**Peter S. Levi**

**Curriculum Vitae**

Email: plevi@wisc.edu Center for Limnology

(608) 852 - 7381 University of Wisconsin-Madison

Madison, WI 53706

**Research Interests**

Biogeochemistry of streams; ecological restoration; freshwater ecosystem metabolism; nutrient cycling dynamics; nitrogen transformations; resource subsidies; Pacific and Atlantic salmon ecology; macrophyte ecology; pollution of aquatic ecosystem from urban landscapes

**Education**

Ph.D., 2012, Biological Sciences, University of Notre Dame, Notre Dame, IN, USA

Thesis: Responses in stream ecosystem function to salmon-derived nutrients.

Adviser: Dr. Jennifer L. Tank

B.A., 2001, Biology, Lawrence University, Appleton, WI, USA

Minors: International Relations, Environmental Science

Graduated Magna cum laude

**Professional Experience**

12/2013 – Present *Cooperative Institute for Limnology and Ecosystems Research Post-doctoral Fellow*, Center for Limnology, University of Wisconsin-Madison

Adviser: Dr. Peter McIntyre

02/2012 – 12/2013 *Post-Doctoral Research Associate*, Dept. of Bioscience, Aarhus University

Adviser: Dr. Tenna Riis

**Grant Proposals Funded**

1. **Levi, P.S.** Do stream restorations scale up? An analysis of ecosystem response throughout river networks in the Great Lakes basin. $132,000 (March 2013, Cooperative Institute for Limnology and Ecosystems Research).
2. **Levi, P.S.**, T.A., Liebich, J.L. Tank, and G.L. Lamberti. Understanding stream ecosystem function at Izembek National Wildlife Refuge. $7,384 (August 2011, Alaska National Wildlife Refuge System’s Challenge Cost Share Program).
3. **Levi, P.S.** and J.L. Tank. Ecosystem response to nutrient subsidies from annual salmon migrations in streams - an inter-biome comparison. $14,152 (June 2009 to June 2010, NSF Doctoral Dissertation Improvement Grant).
4. **Levi, P.S.**, M.A. Barnes, M.L. Greenlee, N.A. Griffiths, and C.J. Patrick. Science & Society: Bridging the communications divide. $19,000 (April 2008 to September 2009, University of Notre Dame Graduate School).

**Publications**

11. Janetski, D.J., D.T. Chaloner, A.H. Moerke, **P.S. Levi**, and G.A. Lamberti. *In press*. Novel environmental conditions alter subsidy and engineering effects by introduced Pacific salmon. Canadian Journal of Fisheries and Aquatic Sciences.

10. **Levi, P.S.**, and J.L. Tank. 2013. Non-native Pacific salmon alter hot spots of sediment nitrification in Great Lakes tributaries. JGR-Biogeosciences 118: 436-444. DOI 10.1002/jgrg.20044.

•Research highlighted in the American Geophysical Union’s *EOS Transactions*, 28 May 2013 (DOI 10.1002/2013EO220008)

•Research highlighted in Fondriest Environmental, Inc.’s *Environmental Monitor*, 26 April 2013 (http://www.fondriest.com/news/great-lakes-salmon-may-have-unintended-effect-on-stream-nutrients.htm)

9. **Levi, P.S.**, J.L. Tank, J. Rüegg, D.J. Janetski, S.D. Tiegs, D.T. Chaloner, and G.A. Lamberti. 2013. Whole-stream metabolism response to spawning Pacific salmon in their native and introduced ranges. Ecosystems 16: 269-283. DOI 10.1007/s10021-012-9613-4.

8. **Levi, P.S.**, J.L. Tank, S.D. Tiegs, D.T. Chaloner, and G.A. Lamberti. 2013. Biogeochemical transformation of a nutrient subsidy: salmon, streams, and nitrification. Biogeochemistry 113: 643-655. DOI 10.1007/s10533-012-9794-0.

7. **Levi, P.S.**, J.L. Tank, S.D. Tiegs, J. Rüegg, D.T. Chaloner, and G.A. Lamberti. 2012. Reply to comment by Jackson and Martin on “Does timber harvest influence the dynamics of marine-derived nutrients in Southeast Alaska streams?” Canadian Journal of Fisheries and Aquatic Sciences 69: 1898-1901. DOI:10.1139/f2012-106.

