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EDUCATION:

Ph.D., 1997, Biology: The Pennsylvania State University. *Abiotic and Biotic Factors Controlling the Structure of Insect Treehole Communities*

M.A., 1989, Biology: State University of New York at Binghamton. *Physiological & Behavioral Consequences for Chinese Praying Mantids When Encountering Variable Prey*

B.S., 1986, Biology, w/ Chemistry minor: State University of New York at Albany

EMPLOYMENT:

August 2006-present: Associate Professor of Biology, Davidson College

August 2000-August 2006: Assistant Professor of Biology, Davidson College

August 1998-May 2000: Assistant Professor of Biology, Director of Environmental Studies, King's College, Wilkes-Barre, PA

January 1998-August 1998: Instructor, The Pennsylvania State University

September 1997-August 1998: Postdoctoral Research Fellow with Dr. William Dunson, PSU

1995-1997: Research Assistant with Dr. William Dunson, PSU

1994: Teaching Assistant, PSU

1990-1994: Laboratory Coordinator, PSU - Responsible for logistics of all introductory biology labs, including supervision of TAs, design of exercises, & maintenance of equipment

1989: Research Assistant with Dr. Nancy Stamp, SUNY Binghamton

1986-1989: Teaching Assistant, SUNY Binghamton

COURSES TAUGHT:

At Davidson College:

Fall 2001, 2003, 2004, 2005, 2006: Bio 321 – Ecology Lecture and Laboratory

Fall 2000, 2002: Bio 315 – Invertebrate Zoology Lecture and Laboratory

Annually, since 2001: Bio 112 – Organisms, Evolution, and Ecosystems, Lecture and Laboratory

Spring & Fall 2002, Fall 2005: Bio 103 – Issues in Environmental Biology, non-science majors

Spring 2001, 2004, 2008: Bio 362 – Ecotoxicology Seminar

Spring 2005 and 2009: Bio 352 – Insect Community Ecology (group investigation course)

Spring 2006, Fall 2009: Bio 317 – Entomology Lecture and Laboratory

Fall 2007 and 2008: CIS 171 – Introductory Environmental Studies (team-taught interdisciplinary course)

At King's College, as a Post Doctoral Fellow or Graduate Student:

Summer 2000: Woods, Water, & Wildlife: Integrating Environmental Standards in Teaching

Spring 2000: Environmental Science Lecture and Laboratory (environmental geology), General Biology Laboratory, Introduction to Environmental Science Lecture and Laboratory

Fall 1999: Ecosystems Lecture and Lab (senior ecology course), Environmental Science Lecture and Lab

Spring 1999: Environmental Science Lecture and Lab (environmental geology), Biology Seminar, Supervised Research

Fall 1998: Environmental Science Lecture and Lab, Introductory Biology I, Natural Science (a required course for all non-science majors)

Summer 1998: Principles of Biology and Biodiversity, The Pennsylvania State University.

Spring 1998: Ecotoxicology, The Pennsylvania State University

1990-1994: Taught laboratory sections of Introductory Biology, The Pennsylvania State University

1986-1989: Courses taught as a Teaching Assistant at SUNY Binghamton included Community Ecology, Zoology, Ecology, Introduction to Biology II, and Introduction to Biology II Lab

REFEREED JOURNAL PUBLICATIONS (*indicates undergraduate):

