STEVEN PAUL BRADBURY, Ph.D.

Iowa State University, Department of Natural Resource Ecology and Management

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Education:
Doctor of Philosophy (1985) •Toxicology and Entomology•Iowa State University.•Ames, IA•Phi Kappa Phi
Master of Science (1981) •Entomology (Insecticide Toxicology)•Iowa State University•Ames, IA
Bachelor of Science (1978) •Molecular Biology•University of Wisconsin•Madison, WI•With Honors

Citizenship:
United States of America

PROFESSIONAL EXPERIENCE

IOWA STATE UNIVERSITY, DEPARTMENTS OF NATURAL RESOURCE ECOLOGY AND MANAGEMENT AND ENTOMOLOGY

Professor Emeritus 1/2023 - present
Professor 8/2015 –12/2022
Visiting Professor 7/2014 – 7/2015

Tenured Professorship in Iowa State University's Departments of Natural Resource Ecology and Management and Entomology as well as Toxicology and Ecology and Evolutionary Biology Programs. Contributing to research, extension and teaching in University-wide toxicology, environmental, agriculture and natural resource science and policy programs. Areas of emphasis include pesticide resistance management, pollination services, monarch butterfly conservation and sustainable agriculture, including the role of integrated pest management within nested layers of governance. Teaching in areas of toxicology, pesticide and chemical risk assessment and related policy topics.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION
OFFICE OF PESTICIDE PROGRAMS, Washington, DC

Office Director (SES) 4/2010- 3/2014
Acting Office Director (SES) 1/2010 -3/2010

Executive responsible for developing and implementing the nation's pesticide policies and regulations under three Federal statutes and in coordination with related environmental Federal laws; e.g., the Clean Water, Safe Drinking Water, Endangered Species and Plant Protection Acts. Direct management and operational responsibilities over the largest EPA Headquarters Office with 11 senior executive direct reports, 750 staff and an annual budget of $150 million. Primary areas of executive leadership included implementing over 1000 regulatory pesticide registration and re-evaluation decisions per year, consistent with statutory-timelines and based on externally peer-reviewed, state-of-the science human health and ecological risk assessments. Leadership ensured safe use of beneficial crop protection and public health products; development and implementation of emerging risk-based methods for pesticide and natural resource management; advancement of Integrated Pest Management and national worker protection and training programs; and support of scientific and regulatory positions within national and international fora and treaties. Executive leadership guided productive, collaborative relationships with other EPA Offices; USDA, DOI, DOC and HHS; State, Tribal and international governments; academic research and teaching institutions and a diverse stakeholder community to develop and implement innovative approaches to address cross-cutting environmental challenges. Responsible for presenting EPA pesticide policies and programs to the House and Senate Agriculture, Natural Resources and

Environment committees at public hearings and through senior staff briefings.

Specific examples of accomplishments:

- Implemented new, state-of-the science risk assessment methods for human and ecological protection
- Implemented peer-reviewed watershed-based water quality monitoring and assessment methods
- Advanced risk assessment approaches for biotechnology and nanotechnology products
- Led EPA, USDA, DOI and DOC National Academy of Science review of pesticide risk assessment methods for endangered species
- Launched a national school IPM program
- Cancelled residential use of anticoagulant rodenticides to protect children and wildlife
- Re-designed pesticide registration and re-evaluation programs through Office-wide participation; new strategic direction addressed 21st century scientific challenges and opportunities to maximize success of budget proposals

Deputy Office Director for Programs (SES) 2009- 2010

With the Office Director, executive responsible for leading and managing the Office of Pesticide Programs. Areas of executive leadership included: pesticide registration and re-evaluation programs; initiatives to advance protection of sensitive subpopulations, aquatic life, wildlife and endangered species; external scientific peer reviews; US scientific and regulatory positions within the international community; and emerging toxicity testing and risk assessment methods. Forged collaborative relationships between the Program's executives and leaders in other EPA offices, Federal Departments, State governments and International Agencies.

Specific examples of accomplishments:

- Implemented NAS recommended toxicity testing and assessment methods for pesticides
- Issued new standards to mitigate risks of pesticide spray drift to workers, bystanders and wildlife
- Initiated the endocrine disruptor screening program for pesticides
- Led science-based, practical process to ensure protection of water quality from pesticide exposure

SPECIAL REVIEW AND RE-REGISTRATION DIVISION

Division Director (SES) 2007-2009

Executive leader of 75 Federal staff. Ensured national regulatory decisions for existing pesticides used in agricultural, commercial and residential settings met statutory timeframes and standards to protect public health and the environment. Implemented transparent risk management policies and decisions based on robust public participation.

Specific examples of accomplishments:

- Implemented the new registration review program
- Completed the cumulative risk assessment for *N*-methyl carbamate insecticides
- Phased-out the registration of organic arsenical herbicides to protect drinking water
- Initiated use restrictions on rodenticides to protect children and wildlife
- Completed re-registration of soil fumigants to provide protection to workers and bystanders
- Led carbofuran cancellation and tolerance revocation to protect children and wildlife

ENVIRONMENTAL FATE AND EFFECTS DIVISION

Division Director (SES) 2003-2007

Executive leader of 100 Federal staff with annual mission support contracts of $5 million. Advanced national and site-specific ecological risk assessments and drinking water exposure characterizations to support registration and re-registration decisions of conventional pesticides.

Specific examples of accomplishments:

- Transformed the Division to advance state of the science risk assessments
- Established endangered species risk assessment methods with other Federal agencies
- Integrated risk assessments and monitoring requirements with Clean Water Act programs
- Ensured rigorous scientific support for contested pesticide cancellations and restrictions

OFFICE OF RESEARCH AND DEVELOPMENT
NATIONAL CENTER FOR ENVIRONMENTAL ASSESSMENT
OFFICE OF THE DIRECTOR
1200 PENNSYLVANIA AVE.
WASHINGTON DC, 20460

Executive Senior Advisor (SES) 3/2014 – 4/2014

Executive leader advising the Center's Director and senior executives on EPA issues concerning human health and environmental risk assessment methods, research planning and Program Office commitments. The Center is EPA's lead organization in conducting chemical assessments for human health and ecological impacts; providing innovative risk assessment methods and guidelines; training EPA and State scientists on new risk assessments methods; maintaining and disseminating risk information; and defining, sponsoring, and conducting research to develop improved assessment methods.

Specific examples of accomplishments:

- Provided the Center advice on re-shaping its human health risk assessment program to be better aligned with EPA regulatory needs over the next 5 years; provided recommendations to strengthen and streamline the associated external peer-review process.

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NATIONAL HEALTH AND ENVIRONMENTAL EFFECTS RESEARCH LABORATORY
1200 PENNSYLVANIA AVE.
WASHINGTON DC, 20460

MID-CONTINENT ECOLOGY DIVISION, Duluth, MN

Division Director (SES) 1999 – 2002

Executive leader and overall manager of laboratories in Duluth, MN and Grosse Ile, MI, which employed 104 Federal staff and 60 non-Federal staff with an annual extramural research budget of $10 million. Planned, directed and implemented national research and demonstration programs to advance understanding of the effects of chemicals and land use on freshwater ecological resources. Incorporated the Division's research products into the Agency's regulatory programs by leading collaborative partnerships with EPA Offices and International, Federal and State agencies.

Specific examples of accomplishments:

- Reorganized the Division to more efficiently and effectively meet the mission
- Implemented monitoring and assessment programs for small watersheds and the Great Lakes and Great Rivers basins through partnerships with University consortia and other Federal and State agencies
- Transferred risk assessment and criteria methodology, models and databases to EPA programs
- Co-led the establishment of EPA's 21st century computational toxicology program

Supervisory Branch Chief (GS-14, GS-15) 1998–1999: 1994–1995; 1991–1993
Led research Branches of 20 - 30 Ph.D. and M.S. scientists investigating reproductive effects of industrial chemicals and pesticides on aquatic life and wildlife, the interactive effects of chemical and non-chemical stressors in aquatic ecosystems and quantitative structure activity relationships to support risk assessments for industrial chemical, pesticide, clean water and hazardous waste programs. Provided expert assistance to, and formed partnerships, with EPA Program and Regional Offices and States agencies.

Specific examples of accomplishments:

- Led research team leaders in multi-disciplinary and cross-organizational projects
- Established wildlife criteria for the Great Lakes as required by the Critical Programs Act
- Public release of an expert system to predict toxicity of industrial chemicals

Acting Associate Division Director for Science (GS-14) 1995–1997; 1993–1994
Appointed by ORD senior leadership on two occasions to direct the Division's research program. With a staff of over 75 research scientists and an annual extramural research budget of $6 million, led the development and integration of research efforts across Branches and teams within the Division and with other EPA laboratories. Coordinated collaborative research agreements with academic institutions and other Federal, State and Tribal agencies.

Specific examples of accomplishments:

- Created the ECOTOX database to support EPA, Federal, State and local governmental risk assessments
- Established an environmental education program with seven bands of the Ojibwa Tribe
- Led a successful Division-wide external peer-review by EPA's Board of Scientific Counselors

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OFFICE OF SCIENCE POLICY
1200 PENNSYLVANIA AVE.
WASHINGTON DC, 20460

ORD Regional Scientist (GS-14) 1997–1998
Competitive detail appointment as the senior science advisor to the Region 8 (Denver, CO) Regional Deputy Administrator and Associate Administrators. Led refinement of ORD research programs to better meet Regional needs and ensure implementation of research products in Regional risk assessments, with a primary emphasis on clean water and hazardous waste/superfund applications.

Specific examples of accomplishments:

- Established State partnerships for a stream monitoring program west of the Mississippi River
- Advanced risk assessment approaches to facilitate waste-site remediation and pollution prevention
- Created the National Regional Science Council to advance Regional-ORD collaboration

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NATIONAL HEALTH AND ENVIRONMENTAL EFFECTS RESEARCH LABORATORY
MID-CONTINENT ECOLOGY DIVISION, Duluth, MN

Research Toxicologist (GS-11, GS-12, GS-13) 1985-1991
Led ecotoxicology research teams to advance state-of-the science risk assessments to support industrial chemical, pesticide, clean water and hazardous material regulations. Nationally and international recognized for scientific and research leadership. Provided technical assistance to EPA Program and Regional Offices as well as State governments. Adjunct assistant professor, University of Minnesota-Duluth, Interdepartmental Toxicology Program.

