

JULIE M. URBAN, Ph.D.

Laboratory for Conservation and Evolutionary Genetics
New York State Museum
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EDUCATION:

Ph.D. (2008), Ecology, Evolution, and Behavior, University at Albany, Albany, NY.

Dissertation: A Phylogenetic Investigation of the Planthopper Superfamily Fulgoroidea (Insecta: Hemiptera) with Emphasis on the Family Fulgoridae. *Distinguished Dissertation Award, College of Arts and Sciences, 2008.*

Chair: Dr. Jason Cryan, New York State Museum

M.S. (2005), Ecology, Evolution, and Behavior, University at Albany, Albany, NY.

Thesis: Reconstructing the phylogeny of the Superfamily Fulgoroidea (Insecta: Hemiptera) using multiple genetic markers.

Chair: Dr. Jason Cryan, New York State Museum

Ph.D. (1995), Human Factors Psychology, University of Central Florida, Orlando, FL.

Dissertation: Task differentiation and status differentiation: Effects on the performance, communication, and perceptions of teams.

Co-Chairs: Dr. Clint A. Bowers and Dr. Ben B. Morgan, Jr.

B.A. (1990), Psychology, University of Dayton, Dayton, Ohio.

ADDITIONAL BIOLOGY TRAINING

Workshop on Molecular Evolution, Woods Hole Marine Biological Laboratories, 2005.

International collecting experience in Belize, Costa Rica (3 expeditions), Peru, French Guiana, Ghana, India, Zambia, Malaysian Borneo (3 expeditions).

Domestic collecting experience in Arkansas, Arizona, California, Florida, Kentucky, Maryland, New Mexico, New York, South Carolina, and Vermont.

RESEARCH AREAS: My research interests focus on the evolution of planthoppers, a diverse and often morphologically bizarre group of phloem-feeding insects in the Hemiptera. By performing phylogenetic reconstructions of relationships among planthopper lineages using molecular and morphological data, my research tests hypotheses concerning classification, biogeography, morphological character evolution, and the co-evolution of planthoppers with their bacterial endosymbionts.

ACADEMIC EXPERIENCE:

New York State Museum Post-Doctoral Fellow, New York State Museum, Laboratory for Conservation and Evolutionary Genetics (1/09-present). Funded by National Science Foundation, Partnerships for Enhancing Expertise in Taxonomy grant (1/09-12/09), and Systematic Biology grant (1/10-present).

Visiting Assistant Professor of Biology, Siena College, (8/07-12/08). Taught two lecture sections and two laboratory sections per semester in General Biology I/II.

Graduate Research Assistant, New York State Museum, (8/03-8/07), Laboratory for Conservation and Evolutionary Genetics.

Graduate Teaching Assistant, University at Albany, Albany, NY (8/02-5/03). Taught two laboratory sections in Introductory Biology; teaching assistant for BIO402, Evolution.

Adjunct Lecturer of Psychology, Southeastern Louisiana University, Hammond, LA (8/00-5/01). Taught two courses per semester.

Visiting Assistant Professor of Psychology, Southeastern Louisiana University, Hammond, LA (8/99-7/00). Taught four courses per semester; served as advisor to Masters and undergraduate students.

Assistant Professor of Psychology and Transportation, Dowling College, Oakdale, NY (8/95-8/99). Tenure track position with teaching load of four courses per semester.

GRANTS:

Cryan, J.R. (PI) and Urban, J.M. (Co-PI). (Awarded Dec. 2009). Illuminating the Lanternfly Tree: Phylogeny of the Planthopper Families Fulgoroidea and Dictyopharidae (Insecta: Hemiptera) and their Bacterial Endosymbionts. *National Science Foundation, Systematic Biology*. Amount of award \$475,000.00.

Urban, J.M. and Cryan, J.R. 2004. A Phylogeny of the Planthopper Superfamily Fulgoroidea. *New York State Museum, Research and Collections, State Education Department*. Awarded \$11,000.00 is to cover costs associated with collecting of specimens and performing molecular sequencing of specimens collected in New York State and in a variety of worldwide regions.

Urban, J.M. 2004. A Phylogenetic Reconstruction of the Planthopper Family Fulgoroidea. *University at Albany, SUNY Benevolent Association*. Awarded \$500.00 toward costs associated with insect collecting expedition to La Selva, Costa Rica in March 2004.

Urban, J.M. 2004. Does a new phylogeny change old ideas? Revisiting host plant mediated diversification in planthoppers (Fulgoroidea). *University at Albany, Graduate Student Organization*. Awarded \$650.00 toward costs associated with travel to present a paper at the Entomological Society of America Annual Meeting, Salt Lake City, UT.

