W. LINDSAY WHITLOW

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EDUCATIONAL BACKGROUND

UNIVERSITY OF MICHIGAN – Ph.D. in Ecology & Evolutionary Biology (96-02)
DUKE UNIVERSITY – B. Sc. in Biology. Marine Biology Concentration. Honors. Ethyl Scholarship. (91-95)
Field Courses: Organization for Tropical Studies in Costa Rica (97), School for Field Studies in Kenya (94), Duke University Marine Laboratory (93)

TEACHING EXPERIENCE

ASSOCIATE PROFESSOR – SEATTLE UNIVERSITY, BIOLOGY DEPARTMENT

Ecology [BIOL 470/270] (F/S 06-13)
Explores population dynamics, community interactions, and ecosystem functions through lectures and labs at local urban field sites. Provides data via service-learning to community partners and ecological education to local elementary school students.

General Biology II [BIOL 162] (W 07-14)
Foundational course in Biology on evolution and biodiversity using interactive lectures to explore the array of microbial, plant, and animal life.

General Biology II Laboratory [BIOL 172] (W 07-13)
Through lab exercises and field trips investigates ecology, evolution and biodiversity with simulations, experiments, and fieldwork.

Marine Ecology [BIOL 472] – *Blakely Island Field Station* (Su 07-14)
Field course exploring marine organisms and ecosystems via team and independent projects investigating an array of marine habitats.

Aquatic Ecology [BIOL 474] – *Blakely Island Field Station* (Su 08-12)
Field course exploring freshwater organisms and ecosystems via team and independent projects investigating an array of freshwater habitats

Biology Senior Synthesis [BIOL 489] (S 12,14)
Provides capstone experience for majors by developing proposals, presentations, applications, and reflections.

Principles of Ecology [EVST 220/BIOL 291] (S 14)
Ecology course for environmental studies majors on concepts underlying environmental issues through fieldwork and service-learning.

Conservation Biology [BIOL 276] (W 13)
Applies biological understanding of processes at multiple scales toward pressing conservation issues.

Tropical Ecology [BIOL 492] (S/Su 07,09)
Field course in Costa Rica exploring tropical ecosystems where students prepare in spring and conduct independent projects during 2 week trip.

Undergraduate Research/Independent Study [BIOL 499/487] (F/W/S 06-14)
Mentored an array of student ecological research projects (described in more detail in Research section)

LECTURER – UNIVERSITY OF WASHINGTON, PROGRAM ON THE ENVIRONMENT (05-06)
Environmental Studies: Interdisciplinary Foundations
Disasters, Society, & the Environment
Preventing Disaster: Risk, Vulnerability, and Natural Hazards in the Pacific Northwest

VISITING ASSISTANT PROFESSOR – BOWDOIN COLLEGE, DEPARTMENTS OF BIOLOGY & ENVIRONMENTAL STUDIES (02-05)
"Cassandra or Chicken Little?": The Ecology of Global Change
Introductory Biology
Introduction to Environmental Science
Behavioral Ecology & Population Biology
"Alien Invasion": The Ecology and Management of Invasive Species
Community & Ecosystem Ecology
Introduction to Environmental Studies

TEACHING GRANTS & FELLOWSHIPS

Keck Foundation (12) – Science & Civic Engagement Western Network. PI: A. Shacter (Santa Clara) w/P. Alaimo & D. Latch
Seattle University Youth Initiative Fund for Engagement (12) - "Enhancing Science and Math Education Training for the SUYI"
Academic Service-Learning Consultant (12-13) – Designing the evolutionary next steps to advancing service-learning at the university.
National Science Foundation (11-12) - Transforming Undergraduate Education in STEM. PI: P. Myers (U. Michigan). *Participant*
Mission Fund (11) – Preliminary work connecting with Makah community and teachers for Neah Bay Project. w/R. Efird
Justice Faculty Fellow (10-11) – Support to develop courses connected to issues in the Duwamish River community.
Learn and Serve America Leadership Fellowship (09) – Support to connect with service-learning leaders nationwide.
Academic Service-Learning Faculty Fellowship (07-08) – Support to enhance service-learning aspects of SU courses.
Washington Center "Curriculum for the Bioregion" (08) – Work to integrate sustainability into biology courses.

TEACHING PROJECTS

FUN Ecological Education Project (11-14) – Train SU students to teach local third graders about urban nature with the Audubon Society. w/C. Wotus
Duwamish River Pyrethroid Project (09-13) – Coordinate Ecology & Chemistry courses to analyze contaminants and water quality. w/P. Alaimo & D. Latch
Environmental Justice Project (11-12) – Coordinate Biology, Chemistry, & English courses on community environmental issues. w/D. Latch & C. Roberts
Makah Neah Bay Project (11-14) – Develop Biology & Anthropology courses to integrate native Makah culture with marine ecology. w/R. Efird
Pollinator Pathway Project (10-12) – Study native flower gardens in parking strips in university neighborhood with local high schoolers. w/S. Bergmann
Duwamish River Education Project (08-09) – Monitoring water quality at restoration sites with local high school students. w/S. Hoofnagle
Service-Learning Projects (07-14) – Develop projects with community partners in Ecology and General Biology courses.
Guide to Statistics (06-14) - Guide for using SPSS to conduct appropriate tests for data analysis for introductory and upper-level courses. w/S. O'Steen
Electronic Student Response System (07-14) – Technology to enable interactive lectures in Introductory Biology.
SUCCOTASH Website (06-14) – Method for disseminating ecological projects with partners and local community members.
Introductory Biology Lab Manual (07-14) – Active learning lab exercises, worksheets, and background material.
Guide to Scientific Presentations (06-14) - Guidelines for giving an effective presentations.
Natural History Projects (06-11) – Students generate nature documentaries and guides to organisms at local field sites.