CONGRESSIONAL HEARINGS

EPA hearing witness, Joint Public Hearing before the Subcommittee on Nutrition and Horticulture of the Agriculture Committee and the Subcommittee on Water Resources and Environment of the Committee on Transportation and Infrastructure, United States House of Representatives. "Regulatory Burdens Posed by the Case National Cotton Council v. EPA (6th Cir. 2009) and to review Related Draft Legislation." February 16, 2011. The hearing addressed pesticide aquatic life risk assessment methods and application under pesticide and clean water statutes.

EPA hearing witness, Joint Public Hearing before the Committee on Agriculture and the Committee on Natural Resources, United States House of Representatives. "At Risk: American Jobs, Agriculture, Health, and Species – The Costs of Federal Regulatory Dysfunction." May 3, 2011. The hearing addressed pesticide risk assessments for endangered species under FIFRA and ESA.

AWARDS AND HONORS

Henry A. Wallace Award for Outstanding Leadership to National and International Agriculture. College of Agriculture and Life Sciences, Iowa State University. 2014.
USEPA Scientific and Technological Achievement Awards 2001, 1998, 1993.
USEPA Silver Medal – Final Great Lakes Water Quality Initiative, Wildlife Criteria, 1995.
USEPA Bronze Medal – Establishment of the National Regional Science Council, 1998.
USEPA Bronze Medal – TCDD Wildlife Risk Assessment for the Columbia River Basin, 1993.
USEPA Bronze Medal – Draft Great Lakes Water Quality Initiative, Wildlife Criteria, 1992.
USEPA Bronze Medal – Municipal Sludge Ecological Risk Assessment 1992.

APPOINTMENTS

United Nations, World Health Organization, Vector Control Advisory Group, (2018 – present).
University of Iowa Center for Health Effects of Environmental Contamination Advisory Committee (2018-present)
United Nations, World Health Organization, Sterile Insect Technology Advisory Group, (2019).
Midwest Association of Fish & Wildlife Agencies, Mid-America Monarch Conservation Strategy. Agriculture/Private Working Lands Committee (2017)
U.S. National Academies of Science, Engineering and Medicine Committee Member: Committee on Future Biotechnology Products and Opportunities to Enhance Capabilities of the Biotechnology Regulatory System (April 2016 – March 2017; http://nas-sites.org/biotech/)
USFWS Monarch Conservation Science Partnership (2016- present)
Keystone Monarch Collaborative Steering Committee (2015 – present).
Innovative Vector Control Consortium, External Scientific Advisory Committee (2015 – 2016)
U.S. Government Head of Delegation, Regulatory Coordination Council with Canada, Work Group on Pesticides (2012 to 2014).
U.S. Government Head of Delegation, Letter of Intent for Cooperation with the Institute for the Control of Agrochemicals, Ministry of Agriculture, People's Republic of China, Work Group on Pesticides (2011 to 2014).
U.S. Government Head of Delegation, North American Free Trade Association, Technical Working Group on Pesticides (2010 to 2014).
Chair, Federal Advisory Committee, Pesticide Program Dialogue Committee (2010 to 2014).
Co-Chair, Pesticide Program Dialogue Committee workgroup on Toxicology Testing in the 21st Century (2008-2014).
Member, Technical Oversight Committee, Audubon Society Project, "Waterbirds on Working Lands: An Examination of Waterbird Activity on Agricultural Landscapes." (2004-2007).
Chair, Organization of Economic Cooperation and Development, Validation Management Group for Non-Animal Assays; Endocrine Disrupter Testing and Assessment Working Group (2004 - 2009)

Member U.S. EPA Risk Assessment Forum (1991 - 1998).
Scientific Advisory Committee, University of California-Davis, Center for Ecological Health Research (1998- 2001).
ATSDR Steering Committee on Physiologically-Based Pharmacokinetic Models and Structure Activity Relationships (1994 - 1996).
Editorial Board, Australasian Journal of Ecotoxicology (1994 - 1999).

SYMPOSIUM/WORKSHOP LEADERSHIP

Co-Chair, Iowa State University and Iowa Department of Agriculture and Land Stewardship Symposium, Pesticide Resistance Management: Where do we go from here? Iowa State University, College of Agriculture and Life Sciences, April 4, 2022, Ames, IA.
Co-Chair, Program Symposium: A New Vision for Managing the "Wicked Problem" of Pest Resistance. Annual Meeting of the Entomological Society of America, November 16 – 18, 2020, Virtual
Co-chair, Workshop: IPM for Early Season Pests. Iowa State University. June 19 – 21, 2018, Ames, IA.
Transformational Working Summit: Future Insect Management. Corteva and Cultivan Sandbox. April 10 – 12, 2018, Des Moines, IA.
Co-Chair, Symposium: Monarch Butterfly Conservation in the North Central states: Challenges and Opportunities. Annual Meeting of the North Central Entomological Society of America. March 18 – 21, 2018, Madison, WI.
Co-Chair, Symposium: Monarch Butterfly Conservation in North America: Challenges and Opportunities. Annual Meeting of the Entomological Society of America. November 15 – 18, 2015, Minneapolis, MN.
Chair, Iowa State University and Iowa Department of Agriculture and Land Stewardship Symposium, Resistance management: Whose problem and whose job? Iowa State University, College of Agriculture and Life Sciences, January 31, 2015, Ames, IA.
Organizing and Scientific Committees for the Fifth, Sixth, Seventh, Ninth and Tenth International Workshops on QSARs in Environmental Sciences (1990 Duluth, MN; 1992 Ispra, Italy; 1996 Elsinore, Denmark; 2000 Bourgas, Bulgaria, 2002 Ottawa, Canada).
Scientific Steering Committee and Session Co-Chair, U.S. EPA/Department of Interior Workshop on Advances in Hardrock Mining Remediation Technology and Assessing and Prioritizing Aquatic Risk and Response, October, 1998, Denver, CO.
Scientific Steering Committee, U.S. EPA Risk Assessment Forum/Department of Interior/World Health Organization, Workshop on 2,3,7,8-TCDD TEFs for Aquatic Life and Wildlife, January 1998, Chicago, IL.
Scientific Steering Committee, U.S. EPA/ATSDR/NIEHS/ DOD, Workshop on Sentinel Species, September 1997, Fredrick, MD.
Scientific Steering Committee, Society of Environmental Toxicology and Chemistry-Europe, Workshop on Biotransformation in Environmental Risk Assessment, April 1996, Noordwijkerhout, The Netherlands.
Session co-chair at Annual Society of Environmental Toxicology and Chemistry Meetings (1996, 1991).
Co-Chair, U.S. EPA International Symposium on Structural Properties for Determining Mechanisms of Toxic Action, October 1988, Duluth, MN.
Co-Chair, International Symposium on Aquatic Toxicology of the Pyrethroid Insecticides. National meeting of the Society of Environmental Toxicology and Chemistry, November 1986, Alexandria, VA.

TEACHING

Iowa State University (2014-present): Guest lectures in SUSAG530 (Ecologically Based Pest Management Strategies); ECON380 (Environmental and Resource Economics); NREM260X (Introduction to Controversial Science). ENT/TOX 450/550 (Pesticides in the Environment), ENT 590I (Insect Toxicology) and ENT/TOX 675 (Insecticide Toxicology); TOX 401/501 (Principles of Toxicology); TOX 515 (Regulatory Toxicology), TOX 504 (Toxicology Seminar), TOX 689 (Current Topics in Toxicology).

Advisor of 3 Postdoctoral Associates, 4 PhD and 2 MS students; serve on 10 PhD committees.

Mentor 1 George Washington Carver Summer Intern (2017); 6 Freshman/Sophomore Honor Students (HON 290H, 490H; Spring 2018, 2019, 2020, Fall 2019); 1 Junior NSF Louis Stokes Alliances for Minority Participation in STEM intern (2018); 8 NREM 490 and 3 ENT/NREM 490 students (Fall 2019; Spring, 2020; Fall 2020), 1 GLOBE 401 student (Fall 2020)

Alt. Toxicology DOGE; Tox. Program Supervisory Committee; Advisor Tox. Graduate Student Organization

GRANTS AWARDED

US Department of Defense, Strategic Environmental Research and Development Program: Ecotoxicology Database and Modeling Support System; 1993 -1995 ($1,300,000).

US EPA Office of Research and Development Competitive Environmental Education Training Grant: Niibin Aazhogan - An environmental resource training program (with S. Linder); 1992- 1995 ($190,000).

US EPA Office of Research and Development Competitive Innovative Research Grant: Free radical reactivity and oxidative stress: Implications for assessing the toxicological hazards of environmental pollutants (with K. Wallace); 1990 ($50,000).

US EPA Office of Research and Development Competitive Innovative Research Grant: Development of a noninvasive whole animal assay of neurotoxicity (with J. Coats); 1988 ($50,000).

US EPA Office of Research and Development Competitive Innovative Research Grant: Metabolism and tumor induction of primary aromatic amines in fish (with R. Johnson); 1987 ($50,000).

Iowa Soybean Association, Evaluating methods for establishing monarch breeding habitat in non-crop land associated with bioreactors (Co-PI with R. Hartzler, S. Blodgett, R. Hellmich); September 2015 – September 2018 ($86,154).

Iowa Soybean Research Center, Support for the Iowa pest resistance management plan; November 2015 – November 2018 ($60,000).

Iowa Pork Producers Association, Establishing monarch butterfly breeding habitat on Iowa swine production sites (Co-PI with R. Hartzler, M. Honeyman); September 2015 – September 2019 ($125,841).

Iowa USDA/NRCS/Iowa-Conservation Innovation Grant, Evaluating milkweed and nectar forage seed blends for monarch butterfly breeding habitat associated with saturated buffer zones (PI with S. Blodgett, T. Isenhart, R. Hartzler, R. Hellmich, R. Schultz); September 2015 – September 2019 ($151,423).

USDA/NRCS-Conservation Innovation Grant, Enhancing monarch butterfly conservation in Iowa (PI with S. Blodgett, D. Debinski, R. Hellmich, R. Hartzler, J. Pleasants); September 2015 – March 2020 ($1,521,794).

NSF/ISU Seed Grant, Monarch habitat assessments in agroecosystems using deep neural nets (Co-PI with A. Sharma and S. Blodgett); January 1, 2017 – December 31, 2018 ($25,000).

