

Ryan M. Utz, Ph.D.

Falk School of Sustainability, Chatham University
6035 Ridge Road, Gibsonia, PA 15044 USA
(724) 272-7769 • utz.ryan@gmail.com

Experience

- 6/15-present Assistant professor of water resource sustainability, Falk School of Sustainability and the Environment, Chatham University (Pittsburgh, Pennsylvania USA)
- 2/17-present Research associate, Carnegie Museum of Natural History (Pittsburgh, Pennsylvania USA)
- 3/11-1/15 Staff Ecologist, the National Ecological Observatory Network (Boulder, Colorado USA)
- 1/10-3/11 Postdoctoral Research Associate, University of California, Santa Barbara (Santa Barbara, California USA)

Education

- 2010 Ph.D. in Environmental Science, University of Maryland
- 2005 M.Sc. in Wildlife and Fisheries Resources, West Virginia University
- 2003 B.Sc. in Biology, University of Miami

Research

Area of professional expertise

Applied scientific inquiry at the interface of aquatic ecology, hydrology, geomorphology, and the ecological effects of invasive plants. Emphasis on detecting long-term environmental change at broad spatiotemporal scales, restoration ecology, salmonid bioenergetics and life history, and time series analysis. Use of advanced programming techniques in R and Python to analyze complex ecological and hydrologic data.

Peer-reviewed publications (†- supervised Chatham graduate student; ±- supervised Chatham undergraduate student)

- 34. Sonn, J.M., **Utz, R.M.**, and C.L. Richards-Zawacki. 2019. Effects of latitudinal, seasonal and daily temperature variation on chytrid fungal infections in a North American frog. *Ecosphere* 10: e02892.
- 33. Mannino†, J.C., Isaac, B.L., and **R.M. Utz**. 2019. New Allegheny County, Pennsylvania occurrences for *Crataegus chrysocarpa* and *Geranium dissectum* plus the rediscovery of *Sherardia arvensis*. *Bartonia* 70: 93-95.
- 32. Link†, A.F., Johnson, L. and **R.M. Utz**. 2019. To manage or not? Successful native tree seedling restoration despite a dense, invasive shrub, *Berberis thunbergii*. *Plant Ecology* 220: 577-593.
- 31. Corrêa, E.C., de Oliveira Roque, F., **Utz, R.M.**, Silva, W.M., Severo-Neto, F., and K. Gido. 2019. Effects of macroconsumers on benthic communities across a gradient of land use in

karst Neotropical streams. *Hydrobiologia* 836: 21-34.

