

Aubrey Ruth Bunch

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Education

Doctor of Philosophy. Zoology. S. Illinois University Carbondale, Carbondale, IL. Currently enrolled

- Research focus in Aquatic toxicology
- Proposal title: Using biomimetic devices to measure bioavailability and assess remediation efforts of polychlorinated biphenyls and polybrominated diphenyl ethers in coastal and estuarine

Masters of Science. Biology. Ball State University, Muncie, IN. Aug 2007 - July 2009

- GPA: 3.82
- Research focus on aquatic ecosystems and water quality
- Thesis title: Abundance of nonprescription pharmaceuticals in central Indiana streams and effects on sediment microbial activity

Bachelor of Science. Biology-Zoology Option. Ball State University, Muncie, IN. Aug 2003 - May 2007

- GPA: 3.55
 - Undergraduate research on testis specific pfks in mice embryos
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Professional Experience

Graduate Teaching Assistant, S. Illinois University Carbondale, Carbondale, IL. August 2009-Present

- Teach three sections of ZOO 115-Introduction to Biology
- Prepare weekly lectures and quizzes
- Supervisor: Katherine Jacobson
- Advisor: Dr. Michael Lydy

Physical Science Technician, U.S. Geological Survey, Indiana District. April 2009 – August 2009

- Collection, processing and analysis of water chemistry and algal biomass sampling for the White River – Miami River National Water Quality study
- Invertebrate sampling for Department of Public Works project
- Processing of mercury samples for a study on Indiana reservoirs
- Set up and calibration equipment
- In charge of data base for algal biomass data
- Received two STAR (Special Thanks for Achievement) awards
- Supervisor: Jeffery Frey

Graduate Research Assistant, Ball State University Biology Department. Aug 2007 – May 2009

- Water quality monitoring using regulatory techniques
- Water chemistry analyses using ion chromatography, ion specific probes, and chemical assays

- Development of experimental protocols for pharmaceutical analyses
- Oversight of undergraduate student assistants
- Advisor: Dr. Melody Bernot

Undergraduate Research, Ball State University Biology Department. Aug 2006 – May 2007

- Ran rt-PCRs for testis specific pfks in mice embryos
- Built laboratory skills including pipetting, preparing stock solutions, and using basic analytical equipment including balances, shaker, water baths, etc.
- Advisor: Dr. Clare Chatot

Biology/Chemistry Tutor, Ball State University Learning Center. Jan 2006 – May 2007

- Assisted peers in understanding course materials through individual and group tutoring
- Developed individual lesson plans to accommodate different learning styles

Funding

- Bunch AR and Bernot MJ. Indiana Academy of Sciences Senior Research Grant. Total Award: \$2,977.
- Bunch AR and Bernot MJ. Ball State University Student Internal Grant. Total Award: \$350.

Publications

- Bunch AR and Bernot MJ. *In preparation*. Indirect effects of human population growth on stream ecosystem function: Sediment respiration and nutrient uptake response to nonprescription pharmaceuticals.
- Bunch AR and Bernot MJ. *In preparation*. Relationships between urbanization and nonprescription pharmaceuticals in central Indiana streams.
- Bunch AR and Bernot MJ. August 2008. Stream ecosystem effects of nonprescription pharmaceuticals. Indiana Branch of the American Society of Microbiology Annual Newsletter.

Presentations

- **Bunch AR** and Bernot MJ. Graduate student oral presentation. Abundance of nonprescription pharmaceuticals in Indiana streams and effects on sediment microbial activity. North American Benthological Society. May 2009.
- **Bunch AR** and Bernot MJ. Graduate student poster presentation. Abundance of nonprescription pharmaceuticals in Indiana streams and effects on sediment microbial activity. Ball State University Student Symposium. March 2009.
- **Bunch AR** and Bernot MJ. Influences of nonprescription pharmaceuticals on microbial activity in headwater streams of central Indiana. Graduate student oral presentation. Indiana Academy of Science. October 2008.
- **Bunch AR** and Bernot MJ. Ecosystem effects of nonprescription pharmaceuticals. Graduate student poster presentation. North American Benthological Society. May 2008.
- **Bunch AR** and Bernot MJ. Ecosystem effects of nonprescription pharmaceuticals. Graduate student poster presentation. Indiana Water Resources Association. May 2008.
- **Bunch AR** and Bernot MJ. Graduate student poster presentation. Ecosystem effects of nonprescription pharmaceuticals. Indiana Branch of the American Society for Microbiology. March 2008. *Awarded first place graduate student poster.

Awards

- Student Travel Grant. Ball State University. May 2009.

- Certificate of Achievement, for significant academic accomplishments at the graduate level. Ball State University. April 2009.
 - Outstanding Graduate in Field Science Award. Ball State University. Department of Biology. March 2009.
 - Student Travel Grant. Ball State University. May 2008.
 - First place graduate student poster presentation. Indiana Branch of the American Society for Microbiology. March 2008.
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Affiliations

- Indiana Water Resources Association
 - American Fisheries Society
 - Indiana Branch of the American Society for Microbiology
 - Indiana Academy of Science
 - North American Benthological Society
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References

Dr. Michael Lydy
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