1. Personal Information

Brian R. Maricle
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2. Education

2006 Ph.D. in Botany, School of Biological Sciences, Washington State University
Dissertation title: "The physiological ecology of salt marsh grasses: factors influencing flooding tolerance, salinity tolerance, and species zonation"
Thesis committee: R.W. Lee (Chair), R.A. Black, and G.E. Edwards

2002 M.S. in Botany, School of Biological Sciences, Washington State University
Thesis title: "Aerenchyma development and oxygen transport in the estuarine cordgrasses *Spartina alterniflora* and *S. anglica*"
Thesis committee: R.W. Lee (Chair), M. Tegeder, V.R. Franceschi

2000 B.S., Biology Comprehensive Major, University of Nebraska at Kearney
Thesis title: "How population density relates to body size in birds"
Thesis advisors: C.J. Bicak and H.G. Nagel

3. Areas of Expertise

- My training is in plant physiology and plant ecology. I study effects of environmental stress on plants, especially drought, salinity, and flooding. I am interested in anatomical, physiological, and biochemical responses of plants to these conditions, and relating these properties to ecological questions.
- Responses of plants to flooding
  - Environmental factors influencing species zonation in estuaries and wetlands
  - Physiological, biochemical, and anatomical factors influencing flooding tolerance in plants
  - Effects of low oxygen levels on respiration and nitrogen assimilation in plants
  - Roles of flooding tolerance in the success of wetland invasive species
  - Biochemical effects of ethanol and how it relates to flooding tolerance
  - Biochemical effects of sulfide and how it relates to species zonation in salt marshes
  - Novel capabilities of plants beneficial to agriculture and phytoremediation
- Effects of environment on photosynthesis in plants
  - Effects of drought and salinity on stomatal conductance, photosynthesis, and transpiration
  - Physiological, biochemical, and anatomical factors influencing drought and salinity tolerance in plants
  - Roles of latent, sensible, and radiative heat exchange under changing environmental conditions
  - Physiological and biochemical responses to oxidative stress in plants
  - Carbon and hydrogen isotope discrimination in photosynthesis and transpiration
  - Effects of chilling on photosynthetic light harvesting, gas exchange, and carbon metabolism

4. Teaching Experience

Fort Hays State University

BIOL 180 A Principles of Biology Fall 2015

BIOL 180L	Principles of Biology Lab (3 sections)	Fall 2015
BIOL 235	Early Field Experience: Biology	Fall 2015
BIOL 250/250L	Botany	Fall 2015
BIOL 476 B	Apprenticeship in Biology	Fall 2015
BIOL 870 A	Graduate Problems in Biology: Plant Symbioses	Fall 2015
BIOL 180 B	Principles of Biology	Spring 2015
BIOL 235	Early Field Experience: Biology	Spring 2015
BIOL 250/250L	Botany	Spring 2015
BIOL 495/495L	Plant Physiology	Spring 2015
BIOL 100 C	Human Biology	Fall 2014
BIOL 180 A	Principles of Biology	Fall 2014
BIOL 180L	Principles of Biology Lab (3 sections)	Fall 2014
BIOL 235	Early Field Experience: Biology	Fall 2014
BIOL 250/250L	Botany	Fall 2014
BIOL 180 B	Principles of Biology	Spring 2014
BIOL 180L	Principles of Biology Lab (2 sections)	Spring 2014
BIOL 235	Early Field Experience: Biology	Spring 2014
BIOL 250/250L	Botany	Spring 2014
BIOL 330/330L	Plant Anatomy	Spring 2014
BIOL 180 A	Principles of Biology	Fall 2013
BIOL 180L	Principles of Biology Lab (2 sections)	Fall 2013
BIOL 235	Early Field Experience: Biology	Fall 2013
BIOL 250/250L	Botany	Fall 2013
BIOL 476 A	Apprenticeship in Biology	Fall 2013
BIOL 235	Early Field Experience: Biology	Spring 2013
BIOL 250/250L	Botany	Spring 2013
BIOL 495/495L	Plant Physiology	Spring 2013
BIOL 100 C	Human Biology	Fall 2012
BIOL 180 A	Principles of Biology	Fall 2012
BIOL 180L	Principles of Biology Lab (4 sections)	Fall 2012
BIOL 235	Early Field Experience: Biology	Fall 2012
BIOL 250/250L	Botany	Fall 2012
BIOL 476 A	Apprenticeship in Biology	Fall 2012
BIOL 235	Early Field Experience: Biology	Spring 2012
BIOL 250/250L	Botany	Spring 2012
BIOL 330/330L	Plant Anatomy	Spring 2012

BIOL 180 A	Principles of Biology	Fall 2011
BIOL 180L	Principles of Biology Lab (5 sections)	Fall 2011
BIOL 235	Early Field Experience: Biology	Fall 2011
BIOL 250/250L	Introductory Botany	Fall 2011
BIOL 476 A	Apprenticeship in Biology	Fall 2011
BIOL 607 A	Environmental Physiology	Fall 2011
BIOL 235	Early Field Experience: Biology	Spring 2011
BIOL 250/250L	Introductory Botany	Spring 2011
BIOL 495/495L	Plant Physiology	Spring 2011
BIOL 180 B	Principles of Biology	Fall 2010
BIOL 180L	Principles of Biology Lab (5 sections)	Fall 2010
BIOL 235	Early Field Experience: Biology	Fall 2010
BIOL 250/250L	Introductory Botany	Fall 2010
BIOL 476 A	Apprenticeship in Biology	Fall 2010
BIOL 235	Early Field Experience: Biology	Spring 2010
BIOL 250/250L	Introductory Botany	Spring 2010
BIOL 330/330L	Plant Anatomy	Spring 2010
BIOL 476 A	Apprenticeship in Biology	Spring 2010
BIOL 100 D	Human Biology	Fall 2009
BIOL 180L	Principles of Biology Lab (4 sections)	Fall 2009
BIOL 235	Early Field Experience: Biology	Fall 2009
BIOL 250/250L	Introductory Botany	Fall 2009
BIOL 476 A	Apprenticeship in Biology	Fall 2009
BIOL 607 A	Environmental Physiology	Fall 2009
BIOL 882	Readings in Biology: Advanced Plant Physiology	Fall 2009
BIOL 235	Early Field Experience: Biology	Spring 2009
BIOL 250/250L	Introductory Botany	Spring 2009
BIOL 476 A	Apprenticeship in Biology	Spring 2009
BIOL 495/495L	Plant Physiology	Spring 2009
BIOL 855	Graduate Seminar	Spring 2009
BIOL 882	Readings in Biology: Stable Isotope Uses and Applications	Spring 2009
BIOL 882	Readings in Biology: Advanced Plant Anatomy	Spring 2009
BIOL 100 D	Human Biology	Fall 2008
BIOL 180L	Principles of Biology Lab (3 sections)	Fall 2008
BIOL 235	Early Field Experience: Biology	Fall 2008
BIOL 250/250L	Introductory Botany	Fall 2008

BIOL 882	Readings in Biology: Stable Isotope Uses and Applications	Fall 2008
BIOL 100	Human Biology	Summer 2008
BIOL 235	Early Field Experience: Biology	Spring 2008
BIOL 250/250L	Introductory Botany	Spring 2008
BIOL 330/330L	Plant Anatomy	Spring 2008
BIOL 855	Graduate Seminar	Spring 2008
BIOL 100	Human Biology (2 sections)	Fall 2007
BIOL 180L	Principles of Biology Lab (3 sections)	Fall 2007
BIOL 250/250L	Introductory Botany	Fall 2007
BIOL 607 A	Posters and Presentations	Fall 2007
BIOL 100	Human Biology	Summer 2007
BIOL 495/495L	Plant Physiology	Spring 2007
BIOL 632	Dendrology	Spring 2007
BIOL 100 A	Human Biology	Fall 2006
BIOL 180L	Principles of Biology Lab (3 sections)	Fall 2006
BIOL 476 A	Apprenticeship in Biology	Fall 2006

Washington State University

BIOL 372	General Ecology lab instructor	Spring 2006	supervisor R.N. Mack
BIOL 320	Plant Physiology lab instructor	Fall 2005	supervisors G.E. Edwards and M. Tegeder
BIOL 352	Cell Physiology exam grader	Fall 2005	supervisor D.F. Moffett
BIOL 352	Cell Physiology website manager	Fall 2005	supervisor R.W. Lee
BIOL 298	Honors Biology lab instructor	Spring 2005	supervisors H.L. Hosick and B.J. Marshall
BIOL 251	Human Physiology lab instructor	Fall 2004	supervisor S.B. Moffett
BIOL 372	General Ecology lab instructor	Spring 2004	supervisor R.N. Mack
BIOL 320	Plant Physiology lab instructor	Fall 2002	supervisor G.E. Edwards
BIOL 352	Cell Physiology exam grader	Fall 2002	supervisor D.F. Moffett
BIOL 352	Cell Physiology website manager	Fall 2002	supervisor R.W. Lee
ZOOL 251	Human Physiology lab instructor	Spring 2002	supervisor P.A. Carter
BOT 320	Plant Physiology lab instructor	Fall 2001	supervisor G.E. Edwards
ZOOL 251	Human Physiology lab instructor	Spring 2001	supervisor P.A. Carter
ZOOL 251	Human Physiology lab instructor	Fall 2000	supervisor J.L. Lipar

5. **Date of Appointment to Fort Hays State University**: 18 August 2008 (with one year prior service)

6. **Prior Service at Other Institutions**

2012- Associate Professor, Fort Hays State University Department of Biological Sciences

2008-2012 Assistant Professor, Fort Hays State University Department of Biological Sciences

2006-2008 Instructor (non tenure track), Fort Hays State University Department of Biological Sciences

2000-2006 Teaching Assistant, Washington State University School of Biological Sciences

2003 Research Assistant, Washington State University School of Biological Sciences; supervisor R.W. Lee

2001-2002 Research Assistant, Padilla Bay National Estuarine Research Reserve, Washington State Department of Ecology; supervisors D.A. Bulthuis and S.R. Riggs

1998-1999 Laboratory Technician, University of Nebraska at Kearney Department of Chemistry; supervisor D. Kaufman

1998 Research Assistant, University of Nebraska at Kearney Department of Physics and Physical Sciences; supervisor J.L. Mena-Werth

7. Departmental and Institutional Service

a. Graduate Students Mentored

8. Tej Man Tamang, M.S. student, FHSU Biology, 2014-
   - Thesis project: Determination of evolutionary history of big bluestem ecotypes through chloroplast DNA analysis
   - 2013 B.S. in Biotechnology, Purbanchal University, Nepal

7. Brendon C. McCampbell, M.S. student, FHSU Biology, 2014-
   - Thesis project: Characterization of biological soil crusts in the Great Plains prairie
   - 2014 B.S. in Biology, Fort Hays State University

6. Katelyn J. Lindsey, M.S. student, FHSU Biology, 2012-2013
   - Project: Effects of drought on stem anatomy of *Andropogon gerardii* ecotypes along a precipitation gradient in the Great Plains
   - 2007 B.S. in Animal Science and Agronomy, Kansas State University

5. Karina M. Barrett, M.S. student, FHSU Biology, 2011-2012
   - Project: Effects of effects of nitrate and phosphate concentration on growth and performance of native and introduced aquatic and riparian plants in western Kansas
   - 2011 B.S. in Biology, Fort Hays State University

4. Jacob T. Olsen, 2012 M.S. in Biology, Fort Hays State University
   - Thesis: Gas exchange and leaf anatomy of *Andropogon gerardii* ecotypes over a climatic gradient of the Great Plains (thesis defended 3/5/2012)
   - 2010 B.A. in Biology, University of Utah
   - Later went to work as a technician for the Bureau of Land Management
   - Later worked for U.S. Border Patrol

3. Kristen A. Polacik, 2010 M.S. in Biology, Fort Hays State University
   - Thesis: Effects of flooding on photosynthesis and root respiration in saltcedar (*Tamarix ramosissima*), an invasive riparian shrub (thesis defended 11/11/2010)
   - 2010-2011 Outstanding Thesis award by FHSU Graduate School
   - 2008 B.S. in Biology, Marshall University
   - Later went to work as a technician for the U.S. Department of Agriculture
   - Later became a supervisor for the Sugar Cane Growers Cooperative in Florida

2. Elizabeth F. Waring, 2010 M.S. in Biology, Fort Hays State University

- Thesis: Flooding tolerance of native and nonnative grasses: variation in photosynthesis, transpiration, respiration, and carbon isotope discrimination (thesis defended 4/16/2010)
- 2009-2010 Outstanding Thesis award by FHSU Graduate School
- Fleharty Fellowship recipient, 2009-2010
- 2007 B.S. in Biology, University of Wisconsin, Milwaukee
- Later went into a Ph.D. program at Texas Tech University

1. Shi He, M.S. student, FHSU Biology, 2007-2008
    - 2007 B.S. in Biology, Wuhan University
    - Project: Nitrate reductase activities in wetland grasses
    - Later went into a Ph.D. program at the University of Idaho

b. Undergraduate Students Mentored

26. Madison S. Pittenger, 2015-present. Fort Hays State University Biology. Project: Herbivore preference among ecotypes of big bluestem, *Andropogon gerardii*
25. Leisha J. Sadler, 2015. Fort Hays State University Biology. Project: Stem anatomy of *Andropogon gerardii* ecotypes over a climatic gradient of the Great Plains
24. Wenkai Shu, 2015. Fort Hays State University, Kansas Academy of Math and Science. Project: Effects of lactic acid on lactate dehydrogenase activity in catfish
23. Adam D. Urban, 2014-present. Fort Hays State University Biology. Project: Effects of lactic acid on respiration enzymes in channel catfish
    - Accepted into University of Kansas Medical Center Scholars in Rural Health Program
22. Christina J. Hilt, 2013-2015. Fort Hays State University Biology. Project: Gas exchange, stomatal distribution, and stem anatomy of *Andropogon gerardii* ecotypes over a climatic gradient of the Great Plains
21. Sana Cheema, 2013-2014. Hays High School. Project: Effects of nitrate and phosphate concentration on inorganic nitrogen assimilation in the grasses *Phragmites* and *Phalaris*
20. Codie L. Webster, 2013-2014. Fort Hays State University, Kansas Academy of Math and Science. Project: Effects of water temperature on growth and metabolism of aquatic plants
19. Amber K. Perdew, 2013-2014. Fort Hays State University, Kansas Academy of Math and Science. Project: Effects of water temperature on growth and metabolism of aquatic plants
18. Diedre L. Kramer, 2013-2015. Fort Hays State University Biology. Project: Inorganic nitrogen assimilation in ecotypes of big bluestem; Environmental and genetic influences on morphology of big bluestem ecotypes
17. Nicole M. Martin, 2012-present. Fort Hays State University Biology. Project: Sulfide toxicity on cytochrome *c* oxidase activity of plants
    - 2015-2106 K-INBRE “Star” Trainee
16. Quentin C. Aker, 2012-2013. Fort Hays State University, Kansas Academy of Math and Science. Project: Physiological effects of drought on turfgrass species
15. Hayley L. Disney, 2012-2013. Fort Hays State University, Kansas Academy of Math and Science. Project: Physiological effects of drought on turfgrass species
14. Nyasha G. Maforo, 2012. Fort Hays State University, Kansas Academy of Math and Science. Project: The role of ethanol toxicity on flooding susceptibility in plants
13. Bliss M. Betzen, 2012-2013. Fort Hays State University, Kansas Academy of Math and Science. Project: Physiological effects of salinity on inland saltmarsh species

12. Taylor N. Biggs, 2012-2013. Fort Hays State University Biology. Projects: Effects of NO_3^-/NH_4^+ nutrition on photosynthesis and nitrogen assimilation in *Phalaris arundinacea*; The role of ethanol toxicity on flooding susceptibility in plants

11. Cera M. Smart, 2012-2015. Fort Hays State University, Kansas Academy of Math and Science. Projects: Physiological effects of salinity on inland saltmarsh species; Inorganic nitrogen assimilation in ecotypes of big bluestem

10. Shaley J. White, 2011-2012. Fort Hays State University, Kansas Academy of Math and Science. Project: The role of ethanol toxicity on flooding susceptibility in plants

9. Alondra Meraz, 2011-2012. Fort Hays State University, Kansas Academy of Math and Science. Project: The role of ethanol toxicity on flooding susceptibility in plants

8. Keri L. Caudle, 2010-2014. Fort Hays State University Biology. Projects: Effects of oil spills on photosynthesis and respiration in coastal grasses; Gas exchange and water potential of *Andropogon gerardii* ecotypes over a climatic gradient of the Great Plains
    - 2011-2012 Outstanding Undergraduate Student, FHSU College of Health and Life Sciences
    - Botanical Society of America "Spotlight Member," March to May of 2012
    - Later went to graduate school at Fort Hays State University

7. Rika Isomura, 2010. Fort Hays State University Biology. Project: Effects of soil water on respiration and photosynthesis in *Celosia* (Amaranthaceae)

6. Cali R. Parker, 2008-2009. Fort Hays State University Biology. Project: Mechanisms of chilling-tolerant C_4 photosynthesis in marsh grasses

5. Jordan J. Brungardt, 2008-2010. Fort Hays State University Biology. Projects: Effects of oil well brine on surrounding plants; Factors influencing aerenchyma development in *Spartina* (Poaceae); Chemical influence on root hair curling in nodulating and non-nodulating legumes
    - Later went to work for a biotechnology company
    - Later earned an M.S. at Wichita State University
    - Later went to graduate school at Kansas State University

