

KEITH S. SUMMERVILLE

Department of Environmental Science
and Policy
Olin Hall, Drake University
Des Moines, Iowa 50311-45056

Work: (515) 271-2265
Home: (515) 279-3833
FAX: (515) 271-3702
E-mail: keith.summerville@drake.edu

ACADEMIC APPOINTMENTS

- 1998-2002 Teaching Associate, Miami University, Oxford, Ohio.
- 2002-2007 Assistant Professor of Environmental Science and Policy, Drake University, Des Moines, Iowa.
- 2008-present Associate Professor of Environmental Science and Policy, Drake University, Des Moines, Iowa
- 2007-present Associate Dean, College of Arts and Sciences, Drake University, Des Moines, Iowa.
- 2010-present Adjunct Associate Professor of Biology, Ball State University, Muncie, Indiana.
- 2003-2009 Adjunct Assistant Professor of Entomology, Mississippi State University, Starkville, Mississippi.

EDUCATION

- 2002 Ph.D., Department of Zoology, Miami University, Oxford, Ohio, 45056.
Dissertation: Determinants of species richness, abundance, and community composition of forest moths (Lepidoptera) at local and regional scales.
- 1998 M.En., Environmental Science, Miami University, Oxford, Ohio, 45056. Master's Thesis: Inventory, monitoring, and conservation of insects in Michigan.
- 1995 B.S., Environmental Science, *Summa Cum Laude*, Westminster College, New Wilmington, Pennsylvania, 16172.

TEACHING EXPERIENCE

Full Course Instructor for:

Drake University

- FYS15: A part of or apart from Nature?
- ENSP15: Introduction to Environmental Science
- ENSP55: Tropical Ecology
- ENSP101: Restoration Ecology
- ENSP115 / BIO198: Field Entomology
- ENSP125 / BIO125: Conservation Biology
- ENSP150a: Special Topics – Recovery of Endangered Species
- ENSP150b: Special Topics – Conservation of Reptiles & Amphibians
- ENSP150c: Special Topics – Dinosaur Biology
- ENSP191: Senior Capstone Experience
- BIO117/118: General Ecology / Field Ecology Lab
- BIO123: Invertebrate Zoology
- BIO167: Population & Community Ecology

PUBLICATIONS

- Timms, L., J. Bowden, **K.S. Summerville**, and C. Buddle. (*in press*). Do species matter? Taxonomic resolution in terrestrial arthropod biodiversity studies. *Insect Conservation and Diversity*.
- *Elmer, A., J. Lane, and **K.S. Summerville**. 2012. Does low-density grazing effect butterfly colonization of a previously flooded tall grass prairie. *Great Lakes Entomologist* 45: 69-78.
- ***Summerville, K.S.**, J. Lane, and D. Courard-Hauri. 2012. Stability in forest lepidopteran communities” how sensitive are pest species to experimental forest management? *Insect Diversity and Conservation* 12: 345-355.
- ***Summerville, K.S.**, Lane, J.L., and M. S. Saunders. 2012 (*in press*). Lepidoptera as predictable communities of herbivores: A test of niche assembly using the moth communities of Morgan-Monroe State Forest. *U.S. Forest Service General Technical Report*, Morgantown, WV.
- Summerville, K.S.** 2011. Effects of experimental timber harvest on forest Lepidoptera: resistance to community change and species dominance. *Ecological Applications* 21: 806-816.
- E. Ockinger, O. Schweiger, T.O. Crist, D.M. Debinski, J. Krauss, M. Kuussaari, J.D. Petersen, J. Pöyry, J. Settele, **K.S. Summerville**, and R. Bommarco. 2010. Life history traits predict species responses to habitat area and isolation – a cross-continental synthesis. *Ecology Letters* 13: 969-979.
- ***K. S. Summerville**, D. Courard-Hauri, and Miranda M. DuPont. 2009. The legacy of timber harvest: do patterns of species dominance suggest recovery of lepidopteran communities in managed hardwood stands? *Forest Ecology and Management* 259: 8-13.
- * Hill, E.C., H.J. Vogel, T.R. Rosburg, L. Lown, and **K.S. Summerville**. 2009. Response of a population of *Terrepen ornata ornata* to long distance relocation. *Natural Areas Journal* 500-506.
- *Govoni, P.W., **K.S. Summerville**, and M.D. Eaton. 2009. Nest sharing between an American Robin and a Northern Cardinal. *The Wilson Journal of Ornithology* 242-244.
- D.S. Senchina, and **K.S. Summerville**. 2008. Great diversity of insect floral associates may partially explain ecological success of poison ivy (*Toxicodendron radicans* subsp. *Negundo* [Greene] Gillis, Anacardiaceae. *Great Lakes Entomologist* 40: 127-145.
- ***K.S. Summerville**, M.D. DuPont, A.V. Johnson, and R.L. Krehbiel. 2008. Spatial structure of lepidopteran communities in oak-hickory forests of Indiana. *Environmental Entomology* 37: 1224-1230.
- Hill, J.F., **K. S. Summerville**, R.B. Brown. 2008. Local and regional determinants of ant biodiversity in the heterogeneous Blackbelt landscape of Mississippi. *Environmental Entomology* 37:453-463.
- Summerville, K.S.** 2008. Species turnover and persistence in restored and remnant Tallgrass Prairies of North America: a function of species’ life history, habitat type, or sampling bias? *Journal of Animal Ecology* 77: 487-494.
- Summerville, K. S.** 2008. Year effects and prairie Lepidoptera: are moth communities stable entities? *Proceedings of the 20th Annual North American Prairie Conference* 20: 127-140.