USDA/North Central IPM Center, A community-based approach to integrated pest-resistance management affecting corn and soybean: case studies for the north central region (PI with A. Gassmann, J. Miranowski, M. Owen, and A. Robertson); March 1, 2017 – February 28, 2019 ($49, 857).

Foundation for Food and Agriculture Research, Pollinator Health Fund. Impact of prairie on reducing interacting stressors on pollinator health. (co-PI with L. Schulte-Moore, A. Dolezal, M. O'Neal, A. Toth, J. Tyndall); January 1, 2018 – December 31, 2021 ($636,638).

USDA/NIFA-AFRI, Factors influencing spatially explicit monarch population responses in midwest agroecosystems (PI with J. Adelman, J. Coats, R. Hartzler, R. Hellmich, J. Pleasants, T. Sappington); February 1, 2018 – January 31, 2022 ($670, 675).

USDA/NIFA-AFRI, Assessment of the socio-economic factors impacting adoption of voluntary pest resistance management by rural communities. (Co-PI with P. Lasley, J. Miranowski, A. Rosburg, A. Plastina, and E. Sivesind); July 1, 2019 – June 30, 2022 ($291,000).

USDA/NIFA-AFRI, Elucidation of arrested pupal ecdysis: a novel, newly discovered insecticidal mode of action to manage a diversity of insect pests (Co-PI with N. Krishnan and R. Jurenka); submitted May 26, 2021 ($298,738; January 1, 2022 – December 31, 2023).

CONTRACTS TO SUPPORT RESEARH AND OUTREACH

Bayer, Dupont-Pioneer and Syngenta, Prevention to prediction: A conference to advance IPM for sporadic early-season insect pests of corn, cotton and soybean; March 2017 – August 2018 ($45,000).

Iowa Corn Growers Association, Iowa Farm Bureau Federation, Iowa Soybean Association, Agriculture Biotechnology Stewardship Technical Committee, Insecticide Resistance Action Committee, Herbicide Resistance Action Committee. Support for implementing the Iowa Pest Resistance Management Plan; March 2017 – March 2020 ($400,000).

BASF, Bayer and Syngenta. Estimating the exposure to neonicotinoid residues in pollinator-attractive habitat adjacent to corn and soybean fields (co-PI with M. O'Neal, J. Coats and A. Toth); March 31, 2017 – March 30, 2021 ($391, 671).

Monsanto. Evaluation of a varroa mite (*Varroa destructor*)-Active dsRNA via dietary exposure to monarch butterfly (*Danaus plexippus*) larvae (PI with J. Coats and R. Hellmich); March 1, 2018 – February, 29, 2021 ($98,850).

GRANTS IN REVIEW

GRANT PROPOSALS NOT FUNDED

National Fish and Wildlife Foundation, Design of a probabilistic survey to quantify milkweed populations in Iowa: A Framework for Assessing Monarch Habitat in the Summer Breeding Range (Co-PI with S. Dinsmore, R. Hartzler, J. Pleasants; Z. Zhu); submitted July 14, 2015 ($436, 696; November 2015 – November 2016).

National Fish and Wildlife Foundation, Coordination for Iowa monarch conservation strategy and monitoring (Co-PI with Iowa Department of Natural Resources); submitted May 2, 2016 ($416,722; January 2017 – December 2018).

USDA/NIFA-AFRI, Prevention to prediction: A conference to advance IPM for sporadic early-season insect pests of corn, cotton and soybean (Co-PI with E Hodgson, M. O'Neal and T. Sappington); submitted August 17, 2016 ($24,974; March 2017 – March 2018).

National Cooperative Highway Research Program, Evaluating the suitability of roadway corridors for use by monarch butterflies (Co-PI with J. Alleman. S. Blodgett, D. Debinski, R. Hellmich, J. Pleasants, A. Sharma, P. Savolainen, B. Wilsey); submitted October 10, 2016 ($349,579; January 1, 2017 – December 31, 2019).

USDA/NIFA-AFRI, Factors influencing spatially explicit monarch population responses in midwest agroecosystems (PI with J. Adelman, J. Coats, R. Hartzler, R. Hellmich and J. Pleasants); submitted July 18, 2016 ($499,004; October 2016 – September 2019); invited to re-submit in 2017; funded 2018.

NSF/Integrated Organismal Systems, Pre-proposal. Fitness in a fragmented landscape: revealing the role of resource-perception capacity in a wild insect**.** **(**Co-PI with J. Adelman, T. Grant, R. Hellmich, T. Sappington), submitted January 19, 2017 (April 15, 2018 – April 14, 2021).

USDA/NIFA-AFRI, A method to study insect dispersal by detecting haplotype variation using full mitochondrial genome enrichment and Illumina sequencing. (co-PI with B. Coates); submitted May 24, 2017 ($99,983; January 1, 2018 – December 31, 2019).

USDA/NIFA- North Central Region SARE, Preproposal. Implementation of Community Based Pest-Resistance Management Programs (PI with E. Sivesind); submitted October 20, 2017 ($200,000).

Iowa USDA/NRCS/Iowa's Partners for Wildlife. Improving environmental performance of Iowa's grasslands for wildlife (PI with R. Hartzler and A. Janke), submitted January 31, 2018 (July 1, 2018 – June 30, 2023; $274,671).

Iowa USDA/NRCS/Iowa's Partners for Wildlife. Technical assistance for NRCS' evaluation of herbicide risk to Iowa wildlife of concern. (PI with R. Hartzler), submitted January 31, 2018 (July 1, 2018 – June 30, 2021; $144,038).

USDA North Central Region Sustainable Agriculture Research and Education. Experiential training for Iowa's USDA Conservation professionals in native habitat establishment and management on CRP land. (PI with S. Blodgett and S. Appelgate), submitted March 22, 2018 (October 1, 2018 – September 30, 2021; $74,980).

Iowa USDA/NRCS/Iowa-Conservation Innovation, Establishing monarch butterfly and pollinator habitat in concert with installation of Iowa nutrient reduction strategy edge-of-field practices (PI with S. Blodgett, T. Isenhart, R. Hartzler, R. Hellmich, J. Pleasants); submitted May 25, 2018 (September 2018 – September 2021; $149,848).

National Fish and Wildlife Foundation, Catalyzing the establishment of 500 thousand acres of monarch and pollinator habitat in Iowa. (PI with A. Janke); submitted May 7, 2018 (August 2018 – July 2020; $94,942).

National Institutes of Health. National Institute of General Medical Sciences. Toxicology mentoring and skills development training program (Co-PI with W. Rumbeiha, J. Danielson, A.-P., Correla, E. Gilbreath, and D. Alexander), submitted January 12, 2018 (December 1, 2018 – November 20, 2023; $2,661,621).

Iowa USDA/NRCS/Iowa's Partners for Wildlife. Pork Producers Improving Grasslands for Pollinators. (PI with A. Janke and R. Euken), submitted February 1, 2019 (August 1, 2019 – September 30, 2023; $399,143).

Iowa USDA/NRCS/Iowa-Conservation Innovation Grant. Demonstration of habitat enhancement to benefit monarchs and pollinators (PI), submitted May 24, 2019 (September 1, 2019 – September 30, 2021; $149,720).

National Science Foundation, RII Track-2 FEC, Bigdata4ag-harnessing big data to predict agronomic, ecological, and environmental impacts of seed treatments (Co-PI with J. Zhan, F. Goggin, U. of Arkansas, lead institution; C. Bradley, U. of Kentucky; J. Coats, Y. Kandel, Q., Li, D. Mueller M. O'Neal; August 1, 2020 – July 31, 2024 ($6,000.000 total; $1,800,000 ISU share; submitted January 24, 2020).

National Science Foundation. Catalyzing Transdisciplinary Convergence Research for Cooperative Management of Pest Resistance in Agricultural Systems. (Co-PI with K. Dentzman, D. Mueller, and P. Lasley; M. Bagavathiannan (Texas A&M), L. Glenna (Penn State University), G. Frisvold (University of Arizona), and R. Clifford (Kansas University); submitted February 7, 2022 ($3,499,6125; ISU – $1,432,190) September, 2022- August 2027).

USDA/NIFA-AFRI, IPM cross-training for pollinator conservation (PI with E. Hodgson, R. Cass, J. Tyndall); January 1, 2021 – December 31, 2024 ($500,000; Submitted April 8, 2020).

USDA/NIFA-AFRI, Finding the sweet spot: Can profitable beekeeping and wild bees coexist on working lands? (Co-PI with M. O'Neal, A. Toth, L. Schulte-Moore, and J. Tyndall); submitted May 27, 2021 ($750,000; February 1, 2022 – January 31, 2025).

National Science Foundation. Catalyzing Transdisciplinary Convergence Research for Cooperative Management of Pest Resistance in Agricultural Systems. (Co-PI with M. Bagavathiannan, D. Ervin, L. Glenna, G. Frisvold); submitted February 1, 2021 ($3,599,650; November, 2021- October 2026); invited to re-submit.

REVIEWER

U.S. National Academies of Sciences, Engineering and Medicine Draft Reports:
California's Risk Assessment Process for Pesticides (reviewed 2014)
Genetically Engineered Crops: Past Experience and Future Prospects (reviewed 2015)
Strategy for Evaluating Evidence of Low-Dose Toxicity from Endocrine Active Chemicals (reviewed 2017)
Forest Health and Biotechnology: Possibilities and Considerations (reviewed 2018)
Transforming EPA Science to Meet Today's and Tomorrow's Challenges (reviewed 2022)

Grant Proposals:
National Institutes of Health, Biological Models and Materials Resources Program Study Section for RFA on "Development of Non-Mammalian Models for Biomedical Research"
Research Foundation – Flanders, Belgium
United Kingdom, Natural Environmental Research Council

Journals:
American Chemical Society Symposium Series
American Society for Testing and Materials, Aquatic Toxicology and Hazard Assessment Symposium Series
Applied In vitro Toxicology
Aquatic Toxicology
Archives of Environmental Contamination and Toxicology
Current Opinion in Insect Science
Ecological Economics
Environmental Pollution
Environmental Science and Technology
Environmental Toxicology and Chemistry
Frontiers in Ecology and Evolution
Human and Ecological Risk Assessment
Insects
Journal of Economic Entomology
Journal of Environmental Entomology
Oikos
PeerJ
Pesticide Management Science
Regulatory Toxicology and Pharmacology

MEMBERSHIP IN PROFESSIONAL SOCIETIES

American Association for the Advancement of Science
American Chemical Society (Agrochemical Division)
Entomological Society of America
Society of Environmental Toxicology and Chemistry
Society of Toxicology

SERVICE TO PROFESSIONAL SOCIETIES

Entomological Society of America, North Central Branch, Honorary Awards Committee (2017 – 2019)
Society of Toxicology, Central States Chapter, Program Committee for 2017 Annual Meeting, September 21 – 22, 2017, Ames, IA.
Society of Environmental Toxicology and Chemistry, Awards Committee Member (1985-1987)

PUBLICATIONS AND PRESENTATIONS

Over 100 peer-reviewed journal articles and book chapters and over 100 invited first author presentations at international and national scientific conferences (see attached Appendix).