6. Rüegg, J., D.T. Chaloner, **P.S. Levi**, J.L. Tank, S.D. Tiegs and G.A. Lamberti. 2012. Environmental variability and the ecological effects of spawning salmon on stream biofilm. Freshwater Biology 57: 129-142.

5. **Levi, P.S.**, J.L. Tank, S.D. Tiegs, J. Rüegg, D.T. Chaloner, and G.A. Lamberti. 2011. Does timber harvest influence the dynamics of marine-derived nutrients in Southeast Alaska streams? Canadian Journal of Fisheries and Aquatic Sciences 68: 1316-1329.

4. Tiegs, S.D., **P.S. Levi**, J. Rüegg, D.T. Chaloner, J.L. Tank, and G.A. Lamberti. 2011. Effects of live salmon on stream nutrients and biofilms exceed those of their carcasses during an annual spawning migration. Ecosystems 14: 598-614.

3. Rüegg, J., S.D. Tiegs, D.T. Chaloner, **P.S. Levi**, J.L. Tank, and G.A. Lamberti. 2011. Salmon subsidies alleviate nutrient limitation of benthic biofilms in Southeast Alaskan streams. Canadian Journal of Fisheries and Aquatic Sciences 68: 277-287.

2. Tiegs, S.D., E.Y. Campbell, **P.S. Levi**, J. Rüegg, M.E. Benbow, D.T. Chaloner, R.W. Merritt, J.L. Tank, and G.A. Lamberti. 2009. Separating physical disturbance and nutrient enrichment caused by Pacific salmon in stream ecosystems.Freshwater Biology 54: 1864-1875.

1. Tiegs, S.D., D.T. Chaloner, **P.S. Levi**, J. Rüegg, J.L. Tank, and G.A. Lamberti. 2008. Timber harvest transforms ecological roles of salmon in southeast Alaska rain forest streams. Ecological Applications 18: 4-11.

**Manuscripts in Review**

1. **Levi, P.S.**, J.L. Tank, A.F. Aubeneau, S.G. Winikoff, J. Rüegg, S.D. Tiegs, D.T. Chaloner, and G.A. Lamberti. *In review*. Transient storage reflects a gradient of large-wood volume in Southeast Alaska streams. Freshwater Science.
2. Roley, S.S., J.R. Griffiths, **P.S. Levi**, C.J. Patrick, S. Sadro, and J.P. Zarnetske. *In review.* State of the ecosystem: progress in quantifying ecosystem health in aquatic ecosystems. Limnology and Oceanography.

**Fellowships, Awards, & Honors**

1. Best Dissertation in Biological Sciences, University of Notre Dame. 2011-2012.
2. Finalist, Shaheen Award for Best Dissertation in the College of Science, University of Notre Dame. 2011-2012.
3. Globe Linkages on Biology, the Environment, and Society (GLOBES) Fellowship, NSF-IGERT, University of Notre Dame. 2006 to 2011 ($10,000 + graduate stipend, tuition).
4. Best Oral Presentation in Basic Research, Society for Freshwater Science. August 2011 ($500).
5. Center for Aquatic Conservation Fellowship, University of Notre Dame. Linking metrics of stream ecosystem function to habitat quality for Atlantic salmon smolt production. 2010 ($1,000 + graduate stipend, tuition).
6. University of Notre Dame Environmental Research Center (UNDERC) Fellowship, University of Notre Dame. 2010 (graduate stipend).
7. Bayer Pre-doctoral Research Fellowship, University of Notre Dame. 2009 ($8,000).
8. President Award, North American Benthological Society. May 2008 ($250).
9. Ecological Society of America Travel Award, Strategic Environmental Research and Development Program. August 2008 ($500).