- Summerville, K. S.** and T. O. Crist. 2008. Structure and conservation of lepidopteran communities in managed forests of northeastern North America: a review. *Canadian Entomologist* 140: 475-494.
- ***Summerville, K.S.** A. C. Bonte, and L.C. Fox. 2007. Short-term temporal effects on community structure of Lepidoptera in restored and remnant Tallgrass prairies. *Restoration Ecology* 15: 179-188.
- Hämbäck, P., **K.S. Summerville**, I. Steffan-Dewenter, J. Krauss, G. Englund, and T.O. Crist. 2007. Density-area relationships in Lepidoptera: Comparing the role of habitat preference and body size across two continents. *Proceedings of the National Academy of Science* 120: 8368-8373.
- *Courard-Hauri, D., A. Wick, L. Kneubuhler, and **K. S. Summerville**. 2006. Patch-scale movement dynamics in two species of Iowa grassland butterflies. *Great Lakes Entomologist* 39: 184-199.
- ***Summerville, K. S.**, C. J. Conoan, and R. M. Steichen. 2006. Beyond site-specific assembly rules: species traits as predictors of the frequency of occurrence of Lepidoptera in restored Tallgrass prairies. *Ecological Applications* 16: 891-900.
- *Wilson, T. D., T. O. Crist, J. A. Veech, and **K. S. Summerville**. 2006. Effect of body size and niche breadth on spatial partitioning of species diversity. *Diversity and Distributions* 12: 91-100.
- Crist, T.O., S.V. Pradhan, and **K. S. Summerville**. 2005. Spatial dependence in insect responses to vegetation in experimental habitat fragments. *Oecologia* 147: 510-521.
- ***Summerville, K. S.**, M. N. Lewis, and R. M. Steichen. 2005. Restoring lepidopteran communities to savanna remnants: contrasting effects of habitat quantity and quality. *Restoration Ecology* 13: 120-128.
- Summerville, K. S.** and T. O. Crist. 2005. Temporal patterns of species accumulation in a survey of Lepidoptera in a beech-maple forest. *Biodiversity and Conservation* 14: 3393-3406.
- *Lewis, M. N., R. M. Steichen, and **K. S. Summerville**. 2005. The diversity of moths in Tallgrass prairies of Iowa: a preliminary assessment. *Journal of the Iowa Academy of Sciences* 112: 1-12.
- Summerville, K. S.** 2004. Do smaller forest fragments contain a greater abundance of lepidopteran crop and forage consumers? *Environmental Entomology* 33: 234-241.
- Summerville, K. S.** 2004. Functional groups and species replacement: testing for the effects of habitat loss on moth communities. *Journal of the Lepidopterists Society* 58: 129-132.
- Summerville, K. S.** and T. O. Crist. 2004. Contrasting effects of habitat quantity and quality on moth communities in fragmented landscapes. *Ecography* 27: 3-12.
- Summerville, K. S.**, L. M. Ritter, and T. O. Crist. 2004. Forest moth taxa as indicators of lepidopteran biodiversity and habitat disturbance: a preliminary analysis. *Biological Conservation* 116: 9-18.
- Veech, J. A., T. O. Crist, and **K. S. Summerville**. 2003. The effect of intraspecific aggregation on species diversity of arthropods. *Ecology* 84: 3376-3383.
- Crist, T. O., J. A. Veech, J. C. Gering, and **K. S. Summerville**. 2003. Partitioning species diversity across spatial scales: statistical tests on components of insect diversity in deciduous forests. *American Naturalist* 162: 734-743.
- ***Summerville, K. S.**, T. O. Crist, J. K. Kahn, and J. C. Gering. 2003. Community structure of arboreal caterpillars (Lepidoptera) within and among four tree species in the eastern deciduous forest. *Ecological Entomology* 28: 747-757.
- ***Summerville, K. S.**, M. J. Boulware, J. A. Veech, and T. O. Crist. 2003. Spatial patterns of lepidopteran biodiversity in eastern deciduous forests and implications for conservation. *Conservation Biology* 17: 1045-1057.