APPENDIX – PUBLICATIONS AND SCIENTIFIC PRESENTATIONS

PUBLICATIONS

Peer-Reviewed Journal Articles:

1. Hall, M.J., Schrunk, D.E., Burns, L.E., **Bradbury, S.P**., and Coats, J.R. 2026. Evaluation of ELISA and LC-MS/MS methods of quantifying neonicotinoid concentrations in water and plant foliage. Environ. Toxicol. Chem. (In preparation).

2. Mullins, A., **Bradbury, S.P**., Sappington, T. and Adelman, J. 2026. Investigation of monarch butterfly perceptual range using outdoor tethered flight experiments. PLOS ONE (In revision).

3. Hall, M.J., Zhang, G., O'Neal, M., **Bradbury, S.P**. and Coats, J.R. 2026. Assessing pollinator habitat exposure to pesticide mixtures in Iowa USA agroecosystems. Agric. Sci. Tech. (In revision).

4. Jurenka, R., Adeyanju, O.Z., **Bradbury S.P.**, Gorman, C., Purlee, S., and Krishnan, N. 2026. Neonicotinoids cause arrested ecdysis in Coleoptera. J. Econ. Ent. https://doi.org/10.1093/jee/toag244

5. Fisher, K.E., Bryan, C.B. Acevedo, C., Anderson, K.E., Goldman, Kira M, Kulakowski, K., Shimota, S.N., and **Bradbury, S.P.** 2026. Impacts of common milkweed (*Asclepias syriaca*) leaf age on larval monarch (*Danaus plexippus*) survival, growth, development, and feeding behavior. Insects. https://doi.org/10.3390/insects17020215

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8. Featherstone, D., C.D. Drewes, J.R. Coats, and **S.P. Bradbury**. 1993. A non-invasive neurotoxicity assay using larval medaka. In: *Environmental Toxicology and Risk Assessment: 2nd Volume,* ASTM STP 1216. Gorsuch, J.W., F.J. Dwyer, C.G. Ingersoll, and T.W. LaPoint (Eds.). American Society for Testing and Materials, Philadelphia, PA. pp. 275- 288.

9. Niemi, G.J**., S.P. Bradbury**, and J.M. McKim. 1991. The use of fish physiology literature for predicting fish acute toxicity syndromes. In: *Aquatic Toxicology and Hazard Assessment: Thirteenth Volume,* ASTM STP 1124. Barron, M. and M. Mayes (Eds.). American Society for Testing and Materials, Philadelphia, PA. pp. 245-260.

10. Bradbury, S.P. and R.L. Lipnick (Eds.). 1990. Structural properties for determining mechanisms of toxic action. Environ. Health Perspect. 87:181-272.

11. Bradbury, S.P., T.R. Henry, and R.W. Carlson. 1990. Fish acute toxicity syndromes in the development of mechanism-specific QSARs. In: *Practical Applications of Quantitative Structure-Activity Relationships (QSAR) in Environmental Chemistry and Toxicology.* Karcher, W. and J. Devillers (Eds.). Kluwer Academic Publishers, Dordrecht, The Netherlands. pp. 295-315.

12. Bradbury, S.P., R.W. Carlson, and T.R. Henry. 1989. Polar narcosis in aquatic organisms. In: *Aquatic Toxicology and Hazard Assessment: Twelfth Symposium.* ASTM STP 1027. Cowgill, U.M. and L.R. Williams (Eds.). American Society for Testing and Materials, Philadelphia, PA. pp. 59-73.

13. Coats, J.R. and **S.P. Bradbury** (Eds.). 1989. Aquatic toxicology of the pyrethroid insecticides. Environ. Toxicol. Chem. 8:359-429.

14. Bradbury, S.P. 1988. Fish acute toxicity syndromes: Application to the development of mechanism-specific QSARs. In: *Proceedings of the Third International Workshop on Quantitative Structure-Activity Relationships in Environmental Toxicology.* Turner, J.E., M.W. England, T.W. Schultz, and N.J. Kwaak (Eds.). Department of Energy Publication No. CONF-880520 (DE88013180), pp. 61-70.

Iowa State University Outreach and Extension Publications:

1. Bradbury, S.P. (Ed.). 2015. Resistance management: Whose problem and whose job? http://www.ipm.iastate.edu/content/pesticide-resistance-workshop-2015
2. Bradbury, S.P. (Ed.). 2015. Conceptual framework for an Iowa pest resistance management plan. http://www.ipm.iastate.edu/content/pesticide-resistance-workshop-2015

3. Bradbury, S.P. (Ed.). 2017. Iowa Pest Resistance Management Plan http://www.ipm.iastate.edu/protectiowacrops.
4. Bradbury, S.P. (Ed.). 2017, 2018. Iowa Monarch Conservation Strategy. http://monarch.ent.iastate.edu/files/file/iowa-monarch-conservation-strategy.pdf
5. Appelgate, S., Blodgett, S., **Bradbury, S**., Debinski, D., Hartzler, R., Pleasants, J., Schweitzer, D. and Hellmich, R. 2018. Monarch high diversity seed mix high. https://store.extension.iastate.edu/product/15139

6. Bradbury, S., Isenhart, T. and D. Schweitzer. 2019. Establishing and managing pollinator habitat on saturated riparian buffers. https://store.extension.iastate.edu/product/15730
7. Bradbury, S.P. (Ed). 2020. Enhancing monarch conservation in Iowa. https://store.extension.iastate.edu/product/15925

U.S. EPA Research Reports:

1. U.S. EPA. 2005. *Wildlife Research Strategy*. EPA 600/R-04/050, Office of Research and Development, February 2005 (a lead author).

2. U.S. EPA. 1995. *Great lakes water quality initiative technical support document for wildlife criteria.* EPA/820/B-95/009, Office of Water, March 1995 (a lead author; document incorporated SAB review and public comment).

3. U.S. EPA. 1995. *Great lakes water quality initiative criteria documents for the protection of wildlife: DDT, mercury, 2,3,7,8-TCDD and PCBs.* EPA/820/B-95/008, Office of Water, March 1995 (a lead author; document incorporated public comment).

4. Cook, P.M., R.J. Erickson, R.L. Spehar, S.P. Bradbury, and G.T. Ankley. 1993. *Interim report on data and methods for assessment of 2,3,7,8-tetrachloro-p-dioxin risks to aquatic life and associated wildlife.* EPA/600/R-93/055, Office of Research and Development, March 1993 (externally peer-reviewed).

5. Bradbury, S.P., G.D. Veith, and C.L. Russom. 1992. *Report on prototype expert system to predict toxic mechanism from chemical structure.* U.S. Environmental Protection Agency, Office of Research and Development, Duluth, MN. Deliverable No. 5658A.

6. Bradbury, S.P. and P.N. Fitzsimmons. 1991. *Interim wildlife criteria: Assessment of screening level values.* U.S. Environmental Protection Agency, Office of Research and Development, Duluth, MN. (Internal Agency Report).

7. Bradbury, S.P. 1990. *Validation of screening level wildlife criteria: A progress report.* U.S. Environmental Protection Agency, Office of Research and Development, Duluth, MN. (Internal Agency Report).

8. Bradbury, S.P. and R.W. Carlson. 1990. *Predictive toxicology in risk assessment: Approaches in predicting mechanisms of toxic action.* U.S. Environmental Protection Agency, Office of Research and Development, Duluth, MN. Deliverable No. 7912A.

9. Bradbury, S.P., P.N. Fitzsimmons, and E. Anderson. 1989. *Screening study for wildlife criteria development.* U.S. Environmental Protection Agency, Office of Research and Development, Duluth, MN. (Internal Agency Report).

10. Bradbury, S.P., R. Hunter, and S.A.T. Hammermeister. 1988. *Expert system to predict major metabolites of industrial chemicals: A progress report.* EPA-600/D-88-298. U.S. Environmental Protection Agency, Office of Research and Development, Duluth, MN. (Internal Agency Report).

11. Bradbury, S.P. 1986. *Report on SAR methods to predict major metabolites of industrial chemicals.* U.S. Environmental Protection Agency, Office of Research and Development, Duluth, MN. (Internal Agency Report).

INVITED PRESENTATIONS

1. How evidence-based policy can meet the needs of pollinator conservation without compromising the needs of pest management. Annual Meeting of the Entomological Society of America. November 5 - 8, 2023, National Harbor, MD.

2. Monarch butterfly ecology, behavior, and vulnerabilities in Midwest U.S. row crop landscapes. 265th annual meeting of the American Chemical Society. March 26 – 30, 2023, Indianapolis, IN.

3. Panelist. 12th Annual American Association for the Advancement of Science/Charles Valentine Riley Memorial Lecture. Washington DC, November 30, 2022.

4. Can we grow crops and monarchs? Risks and benefits of monarch habitat in agricultural landscapes. Monarch Joint Venture Webinar. May 24, 2022.

5. Conservation risks and benefits: Establishing monarch butterfly breeding habitat in agricultural landscapes of the North Central USA. Missouri University of Science and Technology. April 11, 2022.

6. Socio-economic factors that influence pest resistance management practices at the community scale. Mississippi Entomological Association and Mississippi Association of Plant Pathologists & Nematologists annual meeting. November 9th, 2021. Virtual meeting (Extension).

7. Managing pest resistance across space, time and institutions. 2021. Annual Meeting of the Entomological Society of America. October 31 – November 3, 2021. Virtual meeting.

8. Iowa Pest Resistance Management Program. Spring meeting of the Association of American Pesticide Control Officers. March 9th, 2021. Virtual meeting. (Extension).

9. Estimating landscape scale risks of insecticide use to non-migratory monarch butterfly (Danaus plexippus) populations in the North Central U.S. Will the results be useful? Annual Meeting of the Entomological Society of America. November 11– 25, 2020, Virtual meeting.