- Blue JD*, Brewer EJ*, Castillo C*, Goldberg J*, Hawkins K, Krentz T, and Paradise CJ (in prep) Colonization and community dynamics in a simulated treehole metacommunity. In preparation.
- Chrisawn C*, Chang M, Wessner D, Glick D, and Paradise CJ (in prep) Microbial diversity in water-filled treehole communities is affected by bottom-up factors. In preparation.
30. Smith L*, Blue JD*, Carlson J*, Metz G, Haywood J*, Bush D* and Paradise CJ (2009) Density-dependent predation of a dominant species does not facilitate increased diversity in treeholes. *The Open Ecology Journal* 2:91-99. doi: 10.2174/1874213000902010091. <http://www.benthamopen.org/pages/gen.php?file=91TOECOLJ.pdf&PHPSESSID=9809c3cabd2a48cba8fe76b0d680851a>
29. Paradise CJ, Blue JD*, Burkhart JQ*, Goldberg J*, Harshaw L*, Hawkins K, Kegan B*, Kittinger B*, Krentz T, Smith L*, and Villalpando S (2008) Local and regional factors influence the structure of treehole metacommunities. *BMC Ecology* 8:22. <http://www.biomedcentral.com/1472-6785/8/22>
28. Burkhart JQ*, Smith L*, Villalpando S, and Paradise CJ (2007) Scirtid beetles, leaf litter, and treeholes: Is there evidence of facilitation in the field. *Southeastern Naturalist* 6(4):597-614.
28. Paradise CJ, Burkhart JQ*, Chrisawn C*, Harshaw L*, Kittinger B*, and Smith L* (2007) Prior occupation by scirtid beetles does not affect mosquito and midge populations in treeholes. *Journal of Negative Results* 4:15-22.
27. Paradise CJ (2007) *The Weather Makers: Book Review*. *Bioscene: The Journal of College Biology Teaching* 33(2):26-27.
26. Harshaw L*, Chrisawn C*, Kittinger B*, Carlson J*, Metz G, Smith L*, and Paradise CJ (2007) Decaying invertebrate carcasses increase growth of *Aedes triseriatus* (Diptera: Culicidae) when leaf litter resources are limiting. *Journal of Medical Entomology* 44(4):589-596.
25. Harlan NP* and Paradise CJ (2006) Habitat size and shape modify abiotic factors and communities in artificial treeholes. *Community Ecology* 7(2):211-222.
24. Chemotti DC*, Davis SN, Cook LW, Willoughby IR, Paradise CJ, and Lom B (2006) The pesticide malathion disrupts *Xenopus* and zebrafish morphogenesis: An investigative laboratory in developmental toxicology. *BioScene: Journal of College Biology Teaching* 32(3):4-19.
23. Cook LW*, Paradise CJ, and Lom B (2005) The pesticide Malathion reduces growth and survival in the development of zebrafish, *Danio rerio*. *Environmental Toxicology and Chemistry* 24:1745-1750.
22. Paradise CJ (2004) Relationship of water and leaf litter variability to insects inhabiting treeholes. *Journal of the North American Benthological Soc.* 23(4):793-805.
21. Gage M*, Spivak A* & Paradise CJ (2004) Effects of land use and disturbance on benthic insects in headwater streams draining small watersheds north of Charlotte, NC. *Southeastern Naturalist* 3(2):345-358.
20. Paradise CJ (2001) A standardized soil ecotoxicological test using red worms (*Eisenia fetida*). *The American Biology Teacher* 63:504-510.
19. *Wynn G & Paradise CJ (2001) Effects of microcosm scaling and food resources on growth and survival of larval *Culex pipiens*. *BMC Ecology* 2001 1:3 <http://www.biomedcentral.com/1472->

6785/1/3.