- Summerville, K. S.** and T. O. Crist. 2003. Determinants of lepidopteran species diversity and composition in eastern deciduous forests: roles of season, region, and patch size. *Oikos* 100: 134-148.
- Veech, J. A., **K. S. Summerville**, T. O. Crist, and J. C. Gering. 2002. The additive partitioning of species diversity: recent revival of an old idea. *Oikos* 99: 3-9.
- Summerville, K. S.**, J. A. Veech, and T. O. Crist. 2002. Does variation in patch use among butterfly species contribute to nestedness at fine spatial scales? *Oikos* 97: 195-204.
- Summerville, K. S.** and T. O. Crist. 2002. Guild designations and tests of the effects of the gypsy moth (Lepidoptera: Lymantriidae) on native moth communities: a comment on Work and McCullough (2000). *Environmental Entomology* 34: 516-563.
- Summerville, K.S.** and T. O. Crist. 2002. Effects of timber harvest on forest moths (Lepidoptera): community, guild, and species responses. *Ecological Applications* 12: 820-835.
- Summerville, K. S.** and T. O. Crist. 2001. The species richness of forest Lepidoptera in a fragmented landscape: a supplement to the checklist of moths of Butler County, Ohio. *Great Lakes Entomologist*. 34: 93-110
- Summerville, K. S.**, E. H. Metzler, and T. O. Crist. 2001. Diversity of forest Lepidoptera in Ohio natural areas at local and regional scales: How heterogeneous is the fauna? *Annals of the Entomological Society of America*. 94: 583-591.
- Summerville, K. S.** and T. O. Crist. 2001. The effects of habitat fragmentation on patch use by butterflies and skippers (Lepidoptera). *Ecology* 82: 1360-1370.
- Summerville, K. S.**, J. J. Jacquot, and R. Stander. 1999. A preliminary checklist to the moths of Butler County, Ohio. *Ohio Journal of Science* 99: 66-76.
- Summerville, K. S.** and C. A. Clampitt. 1999. Habitat characterization for five state-listed insects in Michigan (Homoptera: Cercopidae, Lepidoptera: Riodinidae, Hesperidae, Nymphalidae). *Great Lakes Entomologist* 32:225-238.
- Summerville, K. S.** 1998. Discovery of two moth species new to Michigan (Lepidoptera: Noctuidae, Tortricidae). *Great Lakes Entomologist* 31: 125-128.

TEACHING PUBLICATIONS (PEER-REVIEWED)

- Summerville, K.S.** 2012. Chapter 16: Biodiversity pedagogical elements. In, Raven, P.R., Berg, L., and Hazendahl, D. Introduction to Environmental Science, 7th edition. Wiley Press, New York.
- Summerville, K.S.** 2012. Chapter 18: Food Resources pedagogical elements. In, Raven, P.R., Berg, L., and Hazendahl, D. Introduction to Environmental Science, 7th edition. Wiley Press, New York.
- Summerville, K.S.** 2012. Chapter 19: Water Resources pedagogical elements. In, Raven, P.R., Berg, L., and Hazendahl, D. Introduction to Environmental Science, 7th edition. Wiley Press, New York.
- ***Summerville, K.S.** and Bret. J. Lang. 2011. Using GIS to predict the re-establishment of Sandhill Cranes in the agricultural Midwest. Online supplement to Introduction to Environmental Science (Raven, Berg, and Hazendahl), Wiley Press, New York.

Summerville, K.S. 2011. Cattle grazing as a management tool: restoring tallgrass prairie heterogeneity in production landscapes. Online supplement to Introduction to Environmental Science (Raven, Berg, and Hazendahl), Wiley Press, New York.

MANUSCRIPTS IN REVIEW

Summerville, K.S., J. Boyles, and L. Lown. Birds of Chichaqua Bottoms Greenbelt: patterns of habitat use and implications for management. *Journal of the Iowa Academy of Science*. *Submitted 7 January 2012*.

Summerville, K.S. Conservation of Lepidoptera in managed eastern deciduous forests: are communities resilient to timber harvest? *Ecological Applications*. *Submitted 19 April 2012*.

* *denotes publications with undergraduate co-authors*

RESEARCH GRANTS

- 2012 Post-grazing seral dynamics in animal communities on Wetland Reserve Program easements. Polk County Conservation Board. \$9760.
- 2012-2013 Conservation by Design in the Gishwati Area Conservation Preserve. Great Ape Trust. \$28,000.
- 2012-2015 Forest management, metacommunity structure, and trophic instability: resolving the conflict between timber harvest and conservation of biodiversity. *Submitted to United States Department of Agriculture, December 2011*. \$475,000 (with co-PIs at Purdue University).
- 2011-2012 Restoration of Tallgrass prairie on the Winnebago Nation Reservation, Nebraska. Nebraska Environmental Trust, \$66,700 (with undergraduate co-authors Robb Krehbiel and Jennifer Koska)
- 2011-2012 Does reduction in invasive shrub cover enhance or impair nesting success in oak bluffland birds? Iowa Great Outdoors Foundation, \$5000.
- 2011-2012 Does neutral theory explain lepidopteran responses to timber harvest. National Geographic Society. \$11,750.
- 2010-2011 Sandhill Crane nesting ecology and development of a habitat suitability GIS analysis. Polk County Conservation Board, \$1500.
- 2010-2012 Ecosystem resilience and forest lepidopteran response to timber harvest. Indiana Division of Forestry and the Nature Conservancy. \$20,000.
- 2009-2010 Faunal inventory of Metropark East. MetroWaste Authority, Des Moines, Iowa. \$10,000.
- 2009 Design concept for sewer line in Onion Creek, Ames Iowa. Stanley Consultants, \$10,000.
- 2009-2010 Effects of timber harvest on forest lepidopteran communities in central Indiana. The Nature Conservancy, \$24,500.