RESEARCH PUBLICATIONS (* indicates undergraduate students)

Peer-Reviewed Journals

Van Nuland, M.* and W.L. Whitlow. 2014. Temporal effects on biodiversity and composition of arthropod communities along an urban-rural gradient. Urban Ecosystems. Published online April 2014.

Huynh, C.*, S. Poquette*, and W.L. Whitlow. 2014. Pyrethroid pesticide effects on behavioral responses of aquatic isopods to danger cues. Environmental Science and Pollution Research. 21: 5211-6.

Latch, D., Whitlow, W.L., and P.J. Alaimo. 2012. Incorporating an Environmental Research Project Across Three STEM Courses: A Collaboration Between Ecology, Organic Chemistry, and Analytical Chemistry Students. In Science Education and Civic Engagement: The Next Level. P. 17-30. American Chemical Society, Oxford University Press.

Lauren, H.* and W.L. Whitlow. 2012. Ecological effects of invasive slugs, Arion rufus, on native Cascade Oregon grape, Mahonia nervosa. Northwest Science. 86: 1-8.

Whitlow, W.L. and J. Grabowski. 2012. Examining how landscapes influence benthic community assemblages in seagrass and mudflat habitats in southern Maine. Journal of Experimental Marine Biology and Ecology. 411:1-6.

Whitlow, W.L. 2010. Changes in survivorship, behavior, and morphology in native soft-shell clams induced by invasive green crab predators. Marine Ecology. 31: 418-430.

Whitlow, W.L. and S. Hoofnagle. 2010. Mud, Muck, and Service: Action research on direct and indirect service-learning in ecology. Science Education and Civic Engagement: An International Journal. 3: 57-65.

Whitlow, W. L., N. A. Rice, and C. Sweeney*. 2003. Native species vulnerability to introduced predators: testing an inducible defense and a refuge from predation. Biological Invasions 5: 23-31.

In Review

Grabowski, J. and W.L Whitlow. *In review 2014*. Assessing impacts of past oil spills to nursery function in temperate estuaries. Marine Ecology.

In Progress

Vincent, J.* and W.L. Whitlow. *Revising for resubmission 2014*. Analysis of edge effects on canopy tree morphology in an urban forest. Urban Habitats..

Whitlow, W.L. *Revising for resubmission 2014*. Historical changes in native clam traits after predatory crab invasion. Estuaries & Coasts.

Vanha, A.* and W.L. Whitlow. *Revising for resubmission 2014*. Comparing restored with unrestored sites along the industrial Duwamish River. Environmental Science and Pollution Research.

Youngquist, L.*, A. Frost*, and W.L. Whitlow. *Revising for resubmission 2014*. Effects of time since restoration and proximity to runoff outfalls on water quality in the Duwamish River. Environmental Science and Pollution Research.

Close, S.*, K. Benson*, W.L. Whitlow, and D. Vasudevan. *Revising for resubmission 2014*. Impacts of ditch plugging on salt marsh plant communities, benthic invertebrates, and water chemistry. Estuaries & Coasts.

Research Reports

Grabowski, J., Whitlow, W. L., Hauke, S.* and Benson, K.* 2007. Importance of seagrass habitat as nurseries for juvenile groundfish and vulnerability to future oil spills. Report to Maine SeaGrant/Maine Oil Spill Advisory Committee.

Conference Proceedings

Whitlow, L. and J. Dochtermann, 2001. Phenotypic Plasticity of Native Soft-Shell Clams in Response to Chemical and Physical Stimuli from Invasive Green Crab Predation. Proceedings of the Second International Conference on Marine Bioinvasions, 151-152.

Whitlow, W. L. 1999. The impact of Carcinus maenas on patterns of Mya arenaria survivorship. in Marine Bioinvasions: Proceedings of the First National Conference. 410-411.

RESEARCH GRANTS & FELLOWSHIPS

Awarded

National Institute of Environmental Health - Environmental Health Research Experience Program (10) - $21,000
Urban aquatic chemistry, ecology, & health: Comparing pyrethroid concentrations, aquatic conditions, benthic invertebrates and human health risks across a Superfund site. Co-PIs: W.L. Whitlow, D. Latch.

LI-COR Environmental Education Fund – Ecophysiology Grant (10) - $48,000
Enhancing research and learning opportunities in ecology, plant physiology, and the biology curriculum. PI: W.L. Whitlow.