**Invited Lectures**

1. Seminar, Linking Biodiversity & Ecosystem Function in Lowland Danish Streams. March 2013. Oikos National Meeting. Odense, Denmark.
2. Seminar, Responses of stream ecosystem function to species diversity and abundance. February 2013. Center for Limnology, University of Wisconsin, Madison, WI.
3. Invited Seminar, The response of stream ecosystem function to salmon-derived nutrient subsidies. November 2011. Aarhus University, Aarhus, Denmark.
4. Invited Seminar, Salmon in Alaska: Supporting a world of wildlife. August 2011. Izembek National Wildlife Refuge, Cold Bay, AK.
5. Opening Remarks, Human Development Conference. February 2011. University of Notre Dame, Notre Dame, IN.
6. Invited Seminar, Nitrogen dynamics and transformations in stream ecosystems. October 2009. Lake Superior State University, Sault Ste. Marie, MI.
7. Invited Seminar, Aquatic-terrestrial linkages between salmon and watershed timber harvest. March 2009. NOAA National Marine Fisheries Office, Orono, ME.
8. Invited Symposium Participant, Cooperative Salmon Habitat Restoration Forum. March 2009. University of Maine, Orono, ME.
9. Invited Seminar, Salmon in streams: Biogeochemistry and ecosystem function.May 2008. Biology Department, Lawrence University, Appleton, WI.

