Curriculum Vitae

NAME: Kyle Wickings
COLLEGE: Agriculture and Life Sciences
DEPARTMENT/UNIT: Entomology
TITLE: Assistant Professor
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BACKGROUND

Education

Year	Degree	Institution
2007	Ph.D., Ecology	Institute of Ecology, University of Georgia, Athens, GA (Advisor: John Ruberson)
2002	B.S., Environmental Studies	University of Buffalo; graduated

Academic ranks

Associate Professor: 2019 - present
Assistant Professor: 2013 - 2019

Primary departmental/unit program area

Ecology and management of soil arthropods, turfgrass entomology

Areas of expertise

Soil animal ecology, plant-insect interactions, biological control, microbial ecology and microbe-invertebrate interactions, biogeochemistry, plant litter decomposition, integrated pest management

PROFESSIONAL EXPERIENCE

Year	Experience
2013-present	Assistant Professor (60% research, 40% extension), Department of Entomology, Cornell University, NYSAES, Geneva, NY
2010 – 2013	Postdoctoral research: Impact of topographical heterogeneity on soil microbial processes in low and high intensity agricultural ecosystems. Dept. of Nat. Res. and Environ., Univ. of NH, Durham, NH
2008 – 2010	Postdoctoral research: Contribution of soil biological complexity to plant residue decomposition in agricultural ecosystems. Dept. of Crop and Soil Science, MSU, East Lansing, MI

2003 – 2007 Ph.D. research: Top-down and bottom-up controls on arthropod communities in cotton agroecosystems. Institute of Ecology, UGA, Athens, GA

Sabbaticals and study leaves
None

HONORS & AWARDS
2017 – CALS Early Achievement Award – Cornell University

2015 - Program Enhancement Funds Recipient – Entomological Society of America, Minneapolis, MN

2007 - Georgia Entomological Society – student presentation award

2006 - D.E. Johnston Award for attendance of the Soil Acarology Summer Program, Ohio State University,

2006 - Foreign Travel Award – University of Georgia Office of Vice President for Research "Soil Ecology: crossing the frontier between below- and above-ground."

2001 - Graduated summa cum laude. University of Buffalo – B.S.

ACADEMIC RESPONSIBILITIES

Administrative responsibilities
None

Research responsibilities
Current Research Professionals Supervised
Abigail Wentworth, Technician I (April 2017 – present)

Past Postdoctoral Associates
Dr. Huijie Gan (January 2014-January 2018)
Dr. Chao Liang (July 2015-June 2016)

Other Past Research Professionals Supervised
Martin Ward, Technician I (October 2014 – August 2017)
Katherine Sortino, Temporary Service Technician (2016)
Katelyn Berry, Temporary Service Technician (July 2014 – July 2016)
Laura Cappio, Temporary Service Technician (2013-2014)
Alison Cole, Temporary Service Technician (2014)
Joshua Neal, Temporary Service Technician (August 2015 – December 2015)

Other Relevant Research Activities, Accomplishments, etc.