M. J. Murdock Charitable Trust - Research Start-up Grant for New Science Faculty (06-09) - $25,000
- Ecology and restoration of local coastal habitats. Co-PIs: G. Yasuda, W.L. Whitlow

SU College of Science & Engineering Summer Research Program (09-14) $15,500 - $18,000/yr

(14) Comparing local and regional drivers on patterns in phycoviral diversity across urban and rural lakes. – A. Wells*

(12) Effects of aquatic plant densities on pesticides in field sediments at restoration sites in the Duwamish River urban watershed. – T. Youngquist*
Analyzing how aquatic plant densities affect pesticide concentrations in experimental mesocosm sediments – S. Poquette*

(11) Comparing urban creek communities and water quality in the Duwamish River urban watershed – C. Huynh*
Investigating a genetic bioassay for pyrethroid exposure in Drosophila and aquatic arthropods – S. Poquette*

(10) Investigating the effects of CSOs into the Duwamish River – A. Frost*
Experimental approach to examining litter invertebrate communities along an urbanization gradient – M. Van Nuland*

(09) Spatial analysis of canopy tree growth and distribution across habitats in an urban park – J. Vincent*
Assessing Duwamish River water quality and ecological communities across restoration sites – L. Youngquist*
Comparing leaf litter communities across an urbanization gradient – M. Van Nuland*

Maine Sea Grant/Maine Oil Spill Advisory Committee (05-07) - $107,792
- Assessment of nursery habitats within Casco Bay. Co-PIs: J. Grabowski (GMRI), W.L. Whitlow.

NOAA/NERRS Graduate Research Fellowship (99-02) - Invasive green crab impacts on populations of the native soft-shell clam.

Rusack Coastal Studies Project Initiative (04-05) - Integrating ecological & economic data on clam harvesting.

Helen Olsen Brower Fellowship in Environmental Studies (01)

Submitted

Washington Sea Grant (11) - Pyrethroids in urban watershed runoff: A case study for investigating the chemistry, genetics, and ecology of contaminant impacts on aquatic ecosystems. Co-PIs: W.L. Whitlow, D. Latch, P. Alaimo, G. Yasuda, C. Stenbak. *Pre-proposal accepted.*

Research Corporation for Science Advancement – Cottrell College Science Award (10) - Chemistry and ecology of emerging contaminants: measuring concentrations and non-lethal effects of pyrethroid pesticides in an urban estuary. Co-PIs: D. Latch, P.J. Alaimo, W.L. Whitlow

M. J. Murdock Charitable Trust – Murdock College Research Program for Life Sciences (10) - Urban ecological community dynamics: Determining factors affecting invertebrate diversity and function in leaf litter across an urbanization gradient. PI: W.L. Whitlow.

The Russell Family Foundation – Environmental Sustainability Program (10) - Duwamish River water quality and community engagement.

Washington Sea Grant (09) - Assessing how exogenous chemicals affect food web dynamics in the Duwamish river estuary. Co-PIs: W.L. Whitlow, D. Latch, M. Marsolek, S. O'Steen.

M. J. Murdock Charitable Trust - Partners in Science Grant (06) - Work with local high school science teacher on Duwamish River restoration research.

Oceans & Human Health Initiative, NOAA (05) - Influence of toxic algae on estuarine food web dynamics. Co-PIs: J. Byers (UNH), W.L. Whitlow.

NSF Field Station and Marine Laboratory Program (04) - Expand education & research at the Kent Island Field Station. Co-PIs: N. Wheelwright, W.L. Whitlow

USDA Invasive Species Management (04) - Dynamic bioeconomic decision framework for invasive species management. Co-PIs: G. Herrera, W.L. Whitlow

RESEARCH PRESENTATIONS (* indicates undergraduate students)

National/International Professional Research Conferences

Poquette, S.*, T. Youngquist*, and W.L. Whitlow. 2014. Running amok in the muck: Investigating urban creeks and restored wetlands in the Duwamish river. Joint Aquatic Sciences Meeting. Portland, OR.

Berude, J.*, W.L. Whitlow, and D. Latch. 2013. Pyrethroid pesticides in the Duwamish River superfund site: Development and optimization of analysis methods. American Chemical Society National Meeting. New Orleans, LA.

Perkins, C.*, C. Fowler, and W.L. Whitlow. 2013. Quantifying the thirst of Western American cities. Water Resources Research Center Conference, University of Arizona. Tucson, AZ.

Huynh, C.*, S. Poquette*, and W.L. Whitlow. 2012. Critical Creek Health Assessment in the Duwamish River Urban Watershed. Poster. Ecological Society of America Conference. Portland, OR.

S. Poquette*, Huynh, C.*, and W.L. Whitlow. 2012. Pyrethroid Pesticide Effects on Invertebrate Behavioral Responses to Danger Cues,. Poster. Ecological Society of America Conference. Portland, OR.

Van Nuland, M.*, J.B. Vincent, L. Youngquist, A. Frost and W.L. Whitlow. 2011. Collembolans, Colonization, & Concrete: Forest floor leaf litter invertebrate communities and disturbance along an urbanization gradient. Poster. Ecological Society of America Conference. Portland, OR.

