

## Gabriel Ryan Karns

### *Contact Information:*

School of Environment & Natural Resources  
The Ohio State University  
2021 Coffey Road, 210 Kottman Hall  
Columbus, OH 43210  
Phone: (614) 292-3865  
Email: [karns.36@osu.edu](mailto:karns.36@osu.edu)

### Education

- North Carolina State University; **Bachelor of Science**, Wildlife Sciences (Minor: Botany), 3.875 GPA (Summa Cum Laude), December 2006.
- North Carolina State University; **Master of Science**, Fisheries and Wildlife Sciences (Minor: Geographic Information Systems), 3.917 GPA, 1300 GRE scores, December 2008. *Impact of Hunting on Adult Male White-tailed Deer Behavior.*
- Auburn University; **Doctorate of Philosophy**, Wildlife Sciences, 4.0 GPA, May 2014. *Spatiotemporal Breeding Strategies within a High Density, Male-skewed White-tailed Deer Population.*

### Professional Appointments

- The Ohio State University; **Post-Doctoral Researcher**, Terrestrial Wildlife Ecology Laboratory, March 2013-August 2016.
- University of Pittsburgh – Lake Pymatuning Laboratory of Ecology; **Summer Field Course Instructor**, July 2015—2019.
- The Ohio State University; **Visiting Assistant Professor**, Terrestrial Wildlife Ecology Laboratory, September 2016—August 2019.
- The Ohio State University; **Clinical Faculty of Land Practice**, September 2019—present.

### Scholarships

- Undergraduate Dean's List (2003-2006)
- Citizen's Scholarship Foundation of America (2003-2006)
- Felton H. Coley Scholarship (2004-2006)
- Camp Younts Scholarship (2006)

- Westervelt Graduate Fellowship (2009-2011)
- Shikar Safari Club International Scholarship (2010)
- Bradley Fellowship (2012)

### Awards

- Commencement speaker at College of Natural Resources graduation (North Carolina State University; 2006)
- Recipient of Ken Wilson Award – North Carolina Chapter of The Wildlife Society Award for Outstanding Wildlife Undergraduate (2007)
- Best Poster Presentation at 2008 Discovery Conference; SAS Institute, Cary, North Carolina (2008)
- School of Forestry and Wildlife Sciences Nominee for the Auburn University Outstanding PhD Student (2012)

### Current Certifications

- Chemical Immobilization of Wild Animals Certification; SafeCapture International
- Associate Wildlife Biologist Certification; The Wildlife Society
- Social and Behavioral Research – Institutional Review Board
- Commercial Pesticide Applicator's License

### Organizations & Professional Affiliations

- Leopold Wildlife Club; North Carolina State University, student chapter (2004-2007)
  - President (2006)
- The Wildlife Society (2004-present)
- North Carolina Chapter of The Wildlife Society (2004-2009)
- Southeastern Section of The Wildlife Society (2005-2013)
- Alabama Chapter of The Wildlife Society (2009-2013)
- Ohio Chapter of The Wildlife Society (2013-present)
  - Secretary (2 terms; 2016-present)
- North Central Section of The Wildlife Society (2013-present)
- Rocky Mountain Elk Foundation (2016-present)
- Backcountry Hunters and Anglers
  - Legislation/Policy chair (2018-present)
  - R3 (Recruitment – Retention – Reactivation) co-chair (2019-present)
- Conservation Leaders for Tomorrow Instructor (2019-present)

## Academic/Advising Committees

- Undergraduate Peer Advisor at North Carolina State University (2005-2006)
- Auburn University Graduate Student Council (2012-2013)
- Faculty mentor for Second-Year Transformational Experience Program for sophomore undergraduates; The Ohio State University, Columbus, Ohio (2016-2019; 4 years consecutive; 65 students collectively)
- SENR Diversity, Inclusion, Equity, & Justice Task Force (2017-present)

## Graduate Students

- Undergraduate Honors Thesis Committee; Taylere Bennett – Avian response to feathering habitat edges in an agricultural landscape in southwestern Ohio, The Ohio State University, Columbus, Ohio (2014)
- Graduate Committee; Claire Beck – Pipelines to pollination: Creating pollinator habitat on natural gas pipeline rights-of-way in the Marcellus and Utica shale region of the eastern United States, The Ohio State University, Columbus, Ohio (2016)
- Graduate Committee; Lewis Lolya – MS candidate, The Ohio State University, Columbus, Ohio (2017-present)
- Graduate Committee; Colleen Sharkey – Integrated Vegetation Management on Pipeline Rights-of-way and Potential for Monarch and Pollinator Habitat Conservation, The Ohio State University, Columbus, Ohio (2017)
- Graduate Committee; Julius Metcalf – Characterizing Potential for Recreational Access and Habitat Conservation within Ohio's Private Landscape, The Ohio State University, Columbus, Ohio (2018-present)
- Graduate Committee; Donald Radcliffe – Monitoring Tree Species Change in Oak Forests, The Ohio State University, Columbus, Ohio (2018-present)
- Undergraduate Honors Thesis Advisor; Lizzie Wilson – Plant and pollinator communities within an exurban pipeline corridor: The effects of native seed mixes, The Ohio State University, Columbus, Ohio (2018-present)
- Graduate Committee; Melissa Stanger – Characterizing Potential for Recreational Access and Habitat Conservation within Ohio's Private Landscape, The Ohio State University, Columbus, Ohio (2019-present)
- Graduate Committee; Clint Cherrington – Pseudorabies carryover from feral swine to black bears via carrion consumption in the southern Appalachians, The Ohio State University, Columbus, Ohio (2019-present)
- Graduate Committee; Casey Kowalewsky – Exurban wildlife-human conflict and the capacity of environmental education to intervene, The Ohio State University, Columbus, Ohio (2019-present)
- Graduate Committee; Stephanie Sforza – Habitat analysis for northern bobwhite, ruffed grouse and deer in Ohio using geospatial techniques, The Ohio State University, Columbus, Ohio (2019-present)

