

## **Jeremy M. Wojdak – Curriculum Vitae**

Department of Biology, Radford University  
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### **Academic positions:**

**Professor** Radford University, Department of Biology, 2015-present  
**Associate Professor** Radford University, Department of Biology, 2010-2015  
**Assistant Professor** Radford University, Department of Biology, 2004-2010  
**Visiting Assistant Professor** Kalamazoo College, Department of Biology, 2003

### **Education:**

**Ph. D.** 2004 **Michigan State University**  
Dual major in Zoology, and Ecology, Evolutionary Biology & Behavior

**B. S.** 1997 **Bowling Green State University**  
Biology major Graduated *cum laude*

### **Teaching and Mentoring:**

**Faculty** *Radford University, Department of Biology, 2004-present*

- Environmental Toxicology (24 students, junior/senior level, with lab)
- Parasitology (24 students, junior/senior level, with lab)
- Tropical Field Biology (15 students, lecture/discussion course on campus with trip to U.S. Virgin Islands during spring break)
- General Ecology (24-48 students, junior/senior level, with lab)
- Environmental Biology (125 students, non-majors course, with lab)
- Principles of Biology (24-48 students, non-majors course, with lab)
- Ecology and Adaptation (24-48 students, freshman majors course, with lab)
- Freshman Biology Seminar (15 students, discussion and active exercise based course)

**Advisor** *Undergraduate Research, 2004-present*

- Served as research advisor to many RU undergraduate students and REU program students.
- Students have investigated indirect effects of predators in pond communities, aquatic invertebrate's responses to chemical stresses from pesticides and mine drainage, trematode parasite interactions with snail and amphibian hosts, explanations for variation in community composition of aquatic invertebrates in local ponds.
- Students have presented their work at scientific conferences, co-authored papers (see pub. list) and have gone on to professional and graduate school.

### **Graduate committees**

- Jennie Wyderko, MS, Biological Sciences, Virginia Tech (2011-2013)
- Skylar Hopkins, PhD, Biological Sciences, Virginia Tech (2012-present)

- Chenhua Li, MS, University of Manitoba (2016-present)

**Publications (\* indicates undergraduate co-author, ^ indicates graduate student co-author):**

Hopkins<sup>^</sup> SR, JC Ocampo\*, LK Belden, **JM Wojdak**. 2016. Host community composition and defensive symbionts determine trematode parasite abundance in host communities. *Ecosphere* in press.

Donovan SD, C Diaz Eaton, K Jenkins, D Lamar, DB Poli, R Sheehy, **JM Wojdak**. 2015. QUBES: A community focused on supporting teaching and learning in quantitative biology. *Letters in Biomathematics* 2:46-55.

Hopkins<sup>^</sup> SR, LK Boyle\*, LK Belden, **JM Wojdak**. 2015. Dispersal of a defensive symbiont depends on contact between hosts, host size, and resource availability. *Oecologia* 179: 307-318.

**Wojdak JM**, RM Edman\*, JA Wyderko\*, SA Zemmer<sup>^</sup>, LK Belden. 2014. Host density and competency determine the effects of host diversity on trematode parasite infection. *PLoSOne* 9(8): e105059.

**Wojdak JM**, JC Touchon J, J Hite<sup>^</sup>, B Meyer\*, JR Vonesh. 2014. Consequences of arboreal egg predator induced hatching plasticity depend on aquatic larval predator diversity. *Oecologia* 175:1267-1276.

Touchon JC, **JM Wojdak**. 2014. Predator identity and sublethal predation affect tadpole morphology but not swimming performance due to increased tadpole effort. *PLoSOne* 9(6):e100623.

Hopkins SR\*, JA Wyderko\*, R Sheehy, LK Belden, **JM Wojdak**. 2013. Non-host species and disease: a symbiotic oligochaete of snail hosts reduces trematode infection by consuming parasites. *Ecology and Evolution* 3: 4427-4438.

Chambers<sup>^</sup> DL, **JM Wojdak**, P Du, LK Belden. 2013. Pond acidification may explain differences in corticosterone among salamander populations. *Physiological and Biochemical Zoology* 86:224-232.