Latch, D.E., W.L. Whitlow, and P.J. Alaimo. 2011. Incorporating an environmental research project across three STEM courses: A collaboration between ecology, organic chemistry, and instrumental analysis. Seminar. American Chemical Society Meeting. Denver, CO.

Whitlow, W.L., D. Latch, P.J. Alaimo, A. Frost*, and J. Berude*. 2010. Urban Chemistry & Ecology: Comparing Pyrethroid Concentrations, Aquatic Conditions, & Benthic Invertebrates across a Superfund Site. Seminar. Society of Environmental Toxicology and Chemistry. Portland, OR.

Frost, A.*, L. Youngquist*, P.J. Alaimo, D. Latch, and W.L. Whitlow. 2010. Investigating impacts of emerging contaminants in the Duwamish River ecosystem: Pyrethroids, Ecology, & Chemistry. Poster. Society of Environmental Toxicology and Chemistry. Portland, OR.

Alaimo, P.J., D.E. Latch, W.L. Whitlow, A. Frost*, and L. Youngquist*. 2010. Incorporating an environmental research project across three simultaneous STEM courses: Collaboration between ecology, organic chemistry, and instrumental analysis. Invited Poster. Resources, Energy and Sustainability: A STEM Teaching and Research Symposium. Honolulu, HI.

Latch, D.E., P.J. Alaimo, W.L. Whitlow, J. Berude, A. Frost*, and L. Youngquist*. 2010. Chemistry and ecology of emerging contaminants: measuring concentrations and non-lethal effects of pyrethroid pesticides in an urban estuary. Invited Poster. Resources, Energy and Sustainability: A STEM Teaching and Research Symposium. Honolulu, HI.

Whitlow, W.L., Frost, A.*, Youngquist, L.*, P.J. Alaimo, and D. Latch. 2010. Urban aquatic contaminants and benthic ecology: comparing invertebrates, chemical concentrations, and water quality across a superfund site. Seminar. Ecological Society of America Conference, Pittsburgh, PA.

Youngquist, L.*, A. Frost*, P.J. Alaimo, D. Latch, and W.L. Whitlow. 2010. Slimy, smelly, and superfun(d): Investigating emerging contaminants in the Duwamish river ecosystem. Poster. Ecological Society of America Conference, Pittsburgh, PA.

Van Nuland, M.*, J. Vincent*, L. Youngquist*, A. Frost*, and W.L. Whitlow. 2010. Little bugs in the big city: investigation of litter invertebrates along an urbanization gradient. Poster. Ecological Society of America Conference, Pittsburgh, PA.

Whitlow, W.L., Youngquist, L.* and Vanha, A.* 2009. Assessing restoration progress: Comparing restored and unrestored shore communities along the industrial Duwamish River. Coastal & Estuarine Research Federation Conference. Portland, OR.

Whitlow, W.L. 2009. Service-learning and superfund: Assessing contributions of direct and indirect service-learning in ecology. Association of Environmental Sciences & Studies Conference. Madison, WI.

Vincent, J.* and Whitlow, W.L. 2009. Not just a walk in the park: Investigation of canopy tree growth and distribution in Seward park. Ecological Society of American Conference, Albuquerque, NM.

Lauren, H.* and Whitlow, W.L. 2009. The good, the bad, and the slimy: Analyzing the net effects of invasive slugs on an urban forest. Ecological Society of American Conference, Albuquerque, NM.

Vanha, A.* and Whitlow, W.L. 2009. Assessing restoration progress: Comparing restored and unrestored shore communities along the industrial Duwamish River. Ecological Society of American Conference, Albuquerque, NM.

Whitlow, W.L. 2009. Mud, muck, and service: Action research on direct and indirect service-learning in ecology. Ecological Society of American Conference, Albuquerque, NM.

Whitlow, W. L, A. Henshaw, S. Fick*, and A. Hodges*. 2005. Interactive effects of invasive species, harvesting, and history on clam populations in Maine, USA. Benthic Ecology Conference, Williamsburg, VA

Whitlow, W. L. and S. Fick*. 2004. Impacts of invasive green crabs and harvesting on native soft-shell clams. American Institute of Biological Sciences Annual Meeting, Washington, DC

Whitlow, W. L. 2003. Native clam protection and the costs to growth and survival. Estuarine Research Federation Conference, Seattle, WA

Whitlow, W. L., S. Fick*, A. Hodges*, E. Bryson*, and J. Harris*. 2003. Historical changes in native clam traits after crab invasion. Ecological Society of America Conference, Savannah, GA

Whitlow, W. L. 2003. Effects of green crabs and clam protection methods on the soft-sediment intertidal community. Benthic Ecology Conference, Mystic, CT

Whitlow, W. L. 2002. Measuring effects of a marine bioinvasion to restore a native fishery: effects of introduced green crabs on native soft-shell clams in Maine. Ecological Society of America Conference, Tucson, AZ

Whitlow, W. L. 2001. How phenotypic plasticity affects native clam survival in response to an invasive crab predator. Estuarine Research Federation Conference, St. Petersburg, FL