**Published Abstracts (**underlined authors represent my advisees**)**

1. **Levi, P.S.**, T. Riis, A.J. Baisner, M. Peipoch, and A. Baattrup-Pedersen. Macrophyte biomass and heterogeneity influence nitrogen uptake in lowland streams. Society for Freshwater Science. Jacksonville, FL, May 2013. Oral presentation.
2. Riis, T., A.J. Baisner, **P.S. Levi**, K. Mætzke, and A. Baattrup-Pedersen. Macrophyte habitats are hot-spots for stream ecosystem function. Society for Freshwater Science. Jacksonville, FL, May 2013. Oral presentation.
3. Baisner, A.J., T. Riis, **P.S. Levi**, and A. Baattrup-Pedersen. Stream metabolism reflects daily and annual variation in environmental characteristics in a macrophyte-dominated stream. Society for Freshwater Science. Jacksonville, FL, May 2013. Oral presentation.
4. Winikoff, S.G., J.L. Tank, G.A. Lamberti, **P.S. Levi**, and T.A. Liebich. Ecosystem function in salmon-bearing streams in subarctic tundra, Southwest Alaska. Society for Freshwater Science. Jacksonville, FL, May 2013. Oral presentation.
5. **Levi, P.S.**, T. Riis, and A. Baattrup-Pedersen. Macrophytes influence transient storage of managed lowland streams. Society for Freshwater Science. Louisville, KY, May 2012. Oral presentation.
6. Winikoff, S.G., **P.S. Levi**, J.L. Tank, M.A. Brueseke, G.A. Lamberti, and T.A. Liebich. Nutrients and metabolism set the stage for comparing salmon-bearing streams in Southeast and Southwest Alaska. Society for Freshwater Science. Louisville, KY, May 2012. Poster presentation.
7. **Levi, P.S.**, J.L. Tank, J. Rüegg, S.D. Tiegs, D.T. Chaloner, and G.A. Lamberti. Ecosystem structure and function reflect salmon-related enrichment and disturbance in Southeast Alaska streams influenced by timber harvest. American Fisheries Society. Seattle, WA, September 2011. Oral presentation.
8. **Levi, P.S.**, and J.L. Tank. Sediment nitrification rates may alter the nutrient subsidy provided by Pacific salmon in Great Lakes streams. North American Benthological Society. Providence, RI, May 2011. Oral presentation.
9. Rüegg, J., G.A. Lamberti, D.T. Chaloner, S.D. Tiegs, **P.S. Levi**, and J.L. Tank. Environmental heterogeneity influences salmon nutrient enrichment of stream biofilms. North American Benthological Society. Providence, RI, May 2011. Oral presentation.
10. **Levi. P.S.,** J.L. Tank, and D.J. Janetski. The role of introduced Pacific salmon on ecosystem function in Midwestern streams. North American Benthological Society. Santa Fe, NM, June, 2010. Oral presentation.
11. **Levi, P.S.,** J.L. Tank, S.D. Tiegs, D.T. Chaloner, and G.A. Lamberti. Nitrogen transformations in Southeast Alaska streams are influenced by marine and terrestrial subsidies. North American Benthological Society. Grand Rapids, MI, May, 2009. Oral presentation.
12. Winikoff, S.G., **P.S. Levi**, J.L. Tank, S.D. Tiegs, and G.A. Lamberti. Transient storage is mediated by watershed timber harvest in Southeast Alaska streams. North American Benthological Society. Grand Rapids, MI, May, 2009. Poster presentation.
13. **Levi, P.S.,** J.L. Tank, S.D. Tiegs, D.T. Chaloner, and G.A. Lamberti. Pacific salmon influence whole-stream metabolism in Southeast Alaskan streams. North American Benthological Society. Salt Lake City, UT, May, 2008. Oral presentation.
14. Tiegs, S.D., M.E. Benbow, E.Y. Campbell, D.T. Chaloner, J.P. Hudson, **P.S. Levi**, R.W. Merritt, A.J. Reisinger, J. Rüegg, J.L. Tank, and G.A. Lamberti. Pacific salmon (*Oncorhynchus* spp.) as agents of disturbance and nutrient enrichment in Southeast Alaska streams. North American Benthological Society. Salt Lake City, UT, May, 2008. Oral presentation.
15. Lamberti, G.A., M.E. Benbow, S.D. Bridgham, E.Y. Campbell, D.T. Chaloner, D.V. D'Amore, R.T. Edwards, J.P. Hudson, **P.S. Levi**, R.W. Merritt, A.J. Reisinger, J. Rüegg, J.L. Tank, and S.D. Tiegs. Aquatic-terrestrial coupling in the flux, uptake, and effects of Pacific Salmon nutrients in Southeast Alaska watersheds.North American Benthological Society. Salt Lake City, UT, May, 2008. Oral presentation.
16. **Levi, P.S.,** J.L. Tank, S.D. Tiegs, D.T. Chaloner, and G.A. Lamberti. Coupled forest management and salmon disturbances may alter nutrient dynamics in southeast Alaskan streams. Ecological Society of America. Milwaukee, WI, August, 2008. Oral presentation.
17. Chaloner, D.T., M.E. Benbow, S.D. Bridgham, E.Y. Campbell, D.V. D'Amore, R.T. Edwards, J.P. Hudson, G.A. Lamberti, **P.S. Levi**, R.W. Merritt, A.J. Reisinger, J. Rüegg, J.L. Tank, and S.D. Tiegs. Environmental change alters the ecological role of Pacific salmon in southeast Alaska rivers. Ecological Society of America. Milwaukee, WI, August, 2008. Oral presentation.
18. Tiegs, S.D., M.E. Benbow, E.Y. Campbell, D.T. Chaloner, J.P. Hudson, **P.S. Levi**, A.J. Reisinger, R.W. Merritt, J. Rüegg, J.L. Tank, and G.A. Lamberti. Comparative effects of spawning salmon and their carcasses in a southeast Alaska stream ecosystem. Ecological Society of America. Milwaukee, WI, August, 2008. Oral presentation.
19. **Levi, P.S.,** J.L. Tank, S.D. Tiegs, D.T. Chaloner, and G.A. Lamberti. Influence of forest management on salmon-derived nutrient dynamics in Southeast Alaska streams. North American Benthological Society. Columbia, SC, June 2007. Poster presentation.
20. Chaloner, D.T., S.D. Tiegs, G.A. Lamberti, J. Rüegg, **P.S. Levi**, M.E. Benbow, S.D. Bridgham, D.V. D'Amore, R.T. Edwards, R.W. Merritt, and J. L. Tank. Ecological influence of Pacific salmon in managed forested watersheds. North American Benthological Society. Columbia, SC, June 2007. Oral presentation.
21. Tiegs, S.D., D.T. Chaloner, T.G. Creech, **P.S. Levi**, J. Rueegg, and G.A. Lamberti. Timber Harvest Dampens the Influence of Salmon on Periphyton in Southeast Alaska Streams. North American Benthological Society. Columbia, SC, June 2007. Oral presentation.
22. Tiegs, S.D., D.T. Chaloner, **P.S. Levi**, A. Reisinger, J. Rüegg, J.L. Tank, and G.A. Lamberti. Historical timber harvest and its lingering influence on the utilization of salmon-derived nutrients in stream ecosystems. Alaska Chapter of the American Fisheries Society. Ketchikan, AK, 2007. Oral presentation.