**Wojdak JM**, L Clay\*, S Moore\*, T Williams\*, LK Belden. 2013. *Echinostoma trivolvis* (Digenea; Echinostomatidae) second intermediate host preference matches host-suitability. *Parasitology Research* 112:799-805.

Belden LK, WE Peterman, SA Smith, LR Brooks\*, EF Benfield, WP Black, Z Yang, **JM Wojdak**. 2012. *Metagonimoides oregonensis* (Digenea, Heterophyidae) infection in pleurocerid snails and *Desmognathus quadramaculatus* salamander larvae in southern Appalachian streams. *Journal of Parasitology* 98:760-767.

Chambers<sup>^</sup> DL, **JM Wojdak**, P Du, LK Belden. 2011. Corticosterone level changes throughout larval development in the amphibians *Rana sylvatica* and *Ambystoma jeffersonianum* reared under laboratory, mesocosm, or free-living conditions. *Copeia* 4:530-538.

Belden LK, **JM Wojdak**. 2011. The combined influence of trematode parasites and a salamander predator on wood frog (*Rana sylvatica*) tadpoles. *Oecologia* 166:1077-1086.

**Wojdak JM**. 2010. An attention-grabbing approach to introducing students to argumentation in science. *Bioscience Education* 15:c5. DOI 10.3108/beej.15.c5

**Wojdak JM**, J Guinan, J Wirgau, R Kugler, G Hammond, C Small, C Manyara, F Singer, C Watts, B Bodo, A Baldwin. 2010. University facilities as real-world foci of multidisciplinary science learning. *Journal of College Science Teaching* 39:8-16.

**Wojdak JM**, DC Trexler\*. 2010. Relative strength of trait- and density-mediated indirect effects of a predator in a freshwater food chain: the influence of predation intensity. *Ecological Research* 25:327-335.

**Wojdak JM**. 2009. Foraging and refuge use by a pond snail: effects of physiological state, predators, and resources. *Acta Oecologica* 35:746-751.

Belden LK, P Widder<sup>^</sup>, L Fischer\*, A Carter\*, **JM Wojdak**. 2009. Trematode (*Echinostoma trivolvis*) egg hatching in response to snail host and non-host chemical cues. *Parasitology Research* 105: 883-885.

Byun<sup>^</sup> C, G Kwon, D Lee, **JM Wojdak**, J Kim. 2008. Ecological assessment of plant succession and water quality in abandoned rice fields. *Journal of Ecology and Field Biology* 31:213-223.

Guinan J, **JM Wojdak**, J Wirgau. 2008. Incorporating the 'real world' into laboratory exercises. *In Tested Studies for Laboratory Teaching, Volume 30* (KL Clase, ed.). Proceedings of the 30<sup>th</sup> Workshop/Conference for the Association for Biology Laboratory Education (ABLE).

**Wojdak JM**, GG Mittelbach. 2007. Consequences of habitat partitioning among snails for pond ecosystem function. *Ecology* 88:2072-2083.

**Wojdak JM**. 2005. Top-down, bottom-up, and consumer species richness effects on ecosystems: context dependency and relative effect strengths. *Ecological Monographs* 75:489-504.

"Faculty of 1000 – Biology" evaluation

<http://www.f1000biology.com/article/nonpub143066/evaluation> - Rated a "Must Read"

"A most remarkable finding of this aquatic mesocosm experiment is that consumer species richness had effects on ecosystem properties often similar in magnitude to, or more important than, effects of nutrient enrichment and predation. This finding is counter to the common belief that biodiversity effects on ecosystem functioning are always small compared to environmental factors and to biotic factors that have been traditionally studied. Considering effect sizes in addition to significance is critical in future experiments to reveal the relative importance of biodiversity effects." M. Gessner.

**Wojdak JM**, BT Luttbegg. 2005. Relative strength of trait-mediated and density-mediated indirect effects of a predator vary with resource levels. *Oikos* 111:592-598.