### Undergraduates/Technicians Supervised

- Paugh, B.; field technician; North Carolina State University (2007)
- Beasley, N.; data technician; North Carolina State University (2007)
- Mosinski, A.; GIS/data technician; The Ohio State University (2013-2014)
- Beck, C.; GIS/data technician; field technician; The Ohio State University (2015)
- McDermott, M.; field technician; The Ohio State University (2016)
- Fowler, M.; field technician; The Ohio State University (2016)
- Beck, C.; field technician; The Ohio State University (2016)
- Hank, J.; field technician; The Ohio State University (2016)
- Sharkey, C.; lab & field technician; The Ohio State University (2017)
- Crouser, A.; GIS/data technician; The Ohio State University (2017)
- Hejna, D.; field technician; The Ohio State University (2017)
- Siddiqi, A.; data technician; The Ohio State University (2017-2018)
- Dumbauld, A.; lab technician; The Ohio State University (2017)
- Cahal, G.; lab technician; The Ohio State University (2017)
- Carr, L.; lab technician; The Ohio State University (2017)
- Spring, M.; lab technician; The Ohio State University (2018-2019)
- Gravely, K.; field technician; The Ohio State University (2018)
- Fuller, J.; field technician; The Ohio State University (2018)
- Glanville, K.; field technician; The Ohio State University (2018)
- Dues, K.; Ecolab summer internship; Ohio State University-Mansfield (2018)
- Gorman, K.; lab technician; The Ohio State University (2018-2019)
- Pollee, A.; lab technician; The Ohio State University (2018-2019)
- Fineran, K.; undergraduate research; The Ohio State University (2018-2019)
- Wilson, L.; undergraduate research; The Ohio State University (2018-2019)
- Hawk, A.; Ecolab summer internship, Work Study; The Ohio State University-Mansfield (2019-2020)
- Palmerton, S.; Ecolab summer internship; Ohio State University-Mansfield (2019)
- Holzworth, A.; Ecolab summer internship; Ohio State University-Mansfield (2019)
- Gregory, K.; Ecolab Work Study; Ohio State University-Mansfield (2020)
- Tambini, A.; full-time maple technician (2021)
- Caudill, G.; part-time maple technician (2021)
- Grabski, S.; Ecolab Work Study; Ohio State University-Mansfield (2020)

### Research Working Groups

- Large Carnivore Working Group – Mountain Social Ecological Observatory Network (2014)
- Appalachian Mountain Joint Venture Energy Working Group (2015-present)
- Energy and Wildlife Policy Committee – Association of Fish and Wildlife Agencies (2016-present)

- Rights-of-Way as Habitat Working Group (2017-present)
- Integrated Monarch Monitoring Protocol Advisory Team (2020-present)

## Grants

- **Karns, G.**, and R. Snow. Herpetofaunal cover board survey at Turner House, Raleigh, North Carolina; College of Natural Resources, North Carolina State University; \$1,000; 1 year (2006)
- Bruskotter, J., R. Gates, S. Matthews, and **G. Karns**. Develop new deer management units for Ohio. Ohio Department of Natural Resources, Division of Wildlife; \$77,704; 1 year continuation (2014)
- O'Hanlon, M., C. Leman, E. Ifft, G. Steffen, S. Ratcliffe, **G. Karns**, and M. Anthony. Biology in the field: A real agri-science experience. The Monsanto Fund; \$25,000; 1 year (2014)
- Matthews, S., **G. Karns**, K. Duren, L. Kearns, C. Tonra, R. Gates, and J. Bruskotter. Assessment of land use change in Ohio. Ohio Department of Natural Resources, Division of Wildlife; \$102,447; 1 year (2015)
- **Karns, G.**, J. Bruskotter, and R. Gates. A feasibility analysis for Ohio: Elk reintroduction. Ohio Department of Natural Resources, Division of Wildlife; \$11,110; 2 months (2015)
- **Karns, G.**, S. Matthews, R. Gates, C. Tonra, L. Kearns, and J. Burris. Response of early successional avifauna to pipeline right-of-ways vegetation management in eastern Ohio. Ohio Department of Natural Resources, Division of Wildlife; \$329,440.67; 3 years (2016-2018)
- **Karns, G.**, J. Bruskotter, S. Matthews, K. Slagle, A. Dietsch, L. Kearns, M. Ervin, J. Burris. Characterizing potential for recreational access and habitat conservation within Ohio's private landscape. Ohio Department of Natural Resources, Division of Wildlife; \$316,005.94; 3 years (2017-2019)
- **Karns, G.**, and S. Matthews. Integrated management of pipeline rights-of-way vegetation as an alternative to mechanical maintenance: Promise for pollinators. Bayer Feed-A-Bee Forage Initiative; \$5,000; 1 year (2017-2018)
- **Karns, G.**, M. Lininger, and S. Matthews. Integrated management on pipeline rights-of-way and potential for Monarch and pollinator habitat conservation. Monarch Joint Venture; \$8,280; 1 year (2017-2018)
- **Karns, G.**, K. Curtis, C. Wood, N. Jones, J. Fry, R. Thompson, K. Scott, E. DeBusk, N. Sintov, A. Dietsch, P. Failor, and V. Coleman. Producing qualified and diverse natural resources

professionals through advanced partnerships and experiential learning communities. Connect & Collaborate grant; \$133,000; 2 years (2018-2020); corporate partner—First Energy

- **Karns, G.** Social acceptability, landscape suitability, and nutritional carrying capacity of potential elk reintroduction in Ohio. Ohio Environmental Council; \$189,955.19; 2 years (2019-2020; pending).
- **Karns, G.,** K. Smith. Herbicide trials for targeted control of non-desirable woody invasive shrubs. Bayer U.S.; \$8,000; 2 years (2018-2020).
- Smith, K., L. Ober, **G. Karns.** Ohio State University-Mansfield Sugar Bush. Representative John Patterson, Ohio – District 99 and Richards Maple Products; \$30,046 (2019).
- Mehmood, S., **G. Karns,** K. Smith, L. Ober. Leveraging education and research to promote maple syrup production in Ohio, Pennsylvania, and West Virginia. United States Department of Agriculture ACER Grant program. \$482,100 (2019).
- **Karns, G.,** L. Ober, K. Smith, S. Matthews. Freeman’s maple (red x silver) potential for syrup production and resilience in Ohio’s forests. United States Department of Agriculture ACER Grant program. \$217,148.13 (2020).