Funding

PIs/co-PIs	TOTAL AWARD/ SUPPORTING AGENCY	START-END DATES	TITLE OF PROJECT
USDA			

Tooker, J./ **Wickings, K.**	Foundational Knowledge of Agricultural Production Systems $461,187 (Wickings – 49.27% $227,233)	06/01/17-05/31/19	Exploring soil health and pest management trade-offs to maximize crop productivity Role: work directly and equally with Tooker on all aspects of project (idea development, proposal writing; will lead all NY-based field experiments)
Kao-Kniffin, J./**Wickings, K.**/ Grant, J.	NIFA CPPM #2014-700006-22633 $244,329 (Wickings- 3.18% $7,772)	02/01/2015-01/31/2017	Pursuing Child Safe Playing Fields with Repetitive Overseeding: Verifiable IPM for School, Athletic, and Recreational Fields Role: Contribute to proposal writing. Design and conduct study to evaluate the potential for establishing Beauveria bassiana as an endophyte via seed coating turfgrass seed. Lead extension workshop in ME.
Wickings, K./ Linn, C.E./ Nault, B.A.	AFRI, Foundational Program, Exploratory Proposal (Wickings – 100% $100,000)	6/1/2015 – 5/31/2016	Plants, Microbes And Chemical Signals Involved In Belowground Insect Herbivory: Who's Sending The Message? Role: Write proposal. Design and conduct experiment. Analyze data.
Neher, D./ Parker, J./ Barlow, J./ Berlin, L./ Nickerson, V./ Gorres, J./ Bonanno, R./ Grandy, S./ Bonhotal, J./ **Wickings, K.**/ Basden, T.	NIFA NERA $10,000 (Wickings – ~5% working group travel funding)	09/01/15-12/31/15	PLANNING GRANT: Regional assessment of the quality control, food safety, environmental, user perception and marketing outlets of diverting food scraps from landfills Role: Attend working group meeting and develop future research goals.
NSF			
Ball, B./ **Wickings, K.**/ Christenson, L.	Arizona State University/ NSF DEB/EAGER $149,978 (Wickings – 45.52% $68,273)	6/1/2015 – 5/31/2017	Pathways and Patterns of Litter Chemistry During Decomposition Role: Contribute to proposal writing. Co-lead working group. Co-lead acquisition of archived plant material. Co-lead plant residue processing and analysis. Advise undergraduate student in independent project.
Federal Capacity Funds			
Wickings, K.	FCF Multistate, NE 1501 $60,000	10/01/18-09/30/20	Digging into oviposition site selection cues of turf inhabiting scarab beetles

Wickings, K.	Hatch $84,500	10/01/17-09/30/20	Using entomopathogenic nematodes to enhance pest resistance and reduce insecticide use in sod
Wickings, K.	Multistate NE 1332 $30,000	10/01/17-09/30/18	Evaluating the potential for on-site augmentative biological control using native entomopathogenic nematodes in school athletic turf
Wickings, K.	Smith-Lever $12,000	10/01/16-9/30/18	Turf Insect Diagnostics Workshop
Wickings, K.	Hatch #2014-15-112 $55,232	10/01/14 – 09/30/17	Potential of Soil Organic Matter Management as a Tool to Mitigate Root Herbivore Damage in Turf
Northeast IPM Program			
Wickings, K./ Bray, N.	NYS IPM Community IPM (Wickings lab – 100% $8,416)	04/01/18 – 02/01/19	Soil biological responses to imidacloprid use in lawns
Wickings, K.	NY IPM $7,670	11/17/17-02/28/18	Web-based key for the identification of white grubs (Coleoptera: Scarabaeidae)
Wickings, K./ Bonhotal, Jean/ Schwarz, Mary/ Lampman, Joellen	NE IPM Partnership (Wickings – 100% $5,760)	09/01/15-08/31/16	The Effects of Mulching Leaves in Place on Tick Populations in Lawns and Parks Role: Contribute to proposal writing and project design.
Atkinson Center for a Sustainable Future			
Wickings, K./ Lehmann, J./ Klinck, H./ McLasky, G.	Academic Venture Fund (Wickings – 100% $102,490)	08/01/18-07/31/20	Sounds of Soil: tracking soil health for targeted pest control
Searle, J./ **Wickings, K.**/ et al.	Sustainable Biodiversity Fund (Wickings – 0% $106,053)	07/01/14 – 08/31/15	Climate Change and Conifer Die-off: Impacts on Biodiversity and Human Health Role: Contribute to proposal writing and designed soil collection procedure. Trained and supervised Searle lab tech in all soil analyses. Contribute to data analysis and writing.
NY Farm Viability Institute			