18. Paradise CJ (2000) Effects of pH and resources on a processing chain interaction in simulated treeholes. *Journal of Animal Ecology* 69:651-658.
17. Paradise CJ (1999) Interactive effects of resources and a processing chain interaction in treehole habitats. *Oikos* 85:529-535.
16. Paradise CJ & *Kuhn K (1999) Effects of pH and leaf litter quantity on scirtid beetles inhabiting treeholes. *Freshwater Biology* 41:43-49.
15. *Baltzley M, Paradise CJ & Dunson WA (1999) Interactive effects of density and water sodium concentration on larvae inhabiting treeholes. *Journal of Freshwater Ecology* 14:113-124.
14. Paradise CJ & Dunson WA (1998). Effects of sodium concentration on mosquitoes and micro-organisms in treeholes. *Journal of Medical Entomology* 35:839-844.
13. Paradise CJ (1998) Colonization and development of insects in simulated treehole habitats with distinct resource and pH regimes. *Ecoscience* 5:39-45.
12. Paradise CJ & Dunson WA (1998) Relationship of atmospheric deposition to the water chemistry and biota of treehole habitats. *Environmental Toxicology and Chemistry* 17:362-368.
11. Dunson WA, Paradise CJ & Dunson D (1998) The inhibitory effect of low salinity on growth and reproduction of the estuarine sheepshead minnow. *Copeia* 1998:235-239.
10. Paradise CJ & Dunson WA (1997) Effects of water cations on insect treehole communities. *Annals of the Entomological Society of America* 90:798-805.
9. Dunson WA, Paradise CJ & Van Fleet RL (1997) Patterns of water chemistry and fish occurrence in wetlands of hydric pine flatwoods. *Journal of Freshwater Ecology* 12:553-565.
8. Paradise CJ & Dunson WA (1997) Effects of pH and sulfate on insects and protozoans inhabiting treeholes. *Archives of Environmental Contamination and Toxicology* 33:182-187.
7. Paradise CJ & Dunson WA (1997) Insect species interactions and resource effects in treeholes: are helodid beetles bottom-up facilitators of midge populations? *Oecologia* 109:303-312.
6. Paradise CJ & Cyr RJ (1994) Carbon dioxide uptake in plants: A computer-aided experimental system. In Goldman CA (ed) *Tested studies for laboratory teaching*, Vol 16. Proceedings of the 16th Workshop of A.B.L.E., pp. 99-114.
5. Paradise CJ & Stamp NE (1993) Episodes of unpalatable prey reduce consumption and growth of juvenile praying mantids. *Journal of Insect Behavior* 6:155-166.
4. Paradise CJ & Stamp NE (1991a) Prey recognition time of praying mantids and consequent survivorship of unpalatable prey. *Journal of Insect Behavior* 4:265-273.
3. Paradise CJ & Stamp NE (1991b) Abundant prey can alleviate previous adverse effects on growth of juvenile praying mantids (Mantidae). *Ann. Entomological Soc. Am.* 84:396-406.
2. Stamp NE, *Erskine T & Paradise CJ (1991) Effects of rutin-fed caterpillars on an invertebrate predator depend on temperature. *Oecologia* 88:289-295.
1. Paradise CJ & Stamp NE (1990) Variable quantities of toxic diet cause different degrees of compensatory and inhibitory responses by juvenile praying mantids. *Entomologia experimentis et applicata* 55:213-222.

SELECTED PAPERS PRESENTED (last 10 years; *indicates undergraduate):

- Jul. 2009: AAAS Meeting, Transforming Undergraduate Biology Education, Washington, DC, "Integrated Systems Biology," w/ LJ Heyer (co-presenter) & AM Campbell.
- Feb. 2009: AAAS Annual Meeting, Chicago IL, "Lost and Found: Integrating Math and Biology in the First-Year Curriculum," w/ LJ Heyer (presenter) & AM Campbell.
- Apr. 2008: 69th Annual Meeting of the Association of Southeastern Biologists, "Colonization and community dynamics in a simulated treehole metacommunity," w/ J Blue*, B Brewer*, D Bush*, C Castillo*, J Goldberg*, K Hawkins*, J Haywood*, T Krentz.*