10. Governance options for managing pest resistance. Annual Meeting of the Entomological Society of America. November 17 – 10, 2019, St. Louis, MO.

11. Can we grow crops and monarch butterflies? Assessing risks of insecticides to monarch populations at the landscape scale. Oklahoma State University Interdisciplinary Toxicology Symposium. March 25, 2019. Stillwater, OK.

12. The historical context for sublethal endpoint assessment testing relevant to chemical pesticides. International Life Science Institute Workshop on Sublethal Endpoints in Non-Target Organisms for Non-Bt genetically engineered crops. March 5 – 6, 2019, Washington DC.

13. Future products of biotechnology and needs for risk analysis science: Findings and recommendations of a national academies of science study. Society of Environmental Toxicology and Chemistry North America 39th Annual Meeting. November 5 -9, 2018, Sacramento, CA.

14. Providing habitat for pollinators and the monarch butterfly (*Danaus plexippus*) using in-field and edge of field conservation practices. 256th American Chemical Society National Meeting. August 19-23, 2018. Washington, DC.

15. Pest Resistance: Implications for Conservation. Iowa NRCS Leadership Meeting. August 21, 2018, Des Moines, IA. (Extension)

16. Entomology informing environmental risk analyses: Spatial, temporal and social dimensions. Annual Meeting of the North Central Branch of the Entomological Society of America. March 18 – 21, 2018, Madison, WI.

17. Landscape Scale Estimates of Monarch Butterfly *(Danaus plexippus*) Population Responses to Insecticide Exposure in an Iowa Agroecosystem. Society of Environmental Toxicology and Chemistry North America 38th Annual Meeting. November 12 -16, 2017, Minneapolis, MN.

18. Optimizing crop protection regulatory systems through governance and risk analysis – experience from the US. British Crop Protection Annual Conference: Achieving both Productivity and Safety through Better Regulation. October 31 – November 1, 2017, Brighton, England.

19. Managing pesticide risks to pollinators: Conservation risks and benefits. Organization for Economic Cooperation and Development Webinar on Pollinator Safety, June 28, 2017, Paris, France.

20. Preparing for future products of biotechnology. 14th International Symposium on the Biosafety of Genetically Modified Organisms, June 4 – 8, 2017, Guadalajara, Mexico.

21. Assessing risks of pesticide use in crop production on the monarch butterfly (*Danaus plexippus*): Conservation risks and benefits. National Fish and Wildlife Foundation sponsored South-Central Monarch Symposium, May 31 – June 1, 2017, Austin TX.

22. Environmental Impact of Synthetic Biology. Workshop sponsored by the U.S Army Corps of Engineers, Environmental Research and Development Center, May 17 – 19, 2017, Lexington, MA.

23. Iowa Pest Resistance Management Plan. Iowa Independent Crop Advisor Association annual meeting. February 15, 2017, Ames, Iowa. (Extension).

24. Iowa Pest Resistance Management Plan. Agribusiness Association of Iowa annual meeting. February 14, 2017, Des Moines, Iowa. (Extension).

25. Iowa Pest Resistance Management Plan. Iowa Farm Power Show. February 2, 2017, Des Moines, Iowa. (Extension).

26. Monarch conservation in Iowa. Iowa Farm Bureau Federation Annual Meeting, December 6, 2016. Des Moines, IA. (Extension).

27. Monarch conservation and agriculture productivity. Iowa Learning Farms Series, Iowa State University Extension and Outreach, May 18, 2016, Ames, IA. (Extension).

28. Monarch conservation in Iowa. Symposium on the Development of Managed Pollinator Protection Plans. Sponsored by USDA, EPA and NASDA, March 10 – 11, 2016, Washington D.C.

29. Monarch conservation, pest resistance management and agriculture productivity. 2016 Iowa Soybean Association Research Conference. February 16 – 17, 2016, Des Moines, IA. (Extension).

30. Cost-benefit analyses and U.S. pesticide registrations of neonicotinoid seed treatments. Video for Iowa Seed Treatment Continuing Instructional Course. January 21, 2016, Ames, IA. (Extension).

31. How Tox21 risk assessments can help bridge risk management uncertainties facing 21st century regulatory decisions. FutureTox III: Transforming 21st Century Science into Risk Assessment and Regulatory Decision-Making. Society of Toxicology Workshop. November 19 – 20, 2015, Arlington, VA.

32. Role of land grant institutions and states within agriculture-based conservation initiatives. Symposium: Monarch Butterfly Conservation in North America: Challenges and Opportunities. Entomology-2015. Annual Meeting of the Entomological Society of America. November 15 – 18, 2015, Minneapolis, MN.

33. Cost-benefit analyses and U.S. pesticide registrations: Options for neonicotinoid seed treatments. Symposium: What are the Costs and Benefits for Neonicotinoid Seed Treatments in Field Crops? Annual Meeting of the Entomological Society of America. November 15 – 18, 2015, Minneapolis, MN.

34. Bringing Partners Together: State Monarch Summits, Plans, and Workgroups (panel discussion). States Monarch Conservation Workshop. Midwest Association of Fish and Wildlife Associations. October 27 - 29, 2015 Des Moines, IA. (Extension).

35. Inspiring action for monarch conservation. 2015 USFWS Region 3 Endangered Species Coordinators' Meeting – Joint State/Federal Partners. September 21 – 24, 2015, Springfield, IL. (Extension).

36. Cost-benefit analyses and U.S. pesticide registrations: Options for neonicotinoid seed treatments. Annual Meeting of the North Central Branch of the Entomological Society of America. May 31 – June 3, 2015, Manhattan, KS.

37. Managing resistance: Options for shared pest susceptibility. Annual Meeting of the North Central Branch of the Entomological Society of America. May 31 – June 3, 2015, Manhattan, KS.

38. Risks, benefits and sustainability: Current challenges in pesticide regulation. Kansas State University, Department of Entomology. April 13, 2015, Manhattan, KS.

39. Regulation of pesticides in the U.S.: Risks, benefits and sustainability. Iowa State University, Graduate Program in Sustainable Agriculture. March 11, 2015, Ames, IA.

40. Developing risk-based approaches for feasible pest management and endangered species protection. Iowa State University, Department of Entomology. February 9, 2015, Ames, IA.

41. Resistance management: Whose problem and whose job? Meeting Chair. Iowa State University and Iowa Department of Agriculture and Land Stewardship. January 30, 2015, Ames, IA. (Extension).

42. Environmental costs and benefits of neonicotinoid seed treatments. Joint Meeting of the North Central Regional Association of State Agricultural Experimental Stations, NC204/NCCC-46, Ecology and Management of European Corn Borers, Corn Rootworm Beetles and other Above and Below Ground Insect Pests of Maize. January 26- 29, 2015, San Antonio, TX.

43. Current and emerging ground water quality issues and pesticide products. Workshop on Future and Emerging Issues for Private Wells. John Hopkins School of Public Health, Department of Health Policy and Management and Centers for Disease Control and Prevention. January 14 – 16, 2015, Baltimore, MD.

44. Regulatory issues for pest control products. Ag Chemical Update Meeting. Iowa State University, Agriculture and Natural Resources College of Extension and Outreach. December 10, 2014, Ames, IA.

45. Pesticide regulatory update. Integrated Crop Management Conference, Iowa State University, Agriculture and Natural Resources College of Extension and Outreach. December 3, 2014, Ames, IA. (Extension).

46. Pesticide ecological risk assessments and common pool resources. South Dakota State University, College of Agricultural and Biological Sciences and USDA, ARS North Central Agricultural Research Laboratory. November 3, 2014, Brookings, SD.

47. Human health and ecological risk assessments for pesticides: Challenges for toxicology in the 21st century. Iowa State University, Interdepartmental Program in Toxicology. October 24, 2014, Ames, IA.

48. The next generation of sustainable chemistries and agricultural products. American Bar Association Committee on Pesticides, Chemical Regulation and Right to Know Committee. July 11, 2014, Washington, DC.

49. Practical applicability of new toxicology tools. 2nd Annual Meeting of the American Society for Cellular and Computational Toxicology. October 31, 2013, Bethesda, MD.

50. Biopesticides: registration and regulatory trends. 246th American Chemical Society National Meeting. September 8 – 13, 2013, Indianapolis, IN.

51. Can science work harder to support policy makers? European Food Safety Authority 10th Anniversary High Level Conference. November 13, 2012. Parma, Italy.

52. Scientific, regulatory, and public perspectives on the credibility and use of alternative toxicological test methods in a legislative framework. 51th Annual Meeting of the Society of Toxicology, March 11 – 15, 2012, San Francisco, CA

53. A more efficient and effective testing and assessment paradigm for chemical risk management. 51th Annual Meeting of the Society of Toxicology, March 11 – 15, 2012. San Francisco, CA.

54. Vision for an integrated approach to testing and assessment. 40 years of chemical safety at OECD: Planning for the next decade. June 15. 2011. Organization for Economic Cooperation and Development. Paris, France.

55. Fetal origin of adult disease: A regulatory perspective. National Research Council. October, 2010, Washington D.C.

56. Pesticide training and certification at EPA. 2009 North American Pesticide Applicator Certification and Safety Education Workshop. August 10 -13, 2009. Charleston, SC. (Outreach).

57. Status of the US endocrine disruptor screening program (EDSP). Organization for Economic Cooperation and Development- Endocrine Disrupter Testing and Assessment Workshop on OECD Countries Activities Regarding Testing, Assessment and Management of Endocrine Disrupters. Copenhagen, Denmark, September 20 – 26, 2009.

58. Meeting the needs of a paradigm shift: A regulatory perspective. Symposium on Toxicity Testing. November 4 – 5, 2009. Chicago, IL.

59. The paradigm shift in risk assessment. The McKim Conference on the Use of QSARs and Aquatic Toxicology in Risk Assessment, June 27 – 29, 2006, Duluth, MN.

60. Scientific needs of ecological risk assessment in a regulatory context. 231st American Chemical Society National Meeting, March 26 – 30, 2006, Atlanta GA.

61. National pesticide program ecological risk assessments: Status and challenges. USEPA Science Advisory Board Workshop on Ecological Risk Assessment – An Evaluation of the State of the Practice, February 7 – 8, 2006, Washington D.C.

62. Molecular biology and risk assessment: Evaluation of the potential roles of genomics in regulatory ecotoxicology. Society of Environmental Toxicology and Chemistry Foundation for Environmental Education and Society of Toxicology/Pellston Conference. Workgroup Member, September, 2005, Pellston MI.