30. Kaushal, S.S., Likens, G.E., Pace, M.L., Haq, S., Wood, K.L., Gallela, J., Morel, C., Doody, T.R., Wessel, B., Kortelainen, P., Raike, A., Skinner†, V., **Utz, R.**, and N. Jaworski. 2019. Novel 'chemical cocktails' in inland waters are a consequence of the Freshwater Salinization Syndrome. *Proceedings of the Royal Society B* 374: 20180017.
29. Corrêa*, E.C., de Oliveira Roque*, F.L., **Utz*, R.M.**, Correa, J.S., de Souza, F.L., and A.P. Covich. 2018. Effects of macroconsumers on benthic communities: rapid increases in dry-season accrual of calcium in a tropical karst stream. *PLoS ONE* 13: e0209102.
*-authors contributed equally to this effort.
28. Link†, A.F., Turnblacer†, T., Snyder†, C. K., Daugherty†, S.E., and **R.M. Utz**. 2018. Low recruitment of native trees in a deciduous forest associated with Japanese barberry (*Berberis thunbergii* DC) invasion. *Invasive Plant Science and Management* 11: 1-7.
27. Kaushal, S.S., Likens, G., Pace, M., **Utz, R.**, Haq, S., Gorman, G., and M. Grese. 2018. Freshwater salinization syndrome on a continental scale. *Proceedings of the National Academy of Sciences of the United States of America* 115: E574-E583.
26. **Utz, R.M.**, Pearce, T.A., Lewist†, D.L., and J.C. Mannino†. 2018. Elevated native terrestrial snail abundance and diversity in association with an invasive understory shrub, *Berberis thunbergii*, in a North American deciduous forest. *Acta Oecologia* 86: 66-71.
25. **Utz, R.M.**, Cooper, S.D., Gido, K.B., and J. Stewart. 2017. Exclusion of fish and invertebrates from benthic patches across water conductivity levels using high-frequency (10 Hz) pulses and adjustable electrical settings. *Freshwater Science* 36: 151-161.
24. **Utz, R.M.**, Hopkins, K., Beesley, L., Booth, D.B., Hawley, R.J., Baker, M., Freeman, M.C., and K.L. Jones. 2016. Ecological resistance in urban streams: the role of natural and legacy attributes. *Freshwater Science* 35: 380-397.
23. Smith, R.F., Hawley, R.J., Neile, M.W., Vietz, G.J., Diaz-Pascacio, E., Hermann, J., Lovell, A.C., Prescott, C., Rios-Tourma, B., Smith, B., and **R.M. Utz**. 2016. Urban stream renovation: incorporating societal objectives to achieve ecological improvements. *Freshwater Science* 35: 364-379.
22. Pennino, M.J., Kaushal, S.S., Mayer, P.M., **Utz, R.M.**, and C.A. Cooper. 2016. Stream restoration and sanitary infrastructure alter sources and fluxes of water, carbon, and nitrogen in urban watersheds. *Hydrology and Earth System Sciences*. 20: 3419-3439.
21. Hilderbrand, R.H. and **R.M. Utz**. 2015. Ecological thresholds and resilience in streams. Pages 461-478 in: Rowinski, P.M. and A. Radecki-Pawlik. *Rivers: Physical, Fluvial, and Environmental Processes*. Springer, New York.
20. McManamay*, R.A. and **R.M. Utz***. 2014. Open-access databases as unprecedented resources and drivers of cultural change in fisheries science. *Fisheries* 39: 417-425.
*-authors contributed equally to this effort.
19. **Utz, R.M.** 2014. Are we overlooking landscape-scale threats to common freshwater fishes? *Fisheries* 39: 294-297.
18. Hafs, A.W., Harrison, L.R., **Utz, R.M.** and T. Dunne. 2014. Quantifying the role of woody debris in providing bioenergetically favorable habitat for juvenile salmon. *Ecological Modelling* 285: 30-38.
17. **Utz, R.M.** and M. Denslow. 2014. Noteworthy collections: Colorado. *Madroño* 61: 251. [*First reported occurrence of wild Muscari neglectum (Hyacinthaceae) in Colorado*].

16. Goring, S.J., Weathers, K.C., Dodds, W.K., Sorrano, P.A., Sweet, L.C., Cheruvelli, K.S., Kominoski, J.S., Ruegg, J., Thorn, A.M., and **R.M. Utz**. 2014. Improving the culture of interdisciplinary collaboration in ecology by expanding measures of success. *Frontiers in Ecology and the Environment* 12: 39-47.
15. Kaushal, S.S., Likens, G.E., **Utz, R.M.**, Pace, M.L., Grese, M., and M. Yepsen. 2013. Increased river alkalization in the Eastern U.S. *Environmental Science and Technology* 47: 10302-10311.
14. **Utz, R.M.**, Mesick, C.F., Cardinale, B.J., and T. Dunne. 2013. How does gravel augmentation impact early-stage Chinook salmon (*Oncorhynchus tshawytscha*) embryonic survivorship? *Journal of Fish Biology* 82: 1484-1496.
13. **Utz, R.M.**, Fitzgerald, M.R., Goodman, K.J., Parker, S.M., Powell, H. and C.L. Roehm. 2013. The National Ecological Observatory Network: an observatory poised to expand spatiotemporal scales of inquiry in aquatic and fisheries science. *Fisheries* 38: 26-35.
12. **Utz, R.M.**, Zeug, S.C. and B.J. Cardinale. 2012. Growth and diet of juvenile Chinook salmon (*Oncorhynchus tshawytscha*) in restored habitat of a California river. *Fisheries Management and Ecology* 19: 375-388.
11. **Utz, R.M.**, Zeug, S.C., Cardinale, B.J., and L.K. Albertson. 2012. Trophic ecology and population attributes of two resident non-game fishes in riverine habitat engineered to enhance salmon spawning success. *California Fish and Game* 98: 104-124.
10. Koskelo, A.I., Fisher, T.R., **Utz, R.M.**, and T.E. Jordan. 2012. A new, precipitation-based method of baseflow separation and event identification for small watersheds (<50 km²). *Journal of Hydrology* 450-451: 267-278.
9. **Utz, R.M.**, Eshelman, K.N. and R.H. Hilderbrand. 2011. Variation in physicochemical responses to urbanization between two Mid-Atlantic physiographic regions. *Ecological Applications* 21: 402-415.
8. **Utz, R.M.** and R.H. Hilderbrand. 2011. Interregional variation in urbanization-induced geomorphic change and macroinvertebrate habitat colonization in headwater streams. *Journal of the North American Benthological Society* 30: 25-37.
7. Hilderbrand, R.H., **Utz, R.M.**, Stranko, S.A., and R.L. Raesly. 2010. Applying ecological thresholds to forecast biodiversity loss from human development. *Journal of the North American Benthological Society* 29: 1009-1016.
6. **Utz, R.M.**, Hilderbrand, R.H., and R.L. Raesly. 2010. Regional differences in patterns of fish species loss with changing land use. *Biological Conservation* 143: 688-699.
5. **Utz, R.M.**, and K.J. Hartman. 2009. Density-dependent individual growth and size dynamics of central Appalachian brook trout (*Salvelinus fontinalis*). *Canadian Journal of Fisheries and Aquatic Sciences* 66: 1072-1080.
4. **Utz, R.M.**, Hilderbrand, R.H., and D.M. Boward. 2009. Identifying regional differences in threshold responses of aquatic invertebrates to land cover gradients. *Ecological Indicators* 9: 556-567.
3. **Utz, R.M.**, Ratcliffe, B.R., Moore, B.T., and K.J. Hartman. 2007. Disproportionate relative importance of a terrestrial beetle family (Coleoptera: Scarabaeidae) as a prey source for central Appalachian brook trout. *Transactions of the American Fisheries Society* 136: 177-184.
2. **Utz, R.M.**, and K.J. Hartman. 2007. Identification of critical prey items to Appalachian brook trout (*Salvelinus fontinalis*) with emphasis on terrestrial organisms. *Hydrobiologia* 575: 259-270.