Steiner CF, TL Darcy, NJ Dorn, EA Garcia, GG Mittelbach, **JM Wojdak**. 2005. Indirect facilitation and consumer diversity regulate trophic-level biomass and population variability in a model planktonic system. *Oikos* 110:556-566.

Dorn NJ, **JM Wojdak**. 2004. The role of omnivorous crayfish in littoral communities. *Oecologia* 140:150-159.

Mittelbach GG, TL Darcy, NJ Dorn, EA Garcia, CF Steiner, **JM Wojdak**. 2004. The impact of density-independent mortality on species coexistence: an experimental test with zooplankton. *Oikos* 107:415-421.

Knapp AK, MD Smith, SL Collins, N Zambatis, M Peel, S Emery, **JM Wojdak**, H Biggs, J Kruger, SJ Andelman. 2004. Searching for generality in ecology: testing North American grassland rules in South African savannas. *Frontiers in Ecology and the Environment* 2:483-491.

### **Selected Presentations:**

Hopkins<sup>^</sup> SR, **JM Wojdak**, LK Belden. Quantifying the relationship between intra- and interspecific transmission rates and host density in a snail symbiont system. Ecological Society of America. Baltimore, MD, 2015.

Phillips K\*, SR Hopkins<sup>^</sup>, **JM Wojdak**, LK Belden. Investigating defense mutualisms: under what conditions is *Chaetogaster limnaei limnaei* a mutualist or parasite of snails? Southeastern Society of Parasitologists & Helminthological Society of Washington Joint Meeting. Blacksburg, VA, 2015.

Hopkins<sup>^</sup> SR, JM Ocampo\*, **JM Wojdak**, LK Belden. Do defensive symbionts indirectly alter parasite transmission to hosts without defensive symbionts? 13<sup>th</sup> Annual Virginia Tech Biological Sciences Research Day. Blacksburg, VA, 2015. (Best poster award.)

McGregor C\*, SR Hopkins<sup>^</sup>, **JM Wojdak**, LK Belden. Does infection of the freshwater snail *Helisoma trivolvis* by trematode parasites induce behavioral changes? Radford University Student Engagement Forum. Radford, VA, 2015.

**Wojdak JM**. Using gross parasites to sneak even grosser equations into the introductory biology classroom. American Society of Parasitologists Annual Meeting. Omaha, NE, 2015.

**Wojdak JM**. A collaborative approach to quantitative biology course reform: It's better than doing it all by yourself. Society for Mathematical Biology Annual Meeting. Atlanta, GA, 2015.

C Diaz-Eaton, S Donovan, S Gower, K Jenkins, MD LaMar, DB Poli, R Sheehy, **JM Wojdak**. QUBES: Supporting faculty in the teaching of mathematical biology. Society for Mathematical Biology Annual Meeting. Atlanta, GA, 2015.

Boyle\* LJ, SR Hopkins<sup>^</sup>, LK Belden, **JM Wojdak**. The effect of variation in trematode parasite density on growth, feeding and mortality rates in the aquatic snail *Helisoma trivolvis*. Association of Southeaster Biologists. Chattanooga, TN, 2015.

**Wojdak JM**, S Donovan, K Jenkins, S Gower. Invited Session: Two themes, one talk: Distributing quantitative faculty expertise to classrooms that need it in real-time & measuring professional

contributions to undergraduate education. 7<sup>th</sup> International Symposium on Biomathematics and Ecology: Education and Research. Claremont, CA, 2014.

Hopkins<sup>^</sup> SR, JM Ocampo\*, **JM Wojdak**, LK Belden. Do defensive symbionts indirectly alter parasite transmission to hosts without defensive symbionts? Ecological Society of America. Sacramento, CA, 2014.

Hopkins<sup>^</sup> SR, LJ Boyle\*, LK Belden, **JM Wojdak**. Dispersal rates of the freshwater snail symbiont, *Chaetogaster limnaei*, depend on host contact and host characteristics. Ecological Society of America. Sacramento, CA, 2014.

Phillips K\*, SR Hopkins<sup>^</sup>, **JM Wojdak**, LK Belden. Investigating defense mutualisms: under what conditions is *Chaetogaster limnaei limnaei* a mutualist or parasite of snails? Virginia Tech Undergraduate Research Conference. Blacksburg, VA, 2014.

