of Fisheries and Aquatic Sciences, Ecological Modelling, Ecology of Freshwater Fish, Endangered Species Research, Evolutionary Ecology, Fisheries Management and Ecology, Fishery Bulletin, Freshwater Biology, Hydrobiologia, Journal of Animal Ecology, Journal of Fish Biology, Journal of the North American Benthological Society, Marine Ecology Progress Series, North American Journal of Fisheries Management, PLOS One, Proceedings of the Royal Academy of Science B, Transactions of the American Fisheries Society

Grant Reviews

External reviewer, National Sciences and Engineering Research Council of Canada Discovery Grant (2013)
External reviewer, Texas Sea Grant (2013)
External reviewer, National Oceanic and Atmospheric Administration and National Marine Fisheries Science Bluefin Tuna Research Program (2010)

Conferences and Symposia Organized

Organizing Committee member (symposia), American Fisheries Society Annual Meeting, 2012

Sole organizer of the symposium *Parental Effects and Their Consequences for Recruitment Dynamics and the Sustainability of Exploited Stocks*, American Fisheries Society, 2008

University Committees

Department of FWCB Kolshorn Lecture and Alumni Committee (chair; 2013-present)

College of Food, Agricultural and Natural Resource Sciences Undergraduate Research Program Committee (2012-present)

Department of FWCB Undergraduate Club faculty co-advisor (2012-2013)

Department of FWCB Faculty Search Committee (2013)

Department of FWCB Head Search Committee (2012)

Department of FWCB Long-Range Planning Committee (2011-2013)

Invasive Species and Genotypes Integrative Graduate Education and Research Traineeship Program (ISG-IGERT) Research Symposium Committee, (2011-2013)

External Committees

Blue Ribbon Panel to conduct an independent review of the walleye fishery of Mille Lacs Lakes for the Minnesota Department of Natural Resources (chair; 2014-present)

Executive Committee of the Minnesota Chapter of the American Fisheries Society (Academic rep.) 2013-present

Red Lakes Fisheries Technical Committee (Academic rep.) 2011-present

External Service

Management/policy advice for the Ontario Ministry of Natural Resources (walleye, 2007 and 2009)

Management/policy advice for the DFO (pugnose shiner recovery potential assessment, 2009)

Management/policy advice for the DFO (channel darter recovery potential assessment, 2009)

FishBase contributor (northern pike, *Esox lucius*, 2009)

EXTENSION & OUTREACH

Education

Manned the Minnesota Aquatic Invasive Species Research Center booth at the Midwest Sportshow (2013) [[watch a video](#)]

Presentations to at numerous elementary and junior high schools (2000-2008), including the [Virtual Researcher on Call Project](#)

Guide and aquatic invertebrate specialist, Activity Science Camp with Hispanic Youth, Toronto ON
Judge at local and regional Alberta science fairs (2002)

Public Speaking

"*Inducing nest failure to control invasive bass*" (2012) Fish Lake Advisory Committee, Fredenberg MN

"*Maternal quality, recruitment, and the dynamics of exploited fish stocks*" (2010) United Walleye Clubs, Sudbury ON

Interviews

Ontario Out of Doors (2010) Ontario Federation of Anglers and Hunters (print)

Airplay (2009) Canadian Broadcasting Corporation (radio)

U of T Magazine (2009) University of Toronto (print)

YES magazine (2009) Peter Piper Publishing (print: [see it here](#))

The Environment Report (2009) Michigan Public Radio (radio: [story 1](#), [story 2](#))