4. Aaron M. Pfeifer, 2007-2009. Fort Hays State University Biology. Projects: Effects of diet, drugs, and activity levels on $\delta^{13}C$ of breath and hair of humans; Ascorbate concentrations and osmolalities in orange and apple juices
    - Later went into medical school at the University of Kansas Medical Center

3. Jeramiah J. Crosier, 2003-2004. Washington State University Biology. Project: Respiration enzyme activities in marsh plants in relation to flooding
    - Later went to work as a technician at a lab supply company

2. Brian C. Bussiere, 2000-2004. Washington State University Biology. Project: Ammonium assimilation in wetland plants
    - Later went into graduate school at the University of San Francisco

1. Toru Tzusaki, 2000-2001. Washington State University Biology. Project: Aerenchyma formation in *Spartina* roots
    - Later went into graduate school at the University of Southampton, UK to work on a similar project

c. Technicians Mentored

1. Sam R. Zwenger, 2007. Fort Hays State University Biology. (2007 M.S. in Biology, Fort Hays State University) Project: Carbon, nitrogen, and hydrogen isotope ratios in creekside trees in western Kansas

d. Graduate Teaching Assistants Supervised

BIOL 180L, Principles of Biology lab: Elizabeth G. Bainbridge, Karina M. Barrett, Jessica J. Bitner, Brandon L. Calderon, Sarah A. Carrow, Jeffrey J. Carter, Jessica L. Casey, P. Allen Casey, Keri L. Caudle, Ian N. Cost, Carol D. Grover, Nina M. Haro, Clinton J. Helms, Allison R. Hullinger, Georgina Y. Jacquez, Brendon C. McCampbell, Frances A. Owen, Kristen A. Polacik, Zac L. Ripperger, Jeffrey G. Sekavec, Katherine M. Talbott, Tej Man Tamang, Lloyd W. Towers III

BIOL 250L, Botany lab: Karina M. Barrett, Keri L. Caudle, Shi He, Jordan R. Hofmeier, Ashley A. Inslee, Georgina Y. Jacquez, Katelyn J. Lindsey, Brendon C. McCampbell, Kristen A. Polacik, Elizabeth F. Waring

BIOL 330L, Plant Anatomy lab: Shi He, Jacob T. Olsen, Kristen A. Polacik

e. Undergraduate Apprentices Supervised

BIOL 180L, Principles of Biology lab: Andrew S. Ables, Brea L. Campbell, Joanna L. Fay, Karli J. Henning, Mike D. Howell, Kaleb G. Moeller, Jennifer R. Pfannenstiel, Haley M. Piland, Jenna B. Shepherd, Ashley M. Spaeny, Maniphone V. (Katrina) Thirakul, Julie M. Weber, Kiley A. Zabel

BIOL 250L, Botany lab: Jordan J. Brungardt, Robert "Andy" Calhoun, Christina J. Hilt, Diedre L. Kramer, Cera M. Smart

f. Graduate Thesis Committees

23. Kaitlin Moore. M.S. student, 2014-present, Fort Hays State University. Major Advisor: Eric T. Gillock. Thesis topic:
22. Angelica V. Sprague. M.S. student, 2014-present, Fort Hays State University. Major Advisor: Elmer J. Finck. Thesis topic: Identification and characterization of Northern Long-eared Bat (*Myotis septentrionalis*) hibernacula in Kansas
21. Elizabeth G. Bainbridge. M.S. student, 2013-present, Fort Hays State University. Major Advisor: Elmer J. Finck. Thesis topic: Space-use patterns of southern flying squirrel *(Glaucomys volans)* in northeastern Iowa
20. Brianna R. Watkins. 2015 M.S. in Biology, Fort Hays State University. Major Advisor: Yasuhiro Kobayashi. Project: Changes in expression of glucose transporters 1 and 2 in comparison to changes in nutrient intake and genetic selection
19. Jeffrey T. Seim. M.S. student, 2013-present, Fort Hays State University. Major Advisor: William J. Stark. Thesis topic: Population dynamics and habitat analysis of aquatic testudines' of Quivira National Wildlife Refuge
18. Patrice M. Betz. M.S. student, 2013-present, Fort Hays State University. Major Advisor: Robert B. Channell. Thesis topic: An assessment of anthropogenic, abiotic, and life history traits on range contraction among birds and mammals
17. Taylor W. Rasmussen. M.S. student, 2013-present, Fort Hays State University. Major Advisor: Elmer J. Finck. Thesis topic: Status of Franklin's ground squirrel (*Poliocitellus franklinii*) in Kansas
16. Samantha R. Pounds. M.S. student, 2013-present, Fort Hays State University. Major Advisor: Elmer J. Finck. Thesis topic: Small mammal diversity in three habitats in western North Dakota
15. Scott A. Brack. 2014 M.S. in Biology, Fort Hays State University. Major Advisor: William J. Stark. Project: Diet of white perch

14. Brian M. Zinke. 2014 M.S. in Biology, Fort Hays State University. Major Advisor: Elmer J. Finck. Thesis title: Comparison of small mammal communities in ephemeral wetlands and wet meadows during drought (thesis defended 4/14/2014)

13. Jessica L. Casey. 2014 M.S. in Biology, Fort Hays State University. Major Advisor: Jordana J. LaFantasie. Thesis title: Timing and intensity of steer use on Old World bluestem (*Bothriochloa ischaemum*) and blue grama (*Bouteloua gracilis*) in southern mixed-grass prairie (thesis defended 4/11/2014)

12. Clinton J. Helms. 2014 M.S. in Biology, Fort Hays State University. Major Advisor: Jordana J. LaFantasie. Thesis title: Nest survival of grassland breeding birds in a southern mixed-grass prairie (thesis defended 3/27/2014)

11. Amanda E. Cheeseman. 2012 M.S. in Biology, Fort Hays State University. Major Advisor: Elmer J. Finck. Thesis title: Diet analysis of two Mephitidae species reflects population trends and landscape structure (thesis defended 11/27/2012)

10. Jeffrey G. Sekavec. 2013 M.S. in Biology, Fort Hays State University. Major Advisor: Eric T. Gillock. Project: Chlorhexidine resistance in *Streptococcus mutans*

9. William T. Moore. 2012 M.S. in Biology, Fort Hays State University. Major Advisor: Eric T. Gillock. Thesis title: Continual passage of *Staphylococcus epidermidis* in subinhibitory levels in the biocide triclosan results in a marked increase in the minimum inhibitory concentration, antibiotic resistance, and ethidium bromide resistance (thesis defended 7/5/2012)

8. Shingo Ishihara. 2010 M.S. in Biology, Fort Hays State University. Major Advisor: Eric T. Gillock. Thesis title: Genetic analysis of vancomycin-resistant Gram-positive cocci isolated from wild songbirds (thesis defended 9/24/2010)

7. Stephanie A. Kane. 2011 M.S. in Biology, Fort Hays State University. Major Advisor: Greg H. Farley. Thesis title: Breeding habitat structure and use by Kansas-occurring black rail (thesis defended 4/26/2011)

6. Lloyd W. Towers III. 2011 M.S. in Biology, Fort Hays State University. Major Advisor: Elmer J. Finck. Thesis title: Alarm-calling and response behaviors of the black-tailed prairie dog in Kansas (thesis defended 10/17/2011)

5. Jacob M. Carter. 2010 M.S. in Biology, Kansas State University. Major Advisor: Jesse B. Nippert. Thesis title: *Tamarix ramosissima* whole plant and leaf level physiological response to increasing salinity (thesis defended 7/14/2010)

4. Claudia M. Dasilva-Carvalho. 2009 M.S. in Biology, Fort Hays State University. Major Advisor: Eric T. Gillock. Thesis title: Isolation and characterization of halophilic bacteria from Quivira National Wildlife Refuge (thesis defended 4/16/2009)

3. Jason K. Black. 2014 M.S. in Biology, Fort Hays State University. Major Advisor: Elmer J. Finck. Thesis title: The human dimensions of waterfowl hunters at Cheyenne Bottoms Wildlife Area, Great Bend, Kansas (thesis defended 2/10/2014)

2. Christian N. Edwards. 2009 M.S. in Biology, Fort Hays State University. Major Advisor: Greg H. Farley. Thesis title: Snowy plover nest density and reproductive success at Great Salt Lake, Utah (thesis defended 4/23/2009)

1. P. Allen Casey. 2009 M.S. in Biology, Fort Hays State University. Major Advisor: Joseph R. Thomasson. Thesis title: Comparative studies of two small, freshwater wetlands in Ellis County, Kansas (thesis defended 3/30/2009)

g. Professional Service

Peer review for 91 manuscripts, proposals, and books since 2005, including the following:

Acta Physiologiae Plantarum (1 paper)
African Journal of Biotechnology (1 paper)
American Journal of Botany (5 papers)
American Journal of Plant Sciences (1 paper)
Annals of Botany (2 papers)
AoB PLANTS (2 papers)
Aquatic Biology (1 paper)
Aquatic Botany (7 papers)
Aquatic Conservation: Marine and Freshwater Ecosystems (1 paper)
Benjamin Cummings Publishing, textbook review: *Human Biology* by Belk and Borden (3 chapters)
Biological Invasions (1 paper)
Ecosphere (1 paper)
Environmental and Experimental Botany (22 papers)
Estuarine, Coastal and Shelf Science (5 papers)
Global Change Biology (1 paper)
International Journal of Molecular Sciences (1 paper)
Jones and Bartlett Publishers, textbook review: *Botany*, 4th ed., by James Mauseth (book review)
Jones and Bartlett Publishers, textbook review: *Botany*, 5th ed., by James Mauseth (book review)
Journal of Agricultural Science and Technology (2 papers)
Journal of Coastal Research (1 paper)
Journal of Plant Growth Regulation (1 paper)
Journal of Plant Nutrition and Soil Science (2 papers)
Journal of Plant Physiology (3 papers)
Journal of the Torrey Botanical Society (1 paper)
Limnology and Oceanography Methods (1 paper)
Marine Ecology Progress Series (2 papers)
National Science Foundation, proposal review (1 proposal)
Photosynthesis Research (2 papers)
Photosynthetica (9 papers)
Plant Biology (1 paper)
Plant Ecology (2 papers)
Sensors (3 papers)
Southwestern Naturalist (1 paper)
Wageningen University, Ph.D. proposal review (1 thesis proposal)
Water, Air, and Soil Pollution (1 paper)
W.H. Freeman Publishers, textbook review: *What is Life?* By Jay Phelan (1 chapter)
Wiley-Blackwell Publishers, textbook review: *The Molecular Life of Plants* by Jones, Ougham, Thomas, and Waaland (book review)

Officer in Professional Societies:

Past-President, Kansas Academy of Science, 2014

President, Kansas Academy of Science, 2013

President-Elect, Kansas Academy of Science, 2012

Vice President, Kansas Academy of Science, 2011

Session moderator:

Ecology/Organismal Biology session, Kansas Academy of Science annual meeting, April 2013

Plant Ecology session, Kansas Academy of Science annual meeting, March 2012

Judge for student presentations:

Judge for student oral and poster presentations (Ecology section), Botanical Society of America annual meeting, July 2014

Judge for student oral presentations (Ecology section), Botanical Society of America annual meeting, July 2012

Judge for student poster presentations (Physiology section), Botanical Society of America annual meeting, July 2012

Judge for student oral and poster presentations (Ecology section), Botanical Society of America annual meeting, July 2011

Judge for student poster presentations, Kansas Academy of Science annual meeting, April 2011

Judge for student oral and poster presentations, Kansas Academy of Science annual meeting, April 2010

Judge for McCarley student grant proposals, Southwestern Association of Naturalists, March 2009

Judge for Wilks student presentation award at the Southwestern Association of Naturalists annual meeting, April 2008

Judge for Hubbs student poster award at the Southwestern Association of Naturalists annual meeting, April 2008

h. Department and University Service

Fort Hays State University

2014-	Honors College Steering Committee
2014-2015	Academic Advising Committee
2013-	Undergraduate Research Experience (URE) Steering Group
2013-2014	Judge for student poster presentations, FHSU Scholarship and Creative Activities Day
14 Mar 2013	Faculty Panel: Undergraduate Research Experience Brown Bag Lunch
6 Sept 2012	Faculty Panel: Undergraduate Research Experience; FHSU Student Research Celebration
2010-2012	University Graduate Council
2009-2012	University Research Environment Committee
2007-2010	University Department/Program Review Committee

Science, Technology, Engineering, and Math (STEM) College, Fort Hays State University

2015	Search committee, Dean of FHSU STEM College

College of Health and Life Sciences, Fort Hays State University

2014-2015	College of Health and Life Sciences Tenure and Promotion Committee
2009-2015	College of Health and Life Sciences Dean's Faculty Advisory Council
2008-2009	College of Health and Life Sciences Professional Science Master's Program Committee

Department of Biological Sciences, Fort Hays State University

Advising

2015-2016 Advisor for 2 graduate students and 27 undergraduate students

2014-2015 Advisor for 2 graduate students and 33 undergraduate students

2013-2014 Advisor for 24 undergraduate students

2012-2013 Advisor for 2 graduate students and 11 undergraduate students

2011-2012 Advisor for 2 graduate students and 13 undergraduate students

2010-2011 Advisor for 2 graduate students and 5 undergraduate students

2009-2010 Advisor for 2 graduate students and 12 undergraduate students

2008-2009 Advisor for 2 graduate students and 10 undergraduate students

2007-2008 Advisor for 1 graduate student and 4 undergraduate students

Department of Biological Sciences Committees

2014- Freshmen Advising Team

2014- Graduate Education Committee

2014 Grade Appeal Committee

2012-2014 Tenure Committee (Chair, 2013-2014)

2011-2014 Graduate Selection Committee

2010- Evaluation committee for graduate student fellowship applications

2010-2011 Professional Science Master's Program Committee

2008-2010 Graduate Studies Committee

2008-2009 Faculty Awards Committee

2008- Curriculum Committee

2007-2008 Biosciences Institute Development Committee

2007- Graduate Teaching Assistant Award Selection Committee

2007-2008 Cell Biology/Physiology Lab Development Committee

Faculty Search Committees

2015 Search committee, Administrative Assistant, FHSU Dept. of Biol. Sci.

2014 Search committee, Department Plant Technician, FHSU Dept. of Biol. Sci.

2013-2014 Chair, Search committee, Range Ecologist, FHSU Dept. of Biol. Sci.

2011-2012 Chair, Search committee, Lecturer, FHSU Dept. of Biol. Sci.

2010-2011 Chair, Search committee, Plant Taxonomist, FHSU Dept. of Biol. Sci.

2009-2010 Chair, Search committee, Animal Physiologist, FHSU Dept. of Biol. Sci.

2009 Search committee, Manager, Kansas Wetlands Education Center

2008-2009 Search committee, Environmental Microbiologist, FHSU Dept. of Biol. Sci.