- 2008-2010 Effects of controlled grazing on animal and plant community structure in a restored Tallgrass prairie. Heartland Conservancy, \$29,000. *co-authored with Linda Appelgate, Loren Lown, and Thomas Rosburg.*
- 2008 Effects of grazing on species diversity in a restored prairie ecosystem: tests with flora, butterflies, birds, snakes, and small mammals. Drake University Undergraduate Research Grant Program Award. \$3000.
- 2008 Restoring grazing dynamics to the prairie. Iowa DNR Wildlife Diversity Program Grant, \$2500. *co-authored with Thomas Rosburg.*
- 2008 Butterfly inventory at Gray's Lake Park. Des Moines City Parks and Recreation Department, \$1500. *co-authored with Miranda M. DuPont.*
- 2008 Vegetation of Morgan Monroe State Forest – a proposal for year 2 of the Hardwood Ecosystems Experiment. Indiana Department of Natural Resources, \$8973.
- 2008 Expanded turtle inventory at Chichaqua Bottoms Greenbelt. Polk County Conservation Board. \$3992.
- 2007 Survey of Lepidoptera (butterflies and moths) in wetland oxbows and grassland habitats at Saylorville Reservoir. US Army Corps of Engineers, \$2450.
- 2007 Inventory of reptiles and amphibians at Chichaqua Bottoms Greenbelt. Polk County Conservation Board. \$2000.
- 2007 Effects of timber harvest of *Quercus* spp. on forest Lepidoptera in central Indiana. The Nature Conservancy, Indiana Chapter & Indiana Department of Natural Resources. \$39,725
- 2006 Do environmental estrogens induce feminization in freshwater fish? A test with Iowa's river species. Beta Beta Beta Biological Honorary Society small grants program, \$775. *This grant was co-authored with Drake University undergraduate Stacy J. Knight and Dr. Amy Wisneiski.*
- 2006 Inventory of threatened and endangered herps at Chichaqua Bottoms Greenbelt. Polk County Conservation Board, \$2500.
- 2006 Population structure of ornate box turtles at Sandhill Prairie. Polk County Conservation Board, \$6550.
- 2006 Restoration of prairie insect biodiversity in agricultural landscapes: a multi-scale assessment. Drake University Undergraduate Research Grant Program Award. \$2500.
- 2006 Restoration of prairie insect biodiversity in agricultural landscapes: a multi-scale assessment. Prairie Biotic Research, Inc. \$1000.
- 2006 Inventory of lepidopteran pollinators of western fringed prairie orchid in central Iowa. United States Fish and Wildlife Service Research Challenge Grant, \$3000.
- 2006 Assessing the relative importance of soil nutrient stocks and carbon amendment on germination rates: tests on Tallgrass prairie forbs. Sigma Xi Society, \$700 *co-authored with Drake University undergraduates, Ashley Wick and Elizabeth Hill.*
- 2005 Restoration of prairie insect biodiversity in agricultural landscapes: a multi-scale assessment. United States Department of Agriculture, Managed Ecosystems Program. \$70,000.
- 2004 Faunal inventory of Worle Creek Basin and Mitigation Options for Proposed Sewer Construction. Stanley Consultants. \$5,000.
- 2004 Determinants of Tallgrass prairie restoration feasibility at multiple spatial scales. National Geographic Society, \$15,000.

- 2003 Using remote sensing to predict the success of prairie restoration: an empirical test with moth communities. Iowa Space Consortium. \$10,000.
- 2003 Effects of habitat quantity and quality on the abundance of remnant-dependent Lepidoptera. Sigma Xi Society, \$750, *co-authored with Drake University undergraduate, Michelle Lewis.*
- 2002 A structured inventory of the moths of Iowa. Prairie Biotic Research, Inc. \$1000.
- 2002 Determinants of moth community composition in savanna habitat remnants. Iowa Science Foundation, \$5,000.
- 2001 Nestedness and forest moth communities: faunal relaxation or habitat heterogeneity? American Museum of Natural History Theodore Roosevelt Grant, \$760.
- 2001 The relationship between insect species turnover and habitat heterogeneity in a Michigan wetland complex. Pierce Cedar Creek Institute, \$4500 (*with Dr. Joseph Jacquot, Grand Valley State University, Grand Rapids, MI.*)
- 2000 The effects of forest management practices on lepidopteran biodiversity: the role of indicator taxa. Ohio Biological Survey Research Grant, \$500.
- 2000 Long-term effects of timber harvest regimes on forest Lepidoptera. Sigma Xi Society, \$775.
- 1999 The effects of habitat edge on forest Lepidoptera and Coleoptera in Southwest Ohio. Sigma Xi Society, \$745.
- 1999 The effects of habitat edge on forest Lepidoptera and Coleoptera in Southwest Ohio. Ohio Biological Survey Research Grant, \$500.
- 1998 The diversity of Coleoptera in the forests of Miami University's Natural Areas. R. A. Hefner Zoological Museum Grant, \$500.