### Published Manuscripts

- |      |   |
|------|---|
| 2009 | <b>Karns, G.,</b> R. Lancia, C. DePerno, M. Conner, and M. Stoskopf. 2009. Intracranial abscessation as a natural mortality factor for adult male white-tailed deer ( <i>Odocoileus virginianus</i> ) in Kent County, Maryland. <i>Journal of Wildlife Diseases</i> , 45(1): 196-200. |
| 2010 | <b>Karns, G.</b> 2010. Understanding white-tailed deer: Florida and the Southeast. Book review. <i>Journal of Wildlife Management</i> 74(8): 1935-1936.   |
| 2011 | <b>Karns, G.,</b> R. Lancia, J. Bishir, C. DePerno, and M. Conner. 2011. Improvement of a catch-per-unit-estimator for white-tailed deer populations. <i>Proceedings of the Southeastern Association of Fish and Wildlife Agencies</i> 65: 15-20.                                     |
| 2011 | <b>Karns, G.,</b> R. Lancia, C. DePerno, and M. Conner. 2011. Investigation of adult male white-tailed deer excursions outside their home range. <i>Southeastern Naturalist</i> 10(1): 39-52.   |
| 2012 | <b>Karns, G.,</b> and S. Ditchkoff. 2012. Antler breakage patterns in white-tailed deer. <i>Proceedings of the Southeastern Association of Fish and Wildlife Agencies</i> 66: 114-119.  |

- 2012 **Karns, G.**, R. Lancia, C. DePerno, and M. Conner. 2012. Impact of hunting pressure on adult male white-tailed deer behavior. *Proceedings of the Southeastern Association of Fish and Wildlife Agencies* 66: 120-125.
- 2013 **Karns, G.**, and S. Ditchkoff. 2013. Trauma-induced malformed antler development in male white-tailed deer. *Wildlife Society Bulletin* 10.1002/wsb.353.
- 2014 **Karns, G.**, A. Jackson, T. D. Steury, and S. Ditchkoff. 2014. Maternal life history of white-tailed deer: factors affecting fetal sex allocation, conception timing, and senescence. *Evolutionary Ecology Research* 16: 165-178.
- 2015 **Karns, G.**, J. Bruskotter, and R. Gates. 2015. Explaining hunting participation in Ohio: a story of changing land use and new technology. *Human Dimensions of Wildlife* 20: 484-500.
- 2016 **Karns, G.**, J. Bruskotter, S. Matthews, M. Tonkovich, C. McCoy, and R. Gates. 2016. Understanding spatial heterogeneity of female white-tailed deer harvest distribution in Ohio. *Wildlife Society Bulletin* doi: 10.1002/wsb.702.
- 2016 Heeren, A., **G. Karns**, J. Bruskotter, E. Toman, R. Wilson, and H. Szarek. 2016. Expert judgment and uncertainty regarding the protection of imperiled species. *Conservation Biology* 31: 657-665. doi: 10.1111/cobi.12838
- 2017 Bruskotter, J., J. Vucetich, M. Manfredo, **G. Karns**, C. Wolf, K. Ard, N. Carter, J. Lopez-Bao, G. Chapron, S. Gehrt, and W. Ripple. 2017. Modernization, risk and conservation of the world's largest carnivores. *BioScience* <https://doi.org/10.1093/biosci/bix049>
- 2017 Bruskotter, J., J. Vucetich, D. Smith, M. Nelson, **G. Karns**, and R. Peterson. 2017. The role of science in understanding (and saving) large carnivores: A response to Allen and colleagues. *Food Webs* <http://dx.doi.org/10.1016/j.fooweb.2017.05.004>
- 2018 Carter, N., J. Bruskotter, J. Vucetich, R. Crabtree, H. Jaicks, **G. Karns**, M. Nelson, D. Smith, and J. Linnell. Towards human-wildlife coexistence through the integration of human and natural systems: The case of gray wolves in the Rocky Mountains, USA. *Human-Wildlife Interactions*, B. Frank, J. Glikman, and S. Marchini (editors), pp. 384-413.
- 2018 **Karns, G.**, H. Szarek, A. Heeren, E. Toman, R. Wilson, and J. Bruskotter. Should grizzly bears be hunted or protected? Social and organizational affiliations influence scientific judgments. *Journal of Canadian Wildlife Biology and Management* 7: 18-30.

- 2018      **Karns, G.** Response of amphibian and reptile populations to vegetation management and edge habitat enhancement along Utica-Marcellus pipelines in eastern Ohio. *12<sup>th</sup> International Rights-of-Way Symposium Proceedings*.
- 2020      Metcalf, J., **G. Karns**, M. Gade, P. Gould, and J. Bruskotter. Wildlife agency mission statements provide insight into the purpose and practice of conservation. *Human Dimensions of Wildlife*.
- In review      Lolya, L., S. Matthews, D. Radcliffe, and **G. Karns**. Assessing avian response to habitat management along pipeline right-of-ways in eastern Ohio. *Environmental Management*.
- In review      Slagle, K., **G. Karns**, and J. Bruskotter. Human Behavior and Effective Chronic Wasting Disease Management. *Human Dimension of Wildlife*.

### Technical Reports

- 2015      **Karns, G.**, J. Bruskotter, R. Gates, S. Matthews, J. C. McCoy, and M. Tonkovich. 2015. Development of white-tailed deer management units in Ohio. The Ohio State University, Terrestrial Wildlife Ecology Lab, School of Environment and Natural Resources. 102 pp.
- 2015      **Karns, G.**, J. Bruskotter, and R. Gates. 2015. Feasibility assessment for potential Rocky Mountain elk reintroduction in Ohio. The Ohio State University, Terrestrial Wildlife Ecology Lab, School of Environment and Natural Resources. 68 pp.
- 2016      Bruskotter, J., R. Crabtree, **G. Karns**, and J. Vucetich. 2016. Large carnivore conflicts in the Western US: Problem identification and opportunities for applied research. The Mountain Social Ecological Observatory Network. 8 pp.
- 2020      Slagle, K., **G. Karns**, and J. Bruskotter. 2020. Deer in Ohio: Results from the 2019 survey of hunters and landowners. The Ohio State University, School of Environment and Natural Resources, Columbus, OH, USA.
- 2020      Slagle, K., M. Stanger, **G. Karns**, and J. Bruskotter. 2020. Characterizing potential for recreational access and habitat conservation within Ohio's private landscape: Scioto watershed. The Ohio State University, School of Environment and Natural Resources, Columbus, OH, USA.
- 2020      Stanger, M., K. Slagle, **G. Karns**, and J. Bruskotter. 2020. Connecting hunters and landowners: A 2018 program evaluation of Ohio's Cooperative Hunting, Trapping, and Fishing Program. The Ohio State University, School of Environment and Natural Resources, Columbus, OH, USA.