2007 Search committee, Department Plant Technician, FHSU Dept. of Biol. Sci.

Graduate Student Comprehensive Oral Exam Committees

2014-2015 Graduate oral exam committees for 5 students

2013-2014 Graduate oral exam committees for 4 students

2012-2013 Graduate oral exam committees for 6 students

2011-2012 Graduate oral exam committees for 6 students

2010-2011 Graduate oral exam committees for 3 students

2009-2010 Graduate oral exam committees for 10 students

2008-2009 Graduate oral exam committees for 6 students

2007-2008 Graduate oral exam committees for 7 students

2006-2007 Graduate oral exam committees for 2 students

Student Recruitment

Department of Biological Sciences representative during KAMS Preview Day (1 Nov 2014, 10 Nov 2012)

Department of Biological Sciences representative during FHSU Majors and Graduate Programs Fair (12 Mar 2013, 13 Mar 2012, 1 Mar 2011, 9 Mar 2010)

Department of Biological Sciences representative during Tiger pre-enrollment day (27 April 2015, 18 April 2015, 28 April 2014, 26 April 2014, 29 Apr 2013, 20 Apr 2013, 4 June 2012, 28 Apr 2012, 30 Apr 2011, 16 Apr 2011, 14 June 2010, 3 May 2010, 17 Apr 2010, 4 May 2009, 25 Apr 2009, 10 June 2008)

Department of Biological Sciences social for incoming freshmen (15 Aug 2014, 16 Aug 2013, 17 Aug 2012, 19 Aug 2011, 21 Aug 2009, 22 Aug 2008, 17 Aug 2007)

Department of Biological Sciences representative during Tiger Day recruitment (9 Nov 2013, 6 Nov 2010, 17 Oct 2009, 3 Nov 2007, 14 Oct 2006)

Department of Biological Sciences representative during Tiger Mania recruitment (2 April 2008, 4 April 2007)

Department of Biological Sciences representative during Science Day (9 Nov 2009, 27 Oct 2008, 6 Nov 2006)

Greenhouse tour for high school biology students (18 Dec 2006)

Individual Meetings with Prospective Students

2014-2015 Met with 10 prospective students and 2 prospective graduate students individually

2013-2014 Met with 13 prospective students and 5 prospective graduate students individually

2012-2013 Met with 20 prospective students and 7 prospective graduate students individually

2011-2012 Met with 25 prospective students and 2 prospective graduate students individually

2010-2011 Met with 28 prospective students and 7 prospective graduate students individually

2009-2010 Met with 27 prospective students and 20 prospective graduate students individually

2008-2009 Met with 27 prospective students and 7 prospective graduate students individually

2007-2008 Met with 19 prospective students and 21 prospective graduate students individually

2006-2007 Met with 3 prospective students and 9 prospective graduate students individually

Student Recognition Programs

2015 Beloit, KS (26 Jan 2015)

2014 Phillipsburg, KS (27 Jan 2014)

2013 Phillipsburg, KS (28 Jan 2013)

2012 Phillipsburg, KS (26 Jan 2012)

2011 Beloit, KS (24 Jan 2011)

2010 Great Bend, KS (25 Jan 2010)

2009 Phillipsburg, KS (29 Jan 2009)

2008 Great Bend, KS (4 Feb 2008)

2007 Holdrege, NE (5 Feb 2007)

Sponsor of Student Organizations

2014- Faculty Sponsor: Pre-Physical Therapy Club, FHSU Dept. of Biological Sciences

2013- Faculty Sponsor: FHSU Student Chapter of the Botanical Society of America

2006-2009 Faculty Sponsor: Biology Club, FHSU Dept. of Biological Sciences

FHSU Foundation Phonathon

"Tiger Call" phonathon, FHSU Foundation (15 Oct 2007, 16 Oct 2006)

Department of Geosciences, Fort Hays State University

Department of Geosciences Committees

2015-2016 Tenure Committee

Washington State University

2005-2006 Faculty search committee, Plant Cell Biologist, WSU School of Biological Sciences

8. Scholarly Submissions, Publications, and Papers Presented

a. Peer-Reviewed Publications (asterisks* denote undergraduate authors; daggers† indicate graduate student authors)

27. Johnson, L.C., J.T. Olsen†, H.M. Tetreault†, A. DeLaCruz*, J. Bryant*, T.J. Morgan, M. Knapp, N.M. Bello, S.G. Baer, and **B.R. Maricle**. 2015. Intraspecific variation of a dominant grass and local adaptation in reciprocal garden communities along a U.S. Great Plains precipitation gradient: Implications for response to grassland restoration with climate change. Evolutionary Applications 8:705-723

26. Caudle, K.L.* and **B.R. Maricle**. 2015. Physiological and ecological effects of spilled oil on inland salt marsh communities: a mesocosm study. Wetlands 35:501-507

25. Martin, N.M.* and **B.R. Maricle**. 2015. Species-specific enzymatic tolerance of sulfide toxicity in plant roots. Plant Physiology and Biochemistry 88:36-41

24. Gray, M.M.†, P. St. Amand, N.M. Bello, M. Galliart*, M. Knapp, K.A. Garrett, T.J. Morgan, S.G. Baer, **B.R. Maricle**, E.D. Akhunov, and L.C. Johnson. 2014. Ecotypes of an ecologically dominant prairie grass (*Andropogon gerardii*) exhibit genetic divergence across the U.S. Midwest grasslands' environmental gradient. Molecular Ecology 23:6011-6028

23. Caudle, K.L.*, L.C. Johnson, S.G. Baer, and **B.R. Maricle**. 2014. A comparison of seasonal foliar chlorophyll change among ecotypes and cultivars of *Andropogon gerardii* (Poaceae) by using non-destructive and destructive methods. Photosynthetica 52:511-518

22. **Maricle, B.R.**, S.J. White*, A. Meraz*, N.G. Maforo*, T.N. Biggs*, N.M. Martin*, and K.L. Caudle*. 2014. Effect of ethanol toxicity on enzyme activity in anaerobic respiration in plants. Transactions of the Kansas Academy of Science 117:237-244

21. Caudle, K.L.* and **B.R. Maricle**. 2014. Physiological relationship between oil tolerance and flooding tolerance in marsh plants. Environmental and Experimental Botany 107:7-14

20. Olsen, J.T.†, K.L. Caudle*, L.C. Johnson, S.G. Baer, and **B.R. Maricle**. 2013. Environmental and genetic variation in leaf anatomy among populations of *Andropogon gerardii* (Poaceae) along a precipitation gradient. American Journal of Botany 100:1957-1968

19. Waring, E.F.† and **B.R. Maricle.** 2012. Stomatal conductance correlates with flooding tolerance in *Phragmites australis* and *Sorghum halepense*. Transactions of the Kansas Academy of Science 115:161-166

18. Polacik, K.A.† and **B.R. Maricle**. 2013. Effects of flooding on photosynthesis and root respiration in saltcedar (*Tamarix ramosissima*), an invasive riparian shrub. Environmental and Experimental Botany 89:19-27

17. Caudle, K.L.* and **B.R. Maricle.** 2012. Effects of flooding on photosynthesis, chlorophyll fluorescence, and oxygen stress in plants of varying flooding tolerance. Transactions of the Kansas Academy of Science 115:5-18 **[most downloaded paper for this journal in 2014]**

16. Waring, E.F.† and **B.R. Maricle.** 2012. Photosynthetic variation and carbon isotope discrimination in invasive wetland grasses in response to flooding. Environmental and Experimental Botany 77:77-86

15. **Maricle, B.R.** and P.B. Adler. 2011. Effects of precipitation on photosynthesis and water potential in *Andropogon gerardii* and *Schizachyrium scoparium* in a southern mixed grass prairie. Environmental and Experimental Botany 72:223-231

14. **Maricle, B.R.**, S.R. Zwenger†, and R.W. Lee. 2011. Carbon, nitrogen, and hydrogen isotope ratios in creekside trees in western Kansas. Environmental and Experimental Botany 71:1-9

13. **Maricle, B.R.** and R.W. Lee. 2010. Mechanisms of sulfide and anoxia tolerance in salt marsh grasses in relation to elevational zonation. pp. 47-53 *in*: Ayres, D.R., D.W. Kerr, S.D. Ericson, and P.R. Olofson, Eds. Proceedings of the Third International Conference on Invasive *Spartina*, 2004 Nov. 8-10, San Francisco, CA, USA. San Francisco Estuary Invasive *Spartina* Project of the California State Coastal Conservancy, Oakland, CA

12. **Maricle, B.R.**, O. Kiirats, R.W. Lee, and G.E. Edwards. 2010. Effects of salinity on photosynthesis in C_4 estuarine grasses. pp. 55-58 *in*: Ayres, D.R., D.W. Kerr, S.D. Ericson, and P.R. Olofson, Eds. Proceedings of the Third International Conference on Invasive *Spartina*, 2004 Nov. 8-10, San Francisco, CA, USA. San Francisco Estuary Invasive *Spartina* Project of the California State Coastal Conservancy, Oakland, CA

11. **Maricle, B.R.** 2010. Changes in chlorophyll content and antioxidant capacity during dark to light transitions in etiolated seedlings: Comparisons of species and units of enzyme activity. Transactions of the Kansas Academy of Science 113:177-190

10. Pfeifer, A.M.*, R.W. Lee, and **B.R. Maricle.** 2010. Effects of diet, drugs, and activity levels on $\delta^{13}C$ of breath and hair of humans. Transactions of the Kansas Academy of Science 113:91-102

9. **Maricle, B.R.**, N.K. Koteyeva, E.V. Voznesenskaya, J.R. Thomasson, and G.E. Edwards. 2009. Diversity in leaf anatomy, and stomatal distribution and conductance, between salt marsh and freshwater species in the C_4 genus *Spartina* (Poaceae). New Phytologist 184:216-233

8. **Maricle, B.R.** and A.M. Pfeifer*. 2009. Ascorbate concentrations and osmolalities in orange and apple juices. Transactions of the Kansas Academy of Science 112:77-86

7. **Maricle, B.R.**, R.W. Lee, C.E. Hellquist, O. Kiirats, and G.E. Edwards. 2007. Effects of salinity on chlorophyll fluorescence and CO_2 fixation in C_4 estuarine grasses. Photosynthetica 45:433-440

6. **Maricle, B.R.**, D.R. Cobos, and C.S. Campbell. 2007. Biophysical and morphological leaf adaptations to drought and salinity in salt marsh grasses. Environmental and Experimental Botany 60:458-467

5. **Maricle, B.R.** and R.W. Lee. 2007. Root respiration and oxygen flux in salt marsh grasses from different elevational zones. Marine Biology 151:413-423

4. **Maricle, B.R.**, J.J. Crosier*, B.C. Bussiere*, and R.W. Lee. 2006. Respiratory enzyme activities correlate with anoxia tolerance in salt marsh grasses. Journal of Experimental Marine Biology and Ecology 337:30-37

3. Kroemer, J., C. Kirkpatrick, **B. Maricle**, R. Gawrych, M.D. Mosher, and D. Kaufman. 2006. Reike zinc as a reducing agent for common organic functional groups. Tetrahedron Letters 47:6339-6341

2. **Maricle, B.R.** and R.W. Lee. 2006. Effects of environmental salinity on carbon isotope discrimination and stomatal conductance in *Spartina* grasses. Marine Ecology Progress Series 313:305-310

1. **Maricle, B.R.** and R.W. Lee. 2002. Aerenchyma development and oxygen transport in the estuarine cordgrasses *Spartina alterniflora* and *S. anglica*. Aquatic Botany 74:109-120

b. Other Publications (asterisks* denote undergraduate authors; daggers† indicate graduate student authors)

10. Packauskas, R.J., Y. Kobayashi, M.J. Greer, and **B.R. Maricle**, with contributions from K.R. Hickman, E.T. Gillock, and P.A. Casey†. 2015. Principles of Biology Laboratory Manual. FHSU Print Shop, revised July 2015

9. **Maricle, B.R.** 2014. General Botany BIOL 250/250L Laboratory Manual. FHSU Print Shop, revised May 2015

8. Edwards, G.E., M. Tegeder, and **B.R. Maricle**. 2013. BIOL 495 – Plant Physiology Laboratory Manual. FHSU Print Shop, revised May 2015

7. Franceschi, V.R. and **B.R. Maricle**. 2014. Plant Anatomy BIOL 330/330L Laboratory Manual. FHSU Print Shop, revised May 2014

6. Olsen, J.T.†, R.K. Goad†, M.L. Mendola†, H.M Tetreault†, L.C. Johnson, S.G. Baer, and **B.R. Maricle**. 2012. Gas exchange and leaf anatomy of big bluestem populations and sand bluestem across a precipitation gradient. Kansas Native Plant Society Spring Newsletter, April 2012, pp. 5-8

5. **Maricle, B.R.** Plant biologists investigate leaf anatomy. Research Matters: The Newsletter of Research and Creative Activity at Fort Hays State University, Spring 2010

4. Polacik, K.A.† and **B.R. Maricle**. 2009. Response to flooding in invasive saltcedar (*Tamarix ramosissima*). Grassland Heritage Foundation Newsletter, December 2009, pp. 4-5

3. **Maricle, B.R.** 2008. How to approach phone interviews. American Society of Plant Biologists (ASPB) News 35:7-8

2. **Maricle, B.R.** and R.W. Lee. 2003. The effect of mowing on oxygen transport in *Spartina anglica* (Poaceae). Padilla Bay National Estuarine Research Reserve Technical Report No. 27. Padilla Bay National Estuarine Research Reserve, Mount Vernon, Washington, 26 pp

1. **Maricle, B.R.** and J.L. Mena-Werth. 1999. The determination of circumstellar material around stars observed with the International Ultraviolet Explorer Satellite using asymmetries in the singly

ionized magnesium h and k lines. Proceedings of the Thirteenth Annual National Conference of Undergraduate Research, Volume V (Physical Sciences):1285-1288

c. Manuscripts Accepted (asterisks* denote undergraduate authors; daggers† indicate graduate student authors)

2. **Maricle, B.R.**, K.L. Caudle*, and P.B. Adler. 2015. Influence of water availability on photosynthesis, water potential, leaf $\delta^{13}C$, and phenology in dominant C_4 grasses in Kansas, USA. Manuscript in press: Transactions of the Kansas Academy of Science

1. Mendola, M.L.†, S.G. Baer, L.C. Johnson, and **B.R. Maricle**. 2015. The role of ecotypic variation and the environment on biomass and nitrogen in a dominant prairie grass. Manuscript in press: Ecology

d. Manuscripts in Review (asterisks* denote undergraduate authors; daggers† indicate graduate student authors)

1. Goad, R.K.†, S.G. Baer, L.C. Johnson, **B.R. Maricle**, D.J. Gibson, and M. Knapp. Patterns of aboveground net primary productivity in communities established with different ecotypes of dominant grasses across an environmental gradient. Manuscript in review: Oikos

e. Abstracts Published (asterisks* denote undergraduate authors; daggers† indicate graduate student authors)

45. Urban, A.D.*, Y. Kobayashi, and **B.R. Maricle**. 2015. Effects of lactic acid on anaerobic respiration in channel catfish (*Ictalurus punctatus*) liver. Transactions of the Kansas Academy of Science 118:158

44. Smart, C.M.*, D.L. Kramer*, K.L. Caudle*, C.J. Hilt*, A.D. Urban*, L.C. Johnson, S.G. Baer, and **B.R. Maricle**. 2015. Chlorophyll content in big bluestem (*Andropogon gerardii*) ecotypes across a precipitation gradient. Transactions of the Kansas Academy of Science 118:156

43. Smart, C.M.*, B.M. Betzen*, K.L. Caudle*, and **B.R. Maricle**. 2015. Physiological salinity tolerance in native and non-native salt marsh species in Kansas. Transactions of the Kansas Academy of Science 118:155

42. Martin, N.M.*, Y. Kobayashi, and **B.R. Maricle.** 2015. Species-specific enzymatic tolerance of sulfide toxicity in plant roots and comparative susceptibility between plant and catfish tissue. Transactions of the Kansas Academy of Science 118:148

41. Kramer, D.L.*, K.L. Caudle*, C.J. Hilt*, N.M. Martin*, A.D. Urban*, S.G. Baer, L.C. Johnson, and **B.R. Maricle**. 2015. Morphological differences in ecotypes of big bluestem (*Andropogon gerardii*) grown in common gardens across a precipitation gradient. Transactions of the Kansas Academy of Science 118:146-147

40. Hilt, C.J.*, K.L. Caudle*, W. Shu*, L.C. Johnson, S.G. Baer, and **B.R. Maricle.** 2015. Stomate densities on leaves of *Andropogon geradii* ecotypes across a precipitation gradient. Transactions of the Kansas Academy of Science 118:143

39. Caudle, K.L.*, C.J. Hilt*, C.M. Smart*, A.D. Urban*, D.L. Kramer*, N.M. Martin*, S.G. Baer, L.C. Johnson, and **B.R. Maricle**. 2015. Does environment or genetics influence leaf level physiology? Measuring photosynthetic rates of native big bluestem (*Andropogon gerardii*) grown in common gardens across a precipitation gradient. Transactions of the Kansas Academy of Science 118:137

38. Smart, C.M.*, D.L. Kramer*, K.L. Caudle*, C.J. Hilt*, S.G. Cheema*, L.C. Johnson, S.G. Baer, and **B.R. Maricle**. 2014. Nitrate reductase activities in big bluestem (*Andropogon gerardii*) ecotypes. Transactions of the Kansas Academy of Science 117:136

37. Martin, N.M.* and **B.R. Maricle**. 2014. Effect of sulfide toxicity on enzymes of respiration in plant roots. Transactions of the Kansas Academy of Science 117:129

36. Kramer, D.L.*, K.L. Caudle*, C.M. Smart*, C.J. Hilt*, S.G. Cheema*, S.G. Baer, L.C. Johnson, and **B.R. Maricle**. 2014. Glutamine synthetase activities in big bluestem (*Andropogon gerardii*) ecotypes from common garden sites across the U.S. Great Plains. Transactions of the Kansas Academy of Science 117:128

35. Honig, A.D.*, M. Rehm*, **B.R. Maricle**, and Y. Kobayashi. 2014. The effects of motor oil pollution on green algal chlorophyll concentrations. Transactions of the Kansas Academy of Science 117:123

34. Hilt, C.J.* and **B.R. Maricle**. 2014. Physiological responses of grasses to drought and flooding treatments. Transactions of the Kansas Academy of Science 117:121

33. Galliart, M.*, L. Johnson, S. Sabates*, H. Tetreault†, A. DeLaCruz*, J. Bryant*, T.J. Morgan, M. Knapp, N.M. Bello, S.G. Baer, D. Gibson, L. Wilson†, K.L. Caudle*, and **B.R. Maricle**. 2014. Adaptive potential and trait variation of a widespread grass *Andropogon gerardii* across Great Plains climate gradient: Implications for climate change. Transactions of the Kansas Academy of Science 117:117-118

32. Cheema, S.G.*, K.L. Caudle*, and **B.R. Maricle**. 2014. Effects of nitrate and phosphate concentrations on inorganic nitrogen assimilation in the grasses *Pascopyrum smithii*, *Phalaris arundinacea*, and *Phragmites australis*. Transactions of the Kansas Academy of Science 117:111

31. Caudle, K.L.*, C.M. Smart*, C.J. Hilt*, and **B.R. Maricle**. 2014. The role of root aerenchyma in oil tolerance of wetland plants. Transactions of the Kansas Academy of Science 117:111

30. Caudle, K.L.*, C.J. Hilt*, C.M. Smart*, D.L. Kramer*, S.G. Cheema*, L.C. Johnson, S.G. Baer, and **B.R. Maricle**. 2014. Pigment variation among ecotypes of big bluestem (*Andropogon gerardii*) across a precipitation gradient. Transactions of the Kansas Academy of Science 117:110