Wickings, K.	New York Farm Viability Institute $70,000	03/01/15 – 02/28/17	Improving White Grub Control in Sod Through Establishment of Persistent Entomopathogenic Nematodes
New York State Turfgrass Association			
Wickings, K.	Turfgrass Foundation $10,000	07/01/16 – 06/30/17	Use of biocontrol nematodes for controlling white grubs and crane flies on school athletic fields
Wickings, K.	Turfgrass Foundation $24,000	7/1/2015 – 6/30/2017	Optimizing Cultural Practices to Improve the Efficacy of Entomopathogenic Nematodes Against Annual Bluegrass Weevil
Wickings, K.	Turfgrass Foundation $18,084	04/01/14-03/31/16	Soil Organic Matter as a Tool for Improving Predictions of Root Pest Damage in Turf
Kao-Kniffin, J/ **Wickings, K.**/ et al.	Turfgrass Association Environmental Stewardship Fund $51,150 (Wickings – 26.45% $13,530)	04/01/14 - 03/31/15	Examining Soil Biota Associated with Drought Tolerance in Tall Fescue Role: Contribute to proposal writing. Developed soil collection procedure and collect soil and roots. Process soil enzyme and root endophyte samples. Analyze data. Write manuscript.
US Golf Course Superintendents Association of America			
Wickings, K.	GCSAA $17,800	6/1/2015 – 5/31/2017	Potential for Managing Annual Bluegrass Weevil in Overwintering Habitats Using Entomopathogenic Nematodes and Fungi
Turf Industry Funds			
Wickings, K.	Industry support $4000	2013-2016	Evaluating management tactics for soil arthropod pests

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Grants and fellowships awarded to members of my lab

PI/ co-PI's	Agency and Award Total	DATES	Project Title
Fennell, Lindsay	Andrew W. Mellon Student Research Grant College of Agriculture and Life Sciences Cornell University $1,000	2018	Quantifying the impacts of seed coated pesticides on soil biota
Bray, Natalie	Grace H. Griswold Award Department of Entomology Cornell University $1,800	Spring 2018 – Fall 2018	Quantifying the roles of soil fauna in belowground carbon and nitrogen cycling

Bray, Natalie	Mike G. Villani Graduate Student Award Department of Entomology NYSAES Cornell University $1,000	2017	Effects of pest management practices on beneficial soil biological communities
Bray, Natalie	Cross-Scale Biogeochemistry and Climate Small Grants Program NSF IGERT Cornell University $3,495	2016-2017	Evaluating the impact of soil animals on soil microbial communities
Bray, Natalie	Andrew W. Mellon Student Research Grant College of Agriculture and Life Sciences Cornell University $1,000	2016	Quantifying the impact of soil animals on belowground carbon cycling and storage
	Atkinson Center for a Sustainable Future – Sustainable Biodiversity Fund $7,156	2016-2017	Effects of neonicotinoid insecticides on microarthropods and belowground carbon cycling
Bray, Natalie	Cornell University Cross-Scale Biogeochemistry and Climate NSF IGERT $2,420	2015-2017	Quantifying the impact of soil animals on belowground carbon cycling and storage
Maxwell Helmberger	Andrew W. Mellon Student Research Grant College of Agriculture and Life Sciences Cornell University $670	2017	Entomopathogenic nematode as biological control agents in school athletic turf: Efficacy, effects of soil properties, and timing for optimal pest control

ACADEMIC RESPONSIBILITIES

Teaching	0%
Research	60%
Extension	40%
Administration	0%

TEACHING AND ADVISING RESPONSIBILITIES

Other Relevant Teaching and Advising Activities, Accomplishments, etc.

Guest lectures

PLPA/ENT 4190, Field Plant Pathology/Entomology, Summer 2014. 1 lecture and field day; Turf Insect Pests

PLPA/ENT 4190, Field Plant Pathology/Entomology, Summer 2015. 2 lectures/ 2 field days; 1) Turfgrass Insect Pests; 2) Beneficial Soil Arthropods

ENT 2010/2011, Alien Empire, April 2015. 1 lecture; Bugs in the Black Box: the importance of insects in soil ecosystem processes

ENT 7670, Professional Development of Entomology, September 2015. USDA grant proposal discussion

PLPA/ENT 4190, Field Plant Pathology/Entomology, Summer 2016. Lecture and Field Day - Turfgrass Insect Pests

ENT 7670, Professional Development of Entomology, September 2017. Soil health and pest management research discussion

PLPA/ENT 4190, Field Plant Pathology/Entomology, Summer 2017. Lecture and Field Day - Turfgrass Insect Pests

ENT 3410, Applied Entomology, October 2017. Ecology and Management of Root Feeding Insects

Undergraduate students advised

Perla Carmenate (Iowa State University), 2019 Summer Scholars Program

Benjamin Fairbairn (Environmental Studies, Hobart and William Smith Colleges), 2019

Caroline Pflueger (Department of Natural Resources, Cornell University), 2018

Ella Maddi – Colby College, Waterville, ME – 2018 Summer Scholars Program.