Urban, J.M. 2003. A Phylogeny of the Planthopper Superfamily Fulgoroidea. *Edmund Niles Huyck Preserve*. Awarded \$1500.00 to cover costs associated with collecting of specimens on the preserve, performing molecular sequencing of eight taxa collected on the preserve, and assembling a list and pinned collection of Planthoppers of the Huyck Preserve.

Urban, J.M. 2003. A Phylogeny of the Planthopper Superfamily Fulgoroidea. *University at Albany, Graduate Student Organization*. Awarded \$400.00 toward airfare for insect collecting expedition to La Selva, Costa Rica in August 2003.

ACADEMIC AWARDS:

Distinguished Doctoral Dissertation Award, University at Albany. Award given to the best dissertation in the College of Arts and Sciences, 2008.

President's Prize, Student Competition in Systematics, Morphology, and Evolution for paper presentation entitled: Does a new phylogeny change old ideas? Revisiting host plant mediated diversification in planthoppers (Fulgoroidea). 2004 Entomological Society of America Annual Meeting, Salt Lake City, UT.

Recipient New York State Museum Graduate Fellowship, 2003-2006.

Presidential Scholarship Recipient, University of Dayton (1986-1990). Academic merit-based full tuition, four year scholarship.

PUBLICATIONS:

Urban, J.M., Bartlett, C.R., and Cryan, J.R. *In Press*. Evolution of Delphacidae (Hemiptera: Fulgoroidea): Combined-evidence phylogenetics reveals importance of grass host shifts. *Systematic Entomology*.

Urban, J.M. and Cryan, J.R. 2009. Entomologically famous, evolutionarily unexplored: The first phylogeny of the lanternfly family Fulgoridae (Insecta: Hemiptera: Fulgoroidea). *Molecular Phylogenetics and Evolution* 50, 471-484.

Urban, J.M. and Cryan, J.R. 2007. Evolution of the planthoppers (Insecta: Hemiptera: Fulgoroidea). *Molecular Phylogenetics and Evolution* 42, 556-572.

Urban, J.M. 2005. Tales from the field: A graduate student collects insects in Africa. *Legacy Magazine*, a publication of the New York State Museum.

Manuscripts In Preparation

Cryan, J.R. and Urban, J.M. *In Preparation*. Is Auchenorrhyncha (Insecta: Hemiptera) really paraphyletic?

Urban, J.M. and Cryan, J.R. *In Preparation*. Combining molecular and morphological evidence to reconstruct the phylogeny of the planthopper families Fulgoridae and Dictyopharidae (Insecta: Hemiptera: Fulgoroidea).

Urban, J.M., Cryan, J.R., and Moran, N. *In Preparation*. Characterization of a Gammaproteobacterial endosymbiont of lanternflies and other planthoppers (Insecta: Hemiptera: Fulgoroidea).

Bartlett, C.R., Urban, J.M., and Cryan, J.R. *In Preparation*. A revised classification of Delphacidae (Insecta: Hemiptera: Fulgoroidea). Manuscript to be submitted to *Systematic Entomology*.

Adams, M., Urban, J.M., McCabe, T., Shih, N.W., and Eisenberg, A. *In Preparation*. A generic circumscription of the genus *Zale* (Lepidoptera: Noctuoidea: Noctuidae) based on morphological and molecular data.

Psychology Publications

Giglio, L., Diamante, T. and Urban, J. 1998. Coaching a leader: Leveraging change at the top. *Journal of Management Development*, Vol. 17(2), pp. 93-105.

J.M. Urban, M. Laube, and R. Youth (Eds.) 1997. *Mind and Behavior II*. Needham Heights, MA: Simon and Schuster.

J.M. Urban, M. Laube, and R. Youth (Eds.) 1996. *Mind and Behavior I*. Needham Heights, MA: Simon and Schuster.

Urban, J.M., Weaver, J.L., Bowers, C.A., and Rhodenizer, L. 1996. Effects of workload and structure on team processes and performance: Implications for complex team decision making. *Human Factors*, 38(2), pp. 300-310.