## Peer-reviewed Abstracts & Research Presentations

- 2005      **Karns, G.**, R. Snow, J. Anderson, and M. Horne. 2005. Avian population, feeding trend, and hierarchical studies of the improved Turner House. The 14<sup>th</sup> Annual North Carolina State University Undergraduate Research Symposium, Talley Student Center, North Carolina State University, Raleigh, North Carolina.
- 2006      **Karns, G.**, A. Partin, B. Horne, and B. Bridges. 2006. Beaver in North Carolina. North Carolina State University Distinguished Lecture Series, McKimmon Center, North Carolina State University, Raleigh, North Carolina.
- 2008      DePerno, C., C. Ayers, C. Chitwood, J. Folta, K. Golden, S. Hutchens, **G. Karns**, A. Rockhill, E. Rutledge, B. Sherrill, and M. Sandfoss. 2008. An overview of wildlife research at North Carolina State University. North Carolina State University, Department of Forestry and Environmental Resources, 1<sup>st</sup> Annual Faculty Research Symposium, Jordan Hall II, North Carolina State University, Raleigh, North Carolina.
- 2008      **Karns, G.**, R. Lancia, J. Bishir, and C. DePerno. 2008. Enhancing a catch-per-unit-effort estimator for harvested white-tailed deer populations using JMP. Discovery 2008 Conference, SAS Institute, Inc., Cary, North Carolina.
- 2008      **Karns, G.**, R. Lancia, C. DePerno, M. Stoskopf, and M. Conner. 2008. Intracranial abscessation as a natural mortality factor for adult male white-tailed deer in Kent County, Maryland. The 15<sup>th</sup> Annual Conference of The Wildlife Society, Miami, Florida.
- 2009      **Karns, G.**, R. Lancia, C. DePerno, M. Conner, and M. Stoskopf. 2009. Intracranial abscessation as a natural mortality factor in adult male white-tailed deer. 32<sup>nd</sup> Annual Meeting of the Southeast Deer Study Group, Roanoke, Virginia.
- 2009      **Karns, G.**, R. Lancia, C. DePerno, and M. Conner. 2009. Impact of hunting pressure on adult male white-tailed deer behavior at Chesapeake Farms, Maryland. 32<sup>nd</sup> Annual Meeting of the Southeast Deer Study Group, Roanoke, Virginia.
- 2011      **Karns, G.**, J. McCoy, B. Collier, and S. Ditchkoff. 2011. Factors influencing and stability of adult sex ratios amidst widely variable harvest strategies. 34<sup>th</sup> Annual Meeting of the Southeast Deer Study Group, Oklahoma City, Oklahoma.
- 2011      **Karns, G.**, J. McCoy, B. Collier, and S. Ditchkoff. 2011. Factors influencing and stability of adult sex ratios amidst widely variable harvest strategies. Annual Meeting of the Alabama Chapter of The Wildlife Society, Prattville, Alabama.

- 2011 Deperno, C. S., **G. Karns**, R. A. Lancia, J. W. Bishir, M. C. Connor, and C. Barker. Improvement of a catch-per-unit estimator for white-tailed deer. 65<sup>th</sup> Annual Southeastern Association of Fish and Wildlife Agencies (SEAFWA) Conference, Sheraton Music City Hotel, Nashville, Tennessee.
- 2012 **Karns, G.**, and S. Ditchkoff. In-progress research: Malformed antlers in white-tailed deer: genetic defects or injured survivors? Alabama Natural Resources Symposium, Auburn University, Auburn, Alabama.
- 2012 **Karns, G.**, and S. Ditchkoff. Patterns of antler breakage in white-tailed deer. 35<sup>th</sup> Annual Meeting of the Southeast Deer Study Group, Destin, Florida.
- 2012 **Karns, G.**, and S. Ditchkoff. Antler breakage patterns in white-tailed deer. 66<sup>th</sup> Annual Conference of Southeastern Association of Fish and Wildlife Agencies, Hot Springs, Arkansas.
- 2012 **Karns, G.**, R. A. Lancia, C. S. DePerno, and M. C. Conner. Impact of hunting pressure on adult male white-tailed deer behavior. 66<sup>th</sup> Annual Conference of Southeastern Association of Fish and Wildlife Agencies, Hot Springs, Arkansas.
- 2013 **Karns, G.**, and S. Ditchkoff. Trauma-induced malformed antler development in male white-tailed deer. Southeast Deer Study Group Meeting, Greenville, South Carolina.
- 2013 McCoy, C., **G. Karns**, S. Ditchkoff, T. Steury, B. Collier, J. Raglin, and C. Ruth. Breeding season movements of male white-tailed deer: do yearlings employ an alternative strategy? Southeast Deer Study Group Meeting, Greenville, South Carolina.
- 2013 **Karns, G.**, and S. Ditchkoff. Spike-on-one-side bucks: injured survivors or genetic defects? Annual Meeting of the Alabama Chapter of The Wildlife Society, Auburn, Alabama.
- 2013 Lashley, M., A. Rockhill, M. Chitwood, S. Basinger, **G. Karns**, K. Adams, L. Muller, C. Harper, S. Ditchkoff, M. Conner, C. Moorman, and C. DePerno. The influence of lunar illumination on trait-mediated predation risk in cervids. Annual Meeting of The Wildlife Society, Milwaukee, Wisconsin.
- 2014 **Karns, G.**, R. Gates, S. Matthews, J. Bruskotter, and M. Tonkovich. Predictors of female white-tailed deer harvest: delineating new deer management units based on spatial homogeneity in Ohio. Midwest Fish and Wildlife Conference, Kansas City, Missouri.