Whitlow, W. L. 2001. The native perspective on marine bioinvasions: how native soft-shell clam behavior and growth changes in response to green crab predation. Marine Biological Invasions, Halifax, NS

Whitlow, W. L. 2001. Phenotypic plasticity of native soft-shell clams in response to chemical and physical stimuli from invasive green crab predation. 2nd International Conference on Marine Bioinvasions, New Orleans, LA

Whitlow, W. L. 2001. The role of plasticity in introduced predator-native prey relationships: morphology of soft-shell clams responding to green crabs. Benthic Ecology Conference, Durham, NH

Whitlow, W. L. 2000. Native species response to invasion: effects of green crabs on soft-shell clam behavior and morphology. Ecological Society of America Conference, Snowbird, UT

Whitlow, W. L. 2000. How native species respond to invasion: the impact of green crabs on soft-shell clams. Benthic Ecology Conference, Wilmington, NC

Whitlow, W. L. 1999. Size-dependent vulnerability of soft-shell clams to predation by the invasive green crab. National Conference on Marine Bioinvasions, Boston, MA

National Undergraduate Research Conferences

Huynh, C.*, S. Poquette*, and W.L. Whitlow. 2012. Critical Creek Health Assessment in the Duwamish River Urban Watershed. Poster. National Council for Undergraduate Research Conference. Ogden, UT.

S. Poquette*, Huynh, C.*, and W.L. Whitlow. 2012. Pyrethroid Pesticide Effects on Invertebrate Behavioral Responses to Danger Cues,. Poster. National Council for Undergraduate Research Conference. Ogden, UT.

Youngquist, L.* and W.L. Whitlow. 2010. Slimy, smelly, and superfun(d): Investigating water quality, invertebrate communities, and pyrethroid insecticides in the Duwamish river ecosystem. Poster. National Council for Undergraduate Research Conference, Missoula, MT.

Van Nuland, M.* and W.L. Whitlow. 2010. Little bugs in the big city: investigation of litter invertebrates along an urbanization gradient. Poster. National Council for Undergraduate Research Conference, Missoula, MT.

Regional Undergraduate Research Conferences

Frost, A.*, J. Berude*, D. Latch, P.J. Alaimo, and W.L. Whitlow. 2010. Urban Aquatic Contaminants & Benthic Ecology: Pyrethroids in the Duwamish River. Seminar. M.J. Murdock Charitable Trust Undergraduate Research Conference. McMinnville, OR.

Van Nuland, M.* and W.L. Whitlow. 2010. Little bugs in the big city: investigation of litter invertebrates along an urbanization gradient. Poster. M.J. Murdock Charitable Trust Undergraduate Research Conference. McMinnville, OR.

Youngquist, L.* and Whitlow, W.L. 2009. Slimy, smelly, and superfun(d): Investigating the effects of pyrethroid insecticides on the Duwamish river ecosystem. M.J. Murdock Charitable Trust Undergraduate Research Conference, Spokane, WA.

Vincent, J.* and Whitlow, W.L. 2009. Seeing the forest and the trees: Spatial analysis of morphology and distribution of large canopy trees in an urban forest fragment. M.J. Murdock Charitable Trust Undergraduate Research Conference, Spokane, WA.

Lauren, H* and Whitlow, W.L. 2008. Comparing the effects of native and invasive slugs on understory plants in an urban forest. M.J. Murdock Charitable Trust Undergraduate Research Conference. Tacoma, WA.

Vincent, J.* and Whitlow, W.L. 2008. Analyzing canopy tree species diversity, distribution and health with distance from edge in an urban forest fragment. M.J. Murdock Charitable Trust Undergraduate Research Conference. Tacoma, WA.

Vanha, A.*, Nguyen, T.*, Sladich, R.*, and Whitlow, W. L. 2007. Urban Ecology: Assessing how restoration efforts affect water chemistry and plankton communities in the Duwamish River, Seattle, WA. M.J. Murdock Charitable Trust Undergraduate Research Conference. Salem, OR.

Invited Seminars

Whitlow, W.L., D. Latch, Frost, A.*, and Berude, J.*. 2010. Urban aquatic chemistry, ecology, & health: comparing pyrethroid concentrations, aquatic conditions, benthic invertebrates, and human health risks across a superfund site. University of Washington Envt. Health Dept. Seattle, WA.

Whitlow, W. L. 2005. How history, harvesting, and invasive species interact to affect clams and the infaunal community of coastal Maine. Humboldt State University. Arcata, CA

Whitlow, W. L. 2005. How history, harvesting, and invasive species have affected the clam fishery of coastal Maine. Bard College. Annandale-on-Hudson, NY

Whitlow, W. L. 2005. Determining the historical and current impacts of invasive species. Providence College. Providence, RI

Whitlow, W. L. 2004. Clam shells and crab smells: impacts of invasive green crabs on the Maine clam fishery. Bigelow Laboratory for Ocean Sciences. Boothbay Harbor, ME

Whitlow, W. L. 2004. Attack of the crab monsters: invasive species impacts on the clam fishery of coastal Maine. Skidmore College. Saratoga Springs, NY

Whitlow, W. L. 2002. Changes in native species after biological invasion: effects of green crabs on soft-shell clams in Maine. University of New Hampshire, Durham, NH

Whitlow, W. L. 2002. Response to biological invasion and the restoration of a native fishery. University of California, Davis, CA

University Research Presentations

Huynh, C.*, S. Poquette*, and W.L. Whitlow. 2011. Whistle while you wade: Ecological investigation of pyrethroids in the Duwamish river watershed. Poster. Murdock Summer Research Symposium. Seattle, WA.