Hopkins<sup>^</sup> SR, LJ Boyle\*, LK Belden, **JM Wojdak**. Dispersal of a defensive symbiont depends on contact between hosts, host size, and resource availability. Virginia Tech Undergraduate Research Conference. Blacksburg, VA, 2014.

Hopkins<sup>^</sup> SR, J Ocampo\*, JA Wyderko<sup>^</sup>, R Sheehy, LK Belden, **JM Wojdak**. Worms eating worms: a predator of parasites reduces trematode infection. Ecology and Evolution of Infectious Disease. State College, PA, 2013.

Ocampo J\*, SR Hopkins<sup>^</sup>, R Sheehy, **JM Wojdak**, LK Belden. Parasite dispersal: when do larval trematodes leave their first intermediate hosts? 11th Annual Virginia Tech Undergraduate Research Conference. Blacksburg, VA, 2013.

Hopkins<sup>^</sup> SR, J Ocampo\*, JA Wyderko<sup>^</sup>, R Sheehy, LK Belden, **JM Wojdak**. Worms eating worms: a predator of parasites reduces trematode infection. 11<sup>th</sup> Annual Virginia Tech Biological Sciences Research Day. Blacksburg, VA, 2013.

**Wojdak JM**. Invited Plenary: How can we best teach our students biomathematics? 6<sup>th</sup> International Symposium on Biomathematics and Ecology: Education and Research. Arlington, VA, 2013.

**Wojdak JM**, R Edman\*, J Wyderko<sup>^</sup>, SA Zemmer<sup>^</sup>, LK Belden. Exploring the dilution effect: host density mediates host diversity effects on community wide parasite infection. American Society of Parasitologists Annual Meeting, Quebec City, Quebec, Canada, 2013.

J Ocampo\*, S Hopkins<sup>^</sup>, R Sheehy, **JM Wojdak**, LK Belden. Parasite dispersal: when do larval trematode parasites leave their first intermediate hosts? Virginia-North Carolina Alliance for Minority Participation Symposium. Richmond, VA, 2013. † First prize among poster presentations.

**Wojdak JM**, J Hagen, F Singer, J Stewart, J Gerlach. SUMS4BIO – Increasing quantitative sophistication across the undergraduate biology curriculum: horizontal and vertical integration across courses. Society for Mathematical Biology Annual Meeting, Knoxville, TN, 2012.

Hopkins SR\*, **JM Wojdak**, JA Wyderko\*, LK Belden. A symbiotic oligochaete can protect snails from trematode infection. American Society of Parasitologists Annual Meeting, Richmond, VA, 2012.

Belden LK, **JM Wojdak**. Combined impacts of predators and parasites on wood frog tadpoles. Society for Integrative and Comparative Biology Annual Meeting, Boston, MA, 2009.

Schoch C\*, **JM Wojdak**. Consequences of trematode infection and predation risk on green frog tadpoles. Virginia Herpetological Society Annual Meeting, Richmond, VA 2008.

**Wojdak JM**. Enhancing interest in field and laboratory exercises by using a real-world environmental problem as the context. Ecological Society of America Annual Meeting, Milwaukee, WI, 2008.

Guinan J, **JM Wojdak**, J Wirgau. Incorporating the 'real world' into laboratory exercises. 30<sup>th</sup> Annual Workshop/Conference of the Association for Biology Laboratory Education, Mississauga, Ontario, Canada, 2008.

**Wojdak JM**, J Guinan, J Wirgau, C Kugler, C Small, F Singer, G Hammond, J Hagen, B Bodo, A Baldwin. Using a stormwater remediation wetland to teach real-world science: How does pedagogical context influence student learning and motivation? Ecological Society of America Annual Meeting, San Jose, CA, 2007.

Wirgau J, J Guinan, **JM Wojdak**. Radford University Stormwater Wetland Project as a Real-World Teaching Laboratory. Southeast Regional Meeting of the American Chemical Society, Greenville, SC, 2007.