- 2014      **Karns, G.**, and J. Bruskotter. Explaining hunting participation in Ohio: a story of changing land use and new technology. Ohio Fish and Wildlife Conference, Columbus, Ohio.
- 2014      **Karns, G.**, R. Gates, S. Matthews, J. Bruskotter, and M. Tonkovich. Predictors of female white-tailed deer harvest: delineating new deer management units based on spatial homogeneity in Ohio. Ohio Fish and Wildlife Conference, Columbus, Ohio.
- 2014      Bruskotter, J., and **G. Karns**. Explaining hunting participation: a story of changing land use and new technology. Pathways 2014 Conference: Integrating Human Dimensions into Fish and Wildlife Management, Estes Park, Colorado.
- 2014      **Karns, G.**, and J. Bruskotter. Explaining hunting participation in Ohio: A story of changing land use and new technology. Annual Conference of The Wildlife Society, Pittsburgh, Pennsylvania.
- 2014      **Karns, G.**, R. Gates, S. Matthews, J. Bruskotter, J. McCoy, and M. Tonkovich. Predicting county-level variation in deer harvest density: delineating new deer management regions based on spatial homogeneity in Ohio. Annual Conference of The Wildlife Society, Pittsburgh, Pennsylvania.
- 2015      **Karns, G.**, R. Gates, S. Matthews, J. Bruskotter, J. McCoy, and M. Tonkovich. The Ohio Deer Management Unit Project – Standing on Solid Ground. Ohio Fish and Wildlife Conference, Columbus, Ohio.
- 2016      Bruskotter, J., A. Heeren, **G. Karns**, H. Szarek, E. Toman, and R. Wilson. Factors influencing experts’ judgments concerning the appropriate status of grizzly bears under the Endangered Species Act. Annual Conference of The Wildlife Society, Raleigh, North Carolina.
- 2017      Beck, C., and **G. Karns**. Pollinator communities on Marcellus-Utica natural gas pipeline rights-of-way in eastern Ohio. Ohio Fish and Wildlife Conference, Columbus, Ohio.
- 2017      **Karns, G.**, and C. Beck. Pipelines to pollination: Implications of vegetation management on Marcellus-Utica natural gas pipeline rights-of-way. Midwest Fish and Wildlife Conference, Lincoln, Nebraska.
- 2018      Lolya, L., S. Matthews, and **G. Karns**. Response of early successional avifauna to pipeline right-of-way vegetation management in Eastern Ohio. Midwest Fish and Wildlife Conference, Milwaukee, Wisconsin.

- 2018 Lolya, L., S. Matthews, and **G. Karns**. Response of early successional avifauna to pipeline right-of-way vegetation management in Eastern Ohio. Ohio Fish and Wildlife Conference, Columbus, Ohio.
- 2018 **G. Karns**. Response of amphibian and reptile populations to vegetation management and edge habitat enhancement along Utica-Marcellus Pipelines in Eastern Ohio. 12<sup>th</sup> International Symposium on Environmental Concerns in Rights-of-Way Management, Denver, Colorado.
- 2019 Lolya, L., **G. Karns**, S. Matthews. Effects of pipeline right-of-way habitat management on early successional songbirds in eastern Ohio. Midwest Fish and Wildlife Conference, Cleveland, Ohio.
- 2019 **G. Karns**, A. Heeren, E. Toman, R. Wilson, J. Bruskotter. Social and institutional factors cloud grizzly expert judgments. Pathways: Human Dimensions of Wildlife Conference, Estes, Colorado.
- 2020 M. Stanger, J. Bruskotter, **G. Karns**, K. Slagle, A. Dietsch. Connecting hunters and landowners: evaluation of Ohio's cooperative program. Pathways: Human Dimensions of Wildlife Conference, Kenya.
- 2020 K. Slagle, J. Bruskotter, M. Stanger, **G. Karns**. Applying the SEEDS framework: A case study of white-tailed deer in Ohio. Conference for the Society of Conservation Biology, Denver, Colorado.

#### Invited Presentations

- 2015 **Karns, G.** White-tailed deer in Ohio: Managing Uncertainty. Ohio Biological Conservation Partnership/Terrestrial Wildlife Ecology Laboratory Research Review, Columbus, Ohio.
- 2016 **Karns, G.**, R. Gates, M. Titchenell, and K. Smith. Changing Ohio forests: Wildlife winners and losers. Annual Meeting of Ohio Society of American Foresters, Columbus, Ohio.
- 2016 **Karns, G.**, and J. Dunscomb. Pipeline expansion throughout the Appalachians: Conservation opportunities and challenges. Appalachian Mountains Joint Venture Energy Webinar Series.
- 2016 Bruskotter, J., A. Heeren, **G. Karns**, E. Toman, H. Szarek, and R. Wilson. Factors influencing expert's judgments concerning the appropriate status of grizzly bears under the Endangered Species Act. Annual Conference of The Wildlife Society, Raleigh, North Carolina.

- 2016 **Karns, G.**, and C. Beck. Pipelines and powerlines: Potential for pollinators. 1<sup>st</sup> Symposium of the Ohio Pollinator Habitat Initiative, Columbus, Ohio.
- 2017 **Karns, G.** Integrated Vegetation Management (IVM) on Pipeline Corridors. 4<sup>th</sup> Meeting of the Rights-of-Way as Habitat Working Group, Chicago, Illinois.
- 2017 **Karns, G.**, M. Lininger, J. Hunt. Ohio Pollinator Habitat Initiative and Ohio Department of Transportation: Partnerships for Pollinators. 4<sup>th</sup> Meeting of the Rights-of-Way as Habitat Working Group, Chicago, Illinois.
- 2018 **Karns, G.** Managing for herpetofauna within pipeline corridors. Annual Conference of The Wildlife Society, Cleveland, Ohio.
- 2018 Thomas, E., L. Lolya, M. Brittingham, S. Stoleson, **G. Karns**, S. Matthews. Impacts of human disturbance resulting from the shale gas industry on the reproductive success of birds. Annual Conference of The Wildlife Society, Cleveland, Ohio.
- 2018 Beck, C., **G. Karns**. Managing for pollinators within pipeline corridors. Annual Conference of The Wildlife Society, Cleveland, Ohio.
- 2019 **Karns, G.** Using a multi-taxa lens to understand conservation potential for industrial vegetation management on pipeline rights-of-way. Departmental Research Seminar, Department of Forestry and Natural Resources, University of Kentucky, Lexington, Kentucky.
- 2019 **Karns, G.**, K. Slagle, J. Bruskotter, A. Dietsch, J. Metcalf, and J. Burris. Solving the riddle of recreational access and habitat conservation. Public and Private Lands Working Group Meeting, Maumee Bay, Ohio.
- 2019 **Karns, G.** Pollinators and pipelines: Lessons from eastern Ohio. 2<sup>nd</sup> Symposium of the Ohio Pollinator Habitat Initiative, Columbus, Ohio.
- 2019 **Karns, G.**, A. Olson, T. Hillstrom, M. Kraushar, T. Moritz, and A. Murray. Panel: Utilizing contracts to enhance habitat conservation. 8<sup>th</sup> Meeting of the Rights-of-Way as Habitat Working Group, Cincinnati, Ohio.
- 2019 **Karns, G.**, and A. Persad. Habitat studies of insect pollinators on rights-of-way. Trees and Utilities Conference, Cincinnati, Ohio.
- 2020 **Karns, G.** Wildlife on the Edge: Managing for the Good Effects and Mitigating the Bad. Woodland, Water, and Wildlife Conference, Mansfield, Ohio.
- 2021 **Karns, G.** ACER Research Updates. Ohio Maple Days (virtual), Mansfield, Ohio.