- Apr. 2008: 69th Annual Meeting of the Association of Southeastern Biologists, “Local and regional factors influence the structure of treehole metacommunities,” w/ J Blue*, JQ Burkhart*, L Harshaw*, L Smith*.
- Jul. 2007: 14th Annual Interdisciplinary Environmental Association meeting, Portland, ME, “The effect of greenway establishment on environmental attitudes and stream health,” w/ K Devoy*, S. Tonidandel.
- Apr. 2007: 68th Annual Meeting of the Association of Southeastern Biologists, Columbia, SC, “A comparative analysis of microbial diversity in simulated aquatic treehole ecosystems,” w/ C Chrisawn*, M Chang*, D Wessner, D Glick.
- Apr. 2007: 68th Annual Meeting of the Association of Southeastern Biologists, Columbia, SC, “Colonization and community dynamics in a simulated treehole metacommunity,” w/ J Blue*, B Brewer*, C Castillo*, J Goldberg*, K Hawkins*, T Krentz.*
- Aug. 2006: 91st Annual Meeting of Ecological Society of America, Memphis, TN, “Effects of a top predator on insect communities in treeholes,” w/ L Smith*, J Carlson*, G Metz.
- Apr. 2006: 67th Annual Meeting of the Association of Southeastern Biologists, Gatlinburg, TN, “Effects of a top predator on insect communities in treeholes,” w/ L Smith*, J Carlson*, G Metz
- Sep. 2005: 7th Annual Southern Appalachian Conference on Arthropod Biology, Asheville, NC, “Bottom-up and top-down effects on insect communities in treeholes,” with co-authors JQ Burkhart*, L Smith*, B Kegan*, S Villalpando, J Carlson*, G Metz*, L Harshaw*, and C Chrisawn*
- Aug. 2005: 90th Annual Meeting of Ecological Society of America, Montreal, Quebec, “Scirtid beetles, resource levels, and insect assemblages: investigating processing chains and community structure in treeholes,” with co-authors JQ Burkhart (lead presenter)*, L Smith*, S Villalpando, B Kegan*.
- Nov. 2004: 2004 Annual Meeting of the Entomological Society of America. Invited speaker in Symposium on Using Principles of Ecology to Understand Populations and Communities of Container Mosquitoes. “Preliminary assessment of the effects of resources and processing chains on mosquito species richness and abundance in simulated treeholes,” with co-authors JQ Burkhart*, B Kegan*, and S Villalpando*.
- Nov. 2004: Invited Seminar Speaker at Western Carolina University, Department of Biology. “Resources, beetles, and mosquitoes: effects of resources and processing chains on mosquito species richness and abundance in treeholes.”
- Apr. 2004: 65th Annual Meeting of the Association of Southeastern Biologists, Memphis, TN, “Malathion causes earlier hatching and stunted growth in developing zebrafish, *Brachydanio rerio*,” with co-authors L Cook*, lead presenter, and B Lom.
- Mar. 2004: 101st Annual Meeting of the North Carolina Academy of Sciences, Salisbury, NC, “Bottom-up effects on processing chains in treehole communities,” with JQ Burkhart*, lead presenter.
- Mar. 2004: 101st Annual Meeting of the North Carolina Academy of Sciences, Salisbury, NC, “Relationship between resource use and environmental studies curricula at southeast US colleges,” with C Hartridge*, lead presenter.
- Mar. 2004: 101st Annual Meeting of the North Carolina Academy of Sciences, Salisbury, NC, “Effects of abiotic factors on insects and microbes in artificial treeholes,” with NP Harlan*, lead presenter.
- Sep. 2003: 5th Annual Southern Appalachian Conference on Arthropod Biology, Boone, NC, “Relationships among habitat size, dissolved oxygen, and aquatic insects in treeholes,” with co-authors *NP Harlan and *JQ Burkhart.
- Aug. 2003: 88th Annual Meeting of Ecological Society of America, Savannah, GA, “Relationships among habitat size, dissolved oxygen, insects, and microbes in treehole communities,” with co-author *NP Harlan.
- Apr. 2003: Faculty Research Group, Davidson College “Effects of land use on aquatic insects in headwater streams.”

- Apr. 2002: Annual Meeting of the Association of Southeastern Biologists, Boone, NC, "Effect of land use and development on insects in streams north of Charlotte, NC," with M Gage* and A Spivak*.
- Nov. 2001: Annual Meeting of Sigma Xi, Raleigh, NC, "Effects of land use on insects in streams north of Charlotte, NC," with undergraduate M Gage* as primary author.
- Sep. 2001: UNC-Charlotte Biology Department, "Control of community structure by abiotic and biotic factors"
- Aug. 2001: 86th Annual Meeting of Ecological Society of America, Madison, WI, "A laboratory exercise using a standardized soil ecotoxicological test"
- Oct. 2000: Davidson College, Department of Biology, "Interactive effects of habitat size and food abundance on growth of larval mosquitoes"
- Apr. 2000: Annual Meeting of the Pennsylvania Academy of Sciences, Reading, PA, "Effects of trout dams on aquatic insect biodiversity," with *Nicole Toto and *John Nealon
- Apr. 2000: Annual Meeting of the Pennsylvania Academy of Sciences, Reading, PA, "Complex interactions in simulated soil ecosystems," with David Glick
- Apr. 2000: Annual Meeting of the Pennsylvania Academy of Sciences, Reading, PA, "Bioassessment of Bowman Creek watershed using benthic macroinvertebrates," with *Jessica Tenbus and *Yvonne Szacki
- Jan. 2000: Invited talk, West Chester University, West Chester, PA, "Interactive effects of resources, pH, and processing chains in treeholes"