63. Defining toxicity pathways: The foundation for establishing relevant dose-metrics and effective risk assessments. Workshop on Internal Exposure - Linking Bioavailability to Effects, August 22 - 27, 2004, Ascona, Switzerland.

64. Computational toxicology research in ORD: The scientific foundation for a paradigm shift in chemical risk assessment. USEPA Office of Research and Development Workshop on Computational Toxicology, September 29-30, 2003, Research Triangle Park, NC.

65. Ecological risk assessments: update and what's ahead. Association of American Pesticide Control Officials, August 6 - 8, 2003, Denver CO.

66. Computational toxicology in chemical risk assessment. Society of Neurotoxicology Annual Meeting, November 19 -21, 2002, Little Rock, AR.

67. Workshop on The Regulatory Acceptance of (Q)SARs for Human Health and Environmental Endpoints. European Centre for Ecotoxicology and Toxicology of Chemicals, March 4-8, 2002, Lisbon, Portugal.

68. A 3-D QSAR-based identification algorithm for potential estrogen receptor ligands. Eighth International Workshop on QSAR in Environmental Sciences, September, 16-21, 2000, Bourgas, Bulgaria.

69. Prioritization and ranking techniques for pesticides and industrial organic chemicals. Second Indo-US Workshop on Mathematical Chemistry, May, 2000, Duluth, MN.

70. Development of structure activity relationships for assessing ecological risks. 217th National Meeting of the American Chemical Society, Corwin Hansch Award Symposium, March 1999, Anaheim, CA.

71. United States Environmental Protection Agency Great Lakes Water Quality Initiative Wildlife Criteria. International Joint Commission, Great Lakes Science Advisory Board's Workgroup on Ecosystem Health Workshop on Great Lakes Water Quality Criteria, March 1998, Chicago, IL.

72. An overview of structure activity relationships in aquatic ecological risk assessments. National Science Foundation Workshop on Research Needs for Coastal Pollution, October 1997, Milwaukee WI.

73. Society of Environmental Toxicology and Chemistry Foundation for Environmental Education/Pellston Conference. Reproductive and Developmental Effects of Contaminants in Oviparous Vertebrates: Mechanisms, Ecological Consequences and Assessments of Risk, Workgroup Member, July 1997, Gregson MT.

74. Predictive models in environmental toxicology. Keynote address, Symposium on Predictive Methods in Toxicology and Environmental Toxicology, Sponsored by the University of Utrecht and the National Institute of Public Health and the Environment, May 1997, Utrecht, The Netherlands.

75. The evolution of ecological risk assessment: USEPA proposed guidelines as a paradigm for opportunities. International Environmental Conference of the Paper and Related Industries, Canadian Pulp and Paper Association and USDA Forest Service, May 1997, Minneapolis, MN.

76. Society of Environmental Toxicology and Chemistry-Europe/Organization for Economic Cooperation and Development/European Commission, Expert Workshop on Endocrine Modulators and Wildlife Assessment and Testing, QSAR Workgroup Rapporteur, April 1997, Veldhoven, The Netherlands.

77. Identifying hazards of endocrine disruptors: a modeling framework. USEPA Endocrine Disruptors Screening and Testing Advisory Committee, February 1997, Houston, TX.

78. Quantitative structure activity relationships and active analogue search techniques: an assessment of conformer flexibility. 17th Annual Meeting of the Society of Environmental Toxicology and Chemistry, Special Symposium on Environmental Endocrine Disruptors, November 1996, Washington, DC.

79. Society of Environmental Toxicology and Chemistry-Europe, Workshop on Biotransformation in Environmental Risk Assessment, Steering committee member responsible for metabolic activation component, April 1996, Noordwijkerhout, The Netherlands.

80. Development of wildlife criteria in the Great Lakes Water Quality Initiative. Fourth Annual Meeting of the Midwest Chapter of the Society of Toxicology and Chemistry, April 1996, Duluth, MN.

81. Approaches and limitations in wildlife toxicity extrapolations. Second SETAC World Congress, 16th Annual Meeting of the Society of Environmental Toxicology and Chemistry, November 1995, Vancouver, B.C., Canada.

82. Toxic equivalency methods for evaluating Ah receptor-mediated effects: Uncertainties in ecological risk assessments. Second SETAC World Congress, 16th Annual Meeting of the Society of Environmental Toxicology and Chemistry, November 1995, Vancouver, B.C., Canada.

83. Narcosis and toxicity mechanisms in aquatic organisms. Short-course on Mechanisms of Acute Toxicity: Baseline (or Minimum) Toxicity. Second SETAC World Congress, 16th Annual Meeting of the Society of Environmental Toxicology and Chemistry, November 1995, Vancouver, B.C., Canada.

84. QSARs for ecological effect assessments: integrating ecotoxicology research with model development. Proctor and Gamble Environmental Science Seminar Series, September 1995, Cincinnati, OH.

85. QSAR approaches for assessing risk of endocrine disruptors. USEPA Workshop on Ecological Effects of Endocrine Disruptors, June 1995, Duluth, MN.

86. Body burden assessments. California EPA Workshop on Guidelines for Ecotoxicological Risk Assessment, March 1995, Davis, CA.

87. QSAR applications for mixture assessments: Issues in predicting the toxicity of reacting chemicals. Sixth International Workshop on QSAR in Environmental Sciences, September 1994, Belgirate, Italy.

88. SETAC Foundation for Environmental Education/Pellston Conference. Ecological Risk Assessment Modeling System. Taskgroup chair on ecological data needs, August 1994, Pellston, MI.

89. Experiences in QSAR and Ecological Risk Assessment. CSRIO, Division of Water Resources, July 1994, Griffith, N.S.W., Australia.

90. Predictive toxicology in ecological risk assessment. New South Wales EPA, Waters and Catchment Branch, June 1994, Sydney, N.S.W. Australia.

91. Ecological risk assessment for chemical stressors: challenges in predictive ecotoxicology research. Keynote address, First Annual Conference of the Australasian Society for Ecotoxicology, June 1994, Sydney, N.S.W., Australia.

92. Ecological protection: The science. Council of State Governments and International City and County Management Association Ecological Protection Conference, April 1994, Chicago, IL.

93. Ecological effects of 2, 3, 7, 8-TCDD: An overview for aquatic life and associated wildlife. 9th Annual US EPA Regional Risk Assessment Conference, April 1994, Boston, MA.

94. Experiences in QSAR research and ecological hazard assessment. Decision support methodologies for hazard identification and risk assessment of toxic substances - A workshop sponsored by ASTDR, U.S. EPA, NCI, NIEHS, The National Library of Medicine, and Wright-Patterson Air Force Base, October 1993, Atlanta, GA.

95. The role of metabolic activation in modeling the toxicity of xenobiotics. Computational chemistry workshop, USEPA National Environmental Supercomputing Center, September 1993, Bay City, MI.

96. Predicting modes of toxic action from chemical structure: An Overview. Fifth International Workshop on QSAR in Environmental Toxicology, July 1992, Duluth, MN.

97. First order uncertainties in deriving wildlife criteria. National Wildlife Criteria Methodologies Meeting, April 1992. Charlottesville, VA.

98. Predictive toxicology in ecological risk assessment: Approaches in predicting mechanisms of toxic action from chemical structure. National meeting of the American Chemical Society, April 1991, Atlanta, GA.

99. Development of mechanism-specific QSARs: Application to ecological hazard assessments. Organization for Economic Co-operation and Development Workshop on Quantitative Structure Activity Relationships (QSARs) in Aquatic Effects Assessment, September 1990, Utrecht, The Netherlands.

100. Fish acute toxicity syndromes in the development of mechanism-specific QSARs. Practical applications of quantitative structure-activity relationships (QSAR) in environmental chemistry and toxicology, EURO - course series of the Commission of the European Communities, June 1990, Ispra, Italy.

101. Toxicokinetic and metabolic studies associated with the validation of medaka as a cancer model. Aquatic Models in Carcinogenicity Workshop, Chemical Manufacturers Association, January 1990, Washington, DC.

102. Fish acute toxicity syndromes: Application to the development of mechanism-specific QSARs. Third International Workshop on Quantitative Structure-Activity Relationships in Environmental Toxicology, May 1988, Knoxville, TN.

103. Polar narcosis in aquatic organisms. American Society for Testing and Materials Twelfth Symposium on Aquatic Toxicology and Hazard Assessment, April 1988, Las Vegas, NV.

104. Synthetic pyrethroids: Insecticides of the 80's. Iowa Pest Control Conference, January 1985, Ames, IA.

FIRST-AUTHOR PRESENTATIONS (In Addition to Invited Presentations)

1. Key challenges and opportunities for monarch butterfly conservation. Annual Meeting of the North Central Branch of the Entomological Society of America. March 18 – 21, 2018, Madison, WI.

2. Advancing risk-analysis science in anticipation of future biotechnology products. Annual Meeting of the American Association for the Advancement of Science, February 18, 2018, Austin, TX.

3. Iowa monarch conservation, pest management, and crop production. Integrated Crop Management Conference, Iowa State University, Agriculture and Natural Resources College of Extension and Outreach. November 30, 2017, Ames, IA. (Extension)

4. New developments in a hazard identification algorithm for hormone receptor ligands. National meeting of the Society of Toxicology, March 1999, New Orleans, LA.

5. Incorporating conformational flexibility in structure activity relationships for ligand binding to steroid hormone receptors. National meeting of the Society of Environmental Toxicology and Chemistry, November 1997, San Francisco, CA.

6. Quantitative structure activity relationships for polychlorinated hydroxybiphenyl estrogen receptor binding affinity: An assessment of conformer flexibility. Seventh International Workshop on QSAR in Environmental Sciences, June 1996, Elsinore, Denmark (due to EPA travel restrictions presented by O. Mekenyan).

7. Quantitative structure activity relationships for polychlorinated hydroxybiphenyl estrogen receptor binding affinity. Fourth Annual meeting of the Midwest Chapter of the Society of Environmental Toxicology and Chemistry, April 1996, Duluth, MN.

8. Toxicokinetics and in vivo metabolism of aniline and 4-chloroaniline in medaka (*Oryzias latipes*). National meeting of the Society of Toxicology, March 1993, New Orleans, LA.

9. Development of screening-level values to identify and rank chemical hazards to wildlife. National meeting of the Society of Environmental Toxicology and Chemistry, November 1991, Seattle, WA.