29. **Maricle, B.R.**, M.M. Gray†, J. Bryant†, A. Jensen*, A. de la Cruz†, K.L. Caudle*, J.T. Olsen†, S.G. Baer, M. Knapp, and L.C. Johnson. 2014. A possible mechanism for increased performance of a xeric adapted big bluestem (*Andropogon gerardii*) ecotype: Nitrogen and chlorophyll content of leaves in reciprocal gardens across the Great Plains. p. 106 *in*: Glaser, A., ed. *America's Grasslands Conference: The Future of Grasslands in a Changing Landscape. Proceedings of the 2nd Biennial Conference on the Conservation of America's Grasslands.* 2013 Aug. 12-14, Manhattan, KS. Washington, DC and Manhattan, KS: National Wildlife Federation and Kansas State University

28. Caudle, K.L.*, L.C. Johnson, S.G. Baer, and **B.R. Maricle**. 2014. Influence of precipitation on trichome densities in big bluestem (*Andropogon gerardii*) ecotypes in Great Plains reciprocal gardens. pp. 105-106 *in*: Glaser, A., ed. *America's Grasslands Conference: The Future of Grasslands in a Changing Landscape. Proceedings of the 2nd Biennial Conference on the Conservation of America's Grasslands.* 2013 Aug. 12-14, Manhattan, KS. Washington, DC and Manhattan, KS: National Wildlife Federation and Kansas State University

27. Caudle, K.L.*, K.J. Lindsey†, S.G. Baer, L.C. Johnson, and **B.R. Maricle**. 2014. Effects of extreme drought on photosynthesis and water potential of *Andropogon gerardii* (big bluestem) ecotypes in common gardens across Kansas. pp. 102-103 *in*: Glaser, A., ed. *America's Grasslands Conference: The Future of Grasslands in a Changing Landscape. Proceedings of the 2nd Biennial Conference on the Conservation of America's Grasslands.* 2013 Aug. 12-14, Manhattan, KS. Washington, DC and Manhattan, KS: National Wildlife Federation and Kansas State University

26. Johnson, L, P. M. Gray†, St. Amand, H. Tetreault†, K. Garrett, E. Akhunov, N. Bello, T. Morgan, S.G. Baer, and **B.R. Maricle**. 2014. Ecotypic variation in drought tolerance and genetic diversity of the ecologically dominant grass big bluestem (*Andropogon gerardii*) across the Great Plains

precipitation gradient: Implications for climate change and restoration. pp. 96-97 *in*: Glaser, A., ed. *America's Grasslands Conference: The Future of Grasslands in a Changing Landscape. Proceedings of the 2nd Biennial Conference on the Conservation of America's Grasslands.* 2013 Aug. 12-14, Manhattan, KS. Washington, DC and Manhattan, KS: National Wildlife Federation and Kansas State University

25. Martin, N.M.* and **B.R. Maricle**. 2013. Effect of sulfide toxicity on root cytochrome *c* oxidase activity in plants. Transactions of the Kansas Academy of Science 116:79

24. **Maricle, B.R.**, K.L. Caudle*, K.J. Lindsey†, S.G. Baer, and L.C. Johnson. 2013. Effects of extreme drought on photosynthesis and water potential of *Andropogon gerardii* (big bluestem) ecotypes in common gardens across Kansas. Transactions of the Kansas Academy of Science 116:79

23. Disney, H.L.*, Q.C. Aker*, and **B.R. Maricle**. 2013. Effects of drought on Kansas turf grasses. Transactions of the Kansas Academy of Science 116:72

22. Caudle, K.L.* and **B.R. Maricle**. 2013. Ecophysiological responses of salt marsh plant communities to spilled oil in experimental mesocosms. Transactions of the Kansas Academy of Science 116:69

21. Caudle, K.L.*, L.C. Johnson, S.G. Baer, and **B.R. Maricle**. 2013. Influence of precipitation on trichome densities in big bluestem (*Andropogon gerardii*) ecotypes grown in reciprocal gardens. Transactions of the Kansas Academy of Science 116:68-69

20. Caudle, K.L.*, L.C. Johnson, S.G. Baer, and **B.R. Maricle**. 2013. Non-destructive vs. destructive methods of measuring leaf chlorophyll content in *Andropogon gerardii* ecotypes. Transactions of the Kansas Academy of Science 116:68

19. Bryant, J.†, A. Jensen*, A. de la Cruz†, K.L. Caudle*, **B.R. Maricle,** S.G. Baer, and L.C. Johnson. 2013. A possible mechanism for increased performance of a xeric adapted big bluestem (*Andropogon gerardii*) ecotype: Nitrogen and chlorophyll content of leaves in reciprocal gardens across the Great Plains. Transactions of the Kansas Academy of Science 116:67-68

18. Biggs, T.N.*, S.J. White*, A. Meraz*, N.G. Maforo*, and **B.R. Maricle**. 2013. Effect of ethanol toxicity on enzyme activity in anaerobic respiration in plants. Transactions of the Kansas Academy of Science 116:66-67

17. Betzen, B.M.*, C.M. Smart*, K.L. Caudle*, and **B.R. Maricle**. 2013. Effects of salinity on photosynthesis and water potential in native and non-native salt marsh species. Transactions of the Kansas Academy of Science 116:66

16. White, S.J.*, A. Meraz*, N.G. Maforo*, and **B.R. Maricle**. 2012. Effect of ethanol toxicity on enzymes of respiration and carbon metabolism in plants. Transactions of the Kansas Academy of Science 115:79-80

15. Olsen, J.T.†, R.K. Goad†, M.L. Mendola*, H.M. Tetrault†, L.C. Johnson, S.G. Baer, and **B.R. Maricle**. 2012. Gas exchange of *Andropogon gerardii* (big bluestem) ecotypes across a climatic gradient of the Great Plains. Transactions of the Kansas Academy of Science 115:68

14. Caudle, K.L.*, C.M. Smart*, B.M. Betzen*, and **B.R. Maricle**. 2012. Effects of salinity on plant water potential in native and introduced salt marsh species. Transactions of the Kansas Academy of Science 115:54

13. Caudle, K.L.*, P.B. Adler, and **B.R. Maricle**. 2012. Physiological and ecological responses of Kansas grasses to water availability. Transactions of the Kansas Academy of Science 115:53-54

12. Caudle, K.L.* and **B.R. Maricle**. 2012. Effects of flooding on photosynthesis and root oxygen stress in plants of different flooding tolerance. Transactions of the Kansas Academy of Science 115:53

11. Caudle, K.L.* and **B.R. Maricle**. 2012. Influence of spilled oil on respiration and photosynthesis in coastal marsh species. Transactions of the Kansas Academy of Science 115:52

10. Biggs, T.N.* and **B.R. Maricle**. 2012. Effects of nitrogen source and wind on photosynthesis and nitrate reductase activity in reed canarygrass. Transactions of the Kansas Academy of Science 115:51-52

9. Barrett, K.M.† and **B.R. Maricle**. 2012. Effects of nitrate and phosphate concentration on photosynthesis and nitrate assimilation in *Phalaris arundinacea* and *Phragmites australis*. Transactions of the Kansas Academy of Science 115:50

8. Caudle, K.L.* and **B.R. Maricle**. 2011. Effects of oil deposition on respiration and photosynthesis in coastal native and introduced wetland grasses. Transactions of the Kansas Academy of Science 114:151-152

7. Olsen, J.T. †, H.M. Tetreault†, R.K. Goad†, M.L. Mendola*, L.C. Johnson, S.G. Baer, and **B.R. Maricle**. 2011. Variation of photosynthesis in big bluestem and sand bluestem reciprocally planted across a precipitation gradient. Transactions of the Kansas Academy of Science 114:170

6. Polacik, K.A.† and **B.R. Maricle**. 2010. Effects of flooding and soil type on photosynthesis in saltcedar (*Tamarix ramosissima*), an invasive riparian shrub. Transactions of the Kansas Academy of Science 113:133

5. Waring, E.F.† and **B.R. Maricle**. 2010. Mechanisms of chilling tolerance in C_4 plants. Transactions of the Kansas Academy of Science 113:140

4. Pfeifer, A.M.*, R.W. Lee, and **B.R. Maricle**. 2009. Effects of diet, drugs, and activity levels on $\delta^{13}C$ of breath and hair of humans. Transactions of the Kansas Academy of Science 112:150

3. Polacik, K.A.† and **B.R. Maricle**. 2009. Response to flooding in invasive saltcedar (*Tamarix*). Transactions of the Kansas Academy of Science 112:150

2. Waring, E.F.† and **B.R. Maricle**. 2009. Effects of flooding on light harvesting and CO_2 fixation in native and nonnative wetland grasses of central Kansas. Transactions of the Kansas Academy of Science 112:157

1. **Maricle, B.**, R. Gawrych, and D. Kaufman. 1999. Rieke zinc as a possible reducing agent for common organic functional groups. Program and Proceedings of the Nebraska Academy of Sciences 119:101

f. Guest Lectures/Demonstrations

10. **Maricle, B.R.** "Forests." Guest demonstrations for the EPA "Environmental Educators Day" workshop for elementary, middle school, and high school teachers, Sternberg Museum of Natural History, Fort Hays State University, Hays, KS, August 2011

9. **Maricle, B.R.** "Measurement of Photosynthesis." Guest demonstration for the Crop Physiology class (AGRI 425), Fort Hays State University, Hays, KS, April 2011

8. **Maricle, B.R.** "Light energy and photosynthesis." Guest lecture for FHSU "Energizing Middle School Science and Social Studies" workshop for middle school teachers (PHYS 603 E), Fort Hays State University, Hays, KS, July 2010

7. **Maricle, B.R.** "Measurement of Photosynthesis." Guest demonstration for the Crop Physiology class (AGRI 425), Fort Hays State University, Hays, KS, May 2010

6. **Maricle, B.R.** "Designing research posters." Tutorial given to FHSU faculty, Fort Hays State University, Hays, KS, Feb 2008

5. **Maricle, B.R.** "Macroclimate" and "Microclimate." Guest lectures for the General Ecology class (BIOL 372), Washington State University, Pullman, WA, January 2006

4. **Maricle, B.R.** "Photosynthetic Light Harvesting" and "Alternative Respiration Strategies." Guest lectures for the Cell Physiology class (BIOL 352), Washington State University, Pullman, WA, September 2005

3. **Maricle, B.R.** and S.M. Peyer. "Near shore environments." Guest lecture for the Ecology class (FOR 221), University of Idaho, Moscow, ID, May 2002

2. **Maricle, B.R.** "Cardiovascular System: Blood and Blood Pressure." Guest lecture for the Human Physiology class (ZOOL 251), Washington State University, Pullman, WA, April 2002

1. **Maricle, B.R.** "Respiratory System: Mechanics." Guest lecture for the Human Physiology class (ZOOL 251), Washington State University, Pullman, WA, April 2001

g. Invited Presentations (asterisks* denote undergraduate authors; daggers† indicate graduate student authors)

13. Johnson, L.C., M. Gray†, P. St. Amand, M. Gailliart*, J. Alsdurf†, S.J. Brown, J. Poland, A. Smith, K. Garrett, E. Akhunov, N. Bello, T. Morgan, H. Tetreault, S. Baer, and **B. Maricle**. Genetic differentiation and local adaptation of dominant prairie grass *Andropogon gerardii* along the climate gradient of the U.S. Midwest: Implications for climate change. Invited presentation at the symposium, "Evolutionary responses to climate change," at the Ecological Society of America annual meeting, Baltimore, MD, August 2015

12. Johnson, L.C., M. Gray†, P. St. Amand, M. Gailliart*, S.J. Brown, J. Poland, K. Garrett, E. Akhunov, N. Bello, T. Morgan, S. Baer, and **B. Maricle**. Genetic differentiation, transcriptome variation, and local adaptation of dominant prairie grass *Andropogon gerardii* along the precipitation gradient of the U.S. Midwest: Implications for climate change. Invited presentation at the Society for Molecular Biology and Evolution satellite meeting on Genomics, Hameau de l'étoile' (France), May 2015

11. Baer, S.G., **B.R. Maricle**, N. Bello, K.L. Caudle*, M. Galliart*, D.J. Gibson, M. Gray†, R.K. Goad†, E. McCrea*, M.L. Mendola†, J.T. Olsen†, S. Sabates*, H. Tetrault†, L. Wilson†, and L.C. Johnson. Discerning the presence and ecological consequence of ecotypic variation: A dilemma for restoration. Invited presentation at the symposium, "Changing prairies: science and practice in grassland restoration and reconstruction," at the 5th World Conference of Ecological Restoration, Madison, WI, October 2013

10. Johnson, L, M. Gray†, H. Tetreault†, K. Garrett, E. Akhunov, P. St. Amand, N. Bello, J. Bryant*, N. An†, **B.R. Maricle**, J. Olsen†, S.G. Baer, R.K. Goad†, A. De La Cruz†, T. Morgan, and M. Knapp. Ecotypic variation in drought tolerance and genetic diversity of the ecologically dominant grass big bluestem (*Andropogon gerardii*) across the Great Plains precipitation gradient: Implications for climate change and restoration. Presented at the Switchgrass II meeting, Madison, WI, September 2013

9. Johnson, L.C., S.G. Baer, and **B.R. Maricle**. Ecotypic and genetic variation in a dominant prairie grass: Implications for grassland conservation in a changing climate. Invited presentation at the European Science Federation ConGenOmics Network Programme, Seville, Spain, February 2012

8. **Maricle, B.R.** How do flooding, salinity, and drought influence plants? Themes from coastal marshes and the mixed-grass prairie. Invited presentation at the Wichita State University Seminar Series in Biological Sciences, Wichita, KS, November 2011

7. **Maricle, B.R.** Environmental influences on salt marsh grasses: the roles of waterlogging, salinity, and sulfide. Invited presentation at the Kansas State University Seminar Series in Ecology and Evolutionary Biology, Manhattan, KS, October 2008

6. **Maricle, B.R.** Wetland vegetation. Invited seminar presented at the Cheyenne Bottoms Wetlanders Festival, Hoisington, KS, April 2007

5. **Maricle, B.R.** Environmental regulation of species zonation in salt marshes: the roles of flooding, salinity, and sulfide. Invited seminar at Loras College, Dubuque, IA, February 2007

4. **Maricle, B.R.** The physiological ecology of salt marsh grasses: factors influencing flooding tolerance, salinity tolerance, and species zonation. Invited seminar at the University of St. Thomas, St. Paul, MN, March 2006

3. **Maricle, B.R.** and R.W. Lee. Respiration and oxygen transport in saltmarsh grasses in relation to elevational zonation. Invited for presentation in the "Environmental Physiology" Minisymposium at the American Society of Plant Biologists Annual Meeting, Seattle, WA, July 2005

2. **Maricle, B.R.** and R.W. Lee. Oxygen transport through aerenchyma in *Spartina* (Poaceae). Invited for presentation in the "Structure and Function of Wetland Plants" Symposium at the Botanical Society of America Annual Meeting, Mobile, AL, July 2003

1. Lee, R. W. and **B.R. Maricle**. Why are *Spartina* grasses so successful? Adaptations to anoxia and hydrogen sulfide. Invited presentation at the *Spartina* Mini Conference, Long Beach, WA, June 2001

h. Contributed Oral Presentations (asterisks* denote undergraduate authors; daggers† indicate graduate student authors)

50. Galliart, M.*, P. St. Amand, J. Poland, N.M. Bello, S. Sabates*, H. Tetreault†, A. DeLaCruz*, J. Bryant*, T.J. Morgan, M. Knapp, S.G. Baer, D. Gibson, L. Wilson†, **B.R. Maricle**, and L. Johnson. Adaptive trait variation and genetic divergence of a widespread grass *Andropogon gerardii* across a Great Plains' climate gradient. Presented at the Midwest Section of the American Society of Plant Biologists Annual Meeting, St. Louis, MO, March 2015

49. Johnson, L.C., M.M. Gray†, P. St. Amand, M. Galliart*, S. Brown, K. Garrett, E. Akhunov, N. Bello, T. Morgan, S.G. Baer, and **B.R. Maricle**. Genetic differentiation, transcriptome variation, and local adaptation of dominant prairie grass *Andropogon gerardii* along the climate gradient of the U.S. Midwest: Implications for climate change and restoration. Presented at the International Plant and Animal Genome XIII Conference, San Diego, CA, January 2015

48. **Maricle, B.R.**, K.L. Caudle*, J.T. Olsen†, J. Bryant†, A. de la Cruz†, A. Jensen*, S.G. Baer, N.M. Bello, and L.C. Johnson. A possible mechanism for increased performance of a xeric adapted big bluestem (*Andropogon gerardii*) ecotype: Photosynthesis, nitrogen, and chlorophyll concentration of leaves in reciprocal gardens across the Great Plains. Presented at the Botanical Society of America Annual Meeting, Boise, ID, July 2014

47. Galliart, M.*, L. Johnson, S. Sabates*, H. Tetreault†, A. DeLaCruz*, J. Bryant*, T.J. Morgan, M. Knapp, N.M. Bello, S.G. Baer, D. Gibson, L. Wilson†, K.L. Caudle*, and **B.R. Maricle**. Adaptive potential and trait variation of a widespread grass *Andropogon gerardii* across Great Plains climate gradient: Implications for climate change. Presented at the Botanical Society of America Annual Meeting, Boise, ID, July 2014