## Referee for Peer-Reviewed Journals

- Proceedings of the Southeastern Fish and Wildlife Agencies (2009 & 2011)
- Wildlife Society Bulletin (2011, 2016, 2017, 2018, 2019)
- Northeastern Naturalist (2012)
- Journal of Ecology and Natural Environment (2013)
- Environmental Management (2013 & 2014)
- National Quail Symposia Proceedings (2016)
- US Geological Survey Fundamental Science Practices (2016)
- American Midland Naturalist (2017)
- PLOS ONE (2018)
- Arboriculture & Urban Forestry (2019-2020)
- Behavioural Processes (2020)

## Teaching Experience

2007	Teaching Assistant; Principles of Wildlife Science (FW 453/553; 3 credits; fall semester; 30 graduate and undergraduate students; under the instruction of Dr. T. Langer), North Carolina State University, Raleigh, North Carolina.
2007	Lab Instructor; Principles of Wildlife Science Lab (FW453L/553L; 1 credit; fall semester; 30 graduate and undergraduate students), North Carolina State University, Raleigh, North Carolina.
2011	Instructor; Wildlife Food Plot Establishment (WILD 1100; 2 credits; fall semester; 50 undergraduate students), Auburn University, Auburn, Alabama.
2012	Instructor; Wildlife Food Establishment (WILD 1100; 2 credits; fall semester; 52 undergraduate students), Auburn University, Auburn, Alabama.
2013	Instructor; Wildlife Ecology Methods (ENR 5362; 3 credits; fall semester; 40 undergraduate students), The Ohio State University, Columbus, Ohio.
2014	Instructor; Graduate Seminar – Wildlife Sciences (ENR 8890.01; 1 credit; spring semester; 12 graduate students), The Ohio State University, Columbus, Ohio.
2014	Instructor; Wildlife Ecology Methods (ENR 5362; 3 credits; fall semester; 32 undergraduate students, 2 graduate students), The Ohio State University, Columbus, Ohio.
2015	Instructor; Graduate Seminar – Wildlife Sciences (ENR 8890.01; 1 credit; spring semester; 6 graduate students), The Ohio State University, Columbus, Ohio.

- 2015      Instructor; Management of Wildlife Habitat (ENR 5370; 2 credits; spring semester; 28 undergraduate students; 2 graduate students), The Ohio State University, Columbus, Ohio.
- 2015      Instructor; Wildlife Management Field Course at the Pymatuning Laboratory of Ecology (BIOSC 1420; 3 credits; summer semester; 9 undergraduate students), University of Pittsburgh, Pittsburgh, Pennsylvania.
- 2015      Instructor; Wildlife Ecology Methods (ENR 5362; 3 credits; fall semester; 40 undergraduate students), The Ohio State University, Columbus, Ohio.
- 2016      Instructor; Environment and Natural Resources Management for Forestry Fisheries and Wildlife (ENR 4900.02; 3 credits; summer semester; 15 undergraduate students), The Ohio State University, Columbus, Ohio.
- 2016      Instructor; Wildlife Management Field Course at the Pymatuning Laboratory of Ecology (BIOSC 1420; 3 credits; summer semester; 9 undergraduate students), University of Pittsburgh, Pittsburgh, Pennsylvania.
- 2016      Instructor; Wildlife Ecology Methods (ENR 5362; 3 credits; fall semester; 40 undergraduate students), The Ohio State University, Columbus, Ohio.
- 2017      Instructor; Wildlife Conservation Policy (ENR 5649; 3 credits; spring semester; 65 students), The Ohio State University, Columbus, Ohio.
- 2017      Instructor; Environment and Natural Resources Management for Forestry Fisheries and Wildlife (ENR 4900.02; 3 credits; summer semester; 18 undergraduate students), The Ohio State University, Columbus, Ohio.
- 2017      Instructor; Wildlife Management Field Course at the Pymatuning Laboratory of Ecology (BIOSC 1420; 3 credits; summer semester; 12 undergraduate students), University of Pittsburgh, Pittsburgh, Pennsylvania.
- 2017      Instructor; Wildlife Ecology Methods (ENR 5362; 3 credits; fall semester; 40 undergraduate students), The Ohio State University, Columbus, Ohio.
- 2018      Instructor; Environment and Natural Resources Management for Forestry Fisheries and Wildlife (ENR 4900.02; 3 credits; summer semester; 16 undergraduate students), The Ohio State University, Columbus, Ohio.
- 2018      Instructor; Wildlife Management Field Course at the Pymatuning Laboratory of Ecology (BIOSC 1420; 3 credits; summer semester; 15 undergraduate students), University of Pittsburgh, Pittsburgh, Pennsylvania.