- Bowers, C.A., Morgan, B.B., Jr., and Urban, J.M. 1996. The development of the Team Performance Assessment Battery. *Advances in Interdisciplinary Studies of Work Teams Series*.
- Urban, J.M., Bowers, C.A., Cannon-Bowers, J.A., & Salas, E. 1995. The importance of team architecture in understanding team processes. In M. Beyerlein (Ed.), *Advances in Interdisciplinary Studies of Work Teams, Volume 2*, 205-228. Greenwich, CT: JAI Press.
- Urban, J.M., Bowers, C.A., Monday, S.D., & Morgan, B.B., Jr. 1995. Workload, team structure, and communication in team performance. *Military Psychology*, 7(2), 123-139.
- Urban, J.M., Bowers, C.A., & Morgan, B.B., Jr., & Monday, S. D. 1993. *Effects of workload on communication processes in decision making teams*. (Report No. TR-93-01). Orlando, FL: University of Central Florida, Team Performance Laboratory.
- Bowers, C.A., Urban, J.M., & Morgan, B.B., Jr. November, 1992. *The study of crew coordination and performance in hierarchical team decision making*. (Report No. TR-92-01). Orlando, FL: University of Central Florida, Team Performance Laboratory.

PRESENTATIONS:

- Urban, J.M. and Cryan, J.R. 2010. Illuminating the Lanternfly tree: Phylogenetic investigation of the planthopper families Fulgoridae and Dictyopharidae. Paper to be presented at the 13th International Auchenorrhyncha Congress, Provence, France.
- Urban, J.M. 2010. Bugs within Bugs: Extreme evolution of obligate mutualists. Invited presentation given at the New York State Museum's 8th Annual Teachers' Workshop on Evolution, Albany, NY.
- Urban, J.M., and Cryan, J.R. 2009. Illuminating the lanternfly tree: Phylogenetic investigation of the planthopper family Fulgoridae and their bacterial endosymbionts. Paper presented at the Entomological Society of America Annual Meeting, Indianapolis, IN.
- Bartlett, C., Urban, J.M., and Cryan, J.R. 2009. Delphacid phylogeny and host plant associations. Paper presented at the Entomological Society of America Annual Meeting, Indianapolis, IN.
- Urban, J.M., and Cryan, J.R. 2007. Using molecular and morphological data to turn the classification of Fulgoridae on its head. Paper presented at the Entomological Society of America Annual Meeting, San Diego, CA.
- Urban, J.M. 2007. Evolution from the perspective of endosymbiotic relationships. Invited presentation given at the New York State Museum's 5th Annual Teachers' Workshop on Evolution, Albany, NY.
- Urban, J.M., and Cryan, J.R. 2006. Phylogeny of the fulgorid planthoppers (Hemiptera: Fulgoridae). Paper presented at the Entomological Society of America Annual Meeting, Indianapolis, IN.
- Urban, J.M., and Cryan, J.R. 2006. A phylogeny of the fulgorid planthoppers (Hemiptera: Fulgoridae) based on data from five genes. Paper presented at the New England Molecular and Evolutionary Biology Annual Conference, Amherst, MA.

- Urban, J.M., and Cryan, J.R. 2005. Fantastic fulgorids: The first phylogeny of the family Fulgoridae. Paper presented at the Entomological Society of America Annual Meeting, Ft. Lauderdale, FL.
- Urban, J.M. and Cryan, J.R. 2005. Phylogeny of planthoppers (Fulgoroidea) based on data from three molecular markers. Paper presented at the 12th International Auchenorrhyncha Congress, Berkeley, CA.
- Urban, J.M. and Cryan, J.R. 2004. Does a new phylogeny change old ideas? Revisiting host plant mediated diversification in planthoppers (Fulgoroidea). Paper presented at the Entomological Society of America Annual Meeting, Salt Lake City, UT.
- Cryan, J.R. and Urban, J.M. 2004. Is Auchenorrhyncha really paraphyletic? Paper presented at the Entomological Society of America Annual Meeting, Salt Lake City, UT.
- Urban, J.M., and Cryan, J.R. 2003. A molecular phylogeny of the planthopper superfamily Fulgoroidea. Paper presented at the Entomological Society of America Annual Meeting, Cincinnati, OH.
- Urban, J.M., Bartlett, C.R. and Cryan, J.R. 2002. Gene hopping with planthoppers: A preliminary molecular phylogeny of Fulgoroidea based on multiple gene regions. Paper presented at the New England Molecular and Evolutionary Biology Annual Conference, Woods Hole, MA.
- Urban, J.M., Bartlett, C.R. and Cryan, J.R. 2002. Gene hopping with planthoppers: A molecular phylogeny of Fulgoroidea based on multiple gene regions. Paper presented at the Entomological Society of America Annual Meeting, Ft. Lauderdale, FL.