46. Caudle, K.L.*, C.M. Smart*, C.J. Hilt*, and **B.R. Maricle**. The role of root aerenchyma in oil tolerance of wetland plants. Presented at the Botanical Society of America Annual Meeting, Boise, ID, July 2014

45. Galliart, M.*, L. Johnson, N.M. Bello, S.G. Baer, **B.R. Maricle**, D. Gibson, H. Tetreault†, and S. Sabates*. Adaptive potential and trait variation of a widespread grass *Andropogon gerardii* across a Great Plains climate gradient: Implications for climate change. Presented at the Evolution 2014 Conference, Raleigh, NC, June 2014

44. Galliart, M.*, L. Johnson, S. Sabates*, H. Tetreault†, A. DeLaCruz*, J. Bryant*, T.J. Morgan, M. Knapp, N.M. Bello, S.G. Baer, D. Gibson, L. Wilson†, K.L. Caudle*, and **B.R. Maricle**. Adaptive potential and trait variation of a widespread grass *Andropogon gerardii* across a Great Plains

climate gradient: Implications for climate change. Presented at the Kansas Academy of Science Annual Meeting, Emporia, KS, April 2014

43. Caudle, K.L.*, C.M. Smart*, C.J. Hilt*, and **B.R. Maricle**. The role of root aerenchyma in oil tolerance of wetland plants. Presented at the Kansas Academy of Science Annual Meeting, Emporia, KS, April 2014 **[1st place oral presentation by an undergraduate student]**

42. Johnson, L., M. Gray†, H. Tetreault†, K. Garrett, E. Akhunov, P. St. Amand, N. Bello, J. Bryant*, N. An†, **B.R. Maricle**, J. Olsen†, S.G. Baer, R.K. Goad†, A. De La Cruz†, T. Morgan, and M. Knapp. Ecotypic variation in drought tolerance and genetic diversity of the ecologically dominant grass big bluestem (*Andropogon gerardii*) across the Great Plains precipitation gradient: Implications for climate change and restoration. Presented at America's Grasslands meeting, Manhattan, KS, August 2013

41. Johnson, L, S.G. Baer, **B.R. Maricle**, M. Gray†, H. Tetreault†, N. Bello, S. Brown, T. Morgan, J. Shelton†, and S. Chellapilla. Genetic differentiation, transcriptome variation, and local adaptation of an ecologically dominant prairie grass *Andropogon gerardii* (big bluestem) occurring along the climate gradient in Midwest U.S. grasslands. Presented at the Evolution 2013 Meeting, Snowbird, UT, June 2013

40. Caudle, K.L.* and **B.R. Maricle**. Ecophysiological responses of salt marsh plant communities to spilled oil in experimental mesocosms. Presented at the Kansas Academy of Science Annual Meeting, Overland Park, KS, April 2013 **[3rd place oral presentation by an undergraduate student]**

39. **Maricle, B.R.**, K.L. Caudle*, K.J. Lindsey†, S.G. Baer, and L.C. Johnson. Effects of extreme drought on photosynthesis and water potential of *Andropogon gerardii* (big bluestem) ecotypes in common gardens across Kansas. Presented at the Kansas Academy of Science Annual Meeting, Overland Park, KS, April 2013

38. Johnson, L, M. Gray†, H. Tetreault†, K. Garrett, E. Akhunov, P. St. Amand, N. Bello, J. Bryant*, N. An†, **B.R. Maricle**, J. Olsen†, S.G. Baer, R.K. Goad†, A. De La Cruz†, T. Morgan, and M. Knapp. Ecotypic variation in drought tolerance and genetic diversity of the ecologically dominant grass big bluestem (*Andropogon gerardii*) across the Great Plains precipitation gradient. Presented at the Ecological Society of America Annual Meeting, Portland, OR, August 2012

37. Gray, M.†, P. St Amand, H. Tetreault†, S. Baer, **B. Maricle**, T. Morgan, R. Goad†, J. Olsen†, and L. Johnson. Ecotypic variation in drought tolerance and genetic diversity of an ecologically dominant grass big bluestem (*Andropogon gerardii*) across the Great Plains precipitation gradient. Presented at the Ecological Society of America Annual Meeting, Portland, OR, August 2012

36. Caudle, K.L.* and **B.R. Maricle**. Physiological responses of coastal marsh species to spilled oil. Presented at the Botanical Society of America Annual Meeting, Columbus, OH, July 2012

35. Olsen, J.T.†, R.K. Goad†, M.L. Mendola*, H.M. Tetrault†, L.C. Johnson, S.G. Baer, and **B.R. Maricle**. Photosynthetic gas exchange of big bluestem (*Andropogon gerardii*) ecotypes across a precipitation gradient of the Great Plains. Presented at the Botanical Society of America Annual Meeting, Columbus, OH, July 2012

34. Caudle, K.L.*, P.B. Adler, and **B.R. Maricle**. Influence of water availability on photosynthesis, water potential, and phenology in Kansas grasses. Presented at the Botanical Society of America Annual Meeting, Columbus, OH, July 2012

33. Barrett, K.M.† and **B.R. Maricle**. Effects of nitrate and phosphate concentration on photosynthesis and nitrate assimilation in *Phalaris arundinacea* and *Phragmites australis*. Presented at the Kansas Academy of Science Annual Meeting, Wichita, KS, March 2012

32. Caudle, K.L.*, P.B. Adler, and **B.R. Maricle**. Physiological and ecological responses of Kansas grasses to water availability. Presented at the Kansas Academy of Science Annual Meeting, Wichita, KS, March 2012

31. Olsen, J.T.†, R.K. Goad†, M.L. Mendola*, H.M. Tetrault†, L.C. Johnson, S.G. Baer, and **B.R. Maricle**. Gas exchange of *Andropogon gerardii* (big bluestem) ecotypes across a climatic gradient of the Great Plains. Presented at the Kansas Academy of Science Annual Meeting, Wichita, KS, March 2012

30. Caudle, K.L.* and **B.R. Maricle**. Influence of spilled oil on respiration and photosynthesis in coastal marsh species. Presented at the Kansas Academy of Science Annual Meeting, Wichita, KS, March 2012

29. Caudle, K.L.* L.C. Johnson, S.G. Baer, and **B.R. Maricle**. Influence of precipitation on trichome density in five *Andropogon gerardii* ecotypes. Presented at the Big Bluestem Consortium Annual Meeting, Manhattan, KS, March 2012

28. Olsen, J.T.†, H.M. Tetrault†, R.K. Goad†, L.C. Johnson, S.G. Baer, M.L. Mendola*, and **B.R. Maricle**. Gas exchange and leaf anatomy of *Andropogon gerardii* ecotypes across a climatic gradient of the Great Plains. Presented at the Big Bluestem Consortium Annual Meeting, Manhattan, KS, March 2012

27. Caudle, K.L.* and **B.R. Maricle**. Responses of respiration and photosynthesis to spilled oil in coastal wetland grasses. Presented at the Botanical Society of America Annual Meeting, St. Louis, MO, July 2011

26. Olsen, J.T.†, H.M. Tetrault†, R.K. Goad†, M.L. Mendola*, L.C. Johnson, S.G. Baer, and **B.R. Maricle**. Photosynthetic variation of big bluestem and sand bluestem influenced by ecotype and precipitation. Presented at the Botanical Society of America Annual Meeting, St. Louis, MO, July 2011

25. Caudle, K.L.* and **B.R. Maricle**. Effects of oil deposition on respiration and photosynthesis in coastal native and introduced wetland grasses. Presented at the Kansas Academy of Science Annual Meeting, Baldwin City, KS, April 2011 **[2nd place oral presentation by an undergraduate student]**

24. Olsen, J.T. †, H.M. Tetreault†, R.K. Goad†, M.L. Mendola*, L.C. Johnson, S.G. Baer, and **B.R. Maricle**. Variation of photosynthesis in big bluestem and sand bluestem reciprocally planted across a precipitation gradient. Presented at the Kansas Academy of Science Annual Meeting, Baldwin City, KS, April 2011

23. Olsen, J.T.†, H.M. Tetrault†, R.K. Goad†, L.C. Johnson, S.G. Baer, M.L. Mendola*, and **B.R. Maricle**. Effects of ecotype and precipitation on photosynthesis in big bluestem. Presented at the Big Bluestem Consortium Annual Meeting, Manhattan, KS, February 2011

22. Waring, E.F.† and **B.R. Maricle**. Photosynthetic variation and carbon isotope discrimination in response to flooding in native and invasive grasses of central Kansas. Presented at the Society of Wetland Scientists Annual Meeting, Salt Lake City, UT, June 2010 **[honorable mention oral presentation by a graduate student]**

21. Polacik, K.A.† and **B.R. Maricle**. Effects of flooding on photosynthesis in saltcedar (*Tamarix ramosissima*), an invasive riparian shrub. Presented at the Southwestern Association of Naturalists Annual Meeting, Junction, TX, April 2010

20. Waring, E.F.† and **B.R. Maricle**. Changes in photosynthesis caused by flooding in native and nonnative wetland grasses of Central Kansas. Presented at the Southwestern Association of Naturalists Annual Meeting, Junction, TX, April 2010

19. Polacik, K.A.[†] and **B.R. Maricle**. Effects of flooding and soil type on photosynthesis in saltcedar (*Tamarix ramosissima*), an invasive riparian shrub. Presented at the Kansas Academy of Science Annual Meeting, Hays, KS, April 2010

18. Waring, E.F.[†] and **B.R. Maricle**. Mechanisms of chilling tolerance in C_4 plants. Presented at the Kansas Academy of Science Annual Meeting, Hays, KS, April 2010 **[3rd place oral presentation by a graduate student]**

17. Polacik, K.A.[†] and **B.R. Maricle**. Response to flooding in invasive saltcedar (*Tamarix*). Presented at the Weed Science Society of America Annual Meeting, Denver, CO, February 2010

16. Waring, E.F.[†] and **B.R. Maricle**. Effects of flooding on photosynthesis and respiration in native and invasive wetland grasses of central Kansas. Presented at the Weed Science Society of America Annual Meeting, Denver, CO, February 2010

15. **Maricle, B.R.**, S.R. Zwenger[†], A.M. Pfeifer*, and R.W. Lee. Effects of creek drying on shallow- and deep-rooted trees in western Kansas. Presented at the Ecological Society of America Annual Meeting, Milwaukee, WI, August 2008

14. **Maricle, B.R.** Biophysical and morphological leaf adaptations to drought and salinity in salt marsh grasses. Presented at the Ecological Society of America Annual Meeting, San Jose, CA, August 2007

13. **Maricle, B.R.** The physiological ecology of salt marsh grasses: factors influencing flooding tolerance, salinity tolerance, and species zonation. FHSU seminar series, Hays, KS, October 2006

12. **Maricle, B.R.** The physiological ecology of salt marsh grasses: factors influencing flooding tolerance, salinity tolerance, and species zonation. WSU exit seminar, Pullman, WA, April 2006

11. **Maricle, B.R.** and R.W. Lee. Oxygen transport and physiological mechanisms influencing zonation in salt marsh grasses. Presented at the Third International Conference on Invasive *Spartina*, San Francisco, CA, November 2004

10. **Maricle, B.R.**, O. Kiirats, G.E. Edwards, and R.W. Lee. Effects of salinity on carbon isotope discrimination and photosynthesis in C_4 estuarine grasses. Presented at the Ecological Society of America Annual Meeting, Portland, OR, August 2004

9. **Maricle, B.R.**, J.J. Crosier*, B.C. Bussiere*, and R.W. Lee. Potential for marsh plants to oxygenate sediments and enhance bioremediation of pollutants. Presented at the Society of Wetland Scientists Annual Meeting, Seattle, WA, July 2004

8. Lee. R.W. and **B.R. Maricle**. Oxygen transport and adaptations to flooding in estuarine cordgrasses. Presented at the EPA Joint Program in Phytoremediation PI Meeting, Washington, DC, January 2004

7. Lee, R.W. and **B.R. Maricle**. Oxygenation of sediments by *Spartina* marsh grasses: Potential facilitation of pollutant degradation. Presented at the U.S. EPA International Applied Phytotechnologies Conference, Chicago, IL, March 2003

6. **Maricle, B.R.** What makes a successful estuarine invader? Comparative hypoxia- and salt-stress physiology of introduced *Spartina* and native *Distichlis* grasses. Presented at "Eco-Evo Lunch," WSU School of Biological Sciences informal departmental seminar, January 2003

5. **Maricle, B.R.** and R.W. Lee. Physiological mechanisms of hypoxia tolerance in invasive *Spartina* cordgrass: The significance of aerenchyma development and oxygen transport. Presented at the American Society of Limnology and Oceanography Annual Meeting, Victoria, BC, June 2002

4. **Maricle, B.R.** and R.W. Lee. Aerenchyma development and oxygen transport in the estuarine cordgrasses *Spartina alterniflora* and *S. anglica*. Presented at the International Conference on Aquatic Invasive Species, Alexandria, VA, February 2002

3. **Maricle, B.R.** Aerenchyma development and oxygen transport in the estuarine cordgrasses *Spartina alterniflora* and *S. anglica*. Presented at "Eco-Evo Lunch," WSU School of Biological Sciences informal departmental seminar, October 2001

2. **Maricle, B.R.** How population density relates to body size in birds. Undergraduate thesis defense, Kearney, NE, July 1999

1. **Maricle, B.R.**, R. Gawrych, and D. Kaufman. Rieke Zinc as a possible reducing agent for common organic functional groups. Presented at the Nebraska Academy of Sciences, Lincoln, NE, April 1999

i. Poster Presentations (asterisks* denote undergraduate authors; daggers† indicate graduate student authors)

96. Smart, C.M.*, D.L. Kramer*, K.L. Caudle*, C.J. Hilt*, A.D. Urban*, L.C. Johnson, S.G. Baer, and **B.R. Maricle**. Chlorophyll content in big bluestem (*Andropogon gerardii*) ecotypes across a precipitation gradient. Presented at Fort Hays State University's John Heinrichs Scholarship and Creative Activities Day, Hays, KS, April 2015

95. Kramer, D.L.*, K.L. Caudle*, C.J. Hilt*, N.M. Martin*, A.D. Urban*, S.G. Baer, L.C. Johnson, and **B.R. Maricle**. Morphological differences in ecotypes of big bluestem (*Andropogon gerardii*) grown in common gardens across a precipitation gradient. Presented at Fort Hays State University's John Heinrichs Scholarship and Creative Activities Day, Hays, KS, April 2015

94. Martin, N.M.*, Y. Kobayashi, and **B.R. Maricle**. Species-specific enzymatic tolerance of sulfide toxicity in plant roots and comparative susceptibility between plant and catfish tissue. Presented at the Experimental Biology Meeting, Boston, MA, March 2015

93. Urban, A.D.*, Y. Kobayashi, and **B.R. Maricle**. Effects of lactic acid on anaerobic respiration in channel catfish (*Ictalurus punctatus*) liver. Presented at the Kansas IDeA Network of Biomedical Research Excellence (K-INBRE) Annual Symposium, Topeka, KS, January 2015

92. Martin, N.M.*, Y. Kobayashi, and **B.R. Maricle**. Species-specific enzymatic tolerance of sulfide toxicity in plant roots and comparative susceptibility between plant and catfish tissue. Presented at the Kansas IDeA Network of Biomedical Research Excellence (K-INBRE) Annual Symposium, Topeka, KS, January 2015

91. Galliart, M.*, P. St. Amand, J. Poland, N.M. Bello, S. Sabates*, H. Tetreault†, A. DeLaCruz*, J. Bryant*, T.J. Morgan, M. Knapp, S.G. Baer, D. Gibson, L. Wilson†, **B.R. Maricle**, and L. Johnson. Adaptive trait variation and genetic divergence of a widespread grass *Andropogon gerardii* across a Great Plains' climate gradient. Presented at the International Plant and Animal Genome XIII Conference, San Diego, CA, January 2015

90. Galliart, M.*, P. St. Amand, J. Poland, N.M. Bello, S. Sabates*, H. Tetreault†, A. DeLaCruz*, J. Bryant*, T.J. Morgan, M. Knapp, S.G. Baer, D. Gibson, L. Wilson†, **B.R. Maricle**, and L. Johnson. Adaptive trait variation and genetic divergence of a widespread grass *Andropogon gerardii* across a Great Plains' climate gradient. Presented at the 12th Annual Ecological Genomics Symposium, Kansas City, MO, November 2014

89. Smart, C.M.*, D.L. Kramer*, K.L. Caudle*, C.J. Hilt*, S.G. Cheema*, L.C. Johnson, S.G. Baer, and **B.R. Maricle**. Nitrate reductase activities in big bluestem (*Andropogon gerardii*) ecotypes. Presented at the Botanical Society of America Annual Meeting, Boise, ID, July 2014

88. Gaffney, J.*, M. Galliert*, S. Sabates*, S. Baer, **B. Maricle**, E. McCrea*, N.M. Bello, and L. Johnson. Variations in polyploidy in Big Bluestem (*Andropogon gerardii*) ecotypes across the Great Plains. Presented at the Botanical Society of America Annual Meeting, Boise, ID, July 2014