10. Acetylenic and allylic alcohol reactivity, inhibition of alcohol dehydrogenase (ADH) activity and QSAR analyses for *in vivo* toxicity to fish. 12th Annual meeting of the Society of Environmental Toxicology and Chemistry, November 1991, Seattle, WA.

11. Use of non-linear dynamic systems to predict toxic mechanisms from chemical structure. Fourth International Workshop on QSAR in Environmental Toxicology, September 1990, Veldhoven, The Netherlands.

12. Metabolism and toxicokinetic considerations in using fish as *in vivo* models for carcinogen assessments. Ninth Annual meeting of the Society of Environmental Toxicology and Chemistry, November 1988, Crystal City, VA.

13. An expert system to predict the metabolism of environmental contaminants. National meeting of the Society of Environmental Toxicology and Chemistry, November 1988, Crystal City, VA.

14. Further assessment of rainbow trout respiratory-cardiovascular responses in identifying fish acute toxicity syndromes. National meeting of the Society of Environmental Toxicology and Chemistry, November 1987, Pensacola, FL.

15. Response of fish to pyrethroid intoxication. National meeting of the Society of Environmental Toxicology and Chemistry, November 1986, Alexandria, VA.

16. Toxicokinetics of fenvalerate in rainbow trout. National meeting of the Society of Environmental Toxicology and Chemistry, November 1985, St. Louis, MO.

17. Distribution and metabolic fate of fenvalerate in rainbow trout. National meeting of the American Chemical Society, September 1985, Chicago, IL.

18. Differential toxicity and uptake of two fenvalerate formulations in fathead minnows. National meeting of the Entomological Society of America, December 1984, San Antonio, TX.

19. Distribution of fenvalerate via two routes of entry into black cutworm. National meeting of the Entomological Society of America, November-December 1982, Toronto, Ontario.

20. Toxicity and metabolic fate of fenvalerate in bobwhite quail. National meeting of the American Chemical Society, September 1982, Kansas City, MO.

21. Excretion of tritium in bobwhite quail following the oral administration of radiolabeled fenvalerate. Meeting of the North Central Branch of the Entomological Society of America, March 1981, Columbus, OH.

CO-AUTHOR PRESENTATIONS (2015 - present)

1. Hartzler, R.G. and **Bradbury S.P.** Monarchs, Milkweeds, and the Endangered Species Act. 77th Annual Meeting of the North Central Weed Science Society, December 5 – 8, 2022. St. Louis, MO (Invited).

2. Krishnan N., Hall M., Coats, J. and **Bradbury S**. Extrapolating pesticide toxicity and risk to listed lepidopteran species. Annual Meeting of the Entomological Society of America. November 5 - 8, 2023, National Harbor, MD.

3. Krishnan N., Gorman, C., **Bradbury S.**, and Jurenka, R. Elucidating the mechanism through which low-dose neonicotinoid and pyrethroid insecticides disrupt insect ecdysis. 43rd Annual Meeting of the Society of Environmental Toxicology and Chemistry, November 13-17, 2022, Pittsburgh, PA.

4. Krishnan N, and **Bradbury S.P.** Assessing risk of insecticide exposures to Lepidoptera: Molecular to population-level effects. 264th Annual Meeting of the American Chemical Society. August 21 – 25, 2022, Chicago, Il (Invited).

5. Krishnan N., Jurenka, R.A., and **Bradbury S.P.** Characterizing a novel adverse outcome pathway for neonicotinoid insecticides. Annual meeting of the North Central Branch of the Entomological Society or America, March 20 -23, 2022, Minneapolis, MN.

6. Fisher, K., Coates, B., Wanamaker, A., and **Bradbury S.** Monarch butterflies migrate to avoid the midwestern winter: Quantifying individual-level migration with stable isotope and genetic analyses. Annual meeting of the North Central Branch of the Entomological Society or America, March 20 - 23, 2022, Minneapolis, MN.

7. Hall, M.J., Krishnan N., Coats J.R., and **Bradbury S.P.** Estimating screening-level risks of insecticide exposure to lepidopteran species of conservation concern in agroecosystems. Annual Meeting of the Society of Environmental Toxicology and Chemistry, November 14 – 18, 2021, Virtual meeting.

8. Fisher, K.E. and **Bradbury S.P.** Influence of habitat configuration on breeding-season female monarch butterfly (*Danaus plexippus*) movement and space use in north-central USA agroecosystem landscapes. Annual Meeting of the Entomological Society of America. October 31 - November 3, 2021, Virtual meeting.

9. Fisher, K.E. and **Bradbury, S.P.** Estimating perceptual range of female monarch butterflies (*Danaus plexippus*) to potted vegetative common milkweed (*Asclepias syriaca*) and blooming nectar resources. 262th Annual Meeting of the American Chemical Society. August 22 – 26, 2021, Virtual meeting.

10. Hall, M., Zhang, G., O'Neal, M., **Bradbury, S**., Coats, J. Pollinator habitat exposure to insecticide and fungicide mixtures in Iowa agricultural landscapes. 262th Annual Meeting of the American Chemical Society. August 22 – 26, 2021, Virtual meeting.

11. Fisher, K.E. and **Bradbury, S.P.** Implementing radio telemetry to track monarch butterflies produces robust datasets to estimate flight patterns, habitat utilization, and perceptual range. Annual Meeting of the Entomological Society of America. November 11– 25, 2020, Virtual meeting.

12. Grant T., Krishnan N, and **Bradbury S**.P. Modeling landscape-scale effects of insecticide drift on monarch butterfly (*Danaus plexippus*) populations in an Iowa agroecosystem to support a national assessment. Annual Meeting of the Entomological Society of America. November 11– 25, 2020, Virtual meeting.

13. Krishnan, N. and **Bradbury S.P**. A student's perspective - how to set up your publication in hopes it will be used quantitatively in a risk assessment. Annual Meeting of the Entomological Society of America. November 11– 25, 2020. Virtual meeting (Invited).

14. Krishnan N., Jurenka R, and **Bradbury S.** 2020. Extrapolating insecticide toxicity data across Lepidopteran species of conservation concern: Pathways to elucidating novel developmental effects. Society of Environmental Toxicology and Chemistry North America 41st Annual Meeting. November 15 -19, 2020. Virtual meeting.

15. Hall, M., O'Neal, M., **Bradbury, S**., and Coats, J. 2020. Quantifying neonicotinoid insecticide residues in wildflowers sampled from prairie strips in row cropped fields planted with treated seeds. Society of Environmental Toxicology and Chemistry North America 41st Annual Meeting. November 15 -19, 2020. Virtual meeting.

16. Grant T., Krishnan N, and **Bradbury S**. 2020. Modeling landscape-scale effects of insecticide drift on monarch butterfly (*Danaus plexippus*) populations in an Iowa agroecosystem to support a national assessment. Society of Environmental Toxicology and Chemistry North America 41st Annual Meeting. November 15 -19, 2020. Virtual meeting.

17. Hall, M., G. Zhang, O'Neal, M., **Bradbury, S**., and Coats, J. 2020. Quantifying neonicotinoid insecticide residues in pollinator-attractive habitat adjacent to corn and soybean fields in Iowa. 260th American Chemical Society National Meeting. August 17 - 20, 2020. Virtual meeting.

18. Fisher, K.E., Coates, B.S. and **Bradbury, S.P**. Prediction of mitochondrial genome-wide variation using mitochondrion enrichment and next-generation sequencing methods. International Branch of the Entomological Society of America. April 27-29, 2020. Virtual meeting

19. Mullins, A.N., Krishnan, N, **Bradbury. S.P**., Sappington, T.W., Adelman J.S., Egg-laying monarchs do not discriminate oviposition based on the presence of a neonicotinoid insecticide. Joint North Central and Southwestern Branch meeting of Entomological Society of America, March 15 – 18, 2020, Oklahoma City, OK. Virtual meeting.

20. Krishnan N, Aust M, Coats J, **Bradbury S**. Estimating risks of insecticide exposure on different life stages of monarch butterfly (*Danaus plexippus*). Joint North Central and Southwestern Branch meeting of Entomological Society of America, March 15 – 18, 2020, Oklahoma City, OK. *(Cancelled due to COVID-19).*

21. Grant T, Krishnan N, **Bradbury S.** Landscape-scale effects of insecticide drift on monarch butterfly *(Danaus plexippus)* populations in an Iowa agroecosystem. Joint North Central and Southwestern Branch meeting of Entomological Society of America, March 15 – 18, 2020, Oklahoma City, OK. *(Cancelled due to COVID-19).*

22. Fisher, K.E. and **Bradbury, S.P**. Monarch Butterfly Population Decline: How understanding movement ecology can aid in population recovery. Iowa Pheasants Forever & Quail Forever Convention. January 24 – 25, 2020. Des Moines, IA (Invited).

23. Grant, T.G. and **Bradbury, S.P**. A novel statistical method for estimating immature survival probability from monarch butterfly field counts. Annual Meeting of the Entomological Society of America. November 17 – 10, 2019, St. Louis, MO.

24. Hall, M.J., Dang, V., O'Neal, M., **Bradbury, S.P,** and Coats, JR. Quantification of neonicotinoid residues in pollen and nectar. Annual Meeting of the Entomological Society of America. November 17 – 10, 2019, St. Louis, MO.

25. Krishnan, N., Grant, T.G., Aust, M., Bidne, K., Hellmich, R., Coats, J.R. and **Bradbury, S.P**. Estimating the risk of insecticide exposures on monarch butterfly (*Danaus plexippus*) at the patch and landscape scales. Annual Meeting of the Entomological Society of America. November 17 – 10, 2019, St. Louis, MO. (Invited).

26. Krishnan, N., Coats, J.R. and **Bradbury, S.P**. Comparing the insecticide sensitivity of monarch butterflies (*Danaus plexippus*) to bees and other butterflies. Annual Meeting of the Entomological Society of America. November 17 – 10, 2019, St. Louis, MO. (Invited poster).

27. Mullins, A.N., Krishnan, N., **Bradbury, S.P**., Sappington, T.W., Adleman, J.S. Monarch butterfly oviposition response to milkweed treated with a systemic neonicotinoid insecticide. Annual Meeting of the Entomological Society of America. November 17 – 10, 2019, St. Louis, MO.