1. **Utz, R.M.**, and K.J. Hartman. 2006. Temporal and spatial variation in the energy intake of a brook trout (*Salvelinus fontinalis*) population in an Appalachian watershed. *Canadian Journal of Fisheries and Aquatic Sciences* 63: 2675-2686.

Manuscripts in review or in progress (†- supervised Chatham graduate student; ‡- supervised Chatham undergraduate student)

- Utz, R.M.**, B. Bookout‡ and S. Kaushal. *In review*. Influence of temperature and precipitation on diel variations in dissolved oxygen concentrations in rural and urban headwater streams. Target journal: *Aquatic Sciences*.
- Fetsko‡, M.N. and **R.M. Utz**. *Revision in review*. Exploratory survey of salamander assemblages in Pennsylvanian forests with dense understories of *Berberis thunbergii*, an invasive shrub. Target journal: *Northeastern Naturalist*.
- Blinn†, H., **Utz, R.M.**, Greiner, L.H., and D.R. Brown. *In review*. Exposure assessment of adults living near unconventional oil and natural gas development and reported health symptoms in southwest Pennsylvania, USA. Target Journal: *PLoS ONE*.
- Utz, R.M.**, Slater†, A., Rosche†, H., and W.P. Carson. *In review*. Do dense layers of invasive plants elevate the foraging intensity of small mammals in temperate deciduous forests? A case study from Pennsylvania, USA. Target Journal: *Neobiota*.
- Ardón, M., Zeglin, L.H., **Utz, R.M.**, Cooper, D.S., Dodds, W.K., Bixby, R.J., Burdett, A., Follstad-Shah, J., Griffiths, N.A., Harms, T.K., Johnson, L.T., Johnson, S.L., Jones, J., Kominoski, J.S., McDowell, W., Rosemond, A.D., Trentman, M.T., Van Horn, D., and A. Ward. *In progress*. Experimental nutrient enrichment stimulates multiple trophic levels through algal and detrital food web pathways: A global meta-analysis from streams and rivers. Target journal: *Biological Reviews*.

Published reports

- Schimel, D. and 18 coauthors. 2011. National Ecological Observatory Network (NEON) 2011 science strategy: enabling continental-scale ecological forecasting. NEON, Inc., Boulder, CO.
- Becker, M. and 15 coauthors. 2011. Workshop on aquatic ecosystem sustainability (WAES): Final report. Y. Gil and T. Harmon, editors. Technical report number ISI-TR-674, University of Southern California Information Sciences Institute, Marina Del Rey, CA.