TEACHING GRANTS

- 2012 Developing ecological research-based pedagogy for central Iowa high school teachers. MetroWaste Authority, \$16,000.
- 2011 The MetroWaste Authority – Drake University Ecology and Stewardship Summer Camp. Watershed University USA, \$10,000.
- 2010 Developing a collaborative field camp for aspiring ecologists. MetroWaste Authority, \$15,500.
- 2005 GIS technology as a tool for ecological science and environmental policy: a seminar for Drake University undergraduates. Drake University Center for Digital Technology and Learning Grant, \$750.
- 2003 Using restored Tallgrass prairie for environmental education. Drake University Student Senate Grant, \$300.
- 2001 Exploring invertebrate zoology through field exercises and research. Miami University Co-curricular learning grant, \$202.
- 1999 Incorporating a marine mesocosm into the invertebrate zoology classroom. Miami University Scholarship and Teaching Grant, \$275.

CONTRIBUTED PAPERS

- Wagner, J.R., **K.S. Summerville**, and K. Islam. 2012. Cerulean warbler population response and breeding success in a forest with recent silviculture. North American Ornithological Congress Annual Meeting, Vancouver, BC.
- Wagner, J.R., **K.S. Summerville**, and K. Islam. 2012. Influence of lepidopteran food resources on demography of the Cerulean warbler in eastern deciduous forests. Annual meeting of the Wildlife Society, Midwest chapter. March 9, 2012.
- Summerville, K.S.** 2011. Developing trait-filter models to predict recolonization dynamics of prairie Lepidoptera following restoration. Invited Symposium presentation, Society for Ecological Restoration International Meeting. Merida, Mexico. August 23, 2011.
- Summerville, K.S.** 2010. Role of controlled grazing on Tallgrass prairie animal biodiversity. Grass-based Livestock Working Group Annual Meeting, West Des Moines, Iowa August 27, 2010.
- Summerville, K.S.**, Bret J. Lang., Santino Narduli, and Jamie Lane. 2010. Managing agricultural lands to protect wildlife. National Fish and Wildlife Foundation & Iowa Soybean Association Wildlife and Agriculture Conference, Otho, Iowa July 27, 2010.
- E. Ockinger, O. Schweiger, T.O. Crist, D.M. Debinski, J. Krauss, M. Kuussaari, J.D. Petersen, J. Poyry, J. Settele, **K.S. Summerville**, and R. Bommarco. Life history traits predict species responses to habitat area and isolation – a cross-continental synthesis. 2010. International Biology of Butterflies Conference, Edmonton, AB. 23 July 2010.
- Summerville, K.S.**, Jamie L. Lane, Bret J. Lang, and Tayler M. Chicoine. 2010. The Environmental Science-Steward Initiative: Towards a New Conservation Biology. Iowa Conservation Education Coalition Annual Meeting, Moravia, Iowa. 15 January 2010.
- Summerville, K.S.** 2008. Spatial structure of lepidopteran communities of Morgan-Monroe State Forest. 2nd Annual Hardwood Ecosystems Experiment Meeting, West Lafayette, IN. 10 April 2008.
- Mycroft, C.J., Brack, V., Dolan, B.J., Dunnering, J.B., Holland, J.D., Islam, K., MacGowan, B.J., Michler, C.H., Parker, G.R., Prokopy, L.S., **Summerville, K.S.**, Weeks, H.P., Williams, R.N., and Swihart, R.K. 2008. The Indiana Hardwood Ecosystem Experiment. Central Hardwood Forest Conference, West Lafayette, IN. 8 April 2008.
- Summerville, K.S.** 2007. An initial biodiversity assessment for Lepidoptera in Morgan-Monroe State Forest, Indiana. Purdue University Hardwood Ecosystems Research Meeting, West Lafayette, IN, 15 October 2007.
- Summerville, K.S.** 2007. Convergence between lepidopteran communities in old prairie restorations and prairie remnants: evidence of successful restoration or loss of conservation species from remnants? 17th Annual Prairie Invertebrate Conference, Decorah, IA, 20-21 October 2007.
- Hill, J. G., **K. S. Summerville**, R. L. Brown, and J. A. MacGown. 2007. The assembly of ant communities in a heterogeneous landscape in Mississippi. Poster Presentation, Fire Ant Conference, Gainesville, FL, 23-26 April 2007.