**Wojdak JM**, J Guinan, J Wirgau, *and 8 others*. Using a real-world environmental issue as the context for college science teaching. Society of Wetland Scientists Annual Meeting, Sacramento, CA, 2007.

**Wojdak JM**. Foraging and refuge use by the pond snail: effects of physiological state, predators, and resource levels. Ecological Society of America Annual Meeting, Memphis, TN, 2006.

Crolley\* J, **JM Wojdak**. Lethal and sub-lethal effects of copper on an aquatic invertebrate (*Lumbriculus variegatus*). Virginia Academy of Science Annual Meeting, Blacksburg, VA, 2006.

Shakeshaft\* SA, **JM Wojdak**. Pond macroinvertebrate community composition along environmental gradients. Virginia Academy of Science Annual Meeting, Blacksburg, VA, 2006.

Trexler\* DC, **JM Wojdak**. Relative strength of trait- and density-mediated indirect effects of a predator in a freshwater food chain: the influence of predation intensity. Southern Region Honors Council Annual Meeting, Orlando, FL, 2006.

Guinan J, C Kugler, **JM Wojdak**. Teaching by example: Integrating a service-learning application into university biology, chemistry, geology, and geography curricula. Greening of the Campus Meeting, Muncie, IN, 2005.

**Wojdak JM**, BT Luttbeg. The relative strength of trait- and density-mediated indirect interactions depend on resource levels in a freshwater food chain. Ecological Society of America Annual Meeting, Montreal, Canada, 2005.

Emery S, M Smith, C Bowles, MC Horner-Devine, J Drake, E Cleland, W Trollope, **JM Wojdak**, R Boone, P Moehlman. Relationships between diversity and community stability in Tanzanian grasslands. Ecological Society of America Annual Meeting, Portland, OR, 2004.

**Wojdak JM**. Context dependency of species richness effects on ecosystem function. Ecological Society of America Annual Meeting, Savannah, GA, 2003.

Dorn NJ, **JM Wojdak**. Crayfish alter succession of pond communities. Ecological Society of America Annual Meeting, Savannah, GA, 2003.

**Wojdak JM**, GG Mittelbach. Does niche complementarity explain species effects on ecosystems? An experiment with aquatic snails. North American Benthological Society Annual Meeting, Pittsburgh, PA, 2002.

**Wojdak JM**, GG Mittelbach. Functional redundancy among aquatic grazers: ecological context determines functional similarity. Ecological Society of America Annual Meeting, Snowbird, UT, 2000.

**Wojdak JM**, GG Mittelbach. Functional redundancy among aquatic grazers: ecological context determines functional similarity. North American Benthological Society Annual Meeting, Keystone, CO, 2000.

**Wojdak JM**. Species diversity: effects of plant size, productivity, and sampling regime on species-area relationships. Ecological Society of America Annual Meeting, Spokane, WA, 1999.

Davis CJ\*, JG Miner, **JM Wojdak**. Potential effects of the Round Goby (*Neogobius melanostomus*) on crayfish (*Orconectes rusticus*) in Lake Erie. Conference of the International Association for Great Lakes Research, Cleveland, OH, 1999.

**Wojdak JM**, JG Miner. Potential effects of the round goby (*Neogobius melanostomus*), an exotic invader, on crayfish – fish interactions. Ohio Academy of Science Annual Meeting, Bowling Green, OH, 1997.

**Invited seminars:**

“Parasites and undergraduates: research and teaching across disciplines.” Virginia Tech, Blacksburg, VA, 2013.

“Context-dependent species interactions in pond ecosystems.” Virginia Commonwealth University, Richmond, VA, 2008.

“How strong can diversity effects on pond ecosystems really be?” Virginia Tech, Blacksburg, VA, 2006.

“Species interactions and the functioning of pond ecosystems.” Radford University, Radford, Virginia, 2003.

“Species interactions and the functioning of pond ecosystems.” Kalamazoo College, Kalamazoo, Michigan, 2003.