Popular media publications

- Utz, R.** 2019. Eastern Canyonlands: Black Forest Trail, Pennsylvania. *Backpacker Magazine* September/October Issue, page 30.
- Utz, R.** 2019. Eternal Summer: Cumberland Island National Seashore, Georgia. *Backpacker Magazine*. January issue, page 26.
- Utz, R.** 2018. Pineland Paradise: Wharton State Forest, New Jersey. *Backpacker Magazine* northeastern edition. June issue, page 21.
- Kaushal, S., Likens, G.E., Pace, M., and **R. Utz**. 2018. U.S. rivers are becoming saltier – and it's not just from treating roads in winter. *The Conversation*, article 92648.
- Utz, R.** 2018. Island time: Go deep in Jamaica's Blue Mountains to find the heart of the country's fight for freedom. *Backpacker Magazine*. May issue, page 20.

Utz, R. 2016. Explore Africa's alpine zone: In Ethiopia, the Bale Mountains' glacier-carved plateaus and canyons teem with rare wildlife. *Backpacker Magazine*. November issue, page 23.

Teaching experience

All student evaluation scores from Chatham University reflect a 1 to 5 scale, with 5 representing the highest rating.

Graduate courses

Applied ecology (SUS 601; 2017 evaluation score: 4.8): A 3-credit lecture course offered at Chatham in fall semesters, offered annually. Covers basic ecological principles in an applied framework. Students are expected to become familiar with the fundamentals of the science and analyze ecological data.

Environmental statistics (SUS 508; 2018 evaluation score: 4.3): A 3-credit course offered at Chatham in spring 2016, offered annually. Introduces students to simple and multiple linear regression, ANOVA models, multivariate analyses, and time series analysis. Uses the program R as an analytical platform.

Undergraduate courses

Aquatic entomology (BIO/SUS 461; 2018 evaluation score: 4.9): Offered at the University of Pittsburgh Pymatuning Laboratory of Ecology during a 3-week summer session in 2017 and 2018.

Dynamic Earth systems (SUS 202; 2019 evaluation score: 4.7): An Earth systems fundamentals course that provides students with working knowledge atmospheric, hydrologic, and lithologic systems. 3 credits.

Integrative biology (SUS 201/L; 2017 evaluation score: 4.4): A 3-credit course plus 1-credit lab offered at Chatham that covers biological principles from molecules to ecosystems with an emphasis on sustainability issues.

Quantitative ecology (SUS 404/L; 2019 evaluation score: 4.8): A 3-credit course plus 1-credit lab offered at Chatham that introduces students to biostatistics, with numerous field activities at Eden Hall and surrounding ecosystems to collect data for analysis.

Sustainability science (SUS 100; 2017 evaluation score: 4.7): A 3-credit Chatham course that introduces students to the fundamentals of sustainability science, from model fundamentals to hydrologic and energy systems.

Grants, contracts, & awards

In review

The Foundation for Pennsylvania Watersheds (\$10,600; October 2019). *Expanding the known Pennsylvania range of the least brook lamprey* (*Lampetra aepyptera*), a state species of concern. PIs: **R. Utz**, R. Weitzell.

National Geographic Society Explorer's Grant (\$47,600; October 2019). *Promoting forest conservation through water budget monitoring of endemic montane cloud forests in the Blue Mountains of Jamaica*. PI: **R. Utz**.

Awarded

- Massey Charitable Trust (\$15,000; April 2017). *Watershed Restoration: Advanced Environmental Monitoring of Two Pittsburgh Urban Streams*. PIs: **R. Utz**, R. Weitzell
- National Science Foundation (\$1,000; February 2016). *Training in Bayesian Modeling for Practicing Ecologists*. Funds awarded as a travel stipend for workshop in Fort Collins, CO.
- R. K. Mellon Freshwater Research Initiative (\$9,800; March 2015). *Long-term monitoring and modeling of temperatures in Pennsylvanian headwater streams: a regional comparative approach*. PI: **R. Utz**. CoI: M. Mehling, J. Niles.
- Trout Unlimited Habitat Restoration Fund (\$1,500; May 2005). *Restoration of ecological function to Little Laurel Run at the West Virginia University forest, Preston County*. PI: K. Hartman; CoI: **R. Utz**.