Lindsey Perrin – University of Rochester – 2017 Summer Scholars Program.

Kyle Ritts (Finger Lakes Community College), 2017

Katelyn Berry (recent Chemistry graduate from Hobart and William Smith Colleges, Geneva, NY)

- Working on NSF-funded project "Pathways and Patterns of Litter Chemistry During Decomposition". Funds support Katelyn learning advanced techniques in soil chemical analysis and attendance of 2016 Ecological Society of America annual meeting, Fort Lauderdale, FL.

Sammy Overby – Brown University, Providence, RI – 2016 Summer Scholars Program.

Alejandra Morales – University of Puerto Rico Mayaguez – 2016 Summer Scholars Program.

Bennett Thompson – Swarthmore College, Swarthmore, PA – 2015 Summer Scholars Program.

Joshua Neal (Liberal Arts Biology/Science, Finger Lakes Community College), 2015

Alison Cole (Geoscience and Environmental Studies, Hobart and William Smith Colleges), 2014, currently applying to graduate schools for Geoscience.

Louisa Rogers – Whitman College, Walla Walla, WA. 2014 Summer Scholars Program.

Laura Cappio (Geoscience and Environmental Studies, Hobart and William Smith Colleges), 2013/2014, currently a graduate student at the University of Minnesota, Duluth (Large Lakes Observatory).

EXTENSION RESPONSIBILITIES

Program Work Team

Member of the Cornell University Turf Team

Extension Workshops, Conferences, and Webinars:

Turf Insect Diagnostics Workshop

Four hour workshop on basic biology and identification of pest and beneficial arthropods, insect pest damage diagnosis, integrated pest management decision making and management options. Participants receive lecture material and work in small groups to identify preserved specimens. Workshop aimed at master gardeners, lawn care professionals, school/sports turf grounds managers, and golf course superintendents. As of Fall 2014, I have presented the workshop at the following venues:

2018

- 2018 Horticulture School 30 Hour Pesticide Applicator Training Course, Seneca Park Zoo, Rochester, NY, February 20, 2018
  Anticipating Participants ~ 50, time – 3hr, contact hours – 150

2017

- 2017 Horticulture School 30 Hour Pesticide Applicator Training Course, Seneca Park Zoo, Rochester, NY, February 16, 2017
  Anticipating Participants ~ 50, time – 3hr, contact hours – 150

2016

- 2016 Horticulture School 30 Hour Pesticide Applicator Training Course, Seneca Park Zoo, Rochester, NY, February 25, 2016
  Participants – 43, time – 3hr, contact hours - 129

- 2016 Andre & Son Turfgrass Workshop, Montrose, PA, February 24, 2015
  Participants – 78, time – 3hr, contact hours – 234

- 2016 New York State Turfgrass Association, Rochester Turf & Grounds Expo. Rochester Riverside Convention Center, Rochester, NY Rochester, NY, November 10, 2016
  Participants – 14, time – 3hr, contact hours – 62

- 2016 Central New York Golf Course Superintendents Association of America, Orchard Valley Golf Club, Lafayette, NY, December 6, 2016
  Participants – 30, time – 2.5, contact hours – 75

2015

- 2015 Horticulture School 30 Hour Pesticide Applicator Training Course, Seneca Park Zoo, Rochester, NY, February 3, 2015
  Participants – 50, time – 3hr, contact hours – 150

2014

- New York State Turfgrass Association, Rochester Turf & Grounds Expo. Rochester Riverside Convention Center, Rochester, NY, November 14, 2014
  Participants – 28, time – 3hr, contact hours – 84

Presentations/ Conferences

Wickings, K. Harnessing soil organisms for enhanced resistance to turfgrass pests. Massachusetts Association of Lawn care Providers, Winter Lawn care Conference, Sturbridge, MA, January 24, 2018
Participants – 150, time – 2hr, contact hours - 300