LAB MANUALS:

- Paradise CJ (2004) Ecology Laboratory and Field Manual. (Developed for my Ecology course, available online at <http://www.bio.davidson.edu/courses/ecology/321syll.html#lab>).
- Cyr RJ, Leicht BG & Paradise CJ (1994) A Laboratory Manual for Biology 110: Basic Concepts and Biodiversity. University Press Publications, State College, PA.
- Cyr RJ & Paradise CJ (1994) Experimental Biology II. Univ. Press Publ., State College, PA.
- Paradise CJ (1994) Exploring Biology: A Lab Manual. Univ. Press Publ., State College, PA.
- Cyr RJ & Paradise CJ (1993) Experimental Biology I. Univ. Press Publ., State College, PA.

FUNDING & AWARDS RECEIVED:

- Fall 2009: Davidson Research Initiative, Faculty Development Award, "Insect Biodiversity on North Carolina Farms" Course load reduction.
- June 2006: Associated Colleges of the South Environmental Program, Curriculum and Faculty Development, "Designing an Introductory Environmental Studies Course for Davidson College" \$3,000 (w/ Dave Martin and Pat Peroni).
- June 2006: Associated Colleges of the South Environmental Program, Curriculum and Faculty Development, "Designing a Senior-Level Environmental Studies Course for Davidson College" \$3,000 (w/ Dave Martin and Pat Peroni).
- June 2006: Associated Colleges of the South, ACS Small Grant, Curriculum and Faculty Development, "Designing Two Environmental Studies Courses for Davidson College" \$500 (w/ Dave Martin and Pat Peroni).
- May 2006-Aug. 2006: Faculty Study and Research Grant, Davidson College, "Institutional matching funds for NSF-RUI grant" \$3,200.
- May 2005-Aug. 2005: Faculty Study and Research Grant, Davidson College, "Institutional matching funds for NSF-RUI grant" \$3,200.
- March 2005: Associated Colleges of the South Environmental Program, Campus as a Laboratory for Sustainability, "Earth Month at Davidson College: A Celebration of Green," \$1,200.
- Aug 2003-Aug 2006: National Science Foundation, Research at Undergraduate Institutions grant (DEB

#0315208), "RUI: Bottom-Up and Top-Down Influences on Processing Chain Interactions in Detritus-Based Communities," \$200,000.

May 2003-Dec. 2003: Faculty Study and Research Grant, Davidson College, "Microbial and invertebrate interactions in water-filled treehole communities," \$1,661.

Apr. 2002: Leadership in Service Learning Award, Community Service Office, Davidson College.

May 2002-Aug. 2002: Faculty Study and Research Grant, Davidson College, "Scaling Effects of Habitat Size on Aquatic Communities Within Water-Filled Treeholes," \$3,000.

May 2001-Aug. 2001: Faculty Study and Research Grant, Davidson College, "Effects of Stream Type on Aquatic Insects in the Catawba River Basin," \$2,994.

May 1999: Summer Research Stipend, King's College (with D. Glick), "Interactions in Soil Ecosystems: Microbes, Phytotoxins, and Invertebrates," \$4,050.

Oct. 1994-Oct. 1998: Co-PI, Environmental Protection Agency grant (#R82-2298-010 – PI William A. Dunson), "Treehole communities as bioindicators of forest stemflow pollution and ecosystem stress," \$297,000.

Jan. 1994: Fund for the Improvement of Undergraduate Instruction (with R. Cyr), \$9,000.

Aug. 1992: Fund for the Improvement of Undergraduate Instruction (with R. Cyr), \$900.

Jun. 1988: Competitive Research Stipend, SUNY Binghamton, \$1,000.