Popular media, service, & certifications

- ‘America’s freshwater is getting saltier. And that’s not good.’- Radio interview on WESA program *The Allegheny Front*, Pittsburgh, PA (1/11/17)
- ‘Please don’t buy Japanese barberry. Forests will thank you.’- Radio interview on WESA program *The Allegheny Front*, Pittsburgh, PA (9/24/17)
- ‘Putting a spotlight on the humble moth’- Radio interview on WESA program *The Allegheny Front*, Pittsburgh, PA (8/12/16)
- ‘Rivers on Roloids: alkalinity in waterways on the rise’- Radio interview on WESA program *The Allegheny Front*, Pittsburgh, PA (9/20/13)
- Native Seeds Collection Crew Leader- Boulder County Open Space and Mountain Parks and Wildlands Restoration Volunteers, CO (6/13-10/13)
- Symposium Organizer-
- W. Dodds and **R. Utz**. Distributed long-term, high frequency networks for ecological data collection: advantages, hurdles, and applications. Joint Aquatic Sciences Meeting (SFS, ASLO, & SWS), Portland, OR (5/14).
 - R. Utz** and R. McManamay. Free data: opportunities in open-access network databases to advance spatiotemporal scales of inquiry in fisheries science. American Fisheries Society annual meeting, St. Paul, MN (8/12).
- Manuscript Referee- *Biological Conservation; Biology Letters; Canadian Journal of Fisheries and Aquatic Sciences; Ecography; Ecological Applications; Ecology and Evolution; Ecology of Freshwater Fish; Ecosphere; Environmental Biology of Fishes; Environmental Management; Estuarine, Coastal, and Shelf Science; Fisheries; Freshwater Biology; Freshwater Science; Journal of Aquatic Animal Health; Journal of Water Resources Planning and Management; Landscape Ecology; North American Journal of Fish Management; Philosophical Transactions of the Royal Society B; PLoS ONE; Progress in Physical Geography; Restoration Ecology; Royal Society Open Science; Transactions of the American Fisheries Society*
- SCUBA- Advanced level certified (2002-)
- Wilderness First Responder- Certified (3/11-)

Presentations

Invited seminars & workshops

- Utz, R.** Nocturnal Lepidoptera biodiversity: why does it matter and what does it look like? Audubon Society of Western Pennsylvania seminar series, Alison Park, PA (4/18).

- Utz, R.** Comprehensively quantifying the ecological impact of a pervasive invasive: surprise, alarm, and indifference inspired by *Berberis thunbergii* (Japanese barberry). Kent State University Biological Sciences seminar series (10/17); Carnegie Museum of Natural History Moriarte seminar series (2/18).
- Utz, R.** Data observatories as a challenge, opportunity, and cultural force within the ecological sciences. Carnegie Mellon University, department of Civil and Environmental Engineering (9/18).
- Utz, R.** Ecological observatories at broad spatiotemporal scales as emerging tools to detect environmental trends amid the noise. University of Pittsburgh Pymatuning Laboratory of Ecology Seminar Series (6/16); University of Pittsburgh ecology seminar series (9/16).
- Utz, R.** Scaling from particles to continents: freshwater fish ecology and conservation in the age of Big Data. Department of Biology, Eastern Washington University, Cheney (6/14); California State University, Chico (10/14).
- Utz, R.** An introduction to STREON: the world's first continental-scale, open access ecological experiment. The National Center for Atmospheric Research/Spark Science Education Ignite IV seminar series, Boulder, CO (9/13).
- Utz, R.** The National Ecological Observatory Network: An open-access resource poised to expand spatiotemporal scales of inquiry in the ecological sciences. University of Maryland Center for Environmental Science, Appalachian Laboratory (9/14); Ecology and Evolutionary Biology Department, University of Colorado at Boulder (10/12); and the Department of Forestry and Rangeland Stewardship, Colorado State University, Fort Collins (10/12).
- Utz, R.** Improving watershed conservation efforts using existent ecohydrology data. Workshop on Workflows for Aquatic Ecosystems Sustainability, University of Southern California Information Sciences Institute, Los Angeles (6/11).
- Utz, R.** Assessing the effects of spawning habitat restoration for salmonids in California rivers. Department of Biology, California State University, Chico (2/11).
- Utz, R.** How landscape heterogeneity determines environmental degradation and biodiversity loss in urban streams. Department of Natural Sciences, University of Michigan at Dearborn (web seminar, 2/11).