- 2018 Instructor; Wildlife Ecology Methods (ENR 5362; 3 credits; fall semester; 32 undergraduate students), The Ohio State University, Columbus, Ohio.
- 2019 Instructor; Management of Wildlife Habitat (ENR 5370; 2 credits; spring semester; 38 undergraduate students; 2 graduate students), The Ohio State University, Columbus, Ohio.
- 2019 Instructor; Environment and Natural Resources Management for Forestry Fisheries and Wildlife (ENR 4900.02; 3 credits; summer semester; 10 undergraduate students), The Ohio State University, Columbus, Ohio.
- 2019 Instructor; Wildlife Management Field Course at the Pymatuning Laboratory of Ecology (BIOSC 1420; 3 credits; summer semester; 14 undergraduate students), University of Pittsburgh, Pittsburgh, Pennsylvania.
- 2019 Instructor; Wildlife Ecology Methods (ENR 5362; 3 credits; fall semester; 40 undergraduate students), The Ohio State University, Columbus, Ohio.
- 2020 Instructor; Conservation Leaders for Tomorrow; workshop for natural resource professionals (20 attendees), Chicago, Illinois.
- 2020 Instructor; Management of Wildlife Habitat (ENR 5370; 3 credits; spring semester; 31 undergraduate students; 2 graduate students), The Ohio State University, Columbus, Ohio.
- 2020 Instructor; Environment and Natural Resources Management for Forestry Fisheries and Wildlife (ENR 4900.02; 3 credits; summer semester; 32 undergraduate students), The Ohio State University, Columbus, Ohio.
- 2020 Instructor; Communicating Natural Resources and Environmental Information (ENR 2367; 3 credits; fall semester; 8 undergraduate students), The Ohio State University-Mansfield, Ohio.
- 2021 Instructor; Communicating Natural Resources and Environmental Information (ENR 2367; 3 credits; spring semester; 24 undergraduate students), The Ohio State University-Mansfield, Ohio.
- 2021 Instructor; Natural Resources Data Analysis (ENR 2000; 3 credits; spring semester; 24 undergraduate students), The Ohio State University-Mansfield, Ohio.
- 2021 Instructor; Management of Wildlife Habitat (ENR 5370; 3 credits; spring semester; 29 undergraduate students; 2 graduate students), The Ohio State University, Columbus, Ohio.



- 2009-2011 Lab Guest Lecture "Chemical Immobilization"; Wildlife Ecology and Management II Lab (WILD 5291; 1 credit; spring semester; 36 graduate and undergraduate students), Auburn University, Auburn, Alabama.
- 2010 Guest Lecture "What To Plant"; Wildlife Food Plot Establishment (WILD 1100; 2 credits; fall semester; 75 undergraduate students), Auburn University, Auburn, Alabama.
- 2011 Guest Lecture "Melding White-tailed Deer and Pine Forest Management"; Silviculture (FOR 5230/6230; 4 credits; fall semester; 32 undergraduate students; 3 graduate students), Auburn University, Auburn, Alabama.
- 2013 Guest Lecture (2); Wildlife Ecology and Management II (WILD 5290; 3 credits, spring semester; 40 students), Auburn University, Auburn, Alabama.
- 2014 Guest Lecture "The politics (science?) of deer management"; Wildlife Conservation Policy (ENR 5649; 3 credits; spring semester; 70 undergraduate students), The Ohio State University, Columbus, Ohio.
- 2014 Guest Lecture "Ecosystem engineers"; Management of Wildlife Habitat (ENR 5370; 2 credits; spring semester; 27 undergraduate students; 3 graduate students), The Ohio State University, Columbus, Ohio.
- 2014 Guest Lecture "The politics (science?) of deer management – standing on solid ground?"; Wildlife Conservation Policy (ENR 5649; 3 credits; fall semester; 7 students), The Ohio State University, Columbus, Ohio.
- 2015 Guest Lecture "How environment defines identity: Hunting participation in Ohio"; Natural Resource Data Analysis (ENR 2000; 3 credits; fall semester; 33 students), The Ohio State University, Columbus, Ohio.
- 2016 Guest Lecture "Reintroduction research: A feasibility assessment for elk in Ohio"; Wildlife Conservation Policy (ENR 5649; 3 credits; spring semester; 55 students), The Ohio State University, Columbus, Ohio.
- 2016 Guest Lecture "Correlative Statistics"; Natural Resources Data Analysis (ENR 2000; 3 credits; fall semester; 40 students), The Ohio State University, Columbus, Ohio.
- 2016 Guest Lecture "How environment defines identity: Hunting participation in Ohio"; Natural Resource Data Analysis (ENR 2000; 3 credits; fall semester; 41 students), The Ohio State University, Columbus, Ohio.

- 2018 Guest Lecture "Elk in Ohio? A case study in science-policy dynamics"; Wildlife Conservation Policy (ENR 5649; 3 credits; spring semester; 70 students), The Ohio State University, Columbus, Ohio.
- 2019 Guest Lecture "Elk in Ohio? A case study in science-policy dynamics"; Wildlife Conservation Policy (ENR 5649; 3 credits; spring semester; 65 students), The Ohio State University, Columbus, Ohio.
- 2020 Guest Lecture "Pollinator Conservation in Ohio: What's All the Buzz"; ENR Capstone Course (ENR 4900.01; 3 credits; spring semester; 25 students), The Ohio State University, Columbus, Ohio.

#### Outreach/Extension Events and Presentations

- 2008 "Chesapeake Farms: a case study in quality deer management." White-tailed deer management: the basics and beyond, Spruce Pine, North Carolina (45 people).
- 2008 "Impact of hunting pressure on adult male white-tailed deer behavior." Thesis presentation, Raleigh, North Carolina (30 people).
- 2011 "Spike-on-one-side antler research." Westervelt Webinar, Tuscaloosa, Alabama (25 people).
- 2012 "Spike-on-one-side bucks: genetic defects or injured survivors?" Lake Martin QDMA Chapter Annual Meeting, Alexander City, Alabama (28 people).
- 2012 "Spike-on-one-side bucks: genetic defects or injured survivors?" Auburn Student Chapter of The Wildlife Society, Auburn, Alabama (25 people).
- 2014 "Bio-rhythms in white-tailed deer." Wildlife Biology course, Eureka High School, Eureka, Illinois (75 people).
- 2015 "Nothing is random. Everything is variable." Wildlife Biology course, Eureka High School, Eureka, Illinois (60 people).
- 2015 "Deer management units for Ohio." District 1 Deer Summit, District 1 Headquarters, Columbus, Ohio (25 people).
- 2016 "Are we doing conservation the right way?" Undergraduate Anthropology club, Ohio State University, Columbus, Ohio (25 people).
- 2016 "Conservation, Preservation, and Leopold." Northside Academy, Columbus, Ohio (30 people).