Wickings, K., Wentworth, A., Dunn, A., Lampman, J. Biocontrol on School Grounds – Teacher Training Workshop. Cobleskill-Schoharie CCE, Cobleskill, NY, March 6, 2018
Participants – 6, time – 5hr, contact hours - 30

Wickings, K. Use of biocontrol nematodes for managing insect pests of turf: challenges and opportunities. Lakeside Sod, Lakeside U, Terry Hills Country Club, Batavia, NY, January 16, 2018
Participants – 30, time – 1hr, contact hours - 30

Wickings, K. Biological control options for school athletic fields. IPM Workshop for Safe Playing Fields: Keeping the Pests Out on a Budget. Mahopac Schools, Putnam Co., NY, June 27, 2017
Participants – 12, time – 1hr, contact hours - 12

Wickings, K. Biological control options for school athletic fields. IPM Workshop for Safe Playing Fields: Keeping the Pests Out on a Budget. Coxsackie Schools, Albany Co., NY, August 3, 2017
Participants – 40, time – 1hr, contact hours - 40

Wickings, K. Challenges and opportunities for using biocontrol nematodes for managing grubs. Winning Fields, Winning Fairways, SUNY Delhi, Delhi, NY, October 4, 2017
Participants - 40, time – 30 minutes, contact hours - 20

Wickings, K. Turf Insect Research Update. Winning Fields, Winning Fairways, SUNY Delhi, Delhi, NY, October 4, 2017
Participants - 40, time – 20 minutes, contact hours - 12

Wickings, K. Biocontrol using entomopathogenic nematodes on school grounds. Maine School Turf Workshop, Gardiner Area High School, Gardiner, ME, July 11
Participants – 30, time – 30, contact hours - 15

Wickings, K. Turf Insect Best Management Practices, Rochester Turf & Grounds Expo, Rochester, NY, November 16, 2017
Participants – 106, time – 1hr, contact hours – 106,

Wickings, K. Cornell Turf Insect Research Update, Rochester Turf & Grounds Expo, Rochester, NY, November 16, 2017

Participants – 65, time – 30 min, contact hours - 32

Wickings, K. Early Bird Seminar: Insect Pests - Year In Review, Rochester Turf & Grounds Expo, Rochester, NY, November 16, 2017
Participants – 62, time – 1hr, contact hours - 62

Wickings, K. 2017 Potential for using native entomopathogenic nematodes to control insect pests during sod production and following harvest. New England Turf Show, Providence, RI, March 8, 2017
Participants – stats pending (200+), time – 45 minutes

Wickings, K. Use of entomopathogenic nematodes for managing annual white grubs in school sports turf. New England Turf Show, Providence, RI, March 8, 2017
Participants – stats pending (100+), time – 45 minutes

Wickings, K. Biocontrol options for managing soil dwelling pests in turfgrass. New York State Turf and Landscape Association, Professional Turf and Landscape Conference and Trade Show, Empire City Casino/Yonkers Raceway, Yonkers, NY, January 11, 2017
Participants – 184, time – 1hr, contact hours - 184

Wickings, K. Biological control options for turf pest management. Nassau-Suffolk Landscape Gardeners Association, Suffolk Community College, Selden, NY, January 19, 2017
Participants ~ 100, time – 1hr, contact hours ~ 100

Wickings, K. Grubs and other insects: preventing, monitoring, pest ID, management and record keeping. Maine Department of Agriculture, Conservation and Forestry School IPM Program, School Turf Management Workshop, Messalongskee High School, Oakland, ME July 26, 2016
Participants – 75, time – 1hr, contact hours - 75

Wickings, K. Annual Bluegrass Weevil Scouting and Management. Golf Turf Field Day. Robert Trent Jones Golf Club, Ithaca, NY, June 9, 2016
Participants – 40, time – 1hr, contact hours – 40

Wickings, K. Cornell Biological Control Research Update. Rochester Turf & Grounds Expo, Rochester, NY, November 10, 2016
Participants ~ 100, time – 0.3hr, contact hours ~30

Gan, H., **Wickings, K.** Use of root endophytic fungi to improve turfgrass defense against white grubs. Cornell Research Update. Rochester Turf & Grounds Expo, Rochester, NY. November 18, 2015.