Conference proceedings (†-supervised graduate student; ‡-supervised undergraduate student)

- de Cortie‡, E., Betras, T., **Utz, R.**, and W. Carson. Interacting effects of over-browsing and invasive flora on restoring populations of a native forest understory shrub, *Sambucus canadensis* (common elderberry). Poster presentation at the 12th annual Student Symposium on the Environment. Westminster College, New Wilmington, PA (12/19).
- Krusec‡, I., Conklin‡, K. and **R. Utz.** Abundance and biodiversity of soil arthropods along an urbanization gradient. Poster presentation at the 12th annual Student Symposium on the Environment. Westminster College, New Wilmington, PA (12/19).
- Utz, R.**, Link†, A., Roschet†, H., Slater†, A., Snyder‡, C., and T. Pearce. How native flora, terrestrial snails, and small mammals interact with recalcitrant understory layers of *Berberis thunbergii*, an invasive shrub spreading throughout temperate eastern North America. Ecological Society of America Annual Meeting, Louisville, KY (8/19).
- Betras, T., **Utz, R.**, and W. Carson. Biodiversity collapse at the urban-rural interface: Over-browsing and exotic plant species create a depauperate and weedy urban forest. Ecological Society of America Annual Meeting, Louisville, KY (8/19).

- Ardon, M., Zeglin, L., **Utz, R.**, Cooper, S., Dodds, W. and 14 others. Experimental nutrient enrichment stimulates multiple trophic levels through algal and detrital food web pathways: a global meta-analysis from streams and rivers. Society for Freshwater Science Annual Meeting, Salt Lake City, UT (5/19).
- Fetsko‡, M. and **R. Utz.** Assessing the effects of an invasive plant, Japanese barberry, on forest amphibians in western Pennsylvania suburban forests. Poster presentation at: the Ecological Society of America Mid-Atlantic Chapter meeting, Bowie, MD (4/19).
- Roschet, H., Slater†, A., and **R. Utz.** Assessing the influence of *Berberis thunbergii* invasion on small mammal density and antipredator behavior in Pennsylvania forests. Poster presentation at: the Ecological Society of America Mid-Atlantic Chapter meeting, Bowie, MD (4/19).
- Rice‡, Q., Cooper‡, P., and **R. Utz.** The effects of invasive Japanese barberry (*Berberis thunbergii*) on eastern deciduous forest soil macrofauna communities. Poster presentation at: the Ecological Society of America Mid-Atlantic Chapter meeting, Bowie, MD (4/19).
- Morris‡, M., Molnar‡, A., and **R. Utz.** Impact of an exotic invasive shrub, *Berberis thunbergii*, on ground-dwelling arthropod abundance in eastern North American deciduous forest soil macrofauna communities. Poster presentation at: the Ecological Society of America Mid-Atlantic Chapter meeting, Bowie, MD (4/19).
- Roschet, H., Slater, A., and **R. Utz.** Assessing the influence of *Berberis thunbergii* on small mammal density and antipredator behavior in southern Pennsylvania forests. Poster presentation at the 11th annual Student Symposium on the Environment. Westminster College, New Wilmington, PA (12/18).
- Wolf‡, B., **Utz, R.** and D. Ward. Effects of grazing on growth and water use by invasive *Bromus inermis* and native *Andropogon gerardii* and *Schizachyrium scoparium*. Poster presentation at: the Ecological Society of America Mid-Atlantic Chapter meeting, Bowie, MD (4/19); the 11th annual Student Symposium on the Environment, Westminster College, New Wilmington, PA (12/18); and Pennsylvania Botany Symposium, State College, PA (11/18).
- Betras, T., Carson, W., and **R. Utz.** Engaging student scientists to enhance our understanding of forest degradation and promote inquiry based scientific skills. Ecological Society of America Annual Meeting, New Orleans, LA (8/18).
- Bookout‡, B. and **R. Utz.** Patterns in event-scale dissolved oxygen dynamics in a network of headwater streams along an urbanization gradient. Universities Council on Water Resources and the National Institutes for Water Resources Conference, Pittsburgh, PA (6/18).
- Snyder‡, C., Link†, A., and **R. Utz, R.** Short-term impact of managing an invasive plant species, *Berberis thunbergii*, on understory flora communities in an eastern North American deciduous forest. Meeting of the Ecological Society of America, Mid-Atlantic Chapter, Newark, NJ (4/18).
- Licata†, F., Block†, M., **Utz, R.**, Henshue, N., and H. Roschet. Lack of elevated invasive earthworm densities in association with an invasive grass, Japanese stiltgrass (*Microstegium vimineum*), in deciduous forest understories. Meeting of the Ecological Society of America, Mid-Atlantic Chapter, Newark, NJ (4/18).
- Link†, A. and **R. Utz.** Testing the mechanisms of native tree recruitment suppression in northeastern deciduous forests by a non-native species of shrub, *Berberis thunbergii*. Poster Presentation at the 10th annual Student Symposium on the Environment. Westminster College, New Wilmington, PA (12/17).
- Link†, A. and **R. Utz.** Management of *Berberis thunbergii*: effects of removing a non-native on forest plant communities and soil conditions. Mid-Atlantic Invasive Plant Council (MAIPC) Conference, Juniata College, Huntingdon, PA (6/17).
- Corrêa†, E.C, Roque, F.O, Corrêa, J.S, and **Utz, R.M.** Loss of macroconsumers affects the accrual of calcium in a karstic tropical stream. XVI Congresso Brasileiro de Limnologia, Rio de Janeiro, Brazil (7/17).
- Bookout‡, B. and **R. Utz.** Event-scale dissolved oxygen dynamics in urban and peri-urban streams. 4th