Youngquist, L.*, A. Frost*, J. Berude*, M. Van Nuland*, P.J. Alaimo, D.E. Latch, and W.L. Whitlow. 2011. Back to the future: Effects of runoff, Raid, and restoration in the Duwamish river ecosystem. SUURA Undergraduate Research Symposium. Seattle, WA.

Van Nuland, M.*, J.B. Vincent, L. Youngquist, A. Frost and W.L. Whitlow. 2011. Collembolans, Colonization, & Concrete: Forest floor leaf litter invertebrate communities and disturbance along an urbanization gradient. SUURA Undergraduate Research Symposium. Seattle, WA.

Frost, A.*, J. Berude*, D. Latch, P.J. Alaimo, and W.L. Whitlow. 2010. Urban Aquatic Contaminants & Benthic Ecology: Pyrethroids in the Duwamish River. Seminar. College of Science & Engineering Natural Sciences Seminar Series. Seattle, WA.

Frost, A.*, L. Youngquist*, P.J. Alaimo, D.E. Latch, and L. Whitlow. 2010. Investigating water quality and contaminants in the Duwamish River ecosystem. Seminar. SUURA Undergraduate Research Symposium. Seattle, WA.

Youngquist, L.*, M. Van Nuland*, and W.L. Whitlow. 2010. Contaminants & Collembolans: Investigating Aquatic & Terrestrial Urban Ecosystems. Seminar. College of Science & Engineering Natural Sciences Seminar Series. Seattle, WA.

RESEARCH PROJECTS

(* indicates undergraduate students)

SEATTLE UNIVERSITY

(13-14) - Comparing local and regional drivers on patterns in phycoviral diversity across urban and rural lakes. w/ A. Wells*, C. Stenbak, & M. Zanis
- Building a model of river macroinvertebrate diversity based on flow and sediment changes. w/B. Yee*, K. Hammond*, & W. Lauer
- Impacts of warming ocean temperature and rising CO_2 on Caribbean coral phenotypes. w/ G. Lout*

(12-13) - Effects of plant densities on pesticides in sediments in the Duwamish River. w/ S. Poquette*, T. Youngquist*, J. Berude*, & D. Latch
- Investigating the fates and impacts of pyrethroid pesticides in the Duwamish River ecosytem. w/ J. Berude* & D. Latch
- Relationships between consumption, population density, precipitation, and watershed area across western cities. w/ C. Perkins* & C. Fowler

(11-12) - Urban creek communities and water quality in the Duwamish watershed. w/ C. Huynh*, S. Poquette*, J. Berude*, D. Latch, & P. Alaimo
- Testing how arthropod responses to predatory chemical cues are altered by pyrethroids. w/C. Huynh*, S. Poquette*, J. Berude*, D. Latch
- Developing a genetic bioassay for pyrethroid exposure in Drosophila and aquatic arthropods. w/S. Poquette*, C. Huynh*, G. Yasuda, C. Stenbak

(10-12) - Investigating how native flower gardens affect invertebrate communities along an urban pathway. w/ S. Bergmann

(09-11) - Determining the impacts of pyrethroid pesticides on an urban aquatic ecosystem. w/ L. Youngquist*, A. Frost*, J. Berude*, D. Latch, P. Alaimo
- Examining litter invertebrate communities across an urbanization gradient. w/ M. Van Nuland*
- Assessing tropical canopy tree seed dispersal mechanisms in a cloud forest ecosystem. w/ G. Goldsmith & J. Vincent*

(09-10) - Investigating shell decision criteria by native intertidal hermit crabs. w/ L. Gossack*
- Comparing the effects of dams on salmon migration in the Columbia River. w/ C. Allan*
- Analyzing how benthic invertebrate communities are affected by urban runoff. w/ D. Sullivan* & A. Morton

(08-11) - Spatial analysis of canopy tree growth and distribution across habitats in an urban park. w/ J. Vincent*

(07-11) - Measuring ecological impacts of invasive slugs in Pacific Northwest forests. w/ H. Lauren*
- Assessing impacts of past oil spills to nursery function in temperate estuaries. w/ J. Grabowski (GMRI), K. Benson*, & S. Hauke*

(08) - Distribution of metals contamination in aquatic habitats of the lower Duwamish River. w/ W. Ellis*
- Comparing mussels exposed to water and algae from polluted marine sites. w/ P. Brown*
- Effects of invasive ivy removal on litter invertebrate communities in the urban forest of Seward Park. w/ K. Anderson* & A. Morton