- Summerville, K.S.** 2006. Species traits and random effects: can we predict restoration trajectories for insect assemblages? Annual meeting of American Society of Agronomy (ASA), Crop Science Society of America (CSSA), and Soil Science Society of America (SSSA), Indianapolis, IN.
- Summerville, K.S.** 2006. Species traits as predictors of colonization potential in grassland Lepidoptera: is community membership a lottery? US Fish and Wildlife Research Symposium, Neal Smith National Wildlife Refuge, Prairie City, Iowa.
- Anderson, S. H. and **K. S. Summerville.** 2005. Predicting wetland habitat use by fall migrating waterfowl: are restored wetlands selectively avoided? Drake University undergraduate research symposium, Des Moines, IA.
- Steichen, R. M. and **K. S. Summerville.** 2005. Beyond site-specific assembly rules: species traits as predictors of the frequency of occurrence of Lepidoptera in restored Tallgrass prairies. Drake University undergraduate research symposium, Des Moines, IA.
- Courard-Hauri, D., L. K. Kneubuhler, A. A. Wick, and **K. S. Summerville.** 2005. Model of grassland butterfly movement in Kheun Conservation Area, Iowa. Annual Meeting of Iowa Academy of Sciences, Cornell College, IA.
- Wick, A.A., L. K. Kneubuhler, D. Courard-Hauri, and **K. S. Summerville.** 2005. Movement behavior of grassland butterflies in mixed grasslands of central Iowa. Annual Meeting of Iowa Academy of Sciences, Cornell College, IA.
- Summerville, K. S.,** R. M. Steichen, and M. N. Lewis. 2004. Ecological constraints on faunal recovery in restored tallgrass prairies: A case study using Lepidoptera. Annual Meeting of Ecological Society of America, Portland, OR.
- Lewis, M. N., R. M. Steichen, and **K. S. Summerville.** 2004. Effects of habitat quantity and quality on lepidopteran biodiversity in oak savannas. Annual Meeting of Iowa Academy of Sciences, Cedar Rapids, IA.
- Lewis, M. N., R. M. Steichen, and **K. S. Summerville.** 2004. Restoring lepidopteran communities to prairies: the challenge ahead. Drake University undergraduate research symposium, Des Moines, IA.
- Kahn, J. K., **K. S. Summerville,** T. O. Crist, and J. C. Gering. 2002. Comparison of community structure of arboreal caterpillars (Lepidoptera) in four tree species of the eastern deciduous forest. Entomological Society of America, North-Central Branch Annual Meeting, East Lansing, MI.
- Summerville, K. S.,** M. J. Boulware, J. A. Veech, and T. O. Crist. 2002. Spatial variation in species diversity and composition of forest Lepidoptera: patterns and implications for conservation. Entomological Society of America, North-Central Branch Annual Meeting, East Lansing, MI.
- Crist, T. O., J. A. Veech, J. C. Gering, and **K. S. Summerville.** 2001. Partitioning species diversity across scales: statistical tests on components of insect diversity in deciduous forests. The Ecological Society of America, Madison, Wisconsin.
- Summerville, K. S.** and T. O. Crist. 2001. Effects of logging on forest Lepidoptera: community, guild, and species responses. The Ecological Society of America, Madison, Wisconsin.
- Pradhan-Devare, S., **K. S. Summerville,** and T. O. Crist. 2001. Responses of insects to fragmentation and plant community composition in an old field. Midwest Ecology and Evolutionary Biology Meeting, Oxford, Ohio.
- Summerville, K. S.** and T. O. Crist. 2000. Effects of forest management on Lepidoptera and the role of moths as indicators of forest health. Annual meeting of the Ohio Biological Survey, Columbus, Ohio.

- Summerville, K. S.** and T. O. Crist. 2000. The effects of experimental habitat fragmentation on patch use by butterflies and skippers (Lepidoptera). The Ecological Society of America, Snowbird, Utah.
- Summerville, K. S.** and T. O. Crist. 1999. The effects of habitat edge on the diversity of beetles (Coleoptera) and moths (Lepidoptera) in a beech-maple forest in southwest Ohio. The Ecological Society of America, Spokane, Washington.
- Summerville, K. S.** and T. O. Crist. 1999. Edge effects on the richness and abundance of beetles (Coleoptera) and moths (Lepidoptera) in beech-maple forests of southwest Ohio. Annual meeting of the Ohio Biological Survey, Columbus, Ohio.
- Summerville, K. S.** 1998. The effects of habitat scale on the inventory and conservation of *Papaipema* species (Lepidoptera: Noctuidae). Ohio Academy of Science, Miami University, Middletown Campus, Ohio. (published abstract in *Ohio Journal of Science* 98: 10).