Wickings, K. Biological control options for soil-dwelling pests in turfgrass: current challenges and new opportunities. CCE and Rochester Nursery and Landscape Association, Rochester, NY. February 10, 2015. (~30 participants)

Wickings, K. Soil organic matter as a tool for managing insect damage in turf. New York State Turfgrass Association, Western Regional Turf & Grounds Expo. Buffalo, NY. February 24, 2014. (~70 participants)

Wickings, K. Introduction to Cornell's Soil Arthropod Ecology Lab. New York State Turfgrass Association, Rochester Turf & Grounds Expo. Rochester, NY. November 12, 2013. (~60 participants)

Wickings, K. Innovations to build soil to feed sustainable communities - Morgan Composting, Sears, MI.

Wickings, K., Hoang, N., Grandy, A.S., 2010 Soil quality in Michigan potato systems: progress and future directions. Michigan Potato Industry Commission, Annual Meeting.

Webinars

Wickings, K. Use of entomopathogenic nematodes for controlling insect pests in turfgrass: challenges and opportunities. Golf Course Superintendents Association of America, Western and Central NY Chapters. Skype. March 6, 2018.

Wickings, K. Beneficial soil microorganism research update. CCE, Cornell Landscape Webinar Series. WebEx. March 12, 2015

- 1hr

Wickings, K. Soil organic matter as a tool for managing insect damage in turf. CCE, Cornell Landscape Webinar Series. WebEx. February 12, 2014

- 1 hr
- Webinar covered potential uses of compost and other soil management tools for improving belowground pest management in turfgrass systems
- Attendees from Allegany, Oneida, Putnam, Westchester, and St. Lawrence Co.

Extension Publications

Rossi, F.S., Grant, J.A., Gardner, R., Helms, M., Landers, A.J., **Wickings, K.**, Kao-Kniffin, J. 2016-17 *Cornell Pest Management Guide for Commercial Turfgrass,* Edited all sections on insect management. https://demo.cuguidelines.net/

Rossi, F.S., Grant, J.A., Gardner, R., Helms, M., Landers, A.J., **Wickings, K.**, Kao-Kniffin, J. 2015-16 *Cornell Pest Management Guide for Commercial Turfgrass,* Edited all sections on insect management. https://demo.cuguidelines.net/

Rossi, F.S., Grant, J.A., Gardner, R., Helms, M., Landers, A.J., **Wickings, K.**, Kao-Kniffin, J. 2014-15 *Cornell Pest Management Guide for Commercial Turfgrass,* Edited all sections on insect management. https://demo.cuguidelines.net/

Wickings, K. (2013) Asian earthworms invading turfgrass. Cornell ShortCUTT. October, 2013

Wickings, K., Grandy A.S. (2008) Springing into action: springtails, mites and other underappreciated soil organisms influence fertility. Potato Newsline (www.mipotato.com)

Ruberson J.R., **Wickings, K.** (2008) Importance of natural enemies for stink bug control in Georgia. In: Cotton Research-Extension Report 2007 (Grey, T., M. Toews, and C. Perry, Eds.) UGA/CPES Research. Extension Publication No. 6, pp. 111-121.

Other Extension Products and Contributions

Wickings, K., Helmberger, M.S. 2018 "GrubID Key". Web developer: Ellen Cramer; Remarc Solutions. http://grubid.cals.cornell.edu/

Wickings, K., Wentworth, A., Dunn, A., Lampman, J. (2018) Nematodes on School Grounds – Entomopathogenic Nematode Laboratory Sampling Protocol
http://blogs.cornell.edu/wickings/soil-ecology-resources-2/

Wickings, K., Wentworth, A., Dunn, A., Lampman, J. (2018) Nematodes on School Grounds – Picture Key to Infection Symptoms for Soil-dwelling Insects
http://blogs.cornell.edu/wickings/soil-ecology-resources-2/