87. Hilt, C.J.* and **B.R. Maricle**. Physiological responses of grasses to drought and flooding treatments. Presented at the Botanical Society of America Annual Meeting, Boise, ID, July 2014 **[Li-Cor prize for student poster in the Physiological section]**

86. Caudle, K.L.*, C.J. Hilt*, C.M. Smart*, D.L. Kramer*, S.G. Cheema*, L.C. Johnson, S.G. Baer, and **B.R. Maricle**. Pigment variation among ecotypes of big bluestem (*Andropogon gerardii*) across a precipitation gradient. Presented at the Botanical Society of America Annual Meeting, Boise, ID, July 2014 **[best student poster in the Physiological section]**

85. Honig, A.D.*, M. Rehm*, **B.R. Maricle**, and Y. Kobayashi. The effects of motor oil pollution on green algal chlorophyll concentrations. Presented at the Kansas Academy of Science Annual Meeting, Emporia, KS, April 2014 **[1st place poster by an undergraduate student]**

84. Hilt, C.J.* and **B.R. Maricle**. Physiological responses of grasses to drought and flooding treatments. Presented at the Kansas Academy of Science Annual Meeting, Emporia, KS, April 2014

83. Cheema, S.G.*, K.L. Caudle*, and **B.R. Maricle**. Effects of nitrate and phosphate concentrations on inorganic nitrogen assimilation in the grasses *Pascopyrum smithii*, *Phalaris arundinacea*, and *Phragmites australis*. Presented at the Kansas Academy of Science Annual Meeting, Emporia, KS, April 2014

82. Kramer, D.L.*, K.L. Caudle*, C.M. Smart*, C.J. Hilt*, S.G. Cheema*, S.G. Baer, L.C. Johnson, and **B.R. Maricle**. Glutamine synthetase activities in big bluestem (*Andropogon gerardii*) ecotypes from common garden sites across the U.S. Great Plains. Presented at the Kansas Academy of Science Annual Meeting, Emporia, KS, April 2014

81. Smart, C.M.*, D.L. Kramer*, K.L. Caudle*, C.J. Hilt*, S.G. Cheema*, L.C. Johnson, S.G. Baer, and **B.R. Maricle**. Nitrate reductase activities in big bluestem (*Andropogon gerardii*) ecotypes. Presented at the Kansas Academy of Science Annual Meeting, Emporia, KS, April 2014

80. Caudle, K.L.*, C.J. Hilt*, C.M. Smart*, D.L. Kramer*, S.G. Cheema*, L.C. Johnson, S.G. Baer, and **B.R. Maricle**. Pigment variation among ecotypes of big bluestem (*Andropogon gerardii*) across a precipitation gradient. Presented at the Kansas Academy of Science Annual Meeting, Emporia, KS, April 2014 **[3rd place poster by an undergraduate student]**

79. Martin, N.M.* and **B.R. Maricle**. Effect of sulfide toxicity on enzymes of respiration in plant roots. Presented at the Kansas Academy of Science Annual Meeting, Emporia, KS, April 2014

78. Caudle, K.L.*, K.J. Lindsey†, S.G. Baer, L.C. Johnson, and **B.R. Maricle**. Effects of extreme drought on photosynthesis and water potential of *Andropogon gerardii* (big bluestem) ecotypes in common gardens across Kansas. Presented at the Kansas Undergraduate Research Day at the Capitol, Topeka, KS, February 2014

77. Honig, A.D.*, M. Rehm*, **B.R. Maricle**, and Y. Kobayashi. The effects of motor oil pollution on green algal chlorophyll concentrations. Presented at the Kansas IDeA Network of Biomedical Research Excellence (K-INBRE) Annual Symposium, Kansas City, MO, January 2014

76. Martin, N.M.* and **B.R. Maricle**. Effect of sulfide toxicity on enzymes of respiration in plant roots. Presented at the Kansas IDeA Network of Biomedical Research Excellence (K-INBRE) Annual Symposium, Kansas City, MO, January 2014

75. Gaffney, J.*, M. Galliert*, S. Sabates*, S. Baer, **B. Maricle**, E. McCrea*, N.M. Bello, and L. Johnson. Variations in polyploidy in Big Bluestem (*Andropogon gerardii*) ecotypes across the Great Plains. Presented at the 11th Annual Ecological Genomics Symposium, Kansas City, MO, November 2013

74. Galliart, M.*, S. Sabates*, S. Baer, N. Bello, K. Caudle*, **B. Maricle**, E. McCrea*, D. Gibson, L. Wilson†, and L. Johnson. How does phenology and seed production of big bluestem (*Andropogon gerardii*) vary across the climate gradient of the Great Plains? A reciprocal garden approach to

distinguish roles of site and ecotype. Presented at the Switchgrass II meeting, Madison, WI, September 2013

73. **Maricle, B.R.**, M.M. Gray†, J. Bryant†, A. Jensen*, A. de la Cruz†, K.L. Caudle*, J.T. Olsen†, S.G. Baer, M. Knapp, and L.C. Johnson. A possible mechanism for increased performance of a xeric adapted big bluestem (*Andropogon gerardii*) ecotype: Nitrogen and chlorophyll content of leaves in reciprocal gardens across the Great Plains. Presented at the Switchgrass II meeting, Madison, WI, September 2013

72. Caudle, K.L.*, K.J. Lindsey†, S.G. Baer, L.C. Johnson, and **B.R. Maricle**. Effects of extreme drought on photosynthesis and water potential of *Andropogon gerardii* (big bluestem) ecotypes in common gardens across Kansas. Presented at the Switchgrass II meeting, Madison, WI, September 2013

71. Caudle, K.L.*, L.C. Johnson, S.G. Baer, and **B.R. Maricle**. Influence of precipitation on trichome densities in big bluestem (*Andropogon gerardii*) ecotypes in Great Plains reciprocal gardens. Presented at the Switchgrass II meeting, Madison, WI, September 2013

70. Galliart, M.*, Sabates, S.*, S. Baer, N. Bello, K. Caudle*, **B. Maricle**, E. McCrea*, D. Gibson, L. Wilson†, and L. Johnson. How does phenology and seed production of big bluestem (*Andropogon gerardii*) vary across the climate gradient of the Great Plains? A reciprocal garden approach to distinguish roles of site and ecotype. Presented at America's Grasslands meeting, Manhattan, KS, August 2013

69. Johnson, L, M. Gray†, H. Tetreault†, K. Garrett, E. Akhunov, P. St. Amand, N. Bello, J. Bryant*, N. An†, **B.R. Maricle**, J. Olsen†, S.G. Baer, R.K. Goad†, A. De La Cruz†, T. Morgan, and M. Knapp. Ecotypic variation in drought tolerance and genetic diversity of the ecologically dominant grass big bluestem (*Andropogon gerardii*) across the Great Plains precipitation gradient: Implications for climate change and restoration. Presented at the America's Grasslands meeting, Manhattan, KS, August 2013

68. **Maricle, B.R.**, M.M. Gray†, J. Bryant†, A. Jensen*, A. de la Cruz†, K.L. Caudle*, J.T. Olsen†, S.G. Baer, M. Knapp, and L.C. Johnson. A possible mechanism for increased performance of a xeric adapted big bluestem (*Andropogon gerardii*) ecotype: Nitrogen and chlorophyll content of leaves in reciprocal gardens across the Great Plains. Presented at America's Grasslands meeting, Manhattan, KS, August 2013

67. Caudle, K.L.*, K.J. Lindsey†, S.G. Baer, L.C. Johnson, and **B.R. Maricle**. Effects of extreme drought on photosynthesis and water potential of *Andropogon gerardii* (big bluestem) ecotypes in common gardens across Kansas. Presented at America's Grasslands meeting, Manhattan, KS, August 2013

66. Caudle, K.L.*, L.C. Johnson, S.G. Baer, and **B.R. Maricle**. Influence of precipitation on trichome densities in big bluestem (*Andropogon gerardii*) ecotypes in Great Plains reciprocal gardens. Presented at America's Grasslands meeting, Manhattan, KS, August 2013

65. Galliart, M.*, Sabates, S.*, S. Baer, N. Bello, K. Caudle*, **B. Maricle**, E. McCrea*, D. Gibson, L. Wilson†, and L. Johnson. How does phenology and seed production of big bluestem (*Andropogon gerardii*) vary across the climate gradient of the Great Plains? A reciprocal garden approach to distinguish roles of site and ecotype. Presented at the Botanical Society of America Annual Meeting, New Orleans, LA, July 2013

64. Sabates, S.*, M. Gitzendanner*, S. Baer, N. Bello, K. Caudle*, **B. Maricle**, E. McCrea*, D. Gibson, L. Wilson†, and L. Johnson. How does phenology and seed production of big bluestem (*Andropogon gerardii*) vary across the climate gradient of the Great Plains? A reciprocal garden approach to distinguish roles of site and ecotype. Presented at the Botanical Society of America 2013 Annual Conference, New Orleans, LA, July 2013

63. **Maricle, B.R.**, M.M. Gray[†], J. Bryant[†], A. Jensen*, A. de la Cruz[†], K.L. Caudle*, J.T. Olsen[†], S.G. Baer, M. Knapp, and L.C. Johnson. A possible mechanism for increased performance of a xeric adapted big bluestem (*Andropogon gerardii*) ecotype: Nitrogen and chlorophyll content of leaves in reciprocal gardens across the Great Plains. Presented at the Botanical Society of America Annual Meeting, New Orleans, LA, July 2013

62. Caudle, K.L.*, L.C. Johnson, S.G. Baer, and **B.R. Maricle**. Influence of precipitation on trichome densities in big bluestem (*Andropogon gerardii*) ecotypes in Great Plains reciprocal gardens. Presented at the Botanical Society of America Annual Meeting, New Orleans, LA, July 2013

61. Johnson, L, S.G. Baer, **B.R. Maricle**, M. Gray[†], H. Tetreault[†], N. Bello. Genetic differentiation, transcriptome variation, and local adaptation of an ecologically dominant prairie grass *Andropogon gerardii* (big bluestem) occurring along the climate gradient in Midwest U.S. grasslands. Presented at the Society for Molecular Biology and Evolution Annual Meeting, Chicago, IL, July 2013

60. Galliart, M.*, S. Sabates*, E. McCrea*, S. Baer, L. Wilson[†], D. Gibson, **B. Maricle**, K. Caudle*, N. Bello, and L. Johnson. How does phenology and seed production of big bluestem (*Andropogon gerardii*) ecotypes vary across the Great Plains climate gradient? A reciprocal garden approach. Presented at the Evolution 2013 Meeting, Snowbird, UT, June 2013

59. Sabates, S.*, M. Gitzendanner*, S. Baer, N. Bello, K. Caudle*, **B. Maricle**, E. McCrea*, D. Gibson, L. Wilson[†], and L. Johnson. How does phenology and seed production of big bluestem (*Andropogon gerardii*) vary across the climate gradient of the Great Plains? A reciprocal garden approach to distinguish roles of site and ecotype. Presented at the Evolution 2013 Annual Conference, Snowbird, UT, June 2013

58. Disney, H.L.*, Q.C. Aker*, and **B.R. Maricle**. Effects of drought on Kansas turf grasses. Presented at the International Science and Engineering Fair, Phoenix, AZ, May 2013

57. Jensen, A.*, L.C. Johnson, S.G. Baer, and **B.R. Maricle**. Big bluestem ecotypic differences in leaf nitrogen content as a possible mechanism for increased performance of Central KS ecotype in reciprocal gardens planted across the Great Plains. Presented at the Nebraska Academy of Sciences, Lincoln, NE, April 2013

56. Disney, H.L.*, Q.C. Aker*, and **B.R. Maricle**. Effects of drought on Kansas turf grasses. Presented at the Kansas Academy of Science Annual Meeting, Overland Park, KS, April 2013

55. Caudle, K.L.*, L.C. Johnson, S.G. Baer, and **B.R. Maricle**. Influence of precipitation on trichome densities in big bluestem (*Andropogon gerardii*) ecotypes grown in reciprocal gardens. Presented at the Kansas Academy of Science Annual Meeting, Overland Park, KS, April 2013 **[2nd place poster by an undergraduate student]**

54. **Maricle, B.R.**, M.M. Gray[†], J. Bryant[†], A. Jensen*, A. de la Cruz[†], K.L. Caudle*, J.T. Olsen[†], S.G. Baer, M. Knapp, and L.C. Johnson. A possible mechanism for increased performance of a xeric adapted big bluestem (*Andropogon gerardii*) ecotype: Nitrogen and chlorophyll content of leaves in reciprocal gardens across the Great Plains. Presented at the Kansas Academy of Science Annual Meeting, Overland Park, KS, April 2013

53. Caudle, K.L.*, L.C. Johnson, S.G. Baer, and **B.R. Maricle**. Non-destructive vs. destructive methods of measuring leaf chlorophyll content in *Andropogon gerardii* ecotypes. Presented at the Kansas Academy of Science Annual Meeting, Overland Park, KS, April 2013

52. Martin, N.M.* and **B.R. Maricle**. Effect of sulfide toxicity on root cytochrome *c* oxidase activity in plants. Presented at the Kansas Academy of Science Annual Meeting, Overland Park, KS, April 2013

51. Biggs, T.N.*, S.J. White*, A. Meraz*, N.G. Maforo*, and **B.R. Maricle**. Effect of ethanol toxicity on enzyme activity in anaerobic respiration in plants. Presented at the Kansas Academy of Science Annual Meeting, Overland Park, KS, April 2013

50. Betzen, B.M.*, C.M. Smart*, K.L. Caudle*, and **B.R. Maricle**. Effects of salinity on photosynthesis and water potential in native and non-native salt marsh species. Presented at the Kansas Academy of Science Annual Meeting, Overland Park, KS, April 2013 **[3rd place poster by an undergraduate student]**

49. Caudle, K.L.* and **B.R. Maricle**. Effects of flooding on photosynthesis and root oxygen stress in plants of different flooding tolerance. Presented at the Kansas Undergraduate Research Day at the Capitol, Topeka, KS, April 2013

48. Disney, H.L.*, Q.C. Aker*, and **B.R. Maricle**. Effects of drought on Kansas turf grasses. Presented at the Kansas Undergraduate Research Day at the Capitol, Topeka, KS, April 2013

47. Sabates, S.*, M. Galliart*, S. Baer, N. Bello, K. Caudle*, **B. Maricle**, E. McCrea*, D. Gibson, L. Wilson†, and L. Johnson. How does phenology and seed production of big bluestem (*Andropogon gerardii*) vary across the climate gradient of the Great Plains? A reciprocal garden approach to distinguish roles of site and ecotype. Kansas State University Research Forum, Manhattan, KS, March 2013 **[best poster award]**

46. Betzen, B.M.*, C.M. Smart*, K.L. Caudle*, and **B.R. Maricle**. Effects of salinity on photosynthesis and plant water potential in native and non-native salt marsh species. Presented at the Kansas State Science Fair, Wichita, KS, March 2013

45. Disney, H.L.*, Q.C. Aker*, and **B.R. Maricle**. Effects of drought on Kansas turf grasses. Presented at the Kansas State Science Fair, Wichita, KS, March 2013 **[2nd place project overall in Division I; 1st place in Botany category; U.S. Stockholm Junior Water prize regional winner; U.S. Army winner; and Kanas BioScience award winner]**

44. Betzen, B.M.*, C.M. Smart*, K.L. Caudle*, and **B.R. Maricle**. Effects of salinity on photosynthesis and plant water potential in native and non-native salt marsh species. Presented at the Hays Regional Science Fair, Hays, KS, February 2013 **[gold medal recipient in Division I]**

43. Disney, H.L.*, Q.C. Aker*, and **B.R. Maricle**. Effects of drought on Kansas turf grasses. Presented at the Hays Regional Science Fair, Hays, KS, February 2013 **[gold medal recipient in Division I]**

42. Biggs, T.N.*, S.J. White*, A. Meraz*, N.G. Maforo*, and **B.R. Maricle**. Effect of ethanol toxicity on enzyme activity in anaerobic respiration in plants. Presented at the Kansas IDeA Network of Biomedical Research Excellence (K-INBRE) Annual Symposium, Manhattan, KS, January 2013

41. Gaffney, J.*, S. Sabates*, S. Baer, **B. Maricle**, E. McCrea*, N. Bello, and L. Johnson. Variations in polyploidy in Big Bluestem (*Andropogon gerardii*) ecotypes across the Great Plains. Presented at the 10th Anniversary Ecological Genomics Symposium, Kansas City, MO, October 2012

40. Sabates, S.*, M. Galliart*, E. McCrea*, S. Baer, L. Wilson†, D. Gibson, **B. Maricle**, K. Caudle*, and L. Johnson. Phenology and seed production in big bluestem (*Andropogon gerardii*) ecotypes in Great Plains reciprocal gardens: the role of site and ecotype. Presented at the 10th Anniversary Ecological Genomics Symposium, Kansas City, MO, October 2012

39. Gray, M.†, P. St Amand, H. Tetreault†, S. Baer, B. Maricle, T. Morgan, R. Goad†, J. Olsen†, and L. Johnson. Phenotypic and genetic variation in a dominant prairie grass along the Great Plains' precipitation gradient: a reciprocal garden approach. Presented at the 10th Anniversary Ecological Genomics Symposium, Kansas City, MO, October 2012