INVITED SEMINARS / SYMPOSIA

- Summerville, K.S.** 2012. Conservation by Design: the Gishwati Area Conservation Program. Des Moines Area Community College (West), West Des Moines, IA.
- Summerville, K.S.** 2010. Ecosystem resistant and resilience in forest lepidopteran communities. Purdue University, West Lafayette, IN.
- Summerville, K.S.** 2010. Using lepidopteran evolutionary ecology to formulate tallgrass prairie management guidelines: towards a new, long-term ecological restoration. Washington University, Saint Louis, Missouri.
- Summerville, K.S.** 2008. Use of fire as a management tool in tallgrass prairies: principles of responsibility and intentionality. Iowa Prairie RC&D Annual Meeting, Ames, Iowa.
- Summerville, K.S.** 2008. Feeding the birds: moth community dynamics in Iowa's restored and remnant tallgrass prairies. Big Bluestem Audubon Society, Ames, Iowa.
- Summerville, K.S.** 2007. Ecology and population dynamics of ornate box turtles (*Terepene ornata ornata*) in central Iowa. Polk County Conservation Board Naturalist Seminar Series, Jester Park, Iowa.
- Summerville, K.S.** 2007. When does restoration succeed? Case studies from Central Tallgrass Prairies and Managed Oak-Hickory Forests. Luther College, Decorah, Iowa.
- Summerville, K.S.** 2007. Effects of timber harvest on forest arthropods: patterns, processes, and unresolved questions. Indiana Sustainable Forests Working Group, Indianapolis, Indiana.
- Summerville, K. S.** 2007. Prairie management and long term conservation of animal communities: compatible ideas and ideals? US Army Corps of Engineers Annual Meeting, Dubuque, Iowa.
- Summerville, K.S.** 2007. Community assembly of Lepidoptera in Eastern Deciduous Forests: towards general principles? Department of Ecology and Evolutionary Biology, Iowa State University, Ames, Iowa.
- Summerville, K.S.** 2006. Species sorting and meta-community dynamics in Tallgrass prairie systems: can species traits be used to predict restoration trajectories? Department of Entomology, The Ohio State University, Columbus, Ohio.

- Summerville, K. S.** 2005. Trait-filter models and the restoration of Tallgrass prairie lepidopteran communities: dispersal versus resource-based species exclusion. Department of Natural Resource Management, Iowa State University, Ames, Iowa.
- Summerville, K. S.** 2005. Determinants and conservation of Lepidoptera biodiversity in managed forests of northern North America. Annual Meeting of the Entomological Society of Canada, Symposium Presentation, Canmore, Canada.
- Summerville, K. S.** 2005. Beyond site-specific assembly rules: species traits as predictors of restoration success. Biology Department, Truman State University, Kirksville, Missouri.
- Courard-Hauri, D., A. Wick, L. Kneubuhler, and **K. S. Summerville.** 2004. Movement of Tallgrass prairie butterflies in a heterogeneous landscape. Biology Department, Drake University, Des Moines, Iowa.
- Summerville, K. S.** 2004. Return from the brink: restoring populations of Tallgrass prairie butterflies to the Iowan landscape. Sierra Club Fall Meeting, Des Moines, Iowa.
- Summerville, K. S.** 2004. Diversity partitioning, forest fragmentation, and predicting the effects of spatial scale on insect community structure. Mississippi State University, Starkville, Mississippi.
- Summerville, K. S.** 2003. Effects of habitat loss on forest Lepidoptera: a question of scale? Drake University, Des Moines, Iowa.
- Summerville, K. S.** 2002. Timber harvesting and forest Lepidoptera: contrasting effects of different logging regimes. Drake University, Des Moines, Iowa.
- Summerville, K. S.** 2002. Effects of timber harvest on forest Lepidoptera: community, guild, and species responses. Gonzaga University, Spokane, Washington.
- Summerville, K. S.** 2001. Human impacts on biodiversity: lessons from Lepidoptera in temperate ecosystems. Westminster College, New Wilmington, Pennsylvania.
- Summerville, K. S.** 2001. Effects of timber harvest on forest Lepidoptera: community, guild, and species responses. Westminster College, New Wilmington, Pennsylvania.
- Summerville, K. S.** 2000. Caterpillars, butterflies, and moths: the role of Lepidoptera in ecological investigation. Annual Meeting of the Ohio Lepidopterists, Columbus, Ohio.

AWARDS

- 2012 National Teacher of the Year; Delta Gamma Foundation.
- 2012 Environmental Educator of the Year; MetroWaste Authority.
- 2011 Windsor Professorship of Science; Drake University.
- 2011 Madeline Levitt Outstanding Teacher of the Year; Drake University.
- 2007 Environmental Educator of the Year Award, Sierra Club - Iowa Chapter.
- 2004 First Place Award, Drake University Conference for Undergraduate Research (*research presented by Drake undergraduates Michelle Lewis and Renae Steichen*), Drake University.
- 2002 Graduate Student Achievement Award for Outstanding Graduate Research; Miami University, \$300.

- 2002 College of Arts and Sciences Graduate Student Teaching Award, Miami University, \$500.
- 2001 Dissertation Scholar Award, Department of Zoology; Miami University, \$12,480.
- 2001 Graduate Student Researcher of the Year; Miami University, \$100.
- 2000 Graduate Student Achievement Award for Outstanding Graduate Research; Miami University, \$500.
- 1999 Graduate Student Achievement Award for Outstanding Graduate Research; Miami University, \$300.
- 1998 Landis Scholarship for Outstanding Zoology Graduate Student; Miami University; \$2000.
- 1997 Outstanding Graduate Student in Environmental Science Award – Butler County Rural Electric Cooperative Scholarship; Miami University; \$1500.
- 1991-1995 Trustee's Scholar Award. Awarded to an undergraduate student who displays excellence in the classroom, in campus activities, and in public service; Westminster College; full tuition, room, and board.