- Symposium on Urbanization and Stream Ecology (SUSE4), Haw River, NC (6/17).
- Corrêat, E., **Utz, R.**, and de Oliveira Roque, F. Effects of macroconsumers on benthic communities, primary productivity, and sediment dynamics in tropical karst streams with varying degrees of riparian cover. Society for Freshwater Science Annual Meeting, Raleigh, NC (6/17).
- Daugherty‡, S. and **R. Utz**. Elevated mycorrhizae abundance in soils of eastern North American forests with dense populations of an invasive shrub, *Berberis thunbergii*. Meeting of the Ecological Society of America, Mid-Atlantic Chapter, Galloway, NJ (4/17).
- Link†, A., Daugherty‡, S., and **R. Utz**. Native tree seedling germination, growth, and survival in forests invaded by *Berberis thunbergii*. Meeting of the Ecological Society of America, Mid-Atlantic Chapter, Galloway, NJ (4/17).
- Lewis†, D., Mannino†, J., Pearce, T., and **R. Utz**. Japanese Barberry, (*Berberis thunbergii*), is associated with areas of elevated land snail species diversity: a leaf-litter study at Eden Hall in Western Pennsylvania. Meeting of the Ecological Society of America, Mid-Atlantic Chapter, Galloway, NJ (4/17).
- Pearce, T., Lewis†, D., Mannino†, J., and **R. Utz**. More land snails under Japanese barberry in western Pennsylvania. 19th Mid-Atlantic Malacologists meeting, Washington, DC (4/17).
- Molnar‡, A., **Utz, R.**, and R. Davidson. Quantifying the impact of an invading shrub (*Berberis thunbergii*) on arthropod assemblages in forests of the northeastern U.S. Meeting of the Entomological Society of America, Eastern Branch, Newport, RI (3/17).
- Daugherty‡, S., Link†, A., Turnblacer‡, T., Giles†, C., Molnar‡, A., Snyder‡, C., and **R. Utz**. Elevated mycorrhizal abundance and increased acidity in forest soils densely populated with an invasive shrub, *Berberis thunbergii*. Pennsylvania Botany Symposium, State College, PA (11/16).
- Snyder‡, C., Turnblacer‡, T., Link†, A., Daugherty‡, S., and **R. Utz**. Suppression of tree recruitment in deciduous forests by an invasive shrub, *Berberis thunbergii*. Pennsylvania Botany Symposium, State College, PA (11/16).
- Skinner†, V., **Utz, R.**, and S. Kaushal. Rising concentrations of key chemicals in eastern U.S. streams with consequences for industrial use applications. Fourth Annual Kent State University Water and Land Symposium, Kent, OH (10/16).
- Smith, R., R. Hawley, M. Neale, G. Vietz, E. Diaz-Pascacio, J. Herrmann, A. Lovell, C. Prescott, B. Rios-Tourna, B. Smith, and **R. Utz**. Introducing urban stream renovation: a method to incorporate societal objectives to achieve ecological improvements. Conference of the New England Association of Environmental Biologists, Rockport, ME (3/16).
- Zeglin, L., S. Cooper, **R. Utz**, M. Ardon-Sayao, R. Bixby, A. Burdett, W. Dodds, N. Griffiths, T. Harms, L. Johnson, S. Johnson, J. Jones, J. Kominoski, W. McDowell, and A. Rosemond. Synthesis of ecosystem responses to nutrient enrichment at multiple trophic levels. Society for Freshwater Science Annual Meeting, Milwaukee, WI (5/15).
- Vance, J., M. Fitzgerald, S. Parker, C. Roehm, K. Goodman, C. Bohall, and **R. Utz**. NEON: a new platform for large river ecology. Society for Freshwater Science Annual Meeting, Milwaukee, WI (5/15).
- Utz, R.**, S. Cooper, K. Gido, and J. Stewart. Effective patch-scale electrical exclusion of fish and invertebrates in the benthos across water conductivity levels using adjustable electrical settings for the STREON program. American Fisheries Society Annual Meeting, Québec City, QC (8/14).
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- Utz, R.** and S. Zeug. Food web structure in habitat engineered to improve Chinook salmon spawning success in a Central Valley, California river. American Fisheries Society annual meeting, Seattle, WA. (9/11).
- Utz, R.**, and R. Hilderbrand. Heterogeneity in urbanization-induced stream ecosystem degradation between two physiographic regions of the Mid-Atlantic United States. American Fisheries Society annual meeting, Pittsburgh, PA. (9/10).
- Utz, R.**, K. Eshelman, and R. Hilderbrand. Variation in hydrological, chemical and thermal responses to