(07) - Restoration effects on water chemistry and planktonic communities in the Duwamish River. w/ A. Vanha*, T. Nguyen*, E. Ghitis, & K. Holsman
- Investigating chemical communication among native crayfish. w/ R. Sladich*

BOWDOIN COLLEGE

(02-05) - Effects of salt marsh restoration on plants, benthic infauna, and water chemistry. w/K. Benson*, S. Close*, D. Vasudevan, & N. Sferra
- Documenting changes in the Everglades ecosystem. D. Fulton*
- Effects of latitude, wave exposure, and tidal height on Chilean snail morphology. E. Dukeshire*
- Response of tropical tree seedlings to disturbance. G. Goldsmith* (w/ J. Lichter)
- Dynamics of song transmission within a Savannah Sparrow population. I. Levin* (w/ N. Wheelwright)
- Microbial communities and fungal pathogens in organic potato agriculture. N. Van Dyke*
- Physiological ecology of intertidal red algae. J. Harris* (w/ B. Logan)
- Interactive effects of invasive crabs and harvesting intensity on Maine clam populations. w/ S. Fick*
- Comparing ancient & modern human harvesting of clam populations. w/ A. Henshaw & A. Hodges*
- Interactive effects of predation cues & intraspecific competition on clams. w/ E. Bryson* & L. Plough*
- Geographic variation in clam responses to predators at Kent Island Scientific Station
- Effects of wave action on growth and morphology of intertidal algae. L. Stanley*
- Science and policy of marine reserve design in developing countries. L. Batt*
- How human and abiotic factors affect Purple Loosestrife along the Kennebec River. J. Ellenbaas*
- Zooplankton species dynamics downstream of alpine lakes. G. Goldsmith*
- Snail density, size, and herbivory variability along tidal and predator gradients. J. Harris*
- Green crab characteristics in intertidal island habitats. M. Boyle* (w/ N. Wheelwright)
- Effects of pesticide concentrations on lobster growth, survival, and shell formation. K. Kindsvogel*

WELLS NATIONAL ESTUARINE RESEARCH RESERVE

(98-03) - Impacts of invasive green crabs on native clams and the soft-sediment community.
- Comparison of benthic infauna and nutrient chemistry across salt marsh pools. w/ R. MacKenzie
- Chemical cue application to hatchery clams to increase survival in restored mudflats. w/ W. Walton

HARVARD MUSEUM OF COMPARATIVE ZOOLOGY, AMERICAN MUSEUM OF NATURAL HISTORY, PHILADELPHIA ACADEMY OF SCIENCES, SMITHSONIAN MUSEUM OF NATURAL HISTORY

(00-01) - Comparison of clam shell morphology across geographic locations and after crab invasion.

UNIVERSITY OF MICHIGAN E.S. GEORGE RESERVE (97) - Refuge limitation and predatory fish effects on competition between native and invasive crayfish.

DUKE MARINE LABORATORY (94-95) - Effectiveness of anti-fouling chemicals; Hermit crab behavior. w/ D. Rittschof

DUKE BIODESIGN LABORATORY (95) - Biomechanics of lobster appendages. w/ S. Wainwright

SCHOOL FOR FIELD STUDIES (94) - Niche partitioning by large mammalian herbivores within a Kenyan wildlife park.

UNIVERSITY SERVICE

UNIVERSITY

University Rank & Tenure Committee – Co-Chair w/J. O'Brien	(13-14)
University Rank & Tenure Committee – S&E representative	(12-13)
Center for Faculty Development – Advisory board member	(12-14)
Seattle University Youth Initiative – facilitator and college liaison	(10-14)
New Faculty Institute – Planning committee member and session leader	(08-12)
University Core Revision Committee – member	(10-11)
University Mission Day Planning Committee – member	(11)
University Convocation – Speaker and panelist on sustainability	(08)
Academic Convocation – Led student reading group discussion	(07 & 11)
Center for the Study of Justice in Society – board member	(10-11)
Western Conversations – University representative	(10)
Nicaragua Immersion Experience – Participant	(10)
MAGIS Alumni Committed for Mission – Speaker	(10)
SU Grounds Department – Working to quantify impacts of sustainable practices	(08-11)
Udall Fellowship Committee – member and reviewer	(10)
Academic Salons – "Omnivore's Film Festival", "Spiral Jetty", and "Environmental History of Seattle"	(07-09)
Law School Panel on Climate Change Legislation	(07)
M. J. Murdock Trust meeting to secure funding for Library Learning Commons	(07)
University Program Review Committee	(07)

Environmental Advisory Council (06-08)
Design Charettes for Lemeiux Library Expansion and Sustainable Campus Planning (07-08)
Center for Service & Community Engagement
- Speaker and participant at freshman orientation environmental volunteer activity (08-11)
- Speaker and participant at "Labor of Love" (07-09)
- Speaker at incoming freshman environmental project field retreat (07)
- Speaker and participant at "Serve Seattle" (07-09)