Helmberger, M.S. (2017) The Soil Animal Handbook
Role: Cornell Entomology Extension Outreach Assistantship Advisor
http://blogs.cornell.edu/wickings/soil-ecology-resources-2/

Helmberger, M.S., Getman-Pickering, Z. (2017) Mycorrhizae and their partner plants. Clay Animation Video
Role: Cornell Entomology Extension Outreach Assistantship Advisor
http://blogs.cornell.edu/wickings/soil-ecology-resources-2/

Helmberger, M.S. (2017) The Pseudoscorpion's Prey. Clay Animation Video.
Role: Cornell Entomology Extension Outreach Assistantship Advisor
http://blogs.cornell.edu/wickings/soil-ecology-resources-2/

Helmberger, M.S. (2017) Earthworm Effects on Soil: the good, the bad, and the ugly. Clay Animation Video.
Role: Cornell Entomology Extension Outreach Assistantship Advisor
http://blogs.cornell.edu/wickings/soil-ecology-resources-2/

Helmberger, M.S. (2017) Life Cycle of Entomopathogenic Nematodes: remastered and extended addition. Clay Animation Video.
Role: Cornell Entomology Extension Outreach Assistantship Advisor
http://blogs.cornell.edu/wickings/soil-ecology-resources-2/

Helmberger, M.S. (2017) Life Cycle of the Squash Bee (*Peponapis pruinosa*)
Clay Animation Video.
Role: Cornell Entomology Extension Outreach Assistantship Advisor
http://blogs.cornell.edu/wickings/soil-ecology-resources-2/

Helmberger, M.S. (2017) The Soil Food Web. Clay Animation Video.

Role: Cornell Entomology Extension Outreach Assistantship Advisor
http://blogs.cornell.edu/wickings/soil-ecology-resources-2/

Helmberger, M.S. (2017) Ecosystem Services in Agriculture. Clay Animation Video.
Role: Cornell Entomology Extension Outreach Assistantship Advisor
http://blogs.cornell.edu/wickings/soil-ecology-resources-2/

Wickings, K. (2016 – present) Twitter Turf Insect Update
@Cornell_SAEL. Followers - 165

GRADUATE FIELD MEMBERSHIP
Entomology

Graduate majors (Current)

Lindsay Fennell	M.S.	Entomology	2020	Advisor
Natalie Bray	Ph.D.	Entomology	2020	Advisor
Marie Zwetsloot	Ph.D.	Horticulture	2018	Committee
Grant Thompson	Ph.D.	Horticulture	2018	Committee
Anna Giesmann	M.S.	Entomology	2020	Committee
Erika Moretti	M.S.	Entomology	2020	Committee

Graduate majors (Completed)

Maxwell Helmberger	M.S.	Entomology	2018	Advisor
Tessa Lessord	M.S.	Entomology	2016	Committee

Sabbatical visitors - 0

OTHER CURRENT PROFESSIONAL ACTIVITIES

Professional societies
Entomological Society of America (2012-present)
Soil Ecology Society (2013-present)

Ad hoc reviewer
2018: Ecosphere (1), Journal of Insect Behavior (1), Applied Soil Ecology (2)

2017: Applied Soil Ecology (1), Urban Ecosystems (1), Fungal Ecology (1), Ecosphere (1), Soil Biology and Biochemistry (1), Scientific Reports (1),

2016: Ecology Letters (1), Applied Soil Ecology (5), Biogeochemistry (1), Journal of Animal Ecology (2), Methods in Ecology and Evolution (2), Insects (1), Ecosphere (1)

2015: Axios Review (1), Journal of Environmental Engineering and Landscape Management (1), Journal of Chemical Ecology (3), Nature Scientific Reports (1), Ecology (1), New Phytologist (1), PLOS One (1), Soil Biology and Biochemistry (2), Science of the Total Environment (1)

2014: Acta Oecologia (1), Biogeochemistry (1), Biology Letters (1), Ecological Applications (2), European Journal of Soil Science (1), Applied Soil Ecology (1), Functional Ecology (1), New Phytologist (1), Soil Biology and Biochemistry (2)