SELECTED PROFESSIONAL SERVICE

- 2011-present **Editor**, *Journal of the Lepidopterists Society* ; **Subject Editor**, *The Canadian Entomologist*
- Coordinated publication of 4 issues of the *Journal* per year, representing 500 published pages and approximately 10 research articles per issue.
 - Managed database of peer reviewers and developed a 3 week average review time for all appropriate manuscript submissions.
 - Oversaw *Journal* budget and coordinated expenditures with Allen Press.
- 2010-present **Peer Reviewer**, Wilson Ornithological Society Competitive Grants Program
- Reviewed 20 competitive grants per year for the Louis Agaziz Ornithology Grant program and the Wilson Ornithology Fellow program.
- 2007 – present. **Board of Directors**, Leopold Center for Sustainable Agriculture.
- Reviewed between 17-25 competitive grants per year on marketing, policy, and ecology research initiatives for sustainable agriculture in Iowa.
 - Served as member of the search committee for the Director of the Leopold Center, 2011.
- 2005-present **Board of Directors**, Iowa Audubon Society
- Established policy and management guidelines for state chapter of Audubon Society, and developed regional conservation plans for Iowa Important Bird Areas.
- 2003-present **Chair, Chichaqua Greenbelt Advisory Committee**, Polk County, Iowa.
- Appointed by Polk County Conservation Board to serve on 16 member panel and charged with critiquing and revising 10-year Master Plan for Chichaqua Greenbelt prairie and wetland restorations.
- 1999-present **Peer Reviewer**, *Ecology*, *Ecology Letters*, *Ecological Applications*, *Journal of Applied Ecology*, *Landscape Ecology*, *Oecologia*, *Oikos*, *Biological Conservation*, *Diversity and Distributions*, *Ecological Entomology*, *Ecological Indicators*, *Forest Ecology and Management*, *Biodiversity and Conservation*, *Journal of Tropical Ecology*, *Journal of Environmental Management*, *Canadian Entomologist*, *Archiv Für*

Hydrobiologie, Journal of the Lepidopterists Society, Great Lakes Entomologist, Journal of Entomological Science, & Ohio Journal of Science.

- Reviewed 5-8 manuscripts per year on various aspects of community ecology, insect ecology, and biodiversity conservation.
- 2005-2006 **Chair, College of Arts and Sciences Curriculum Committee**, Drake University
- Reviewed proposal for new courses and course revisions in the College of arts and Sciences; revised policy for submitting new courses in the College to emphasize linking learning outcomes and assessment.
- 2002-2007 **Faculty Advisor, Drake University Outdoor Club**, Drake University
- Coordinated at least one camping trip per semester with Drake undergraduates and attended one meeting per month to ensure that the group was organized and active in campus life.
- 2002-present **Member of Ad-hoc Biodiversity Center Committee**, Drake University.
- Participated in regular meetings to discuss education and research usage of Drake University's Biodiversity Center.
- 2004 **Zoologist**, Stanley Consulting, Inc.
- Conducted faunal inventory (vertebrates & selected invertebrates) of Worle Creek woodlands (Ames, Iowa) and assessed mitigation / restoration options for proposed municipal sewer construction.
- 1999-2003 **Lepidopteran Specialist**, Legacy Environmental, Inc., Cincinnati, Ohio.
- Identified Lepidoptera to species for environmental consulting firm accumulating biodiversity information for Clermont County, Ohio.
- 1999-2003 **Secretary**, The Ohio Lepidopterists, a non-profit scientific and avocational society.
- Recorded Board meeting minutes and maintained monthly correspondence with other Ohio state and non-profit conservation organizations.
 - Provided educational programs on ecology and Lepidoptera for primary and secondary schools as well as other Ohio non-profit organizations.
- 2001-2002 **Graduate Student Representative**, Graduate Advisory Committee, Department of Zoology.
- Discussed and voted on policy matters related to graduate student curricula and recruiting strategy.
- 1997 **Insect Ecologist**, The Nature Conservancy, Michigan Chapter.
- Designed and implemented research protocol to quantify and characterize microhabitat affinity of federally endangered Mitchell's satyr butterfly in Michigan fens.
 - Performed inventories for rare Orthoptera, Homoptera, Odonata, and Lepidoptera species throughout Michigan's Lower Peninsula.
 - Revised and developed conservation plans for preserves managed by The Nature Conservancy.
 - Participated in Mitchell's Satyr Butterfly Recovery Plan Working Group with representatives from U.S. Fish & Wildlife Service, The Nature Conservancy, and Michigan Department of Natural Resources.

PROFESSIONAL SOCIETIES

Ecological Society of America
Society of Conservation Biologists
Entomological Society of America

Society for Ecological Restoration
Lepidopterists' Society
Sigma Xi

Wilson Ornithological Society