38. Sabates, S.*, E. McCrea*, S. Baer, **B. Maricle**, K. Caudle*, and L. Johnson. Phenology and seed production in big bluestem (*Andropogon gerardii*) ecotypes in Great Plains reciprocal gardens: the role of site and ecotype. Presented at the Kansas State University Undergraduate Research Meeting, Manhattan, KS, August 2012

37. Betzen, B.M.*, C.M. Smart*, **B.R. Maricle**, and K.L. Caudle*. Effects of salinity on plant water potential in native and introduced salt marsh species. Presented at the Fort Hays State University Student Research Meeting, Hays, KS, May 2012

36. Caudle, K.L.* and **B.R. Maricle**. Responses of respiration and photosynthesis to spilled oil in coastal marsh species. Presented at Fort Hays State University's Scholarship and Creative Activities Day, Hays, KS, May 2012 **[2nd place poster in undergraduate research experience category]**

35. Caudle, K.L.* and **B.R. Maricle**. Effects of flooding on photosynthesis and root oxygen stress in plants of different flooding tolerance. Presented at Fort Hays State University's Scholarship and Creative Activities Day, Hays, KS, May 2012 **[1st place poster by an undergraduate student]**

34. Betzen, B.M.*, C.M. Smart*, **B.R. Maricle**, and K.L. Caudle*. Effects of salinity on plant water potential in native and introduced salt marsh species. Presented at Fort Hays State University's Scholarship and Creative Activities Day, Hays, KS, May 2012

33. White, S.J.*, A. Meraz*, N.G. Maforo*, and **B.R. Maricle**. Effect of ethanol toxicity on enzymes of respiration and carbon metabolism in plants. Presented at Fort Hays State University's Scholarship and Creative Activities Day, Hays, KS, May 2012

32. Biggs, T.N.* and **B.R. Maricle**. Effects of nitrogen source and wind on photosynthesis and nitrate reductase activity in reed canarygrass. Presented at the Kansas Academy of Science Annual Meeting, Wichita, KS, March 2012

31. White, S.J.*, A. Meraz*, N.G. Maforo*, and **B.R. Maricle**. Effect of ethanol toxicity on enzymes of respiration and carbon metabolism in plants. Presented at the Kansas Academy of Science Annual Meeting, Wichita, KS, March 2012

30. Caudle, K.L.*, C.M. Smart*, B.M. Betzen*, and **B.R. Maricle**. Effects of salinity on plant water potential in native and introduced salt marsh species. Presented at the Kansas Academy of Science Annual Meeting, Wichita, KS, March 2012

29. Caudle, K.L.* and **B.R. Maricle**. Effects of flooding on photosynthesis and root oxygen stress in plants of different flooding tolerance. Presented at the Kansas Academy of Science Annual Meeting, Wichita, KS, March 2012

28. Gray, M.†, H. Tetreault†, C. Rodewald*, P. St. Amand, S. Baer, **B. Maricle**, T. Morgan, N. Bello, R. Goad†, J. Olsen†, L. Wheeler*, E. Akhunov, K. Garrett, G. Bai, and L. Johnson. Evidence for local adaptation and genetic differentiation across *Andropogon gerardii* (big bluestem) tall grass ecotypes occurring along a precipitation gradient. Presented at the 9th Annual Ecological Genomics Symposium, Kansas City, MO, November 2011

27. Bryant, J.*, A. De La Cruz†, K. Price, N. An†, M. Knapp, H. Tetreault†, **B. Maricle**, J. Olsen†, K. Caudle*, R. Goad†, S. Baer, and L. Johnson. Remote sensing to detect plant performance in common gardens of big bluestem ecotypes across the Great Plains. Presented at the 9th Annual Ecological Genomics Symposium, Kansas City, MO, November 2011

26. Bryant, J.*, A. De La Cruz†, K. Price, N. An†, H. Tetreault†, **B. Maricle**, J. Olsen†, K. Caudle*, S. Baer, and L. Johnson. Use of chlorophyll fluorescence analysis to detect plant performance in common gardens of big bluestem ecotypes across the Great Plains. Presented at the Grasslands in a Global Context meeting, Manhattan, KS, September 2011

25. Goad R.K.†, S.G. Baer, L.C. Johnson, and **B.R. Maricle**. Patterns in aboveground net primary productivity in prairie reciprocally restored with dominant grasses from across a precipitation gradient. Presented at the Grasslands in a Global Context meeting, Manhattan, KS, September 2011

24. Goad R.K.[†], S.G. Baer, L.C. Johnson, **B.R. Maricle**, H.M. Tetrault[†], and J.T. Olsen[†]. Patterns in aboveground net primary productivity of an assembling tallgrass prairie. Presented at the Ecological Society of America Annual Meeting, Austin, TX, August 2011

23. Tetreault, H. [†], C. Rodewald*, S. Baer, **B. Maricle**, T. Morgan, R. Goad[†], J. Olsen[†], and L. Johnson. Local drought adaptation of the ecologically dominant prairie grass big bluestem *Andropogon gerardii*: Contribution of genotype and environment to phenotypic variation. Presented at the Ecological Society of America Annual Meeting, Austin, TX, August 2011

22. Tetreault, H.[†], M. Gray[†], C. Rodewald*, M. Mendola[†], R. Goad[†], J. Olsen[†], E. McCrea*, L. Wheeler, N. Bello, T. Morgan, M. Knapp, P. St. Amand, E. Akhunov, K. Garrett, G. Bai, S. Baer, **B. Maricle**, L. Johnson. Phenotypic variation and population differentiation of *Andropogon gerardii* along the Great Plains precipitation gradient. Presented at the Gordon Research Conference on Ecological and Evolutionary Genomics, Biddeford, ME, July 2011

21. Tetreault, H. [†], C. Rodewald*, M. Mendola*, R. Goad[†], J. Olsen[†], E. McCrea*, N. Bello, T. Morgan, R. Wynia, S. Baer, **B. Maricle**, and L. Johnson. Phenotypic variation of big bluestem ecotypes across the Great Plains precipitation gradient. Presented at the Evolution 2011 Meeting, Norman, OK, June 2011

20. Caudle, K.L.* and **B.R. Maricle**. Effects of oil deposition on respiration and photosynthesis in coastal native and introduced wetland grasses. Presented at Fort Hays State University's Research and Creative Activities Week, Hays, KS, April 2011 **[1st place poster by an undergraduate student]**

19. Olsen, J.T.[†], H.M. Tetreault[†], R.K. Goad[†], M.L. Mendola*, S.G. Baer, L.C. Johnson, and **B.R. Maricle**. Effects of precipitation and ecotype on photosynthesis in two grass species. Presented at Fort Hays State University's Research and Creative Activities Week, Hays, KS, April 2011

18. Gray, M.[†], H. Tetreault[†], C. Rodewald*, S. Baer, **B. Maricle**, P. St. Amand, E. Akhunov, K. Garrett, T. Morgan, L. Wheeler*, R. Goad[†], J. Olsen[†]; B. Guihua, L. Johnson. Local adaptation of the dominant prairie grass big bluestem: Contribution of genetics and environment to phenotype. Presented at the Ecological Genomics Symposium, Kansas City, MO, November 2010

17. Johnson, L.C., **B.R. Maricle**, and S.G. Baer. Ecotypic variation of *Andropogon gerardii* across a precipitation gradient in midwest grasslands. Presented at Konza Prairie visitor's day, Manhattan, KS, September 2010

16. Waring, E.F.[†] and **B.R. Maricle**. Effects of flooding on transpiration in *Sorghum halepense* (johnsongrass) and *Phragmites australis* (common reed). Presented at the Society of Wetland Scientists Annual Meeting, Salt Lake City, UT, June 2010

15. Polacik, K.A.[†] and **B.R. Maricle**. Response to flooding in invasive saltcedar (*Tamarix*). Presented at the Kansas Native Plant Society Annual Wildflower Weekend, Pittsburgh, KS, September 2009

14. Waring, E.F.[†] and **B.R. Maricle**. Differences in photosynthesis and respiration due to flooding in native and nonnative wetland grasses of central Kansas. Presented at the Society of Wetland Scientists Annual Meeting, Madison, WI, June 2009

13. Polacik, K.A.[†] and **B.R. Maricle**. Response to flooding in invasive saltcedar (*Tamarix*). Presented at Fort Hays State University's Research and Creative Activities Week, Hays, KS, April 2009

12. Waring, E.F.[†] and **B.R. Maricle**. Effects of flooding on light harvesting and CO_2 fixation in native and nonnative wetland grasses of central Kansas. Presented at Fort Hays State University's Research and Creative Activities Week, Hays, KS, April 2009 **[3rd place poster by a graduate student]**

11. Polacik, K.A.[†] and **B.R. Maricle**. Response to flooding in invasive saltcedar (*Tamarix*). Presented at the Kansas Academy of Science Annual Meeting, Topeka, KS, March 2009

10. Waring, E.F.† and **B.R. Maricle**. Effects of flooding on light harvesting and CO_2 fixation in native and nonnative wetland grasses of central Kansas. Presented at the Kansas Academy of Science Annual Meeting, Topeka, KS, March 2009

9. Pfeifer, A.M.*, R.W. Lee, and **B.R. Maricle**. Effects of diet, drugs, and activity levels on $\delta^{13}C$ of breath and hair of humans. Presented at the Kansas Academy of Science Annual Meeting, Topeka, KS, March 2009

8. **Maricle, B.R.**, J.R. Thomasson, J.L. Casey*, J.J. Bitner†, J.L. Gorney†, C.M. Dasilva-Carvalho†, R.M. Shofner*, E.V. Voznesenskaya, N.K. Koteyeva, and G.E. Edwards. Functional and ecological leaf anatomy in grass leaves of the genus *Spartina*. Presented at Fort Hays State University's Research and Creative Activities Week, Hays, KS, April 2008

7. **Maricle, B.R.** and R.W. Lee. Respiration and oxygen transport in saltmarsh grasses in relation to elevational zonation. Presented at the American Society of Plant Biologists Annual Meeting, Seattle, WA, July 2005

6. **Maricle, B.R.**, O. Kiirats, G.E. Edwards, and R.W. Lee. Effects of salinity on photosynthesis in C_4 estuarine grasses. Presented at the Third International Conference on Invasive *Spartina*, San Francisco, CA, November 2004

5. Hellquist, C.E., R.W. Lee, **B.R. Maricle**, S. Riggs, and R.A. Black. Interactions of *Spartina anglica* with native plant and animal species in northern Puget Sound, WA, USA: an overview. National Estuarine Research Reserve System Mixer. Presented at the Estuarine Research Federation Biennial Conference, Seattle, WA, September 2003

4. **Maricle, B.R.** and R.W. Lee. Changes in carbon and nitrogen isotopic composition of C_4 estuarine grasses under different salinity levels. Presented at the Estuarine Research Federation Biennial Conference, Seattle, WA, September 2003

3. **Maricle, B.R.**, T. Tsuzaki*, B.C. Bussiere*, and R.W. Lee. Aerenchyma development in *Spartina alterniflora* and *S. anglica*: Differential responses to flooding and nutrient limitation. Presented at the Science and Engineering Research Symposium, Pullman, WA, March 2001

2. **Maricle, B.R.** and R.W. Lee. Aerenchyma development in *Spartina alterniflora* and *S. anglica*: Differential responses to flooding. Presented at the William R. Wiley Research Exposition, Pullman, WA, February 2001

1. **Maricle, B.R.** and J.L. Mena-Werth. The determination of circumstellar material around stars observed with the International Ultraviolet Explorer Satellite using asymmetries in the singly ionized magnesium *h* and *k* lines. Presented at the National Conference of Undergraduate Research, Rochester, NY, April 1999

9. Research Grants Received

a. Current Research Grants (asterisks* indicate undergraduate authors; daggers† indicate graduate student authors)

Kansas IDeA Network of Biomedical Research Excellence (K-INBRE)

2015 Tamang, T.M.† and **B.R. Maricle**. Determination of evolutionary history of big bluestem ecotypes through chloroplast DNA analysis. K-INBRE Minigrant, $4000

2015 Martin, N.M.*, Y, Kobayashi, and **B.R. Maricle.** How sulfide toxicity influences enzymes of respiration in plants. K-INBRE Star Trainee Program, $7000

2015 Urban, A.D.*, Y, Kobayashi, and **B. R. Maricle**. Effect of lactic acid on enzymes of respiration in catfish tissue. K-INBRE Summer/Semester Scholars Program, $4000

Kansas Academy of Science

2015 Tamang, T.M.† and **B.R. Maricle.** Determination of evolutionary history of big bluestem ecotypes through chloroplast DNA analysis. KAS Student Research Grant, $1500

2014 Hilt, C.J.* and **B.R. Maricle**. Evolution of anatomical drought tolerance in an important prairie grass. KAS Student Research Grant, $1000

2014 Smart, C.M.* and **B.R. Maricle**. Anatomical and physiological salinity tolerance in native and non-native salt marsh species in Kansas. KAS Student Research Grant, $1000

2013 Martin, N.M.* and **B.R. Maricle.** Effect of sulfide toxicity on cytochrome *c* oxidase activity in plant mitochondria. KAS Student Research Grant, $1000

Prairie Biotic Research, Inc.

2014 McCampbell, B.C.† and **B.R. Maricle.** Ecology of biological soil crusts on the prairie. Prairie Biotic Research, Inc., Small Grant Proposal, $1000

Fort Hays State University

2015 Stephenson, R.J., J.A. Gleichsner, **B.R. Maricle**, and M.J. Greer. Faculty teaching grant award. FHSU College of Health and Life Sciences, $500

2015 **Maricle, B.R.** Genetic and environmental influences on physiological and anatomical drought tolerance in big bluestem. FHSU Faculty Summer Research and Creative Activity Grant, $4193

b. Pending Research Grants (asterisks* indicate undergraduate authors; daggers† indicate graduate student authors)

National Science Foundation

2015 Johnson, L.C., **B.R. Maricle**, S.G. Baer, N. Bello, and D.J. Gibson. LTREB: Ecotypic variation of a dominant grass in reciprocal gardens across the Great Plains climate gradient: Platform to study eco-evolutionary dynamics. NSF Division of Environmental Biology, Long Term Research in Environmental Biology, pre-proposal

2015 Baer, S.G., D.J. Gibson, L.C. Johnson, **B.R. Maricle**, and J.A. Gilbert. The role of local adaption and non-local variation in a dominant species on biodiversity, ecosystem processes, and moderating effects of climate change on communities and their function. NSF Division of Ecosystems, pre-proposal

2015 Johnson, L.C., **B.R. Maricle**, S.G. Baer, N. Bello, and D.J. Gibson. Assessing biotic and abiotic forces in shaping local adaptation of ecotypes in foundation species across a climate gradient. NSF Division of Integrative Organismal Systems, pre-proposal

2014 NSF Science and Technology Centers, pre-proposal

2014 Johnson, L.C., S. Brown, N. Bello, **B.R. Maricle**, and S.G. Baer. Genetic variation in ecotypes of a dominant forage grass, *Andropogon gerardii*, across the precipitation gradient of Midwest grasslands: Implications for response to climate change. NSF Plant Genome Research Program, $1,000,000

2014 Johnson, L.C., S.G. Baer, N. Bello, and **B.R. Maricle**. Biotic and abiotic forces shaping local adaptation of ecotypes in a foundation grass species across the climate and competition gradient of the Great Plains. NSF Division of Ecological Biology, pre-proposal

2014 Baer, S.G., L.C. Johnson, **B.R. Maricle**, and J.A. Gilbert. Unravelling the effects of foundation species, soil properties and climate on grassland ecosystem components and processes. NSF Division of Ecosystems, pre-proposal

United States Department of Agriculture

2015 Johnson, L.C., S. Brown, N. Bello, J. Poland, S.G. Baer, and **B.R. Maricle**. Transcription variation in response to drought in ecotypes of the forage grass big bluestem (*Andropogon gerardii*) in Midwest grasslands. Plant Health and Production and Plant Products, Program Area Priority – Understanding Biological Mechanisms for Plant Production (code A1101), $500,000

2014 Baer, S.G., L.C. Johnson, and **B.R. Maricle**. Using ecotypic variation to optimize ecosystem services in conservation grasslands. United States Department of Agriculture Agricultural and Food Research Initiative (AFRI), Renewable Energy, Natural Resources, and Environment (RENRE), Agroecosystem Management (A1451), $500,000

United States Department of Energy

2014 Johnson, L.C., J. Poland, S. Brown, N. Bello, M. Casler, **B.R. Maricle**, D. Wang, and W. Yuan. Genomic-assisted breeding of regionally-adapted energy feedstocks prairie grass big bluestem *Andropogon gerardii*. United States Department of Energy, Plant Feedstock Genomics for Bioenergy, preproposal

2014 Johnson, L.C., J. Poland, S. Brown, N. Bello, S.G. Baer, and **B.R. Maricle**. Enhancement of transcriptome resources for drought-adapted ecotypes of the bioenergy grass big bluestem *Andropogon gerardii*, a switchgrass comparator. United States Department of Energy, Joint Genome Institute, preproposal

The Wetland Foundation

2014 Martin, N.M.* and **B.R. Maricle.** Request for Conference Travel Grant, Type 2, The Wetland Foundation, $1026

Kansas Academy of Science

2015 Urban, A.D.* and **B.R. Maricle**. Effect of lactic acid on enzymes of respiration in catfish tissue. KAS Student Research Grant, $1000

2015 McCampbell, B.C.† and **B.R. Maricle.** Taxonomic composition, carbon assimilation, and nitrogen fixation of biological soil crusts in prairie ecosystems of the Great Plains. KAS Student Research Grant, $1500

Kansas IDeA Network of Biomedical Research Excellence (K-INBRE)

2015 Urban, A.D.*, Y, Kobayashi, and **B. R. Maricle**. Effect of lactic acid on enzymes of respiration in catfish tissue. K-INBRE Minigrant, $2232

2015 McCampbell, B.C.† and **B.R. Maricle.** Cell biology and characterization of biological soil crusts in prairie ecosystems of the Great Plains. K-INBRE Minigrant, $4000

2015 Tamang, T.M.† and **B.R. Maricle**. Determination of evolutionary history of big bluestem ecotypes through chloroplast DNA analysis. K-INBRE Bioinformatics Scholars Program, $4000

c. Past Research Grants (asterisks* indicate undergraduate authors; daggers† indicate graduate student authors)

National Science Foundation

2004 Lee, R.W. and **B.R. Maricle.** DISSERTATION RESEARCH: Mechanisms of anoxia tolerance in marsh grasses in the genus *Spartina* (Poaceae). National Science Foundation Doctoral Dissertation Improvement Grant DEB-0508833, $8542

U.S. Environmental Protection Agency

2012 Caudle, K.L.* and **B.R. Maricle**. Fall 2012 EPA Environmental Protection Agency Greater Research Opportunities (GRO) Fellowships for Undergraduate Environmental Study, $36,796

2001 Lee, R. W. and **B.R. Maricle.** Physiological mechanisms of estuarine sediment oxidation by *Spartina* cordgrasses. U.S. Environmental Protection Agency Joint Program in Phytoremediation, $110,307

United States Department of Agriculture

2010 **Maricle, B.R.** Ecotypic variation of *Andropogon gerardii* across a precipitation gradient in Midwest grasslands. Subaward from USDA Plant Biology Abiotic Stress program, $35,545

Li-Cor Biosciences, Inc.