**Teaching Experience**

1. Lead Instructor, Nitrogen transformations in aquatic ecosystems, Ph.D. course, August 2013

Aarhus University, Aarhus, Denmark

1. Adviser, Kamilla Mætzke Master’s Thesis, April 2012 to August 2013.

Aarhus University, Aarhus, Denmark

● Thesis title: Seasonal variation of sediment denitrification in macrophyte-dominated streams.

1. Program Director, Sensing Our World: Science Through Time, June to July 2011.

University of Notre Dame, Notre Dame, IN

● Instructed week-long summer science program for 65 middle school students

● Developed curriculum and coordinated College of Science faculty and staff

1. Advanced Teaching Scholar Certification, Spring 2011.

University of Notre Dame, Notre Dame, IN

1. Teaching Co-Instructor, General Ecology, Fall 2010.

Department of Biological Sciences, University of Notre Dame, Notre Dame, IN

● Lectured to general ecology undergraduate students

● Developed and implemented new curriculum

1. Program Director, Sensing Our World: Global Health Science Program, July 2010.

University of Notre Dame, Notre Dame, IN

● Instructed week-long science summer program for 40 middle school students

● Developed curriculum and coordinated College of Science faculty and staff

1. Teaching Assistant, Aquatic Ecology, Fall 2009.

Department of Biological Sciences, University of Notre Dame, Notre Dame, IN

1. Teaching Assistant, Biostatistics, Spring 2008, Spring 2009.

Department of Biological Sciences, University of Notre Dame, Notre Dame, IN

1. Ecology Instructor, January to June 2004.

Newfound Harbor Marine Institute, Big Pine Key, FL

1. Assistant Director and Lead Ecology Instructor, August 2002 to November 2003.

Ferry Beach Ecology School, Saco, ME

1. Research and Advocacy Intern, June to August 2002.

Tip of the Mitt Watershed Council, Petoskey, MI

1. Environmental Education Instructor, February to June 2002.

YMCA Camp Surf, Imperial Beach, CA

1. Assistant Director, World Capitals-South Africa, August to December 2001.

American University, Washington, DC and Cape Town, South Africa

**Departmental Leadership, Professional Service, & Outreach**

1. Member, Education & Outreach Committee, Society for Freshwater Science, 2012-Present.
2. Graduate Student Chair, Development Studies Working Group, 2010-11.
3. Instructor, Sensing Our World Science Program, July 2009.
4. Mentor, NSF Research Experience for Undergraduates program, 2008.
5. Instructor, Ms. Wizard Day, March 2008.
6. President, Biology Graduate Student Organization, 2007-08.
7. Student Representative, NSF-IGERT GLOBES fellowship, 2007-08.
8. External Reviewer, Biogeochemistry, Journal of Applied Ecology, Water Resources Management.
9. Associate Reviewer, Faculty of 1000.

**Professional Workshops Attended**

1. Ecological – Dissertations in the Aquatic Sciences X Symposium (Eco-DAS X), University of Hawaii, October 2012.
2. Teaching your First Biology Course, University of Notre Dame, May 2010.
3. Communications Partnership for Science and the Sea (COMPASS) Policy Workshop, Washington, DC, October 2009.
4. American Institute of Biological Sciences (AIBS) Policy and Communications Workshop, University of Notre Dame, Notre Dame, IN, January 2009.
5. COMPASS Science & Policy Workshop. October 2008.
6. COMPASS Effective Communication Workshop. March 2008.
7. Fundamentals in Ecosystem Ecology, Cary Institute of Ecosystem Studies, Millbrook, NY, January 2008.

**References**

1. Dr. Jennifer Tank

Department of Biological Sciences

University of Notre Dame

Notre Dame, IN 46556

tank.1@nd.edu

(574) 631 - 3976

2. Dr. Tenna Riis

Department of Bioscience

Aarhus University

8000 Aarhus C Denmark

tenna.riis@biology.au.dk

(+45) 8715 - 6578

3. Dr. Gary Lamberti

Department of Biological Sciences

University of Notre Dame

Notre Dame, IN 46556

glambert@nd.edu

(574) 631 - 0580

4. Dr. Michael J. Vanni

Department of Zoology

Miami University

Oxford, OH 45056

vannimj@muohio.edu

(513) 529 - 3192