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- Utz, R.,** and K. Hartman. Density dependent growth and energy acquisition dynamics of central Appalachian brook trout. American Fisheries Society annual meeting, Ottawa, ON. (8/08).
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- Utz, R.,** R. Hilderbrand, and R. Raesly. Variation in ecosystem sensitivity to urbanization between physiographic ecoregions in the southeastern United States. Southern Division American Fisheries Society annual meeting. Wheeling, WV. (2/08).
- Utz, R.** and K. Hartman. Contrasting density dependent growth dynamics between and within two age classes of central Appalachian brook trout. Southern Division American Fisheries Society annual meeting. Wheeling, WV. (2/08).
- Utz, R.** and R. Hilderbrand. Taxon-specific responses of fish and macroinvertebrates to urbanization in eastern Maryland. American Fisheries Society annual meeting, San Francisco, CA. (9/07).
- Utz, R.** Spatial and temporal feeding dynamics of a central Appalachian brook trout population. Poster. American Fisheries Society annual meeting, San Francisco, CA. (9/07).
- Hilderbrand, R., **R. Utz** and R. Raesly. Identifying stressor thresholds and alternate states in stream ecosystems of Maryland. Ecological Society of American annual meeting, Memphis, TN. (8/06)
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- Utz, R.** and K. Hartman. Spatial and temporal patterns in feeding and growth of central Appalachian brook trout at the watershed scale. Poster. American Fisheries Society annual meeting. Anchorage, AK. (9/05).
- Utz, R.** and K. Hartman. Patterns of spatial and temporal feeding ecology of a mid-Appalachian brook trout population. East Coast Trout Management and Culture Workshop IV. Lock Haven, PA. (6/05).
- Utz, R.,** and K. Hartman. Patterns of spatial and temporal feeding ecology of a mid-Appalachian brook trout population. Davis College of Agriculture, Forestry, and Consumer Science Ninth Annual Graduate Student Research Conference (WVU). Morgantown, WV. (4/05).
- Utz, R.** and K. Hartman. Temporal trends in energy storage, consumption, and growth in a population of central Appalachian brook trout. Joint meeting of the WV Society of Foresters, Wildlife Society, and American Fisheries Society. Flatwoods, WV. (2/05).
- Utz, R.** and K. Hartman. Temporal trends in energy storage, consumption, and growth in a population of central Appalachian brook trout. Southern Division American Fisheries Society annual meeting. Virginia Beach, VA. (2/05).
- Utz, R.** and K. Hartman. Dynamic patterns of energy storage in a central Appalachian brook trout population with respect to seasonal change, food availability, and growth. Southern Division American Fisheries Society student colloquium. St. Augustine, FL. (11/04).

References

Bradley Cardinale- Associate Professor, School of Natural Resources and Environment, University of Michigan. 440 Church St., Ann Arbor, MI 48109. (734) 764-9689, bradcard@umich.edu

Kyle Hartman- Professor, West Virginia University Department of Wildlife & Fisheries, Davis College of Agriculture, Forestry and Consumer Sciences. 320 Percival Hall, Morgantown, WV 26506. (304) 293-2941 ext. 34797, hartman@wvu.edu

Robert (Bob) Hilderbrand- Assistant Professor, University of Maryland Center for Environmental Sciences, Appalachian Laboratory. 301 Braddock Road, Frostburg, MD 21532. (301) 689-7141, rhilderbrand@al.umces.edu

Peter Walker- Dean, Falk School of Sustainability, Chatham University. 6035 Ridge Road, Gibsonsia, Pennsylvania. (412) 365-1842, pwalker@chatham.edu.