### **Grants, Fellowships, and Awards:**

#### **External grants:**

- National Science Foundation, Division of Undergraduate Education, *BioMAAP: Biology undergraduate Mathematics Attitude and Anxiety Program*, 2016-2019 (\$300,000), PI, *PENDING*.
- National Science Foundation, Division of Undergraduate Education, *QUBES: Quantitative Undergraduate Biology Education and Synthesis*, 2014-2019 (Total Budget: ~\$2,900,000. Radford budget: \$450,171) co-PI, with seven other lead investigators.
- National Science Foundation, Division of Undergraduate Education, *AIMS: Analyzing Images to learn Mathematics and Statistics*, 2014-2017 (\$142,356), PI.
- National Science Foundation, Division of Undergraduate Education, *SUMS4BIO: Strengthening Undergraduate Mathematics and Statistics Education for Biologists*, 2011-2015 (\$199,176). Co-PI, with F. Singer, M. Stewart, J. Hagen, Radford University
- National Science Foundation, Division of Environmental Biology, *Collaborative Research: Community composition and disease outcomes in a multihost-parasite system*, 2009-2013 (Total budget: \$540,730. Radford budget: \$165,070, plus \$28,800 in four Research Experiences for Undergraduates supplements) PI, with L. Belden, Virginia Tech.
- National Science Foundation, Division of Environmental Biology, Research Opportunity Award, *Collaborative Research: Fear, death, and life history switch points- cumulative effects of phenotypic plasticity and predation across three life stages. SUBAWARD to Radford- Interactions between response to egg predation and larval predator diversity and identity effects on red-eyed treefrog, Agalychnis callidryas, tadpoles*, 2009 (\$23,810) co-PI, with J. Vonesh, Virginia Commonwealth University.
- National Science Foundation Curriculum Adaptation and Implementation Grant, *Teaching by Example: Integrating a Service-Learning Application into University Biology, Chemistry, Geology, and Geography Curricula*, 2005-2008 (\$140,000) co-PI, with C. Kugler and J. Guinan, Radford University.
- Jeffress Trust Grant to Support Undergraduate Research, 2004 (\$2000) PI.

#### **Internal grants from Radford University:**

- Radford University College of Science and Technology Research Program for agent based modeling of host contact rates in disease transmission, 2015 (\$6000)
- Radford University Faculty Research Award (with R. Sheehy) for collaborative research to determine genetic diversity of the parasite *Echinostoma trivolvis* and effects on host infection, 2010, 2012 (\$19,736, \$19,866)
- Radford University College of Science and Technology Research Program for scanning electron microscopy of trematodes, 2010 (\$7600), 2011 (\$9821), 2013 (\$9878)



- Radford University Mentoring Assistance Program Grant to conduct preliminary studies with another professor, leading to an external grant proposal, 2007 (\$14,800).
- Radford University SEED Grants to conduct preliminary studies and spur a larger external grant proposal, 2005, 2011 (\$11,000, \$20,000).
- College Faculty Summer Scholars Grant to support research involving undergraduates, 2005-2008 (\$4500, \$6000, \$8400, \$5000).
- Radford University Dean's Faculty Development Grant to J. Wojdak, J. Guinan, S. Dennis and F. Singer to support undergraduate education in environmental biology, 2004 (\$17,000).

### **Fellowships**

- Radford University Faculty Research Fellowship – one of a handful of professors selected from the university for half-time support for a year of grant writing.

### **Awards**

- Nominated for Radford University Distinguished Teaching Professor Award, 2014.
- Nominated for Radford University Distinguished Creative Scholar Award, 2010, 2016.

### **Significant professional development:**

*National Science Foundation Ideas Lab – Undergraduate Biomathematics Education, 2014.*

- Defined scope and scale of the problem, proposed solutions, worked with small groups to plan proposals and projects to address mathematics gap in biology curriculum. Led by S. Ellis (NSF), L. Gross (NIMBIOS), G. Ledder (U Nebraska- Lincoln), others.