Psychology Presentations

- Urban, J.M. and Bowers, C.A. 1995. Toward optimizing the performance of product structure teams. Paper presented at the 103rd Annual Meeting of the American Psychological Association, New York, NY.
- Urban, J.M., Bowers, C.A., Maniam, N.S., & Morgan, B.B., Jr. 1994. The effects of workload and uncertainty on team development. In *Proceedings of the 38th Annual Meeting of the Human Factors and Ergonomics Society*, Nashville, TN.
- Weaver, J.L., Urban, J.M., Maniam, N.S., & Bowers, C.A. 1994. Team skill acquisition: Team and individual performance effects of feedback. In *Proceedings of the 38th Annual Meeting of the Human Factors and Ergonomics Society*, Nashville, TN.
- Urban, J.M., Weaver, J.L., Maniam, N.S., & Bowers, C.A. 1994. The effect of team and individual feedback on complex team performance. In *Proceedings of the 2nd Annual Mid-Atlantic Meeting of the Human Factors and Ergonomics Society*. Reston: VA.
- Urban, J.M., Bowers, C.A., Monday, S.D., & Morgan, B.B., Jr. 1993. Effects of workload on communication processes in decision making teams: An empirical study with implications for training. In *Proceedings of the 37th Annual Meeting of the Human Factors and Ergonomics Society*, Seattle, WA.
- Bowers, C.A., Monday, S.D., Morgan, B.B., Jr., & Urban, J.M. 1993, August. Communication training for effective team performance. In J. A. Cannon-Bowers (Chair), *Training teams: Research and*

Applications. Symposium presented at the 101st Annual Meeting of the American Psychological Association, Toronto, Canada.

- Urban, J.M., Bowers, C.A., Morgan, B.B., Jr., Braun, C. C., and Kline, P. B. 1992. The effects of hierarchical structure and workload on the performance of team and individual tasks. In *Proceedings of the 36th Annual Meeting of the Human Factors Society*, pp. 829-833. Santa Monica, CA: Human Factors Society.
- Urban, J.M., Braun, C.C., and Weaver, J.L. 1992. The human factors toxicologist. In *Proceedings of the 36th Annual Meeting of the Human Factors Society*, pp. 572-574. Santa Monica, CA: Human Factors Society.
- Weaver, J.L., Kearns, J.D., and Urban, J.M. 1992. The expert witness. In *Proceedings of the 36th Annual Meeting of the Human Factors Society*, pp. 566-567. Santa Monica, CA: Human Factors Society.
- Kline, P.B., Urban, J.M., Bowers, C.A., and Morgan, B.B., Jr. 1992, June. Team performance and communication in a synthetic work paradigm. Poster presented at the Centennial Meeting of the American Psychological Association, Washington, D.C.
- Urban, J.M., Braun, C.C., and Weaver, J.L. 1992. The human factors toxicologist. Invited presentation at the Central Florida Human Factors Society Meeting, Orlando, Florida.
- Bowers, C.A., Urban, J.M., & Morgan, B.B., Jr. 1992, May. A synthetic work study of hierarchical team decision making: Preliminary results. In D. R. Ilgen (Chair) Team Decision Making. Symposium presented at the 7th Annual Meeting of the Society for Industrial and Organizational Psychology, Montreal, Quebec.
- Urban, J.M., Bowers, C.A., Franz, T.M., and Morgan, B.B., Jr. 1991, March. A comparison of behavioral observations and subjective evaluations in the assessment of aircrew communications. Poster presented at the 37th Annual Meeting of the Southeastern Psychological Association, New Orleans, Louisiana.

POSTERS:

- Brown, J.L. and Urban, J.M. 2004. Why do birds breed as early as they can? Poster presented at the American Ornithological Union Annual Meeting.
- Brown, J.L. and Urban, J.M. 2003. Post-fledging survival of Mexican jays (*Aphelocoma ultramarina*) in relation to laying date and related factors. Poster presented at the American Ornithological Union Annual Meeting.

PROFESSIONAL ACTIVITIES:

Reviewer

Annals of the Entomological Society of America

Invertebrate Systematics

Molecular Phylogenetics and Evolution

Northeastern Naturalist

University at Albany Graduate Student Organization Grants Committee

Search Committee Membership

Search Committee Member for position of Curator of Ornithology, New York State Museum, Spring 2006.

Search Committee Member for Assistant Professor of Psychology, Dowling College, 1999.

Membership

Entomological Society of America
Society of Systematic Biology

BIOLOGY COURSES TAUGHT:

Introductory Biology I – chemical and molecular basis of life
Laboratory for Introductory Biology I
Introductory Biology II – anatomy and physiology
Laboratory for Introductory Biology II

PSYCHOLOGY COURSES TAUGHT:

Conditioning & Learning
Developmental Psychology
Industrial & Organizational Psychology
Interpersonal Communication
Introduction to Psychology
Mind and Behavior I and II
Physiological Psychology
Psychology of Women
Research Methods
Sensation & Perception
Statistical Methods in Psychology