COLLEGE SERVICE:

Aug. 2009 to present: Climate Action Plan Administrative Policy Team, Davidson College

Aug. 2009 to present: Strategic Plan Implementation Team 3, Center for Civic Engagement, Davidson College

Aug. 2009 to present: Academic Computing Committee, Davidson College

Aug. 2009 to present: Charlotte Teacher's Institute – University Advisory Council

Apr. 2008 to present: President's Sustainability Council, Davidson College

Aug. 2008 to present: Chair, Elmer Brown Environmental Sites Fund Committee, Davidson College

Aug. 2007 to present: Education Committee, Davidson College

Aug. 2004 to present: Faculty Representative for the Morris K. Udall Foundation Scholarship

Aug. 2004 to present: Grant Travel Award Committee, Biology Department, Davidson College

Aug. 2007 to Aug. 2008: Environmental Studies Working Group, Davidson College

Aug. 2006 to May 2008: Faculty Advisor to the Environmental Action Coalition, Davidson College

Aug. 2004 to May 2008: ACS (Associated Colleges of the South) Environmental Faculty Fellow, Davidson College

Oct. 2003 to Aug. 2004: Joint Committee on Information Technology, Davidson College

Aug. 2002 to May 2005: Library Committee, Davidson College

Aug. 2002 to Jan. 2003: Faculty/Staff Retreat Committee, Davidson College

Aug. 2001 to Aug. 2009: Institutional Animal Care and Use Committee, Davidson College

Mar. 2001 to present: Department of Biology Web Server Administrator

SOCIETY MEMBERSHIPS/EDITORIAL SERVICE:

Jan. 2002 to present: Member, Association of Southeastern Biologists

May 2001 to present: Member, North Carolina Academy of Sciences & North Carolina Entomological Society

2001 to 2005: Member, North American Benthological Society

1994-present: Member, Ecological Society of America

1991-1995: Member, Nat'l Assoc. Biological Teachers and Assoc. for Biology Lab. Education

Reviewed manuscripts for following journals:

Annals of the Entomological Society of America (>3)

Aquatic Toxicology
Archives für Hydrobiologie
Archives of Environmental Contamination and Toxicology (>3)
Biologia
Biotropica
Canadian Journal of Zoology (>3)
Ecology and Ecological Monographs (>2)
Ecological Entomology (2)
Functional Ecology
Journal of Animal Ecology
Journal of the North American Benthological Society (>2)
Journal of Vector Ecology
Aquatic Microbial Ecology
American Midland Naturalist (>2)
Journal of Medical Entomology (>3)

Reviewed chapters for the following textbooks:

Gullan, P.J. and Cranston, P.S. The Insects: An Outline of Entomology, Blackwell Publishing

Molles, M. Ecology: Concepts and Applications, McGraw Hill

Camill, P. Environmental Science, W.H. Freeman & Co.

Stiling, P. Ecology: Theories and Applications, 4th edition, Prentice Hall, Boston

Temeles, E.J. Ecology and the Use of Resources: Concepts and Applications, Prentice Hall, Boston

Friedman, A., Jones, R., and Weisberg, S. Environmental Science: People and the Natural World,
W.H. Freeman & Co.

External Reviewer, National Science Foundation:

Panelist at April 2004 DEB-Ecology Program proposal reviews (reviewed 15 proposals)

Ad Hoc reviewer for the DEB-Ecology Program (8 total reviews)

DBS: Division of Molecular and Cell Biology (1)

International Opportunities for Scientists and Engineers (1)

RUI Program (2)

Dissertation Improvement (1)

COMMUNITY SERVICE/OUTREACH:

Jun. 2007 to Jun. 2008: Chair, Social Justice Team, Unitarian Universalist Church of Charlotte, Charlotte, NC.

Jan. 2007 to present: Board of Directors, Carolinas Clean Air Coalition, Charlotte, NC.

Insect Outreach: Routine identifications and consultations on insects.

2003-2006: Davidson IB Middle School: Tutor for Science Olympiad Water Quality and Don't Bug Me teams

Aug. 2003: World View' Partners' Workshop, Providence Day School, Charlotte – presented

“Environmental Impact and the Future of Biosystems” to 100 Charlotte-Mecklenburg School
District Magnet School teachers.

2000: Board of Directors of the Riverfront Parks Committee, a non-profit organization committed to
preserving two city parks near the Susquehanna River in Wilkes-Barre, PA.

1999-2000: Technical Advisor to the Bowman Creek Watershed Association, Noxen, PA, advising on water
quality monitoring and collecting data on benthic insect communities.