*Training in Bayesian Modeling for Practicing Ecologists, Colorado State University, 2014.*

- Learned a principles-based understanding of Bayesian methods needed to train students and solve research problems. Topics included basic Bayesian concepts, Markov Chain Monte Carlo methods using JAGS and R, hierarchical and mixed models. Taught by T. Hobbs, M. Hooten, K. Ogle, M. Uriarte.

*Algebraic and Discrete Biological Models for Undergraduate Courses, National Institute for Mathematical and Biological Synthesis, 2014.*

- Learned algebraic and discrete approaches to problems from modern biology including gene regulation, gene identification, RNA folding, phylogenetics, and metabolic pathway analysis. Taught by R. Robeva, R. Davies, T. Hodge, M. Macauley.

*Communication in Collaboration workshop, U. of Tennessee and National Institute for Mathematical and Biological Synthesis, 2012.*

- Learned more effective ways to interact in research collaborations, resolve conflicts, and communicate to peers, students, and administrators. Taught by H. Gaff, J. Alonzo.

*Highland Statistics courses, U. of Lisbon, U. of Coimbra, Portugal, 2012.*

- Learned general linear, generalized additive, generalized linear, and mixed modeling techniques, data visualization, in R. Taught by A. Zuur, E. Ieno.

*Ecology and Evolution of Infectious Disease Workshop, U. of Colorado/ U. of California, Santa Barbara, 2011.*

- Learned quantitative skills useful for studying disease/parasitism: dynamical modeling of disease epidemics, analysis of cross-sectional disease prevalence data in stage-structured populations. Taught by M. Ferrari, J. Drake, B. Bolker, others.

*Information theory and multi-model inference workshop, Virginia Tech, 2010.*

- Learned approaches of statistical inference and model selection based on information theory and their application to biological research. Taught by D. Anderson.

*Science Environment for Ecological Knowledge, Early Career Faculty and Post-doctoral Training, Long Term Ecological Research Network Office, Univ. of New Mexico, 2005.*

- Learned state-of-the-art bioinformatics tools and practices including scientific workflows, grid technologies, metadata, database design and implementation, knowledge representation, ontologies, and dynamic website creation.

### **Leadership and Service:**

Associate Editor, *Letters in Biomathematics*, 2014-present; *Tropical Ecology*, 2008-2011.

National Science Foundation Panelist for the Course, Curriculum, and Laboratory Improvement Program (2009), S-STEM scholarship Program (2012), Dissertation Improvement (DDIG) Program (2014), and Division of Environmental Biology (2015).

Ad-hoc reviewer for National Science Foundation proposals: 2004-2006, 2009-13.

Ad-hoc peer reviewer for: *American Midland Naturalist*, *Behavioral Ecology and Sociobiology*, *Biological Invasions*, *Biology Letters*, *Bulletin of Marine Science*, *Ecography*, *Ecological Entomology*, *Ecology*, *Ecology Letters*, *Ecoscience*, *Ecosphere*, *Freshwater Science*, *Functional Ecology*, *Intern. J. of Limnology*, *International Review of Hydrobiology*, *J. of Animal Ecology*, *J. of Experimental Marine Biology and Ecology*, *Letters in Biomathematics*, *Oecologia*, *Oikos*, *Parasitology Research*, *PLoS One*, *Proceedings of the Royal Society B*.

### ***Radford University***

- A faculty lead of the "Maker Movement", a grassroots faculty and student led multidisciplinary effort to build, create, invent, and innovate, as a means to learn
  - Organized "Techno Prom" and "Feeble Robot" K-12 outreach events bringing local school children together with RU faculty and students to learn 3D technology, design, and invention
  - Participating in residential learning community focused on making, scheduled to launch Fall 2016
  - Outfitting, organizing new multidisciplinary makerspace
  - Mentoring workstudy students learning 3D printing and scanning technology in the service of scientific research and education
- Past-chair and current member of the department Academic Assessment committee, 2006-2012.

- Member of the department Curriculum committee, 2006-2012.
- Member of an Undergraduate Education Task Force as a part of the “Commission for the Future of Radford University” charged with setting long-term University goals and priorities for academic excellence, 2005.
- Chair (2006-2010) and Member of the Animal Care and Use Committee, 2005-2010.