- 2016 Columbus City Schools Exceptional Science Fair (environmental outreach to special needs high school students), Beechcroft High School, Columbus, Ohio (125 people).
- 2016 “Shale gas infrastructure in eastern Ohio and opportunities for conservation.” National Wild Turkey Federation, Cambridge, Ohio (100 people).
- 2016 “Rights-of-way and wildlife conservation: Potential problems or promising positives?” East Central Ohio Forester’s Association, Dover, Ohio (50 people).
- 2016 “Changing Ohio forests: Wildlife winners and losers.” Vinton Furnace Experimental Forest, Vinton Forest Fridays, Radcliff, Ohio (35 people).
- 2017 “Reintroduction feasibility assessments: Elk in Ohio” Wildlife Biology course, Eureka High School, Eureka, Illinois (73 people).
- 2018 “Helping wildlife get the edge.” Keynote presentation. Ohio Certified Volunteer Naturalist Conference, Lake County Environmental Center, Ohio (89 people).
- 2018 Sharkey, C., and **G. Karns**. Pollinators along pipelines. Ecology on Tap event, Brothers Drake Meadery, Columbus, Ohio (50 people).
- 2018 “Bee the power for our food.” Rights-of-way Ecolab committee, Ohio State Mansfield, Mansfield, Ohio (65 people).
- 2018 “Managing Wildlife Habitat Along Edges: Challenges and Opportunities.” Farm Science Review, 2018, London, Ohio (20 people).
- 2019 “Pipeline Potential for Wildlife Habitat Management.” 30-minute radio show segment for From the Woods Kentucky Show WRFL 88.1 (Lexington, Kentucky, FM Radio); Department of Forestry and Natural Resources, University of Kentucky.
- 2019 Tour of OSU-Mansfield Sugarbush. OSU-Mansfield campus, Akron Water Supply, March 2019 (5 people).
- 2019 Tour of CRP and CREP farm and wetland restoration practices. Coyote Run LLC property in Fairfield County, March 2019 (21 people).
- 2019 Tour of OSU-Mansfield Ecolab. OSU-Mansfield campus, Environmental Education Council of Ohio, April 2019 (25 people).
- 2019 Earth-Day Tour of OSU-Mansfield Ecolab: Vernal pools. OSU-Mansfield campus, April 2019 (17 people).

- 2019 Interview on topic of local and international deforestation and impacts to wildlife populations. Students from Upper Arlington High School, April 2019 (4 people).
- 2019 “Oh Deer: Deer Ecology and the Relation to Habitat.” Woodland Stewards – Wildlife in Your Woods, August 2019, Ohio State Mansfield, Mansfield, Ohio (30 people).
- 2019 “Wildlife on the Edge.” Woodland Stewards – Wildlife in Your Woods, August 2019, Ohio State Mansfield, Mansfield, Ohio (30 people).
- 2019 Ecolab Tour for Ohio State Columbus SUSTAINS Learning Community. August 2019 (45 people).
- 2019 Pollinators and How You Can Help. Student Workshop for Ohio Chapter of The Wildlife Society, August 2019, Gwynne Conservation Area (19 people).
- 2019 Ecolab Nature Walk. Student Outreach Event, September 2019, Ohio State Mansfield, Mansfield, Ohio (29 people).
- 2019 Ohio Pollinator Volunteer Naturalists Event, September 2019, Dawes Arboretum, Newark, Ohio (35 people).
- 2019 Richland County Development Council, November 2019, Monthly Board meeting, Mansfield, Ohio (40 people).
- 2019 Ecolab Nature Film Night – Series of Shorts, November 2019, Mansfield, Ohio (35 people).
- 2019 “History of the National Parks System: Opportunity for All”, November 2019, Residence Hall Lecture with Undergraduates, Thompson Hall, Columbus, Ohio (18 people).
- 2019 Elk Reintroduction Feasibility Assessment, December 2019, Ohio Division of Wildlife – Wildlife Section Annual Meeting, Columbus, Ohio (80 people).
- 2019 Objectives of Projects Funded under the FY19 Annual Agreement with the Ohio Division of Wildlife, co-presenters: R. Gates and J. Bruskotter, December 2019, Ohio Division of Wildlife – Wildlife Section Annual Meeting, Columbus, Ohio (80 people).
- 2020 Doesn’t Matter How Old You Are – You Can Protect Pollinators. Clear Fork High School, Bellville, Ohio; co-presenter M. Retterer, January 2020 (30 people).

- 2020      Syrup and Salamanders. Woodland Stewards, OSU Extension; co-presenter M. Titchenell, Ohio State Mansfield campus, February 2020 (60 people).
- 2020      Ecolab Outdoor Challenge. Ohio State Mansfield campus, September 2020 (10 people).
- 2020      Farm Science Review. Recreational Lease Hunting, September 2020 (online webinar).
- 2020      Environmental Professionals Network. Public Trust Film Screening, Moderated discussion, September 2020 (10 people).
- 2020      Friday in the Woods Webinar Series, Woodland Stewards OSU Extension, “Managing Deer, Managing for Deer”, October 2020 (97 people).

### Popular Press & Web Media

- 2007-2017      **G. Karns.** Blog – The Outdoor Smorgasbord. Part of the Outdoor Hub conglomerate, >1400 posts over 10 years.
- 2012      **G. Karns.** Oh Snap! A look at broken antlers. Quality Whitetails. August/September: 24-25.
- 2012      **G. Karns.** Spike on one side: inferior genetics or injured survivors? Quality Whitetails October/November: 18-20.
- 2013      **G. Karns.** Spike-on-one-side: inferior genetics or injured survivors? Alabama Wildlife 77(4): 22-24.
- 2016      J. Burris, M. Lininger, and **G. Karns.** Ohio Pollinator Habitat Initiative: All you can, where you can. Ohio Oil and Gas Bulletin, March issue.
- 2018      **G. Karns.** College Corner. Connect and Collaborate with FirstEnergy Corp. and Ohio State University. Utility Arborist Newsline, November/December (Vol 9, Number 6) 2018 Issue. Special Issue: Environmental Stewardship: 13-14.
- 2019      T. Turner, **G. Karns.** CDC—Avoid “zombie” deer meat. Chow Line, OSU Extension and the Ohio Agricultural Research and Development Center website, <https://cfaes.osu.edu/news/articles/chow-line-cdc-avoid-%E2%80%9Czombie%E2%80%9D-deer-meat>.
- 2019      Hugo, K., **G. Karns.** The mysterious cervicorn: Nature’s unicorn deer. Ripley’s Believe it or Not website, <https://www.ripleys.com/weird-news/cervicorn-unicorn-deer/>.

- 2019 Durkin, P., **G. Karns**. Cranial abscess syndrome: The false CWD. Meateater website, <http://themeateater.com/hunt/whitetail-deer/cranial-abscess-syndrome-the-false-cwd>.
- 2020 **Karns, G.** Oh Snap! Which Parts of Antlers Break Most Often? Quality Deer Management Association newsletter feature article. March 2020.