28. Mullins, A.N., Sappington, T.W., **Bradbury, S.P**., Adelman, J.S. Revelations from a monarch: Elucidating butterfly perceptual range to facilitate habitat management. Society for Advancement of Chicanos/Hispanics and Native Americans in Science, National Diversity in STEM Conference, October 31 – November 2, 2019, Honolulu, HI.

29. Fisher, K.E., Dixon, P.M., Adelman, J.S., and **Bradbury, S.**P. Landscape scale movement: Adapting radio telemetry technology to track monarch butterflies. Annual Meeting of The Wildlife Society. October 29 – November 3, 2019. Reno, NV.

30. Hall, M.J., Dang, V., O'Neal, M., Borts, D., **Bradbury, S.P.,** and Coats J.R. LC-MS/MS analysis of neonicotinoids and their metabolites in different environmental matricies by modified QuEchERS. 258th American Chemical Society National Meeting. August 25-29, 2019. San Diego, CA.

31. Krishnan N, Coats J, **Bradbury S**. Estimating the risk of agricultural insecticides on monarch butterflies. Annual meeting of the Ozark-Prairie Society of Environmental Toxicology and Chemistry, May 13 – 15, 2019, St. Louis, MO.

32. Grant, T.G., Flockhart, D.T., Tyner, S. Blader, T.R., Pitman, G.M., Hellmich, R.L., Norris, R.D. and **Bradbury, S.P**. A bayesian state-space model for estimating larval survival probabilities from monarch butterfly field counts. Annual Meeting of the North Central Branch of the Entomological Society of America. March 17 – 20, 2019, Cincinnati, OH.

33. Fisher, K.E. and **Bradbury, S.P**. Estimates of common milkweed (*Asclepias syriaca*) utilization by monarch (*Danaus plexippus*) caterpillars. Annual Meeting of the North Central Branch of the Entomological Society of America. March 17 – 20, 2019, Cincinnati, OH.

34. Fisher, K.E., Dixon, P., Adelman, J. and **Bradbury, S.P**. Monarch movement ecology: Adapting automated radio telemetry to track monarch butterflies. Annual Meeting of the North Central Branch of the Entomological Society of America. March 17 – 20, 2019, Cincinnati, OH. (Invited).

35. Weingarten, C., Fisher, K.E., Hodgson, E. and **Bradbury, S.P**. Evaluating monarch flight with a transmitter prototype. (Poster). Annual Meeting of the North Central Branch of the Entomological Society of America. March 17 – 20, 2019, Cincinnati, OH.

36. Hall, M.J. Dang, V., Zhang, G., O'Neal, M., **Bradbury S.P**., and Coats, J.R. Estimating neonicotinoid residues in pollinator attractive habitat by LC-MS/MS. Annual Meeting of the North Central Branch of the Entomological Society of America. March 17 – 20, 2019, Cincinnati, OH. (Invited).

37. Fisher, K.E. and **Bradbury, S.P**. Tracking monarch butterflies with radio telemetry. Symposium on Conservation and Monitoring of Native Pollinators. Society for Range Management. February 12, 2019, Minneapolis, MN. (Invited).

38. Krishnan, N., Bidne, K., Hellmich, R., Coats, J. and **Bradbury, S**. Risks of insecticide exposure on monarch butterfly (*Danaus plexippus*) at the patch and landscape scales. Society of Environmental Toxicology and Chemistry North America 39th Annual Meeting. November 5 -9, 2018, Sacramento, CA.

39. Hall, M.J., Dang, V., Zhang, G., Borts, D., **Bradbury, S.P**., and Coats, J.R. Estimating neonicotinoid residues in pollinator-attractive habitat. Society of Environmental Toxicology and Chemistry North America 39th Annual Meeting. November 5 -9, 2018, Sacramento, CA.

40. Hall, M.J., Dang, V., O'Neal, M., Borts, D., **Bradbury, S.P.,** and Coats J.R. LC-MS/MS method for estimating neonicotinoid residues in pollinator attractive habitat. Poster presentation. 256th American Chemical Society National Meeting. August 19-23, 2018. Washington, DC.

41. Richardson. L., Campbell, D., Sacher, B., Savinelli, C., Hanzas, J., Bertgelsen, P., Applegate, S. and **Bradbury, S**. Rusty-patched bumble bee habitat restoration in northwest Iowa: Meeting multiple conservation objectives in a working landscape. 256th American Chemical Society National Meeting. August 19-23, 2018. Washington, DC. (Invited)

42. Fisher, K.E. and **Bradbury S.P.** Where'd that caterpillar go? Frequency of larval movement and estimates of milkweed utilization by monarch caterpillars. Annual Meeting of the Ecological Society of America. August 5 - 10, 2018. New Orleans, LA.

43. Krishnan, N., Bidne, K., Hellmich, R., Coats, J. and **Bradbury, S.P.** Milkweed (*Asclepias* spp.) placements in agricultural landscapes: risks of insecticide exposure to the monarch butterfly (*Danaus plexippus*) larvae. Annual Meeting of the North Central Branch of the Entomological Society of America. March 18 – 21, 2018, Madison, WI.

44. Grant, T., Parry, H.R., Zalucki, M., and **Bradbury S.P.** A landscape scale spatially-explicit agent-based model of monarch butterfly movement and egg laying. Annual Meeting of the North Central Branch of the Entomological Society of America. March 18 – 21, 2018, Madison, WI.

45. Fisher, K.E. and **Bradbury, S.P**. Where'd that caterpillar go? Frequency of larval movement and estimates of milkweed utilization by monarch caterpillars. Annual Meeting of the North Central Branch of the Entomological Society of America. March 18 – 21, 2018, Madison, WI.

46. Fisher, K.E., Adelman, J., and **Bradbury, S.P**. Landscape Scale Movement: Adapting Radio Telemetry Technology to Track Monarch Butterflies. Poster presentation. Annual Meeting of the North Central Branch of the Entomological Society of America. March 18 – 21, 2018, Madison, WI.

47. Krishnan, N., Bidne, K., Hellmich, R., Coats, J. and **Bradbury, S.P**. Risk assessment of insecticides commonly used in corn and soybean production on monarch butterfly (*Danaus plexippus*) larvae. Society of Environmental Toxicology and Chemistry North America 38th Annual Meeting. November 12 -16, 2017 Minneapolis, MN.

48. Grant, T.J., Krishnan, N. and **Bradbury, S.P**. Spatially-explicit estimates of monarch butterfly (*Danaus plexippus*) population responses to insecticide spray drift exposure in north central agroecosystems. Poster presentation. Annual meeting of the Entomological Society of America. November 5 – 8, 2017, Denver, CO.

49. Krishnan, N., Bidne, K., Hellmich, R., Coats, J. and **Bradbury, S.P**. Risk assessment of foliar insecticides commonly used in corn and soybean production on monarch butterfly (*Danaus plexippus*) larvae. Oral presentation. Annual meeting of the Entomological Society of America. November 5 – 8, 2017, Denver, CO.

50. Grant, T.J. and **Bradbury, S.P**. Exploring behavior landscape ecology in monarch butterflies with a spatially explicit agent-based model. Annual meeting of the Entomological Society of America. November 5 – 8, 2017, Denver, CO.

51. Fisher, K.E., Adelman, J., and **Bradbury, S.P**. Estimating perceptional range of the monarch butterfly (*Danaus plexippus*) with an automated radio telemetry system. Annual meeting of the Entomological Society of America. November 5 – 8, 2017, Denver, CO.

52. Krishnan, N., Bidne, K., Hellmich, R., Coats, J. and **Bradbury, S.P**. Risk assessment of foliar insecticides commonly used in corn and soybean production on monarch butterfly (*Danaus plexippus*) larvae. Poster presentation. 254th American Chemical Society National Meeting. August 20-24, 2017. Washington, DC.

53. Fisher, K.E., Adelman, J., and **Bradbury, S.P**. Testing methods for tracking monarch butterfly movement with radio telemetry. Poster presentation. Annual Meeting of the Ecological Society of America. August 6 – 11, 2017. Portland, OR.

54. Pocius, V.M., Debinski, D.M, Hellmich, R., Bidne, K.G., Pleasants, J.M., Blodgett, S., **Bradbury, S**., and Hartzler, R. Milkweed matters: Survival and maturation of monarch butterfly (*Danaus plexippus*) larvae on nine *Asclepias* species. Annual Meeting of the Ecological Society of America. August 6 – 11, 2017. Portland, OR.

55. Grant, T.J. and **Bradbury, S.P**. Monarch movement and egg laying. USFWS Monarch Conservation Science Partnership Workshop (invited). January 10 – 12, 2017 Ft. Collins, CO.

56. Grant, T.J., **Bradbury, S.P.,** Parry H.R., and Zalucki, M.P. Modelling monarch butterfly movement and egg-laying in a spatially-explicit Iowa, USA landscape. 2016 XXV International Congress of Entomology (invited). September 25 – 30, 2016 Orlando FL.

57. Fisher, K.E., Coates, B.S., and **Bradbury, S.P**. Identification of monarch mitochondrial haplotypes based on direct sequencing. Poster presentation. North Central Branch Meeting of the Entomological Society of America, June 5 – 8, 2016, Cleveland, OH.

58. Krishnan, N., Bidne, K., Hellmich, R., Coats, J. and **Bradbury, S.P**. Toxicity of insecticides commonly used in corn and soybean production on Monarch butterfly (*Danaus plexippus*) larvae. Poster presentation. North Central Branch Meeting of the Entomological Society of America, June 5 – 8, 2016, Cleveland, OH.

59. Grant, T.J., **Bradbury, S.P.,** Parry H.R., and Zalucki, M.P. Modeling monarch butterfly (*Danaus plexippus*) movement and egg-laying in a spatially-explicit Iowa landscape. North Central Branch Meeting of the Entomological Society of America, June 5 – 8, 2016, Cleveland, OH.

60. Grant, T.J. and **Bradbury, S.P.** Monarch movement and egg-laying model. USGS and USFWS Monarch Scientific Partners Seminar Series (Invited). April 13, 2016, Minneapolis, MN.

61. Blader, T., Hellmich, R., Blodgett, S., **Bradbury, S**., Moranz, R., Pleasants, J., and Debinski, D. Does density of host plant (*Asclepias syriaca*) influence monarch butterfly (*Danaus plexxipus*) ovipostion? Annual Meeting of the Entomological Society of America. November 15 – 18, 2015, Minneapolis, MN.

Over 50 additional co-authored paper and poster presentations at national and international scientific conferences from 1980 to 2014.