COLLEGE OF SCIENCE & ENGINEERING

Science Futures Committee – Developing a college mission for the sciences associated with prospective new facilities (14)
Marine & Conservation Biology Major – Designed curriculum and implementing new major (09-14)
Seattle University Youth Initiative – College liaison (11-14)
Graduate Fellowship Committee – reviewer and member (10-12)
New Building Design – participant (10-11)
Education Abroad – Ad-hoc committee member (08-11)
Blakely Island Field Station - Assist establishing relationship for student opportunities (07-12)
Sustainability Committee - member (09-10)
Natural Science Seminar Series – Presenter and recruiter (09-10)
Environmental Science Major – Assist with curriculum revision and development (09-10)
Evaluation of Field Sites – Assessed value of potential field sites on Olympic peninsula (08-09)
Biology/Math Biostatistics – Course development discussions (07-10)

BIOLOGY DEPARTMENT

Faculty Search Committees (7) (07-08,11-13)
Planning and facilitating implementation of new Marine & Conservation Biology Major (11-14)
Department Liaison to Lemeiux Library (12-14)
Academic advisor (12 students/yr) (07-14)
Acquired grant for Li-Cor ecophysiology equipment to enhance courses (10-11)
Developing potential biology education track for senior synthesis projects (11)
Recruited visiting speaker to give seminar and meet with students (09)
Co-organized "Darwinival" to celebrate Darwin's 200th birthday (09)
Participated in Departmental Program Review (08)
Departmental website – designed and maintained (07-09)
Co-developed proposal for study abroad opportunities (08-09)
Co-designed new research laboratory (06-07)
Taught statistics workshop for summer research students (07)
Co-taught statistics workshop for faculty on SPSS software (07)
Assisted acquisition and evaluation of laptop set for classes and laboratories (07)

COMMUNITY & PROFESSIONAL SERVICE

COMMUNITY

Partnership with Bailey-Gatzert Elementary and Seattle Audubon – FUN Ecology Education Program (11-14)
Partnership with Washington Audubon/Seward Park Environmental Learning Center – Research at sites in Seward Park. (06-14)
Partnership with Duwamish River Cleanup Coalition – Research at sites along the Duwamish River. (10-14)
Partnership with People for Puget Sound – Research at restoration sites along the Duwamish River. (06-12)
Partnership with National Marine Fisheries Service – Research on pesticides impacts (10-12)
Partnership with Seattle Parks & Recreation – Research at sites in Seward Park. (07-12)
Partnerships with Garfield and Summit High Schools –SU students involve high school students in planning, conducting, and presenting research. (07-11)
Partnership with Pollinator Pathway – Research at sites within Central District neighborhood. (10-12)

OUTREACH

Curriculum Development for University of Washington Program on the Environment (05-06)
"Impact of Invasive Species a Serious Concern" Times Record, Brunswick, ME (04)
Maine Island Trail Association. Study to assess impacts of recreational use on intertidal habitats. (04)
Maine's Marine Invasion - Participant at meeting in Portland, ME (04)
National Council for Science and the Environment/Council of Environmental Deans and Directors (04)
Earthwatch Radio – Interviewed for a report entitled, "Mean Green Crabs" (03)
Faculty Seminar Series - Bowdoin College "The Coast of Maine: Beautiful Coves, Tasty Steamers, and the Attack of the Crab Monsters" (03)
National Estuaries Day – Wells NERR - Presented a talk entitled, "Clams are Cool" (03)
"Invasive Aliens" - ESA Press release for annual meeting. (03)
Reading the Riches of the Gulf - Curtis Memorial Library Lecture "Attack of the crab monsters and other tales of invasion in the Gulf of Maine." (02)
Wells NERR Coastal Ecology Center - Designed interactive exhibit on clams and invasive species. (01)
MERITS Program - Mentored outstanding Maine high school students in summer research projects. (98-01)
Fundy Forum - Panel member for discussion on invasive species in the Gulf of Maine and Atlantic Canada. (01)
NOAA Estuary Live - Educational broadcast describing research on effects of invasive green crabs on clams. (01)
Wells NERR Summer Lecture Series - "Attack of the crab monsters at the Wells Reserve" (00)
NatureWorks – New Hampshire Public Television program on the ecology of soft-sediment communities and invasive species. (99)
Public Schools – Seattle, WA; Ann Arbor, MI; Beaufort, NC; Durham, NC; Chesterfield, VA; Wells, ME (93-14)

PROFESSIONAL ORGANIZATIONS

Ecological Society of America – Member, Reviewer
- Education Section – Member
- Urban Ecosystem Ecology Section – Member
- Aquatic Ecology Section – Member
- Environmental Justice Section – Member
- PUI Section – Member

Coastal & Estuarine Research Federation – Member, Reviewer
Society for Conservation Biology – Member
Society for Freshwater Sciences - Member
National Science Foundation – Reviewer
National Sea Grant – Reviewer
American Naturalist – Reviewer
Ecological Letters – Reviewer
Biological Invasions – Reviewer
Marine Ecology – Reviewer
Oxford University Press - Reviewer
American Society of Limnology and Oceanography – Member
New England Estuarine Research Society - Member
Session Chair – Benthic Ecology Conference
Xerces Society - Member