2008 **Maricle, B.R.** Application for LI-6400 XTR package through the Li-Cor Environmental Education Fund (LEEF) program, $71,850

American Society of Plant Biologists

2012 Caudle, K.L.* and **B.R. Maricle**. Genetic and environmental influence on physiological drought tolerance in big bluestem. American Society of Plant Biologists Summer Undergraduate Research Fellowship (SURF), $4700

Botanical Society of America

2011 Caudle, K.L.* and **B.R. Maricle**. Does soil nitrogen faciliatate invasive potential of non-native grasses? Effects of NO_3^- concentration on nitrogen uptake rates, assimilation, and photosynthesis in native and introduced grasses. Botanical Society of America Undergraduate Student Research Award, $200

Weed Science Society of America

2013 Caudle, K.L.* and **B.R. Maricle**. Can anatomical advantages increase invasive potential of introduced species in native marshes following an oil spill? Influence of spilled oil on root anatomy in native and introduced marsh grasses. Weed Science Society of America Undergraduate Research Award, $967

2012 Caudle, K.L.* and **B.R. Maricle**. Does salinity tolerance encourage invasiveness in marsh communities? How physiological advantages of the invasive saltcedar *Tamarix ramosissima* impact a Kansas salt marsh. Weed Science Society of America Undergraduate Research Award, $1000

2011 Caudle, K.L.* and **B.R. Maricle**. Does soil nitrogen facilitate invasive potential? Effects of NO_3^- concentration on N uptake rates, assimilation, and photosynthesis in native and introduced grasses. Weed Science Society of America Undergraduate Research Award, $1000

Society of Wetland Scientists

2012 Caudle, K.L.* and **B.R. Maricle**. Physiological, anatomical, and ecological responses of salt marsh communities to spilled oil using experimental mesocosms. Society of Wetland Scientists Student Research Grant, $989

Kansas Academy of Science

2011 Caudle, K.L.* and **B.R. Maricle**. Does spilled oil induce anaerobic soil conditions in coastal wetlands? Effects of oil deposition on respiration and photosynthesis in coastal native and introduced wetland grasses. KAS Student Research Grant, $1000

2009 Waring, E.F.† and **B.R. Maricle**. Mechanisms of cold-tolerance in C_4 photosynthetic plants. KAS Student Research Grant, $1000

2009 Polacik, K.A.† and **B.R. Maricle**. Response to flooding in invasive salt cedar (*Tamarix*). KAS Student Research Grant, $922

Kansas IDeA Network of Biomedical Research Excellence (K-INBRE)

2014 Martin, N.M.* and **B.R. Maricle.** How sulfide toxicity influences enzymes of respiration in plants. K-INBRE Summer Scholars Program, $4000

2014 Urban, A.D.* and **B. R. Maricle**. Effect of lactic acid on anaerobic respiration in catfish muscle. K-INBRE Minigrant, $1853

2014 Martin, N.M.* and **B. R. Maricle**. Effect of sulfide on cytochrome *c* oxidase in catfish muscle. K-INBRE Minigrant, $3465

2014 **Maricle, B.R.** Anatomical mechanisms of drought and salinity tolerance in Kansas plants. Request for K-INBRE carryover funds, $3310

2013 Martin, N.M.* and **B.R. Maricle.** Effect of sulfide toxicity on enzymes of respiration in plants. K-INBRE Summer Scholars Program, $4000

2013 **Maricle, B.R.** and N.M. Martin*. Effects of sulfide toxicity on enzymes of respiration in plants. K-INBRE Minigrant, $1187

2012 Biggs, T.N.* and **B.R. Maricle.** Effect of ethanol toxicity on enzymes of respiration and carbon metabolism in plants. K-INBRE Summer Scholars Program, $4000

Washington State Department of Ecology

2001 **Maricle, B.R.** Physiological assessments of vigor in Pacific estuary invaders *Spartina alterniflora* and *S. anglica*: How effective is mowing as a control agent? Washington State Department of Ecology Research Assistantship, $5000

Fort Hays State University

2015 **Maricle, B.R.** Request for travel money. FHSU Faculty/Staff Development Plan, $1700

2014 **Maricle, B.R.** Mechanisms of drought and salinity tolerance in Kansas plants. FHSU Undergraduate Research Experience (URE) application, $1694

2014 **Maricle, B.R.** Funding for Heinrichs Undergraduate Research Mentor Award, $500

2014 **Maricle, B.R.** Mechanisms of drought tolerance in ecotypes of big bluestem. Dane G. Hansen Funds to support work in northwestern Kansas, $2720

2014 **Maricle, B.R.** Request for travel money. FHSU Faculty/Staff Development Plan, $1400

2014 **Maricle, B.R.** Genetic and environmental influences on physiological and anatomical drought tolerance in big bluestem. FHSU Faculty Summer Research and Creative Activity Grant, $3974

2013 **Maricle, B.R.** Mechanisms of drought tolerance in ecotypes of big bluestem. FHSU Undergraduate Research Experience (URE) application, $1575

2012 **Maricle, B.R.** Effect of ethanol toxicity on enzymes of respiration and carbon metabolism in plants. FHSU Undergraduate Research Experience (URE) application, $1500

2012 **Maricle, B.R.** Genetic and environmental influence on physiological drought tolerance in big bluestem. FHSU Faculty Summer Research and Creative Activity Grant, $3467

2012 **Maricle, B.R.** Request for travel money. FHSU Faculty/Staff Development Plan, $1200

2011 **Maricle, B.R.** Physiological and ecological effects of oil spills on coastal marsh plants. FHSU Undergraduate Research Experience (URE) application, $1500

2011 **Maricle, B.R.** Precipitation manipulation and its role on photosynthesis and water potential in mixed-grass prairie grasses. FHSU Faculty Summer Research and Creative Activity Grant, $3293

2011 **Maricle, B.R.** Request for travel money. FHSU Faculty/Staff Development Plan, $775

2010 **Maricle, B.R.** Effects of oil spills and nitrogen pollutants on coastal and wetland plants. FHSU Undergraduate Research Experience (URE) application, $1500

2010 **Maricle, B.R.** Funding for FHSU Masters II Graduate Faculty designation, $500

2010 **Maricle, B.R.** Effects of water on photosynthesis in mixed-grass prairie grasses. FHSU Faculty Summer Research and Creative Activity Grant, $3261

2009 **Maricle, B.R.** Effects of water on photosynthesis in mixed-grass prairie grasses. FHSU Graduate School Small Research Grant, $1719

2009 Waring, E.F.† and **B.R. Maricle**. Mechanisms of cold-tolerance in C_4 photosynthetic plants. FHSU Graduate School Mini-Grant, $249

2009 Waring, E.F.† and **B.R. Maricle**. Effects of flooding on photosynthesis and respiration in native and invasive wetland grasses of central Kansas. FHSU Graduate School Travel Grant, $250

2009 Polacik, K.A.† and **B.R. Maricle**. Response to flooding in invasive salt cedar (*Tamarix*). FHSU Graduate School Mini-Grant, $200

2008 **Maricle, B.R.** Mechanisms of chilling-tolerant C_4 photosynthesis in marsh grasses. FHSU Graduate School Small Research Grant, $1190

2008 **Maricle, B.R.** Request for travel money. FHSU Faculty/Staff Development Plan, $516

2007 **Maricle, B.R.** Physiological and ecological assessments of water stress in riparian trees. FHSU Graduate School Small Research Grant, $4798

2007 **Maricle, B.R.** Request for travel money. FHSU Faculty/Staff Development Plan, $600

2007 **Maricle, B.R.** Faculty teaching grant award. FHSU College of Health and Life Sciences, $500

2006 **Maricle, B.R.** Physiological and biochemical mechanisms of flooding tolerance in plants. FHSU Graduate School Small Research Grant, $740

2006 **Maricle, B.R.** Request for travel money. FHSU Faculty/Staff Development Plan, $825

Washington State University

2006 **Maricle, B.R.** Environmental regulation of species distribution in Washington salt marshes. Betty W. Higinbotham Trust for off-campus training and research, $975

2005 **Maricle, B.R.** Physiological mechanisms of anoxia tolerance in marsh grasses in the genus *Spartina* (Poaceae). Betty W. Higinbotham Trust for off-campus training and research, $1028

2005 **Maricle, B.R.** Physiological mechanisms of anoxia tolerance in marsh grasses in the genus *Spartina* (Poaceae). WSU Orlin and Susann Biddulph Summer Research Award, $1000

2004 **Maricle, B.R.** What makes a successful estuarine mudflat invader? Comparative hypoxia- and salt-stress physiology of introduced *Spartina* and native *Distichlis spicata* (Poaceae). WSU Betty W. Higinbotham Trust for off-campus training and research, $1933

2004 **Maricle, B.R.** The physiology of an estuarine invader: What makes introduced *Spartina* so successful? WSU Orlin and Susann Biddulph Summer Research Award, $1000

2003 **Maricle, B.R.** Oxygenation of sediment by *Spartina* marsh grasses: Facilitation of pollutant degradation. WSU Noe Higinbotham Endowment in Botany, $500

2002 **Maricle, B.R.** Aerenchyma development and oxygen transport in the estuarine cordgrasses *Spartina alterniflora* and *S. anglica*. WSU Graduate School Travel Grant, $270

2002 **Maricle, B.R.** What makes a successful estuarine invader? Comparative hypoxia- and salt-stress physiology of introduced *Spartina* and native West-Coast estuarine vegetation. WSU Betty W. Higinbotham Trust for off-campus training and research, $1824

2001 **Maricle, B.R.** Aerenchyma formation and function in Pacific estuary invaders *Spartina alterniflora* and *S. anglica*: Physiological adaptations to hypoxia. WSU Betty W. Higinbotham Trust for off-campus training and research, $2620

10. Honors and Distinctions

a. Professional Distinctions

2015 Outstanding Academic Advising Award Winner, Faculty Advising Category, National Academic Advising Association

2014 FHSU Heinrichs Outstanding Undergraduate Research Mentor

2014 FHSU Edmund Shearer Academic Advisor of the Year

2012 Nominee, Botanical Society of America Charles Edwin Bessey Teaching Award

2010 Nominee, Fort Hays State University Pilot Award for teaching excellence

2009-2010 Outstanding Thesis/Field Study Chair, Fort Hays State University Graduate School

2009 Outstanding Research Award, Fort Hays State University, Spring 2009

2008-2009 Outstanding Scholarship Award, FHSU College of Health and Life Sciences

b. Academic Honors

2006 Graduated Summa Cum Laude, Ph.D. in Botany, WSU

2002 Graduated Summa Cum Laude, M.S. in Botany, WSU

2000-2006 Dean's List, Washington State University

2000 Selected as Outstanding Graduating Senior by the UNK Department of Biology

2000 Graduated Summa Cum Laude, B.S. in Biology, UNK

1996-2000 Dean's List, University of Nebraska at Kearney

1996-2000 Member of UNK Honors Program

c. Professional Affiliations

American Society of Plant Biologists (member 2001 - present)

Botanical Society of America (member 2008 - present)

Ecological Society of America (member 2004 - present)

Kansas Academy of Science (member 2009 - present; Lifetime member)

d. Current and Recent Collaborators (since 2006)

Peter B. Adler, Department of Wildland Resources and the Ecology Center, Utah State University, Logan, UT

Eduard D. Akhunov, Department of Plant Pathology, Kansas State University, Manhattan, KS

Sara G. Baer, Department of Plant Biology, Southern Illinois Univeristy, Carbondale, IL

Nora M. Bello, Department of Statistics, Kansas State University, Manhattan, KS

R. Alan Black, School of Biological Sciences, Washington State University, Pullman, WA

Susan J. Brown, Division of Biology, Kansas State University, Manhattan, KS

Colin S. Campbell, Decagon Devices, Inc., Pullman, WA

Michael D. Casler, USDA-ARS, U.S. Dairy Forage Research Center, Madison, WI

Douglas R. Cobos, Decagon Devices, Inc., Pullman, WA

Gerald E. Edwards, School of Biological Sciences, Washington State University, Pullman, WA

Karen A. Garrett, Department of Plant Pathology, Kansas State University, Manhattan, KS

David J. Gibson, Department of Plant Biology, Southern Illinois Univeristy, Carbondale, IL

Jack A. Gilbert, Argonne National Laboratory, Argonne, IL

Keith R. Harmoney, Kansas State University Ag Research Center, Hays, KS

C. Eric Hellquist, Department of Biological Sciences, Oswego State University, Oswego, NY

Loretta C. Johnson, Division of Biology, Kansas State University, Manhattan, KS

Ari Jumpponen, Division of Biology, Kansas State University, Manhattan, KS

Olavi Kiirats, School of Biological Sciences, Washington State University, Pullman, WA

Mary Knapp, Department of Agronomy, Kansas State University, Manhattan, KS

Yasuhiro Kobayashi, Department of Biological Sciences, Fort Hays State University, Hays, KS

Nouria K. Koteyeva, Laboratory of Anatomy and Morphology, V. L. Komarov Botanical Institute of Russian Academy of Sciences, St. Petersburg, Russia

Maurice S. B. Ku, Graduate Institute of Agricultural Biotechnology, Center of Agricultural Biotechnology, National Chiayi University, Chiayi, Taiwan

Jordana J. LaFantasie, Department of Biological Sciences, Fort Hays State University, Hays, KS

Raymond W. Lee, School of Biological Sciences, Washington State University, Pullman, WA

Carolyn M. Malmstrom, Department of Plant Biology, Michigan State University, East Lansing, MI

Theodore J. Morgan, Division of Biology, Kansas State University, Manhattan, KS

Jesse Poland, Department of Agronomy, Kansas State University, Manhattan, KS

Kevin P. Price, Department of Agronomy, Kansas State University, Manhattan, KS

Dorith Rotenberg, Department of Plant Pathology, Kansas State University, Manhattan, KS

Paul St. Amand, United States Department of Agriculture, Agricultural Research Service, Hard Winter Wheat Genetics Research Unit, Manhattan, KS

Aavudai A. Swami, Department of Agronomy, Kansas State University, Manhattan, KS

Les J. Szabo, Cereal Disease Laboratory, USDA Agricultural Research Service, St. Paul, MN

Joseph R. Thomasson, Department of Biological Sciences, Fort Hays State University, Hays, KS

Elena V. Voznesenskaya, Laboratory of Anatomy and Morphology, V. L. Komarov Botanical Institute of Russian Academy of Sciences, St. Petersburg, Russia

Donghai Wang, Department of Biological and Agricultural Engineering, Kansas State University, Manhattan, KS

Anna E. Whitfield, Department of Plant Pathology, Kansas State University, Manhattan, KS

Samuel R. Zwenger, Department of Biological Sciences, Fort Hays State University, Hays, KS

11. Community Service

Maricle, B.R., T. Mannell, and J.T. Olsen. Tree/shrub identification and sampling. Sternberg's Wildlife Explorer's Camp for students in third to eighth grade, August 2010

Work with the FHSU Biology club to develop an outdoor classroom at the Sternberg Museum of Natural History (Spring 2007 to Spring 2009)

Presentations to a lay audience:

Maricle, B.R. Responses of plants to abiotic stress. Invited presentation at the Phi Kappa Phi Honors Society Induction Ceremony, Fort Hays State University, Hays, KS, April 2012

Maricle, B.R. Wetland vegetation. Invited seminar presented at the Cheyenne Bottoms "Wetlanders" Festival, Hoisington, KS, April 2007

12. References

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