2013: NSF proposal reviewer – CAREER Award

Committee assignments

International/National (including federal government agencies):
None

State/Local (including state and local government agencies):
None

Commodity and other Stakeholder:
None

University:
None

College:

2019 – present:	Cornell Summer Scholars Undergraduate Research Program Leader
2018 – present:	Field Research Unit Planning Committee
2018 – present:	Student Association of the Geneva Experiment Station (SAGES) Faculty Advisor
2017 – present:	Community IPM Council member – NYS Integrated Pest Management Program
2017:	Search Committee Member – Biocontrol Specialist; NYS Integrated Pest Management Program
2016:	Search Committee Member - Greenhouse/Growth Chamber Coordinator, Cornell University, NYSAES, Geneva
2014 – present:	Plant Growth Chamber Committee, Cornell University, NYSAES Geneva

Department:

2019:	Entomology Department Executive Committee Member
2017 – 2018:	Search Committee – Applied Chemical Ecology
2017 – present:	Applied Entomology Task Force - assisted in organizing and leading Entomology faculty retreat
2017 – 2019:	Graduate Admissions Committee
2016:	Entomology Position Development – Applied Computational Entomologist
2013 – present:	Extension/Outreach Assistantship Committee

OTHER CURRENT PROFESSIONAL CONTRIBUTIONS

Presentations

Invited

Wickings, K. 2019 Incorporating fauna in soil biodiversity monitoring. Soil Ecology Society. "The State of Knowledge on Global Soil Biodiversity". May 28-31, Toledo, OH.

Wickings, K., Gan, H. 2018 Insect-microbe interactions in the rhizosphere: implications for belowground pest management**.** 21st Penn State Symposium in Plant Biology. "Wild and Tamed Phytobiomes". June 19-22, University Park, PA

Wickings, K., Gan, H. 2018 Impact of root associate fungi on plant defense in turfgrass**.** Second Global Biodiversity Conference, China Soil Microbiome Initiative and Global Soil Biodiversity Initiative, October 15-19, Nanjing, China – *unable to attend*

Wickings, K. 2018 Insect-microbe interactions in the rhizosphere: implications for belowground pest management**.** Purdue University, Department of Entomology – Weekly Seminar Series - Oral

Wickings, K. 2016 Linking knowledge about short and long-term decomposition processes involved in soil organic matter formation. Ecological Society of America, Fort Lauderdale, FL (Oral – Symposium – Litter decomposition in the Anthropocene: do we understand the regulators of decomposition well enough to predict future consequences?)

Liang, C., Schimel, J., **Wickings, K.** 2016 Dual controls on soil carbon storage by microbial metabolism over litter decomposition. Ecological Society of America, Fort Lauderdale, FL (Oral – Symposium – Litter decomposition in the Anthropocene: do we understand the regulators of decomposition well enough to predict future consequences?)

Wickings, K., Gan, H. 2016 Insect-microbe interactions in the rhizosphere and their effects on plant defense and soil processes. Penn State Department of Entomology – Weekly Seminar Series - Oral

Wickings, K., Gan, H. 2015 Insect-microbe interactions in the rhizosphere and their consequences for plant defense and carbon cycling. Entomological Society of America, Minneapolis, MN
Oral – ESA Section Symposium (Plant-Insect Ecosystems), Getting Down and Dirty: The Role of Brown Food Webs in Providing Ecosystem Services

Wickings, K., Gan, H. 2015 Root herbivory alters soil microbial processes and carbon cycling. Entomological Society of America, Minneapolis, MN
Oral – ESA Member Symposium, Urban Soil Ecology – A New Frontier

Wickings, K. 2014 Identifying drivers of soil arthropod distribution and function to improve soil and plant health, Department of Plant Pathology and Plant and Microbe Biology, Cornell University *(Oral)*

Wickings, K. 2014 Identifying drivers of soil invertebrate composition and function in managed ecosystems. Department of Plant and Soil Science Symposium, University of Vermont *(Oral)*

Wickings, K. 2014 Studying interactions between insects and soil organic matter to improve belowground ecosystem services. Department of Entomology Symposium, Cornell University *(Oral)*

Wickings, K. 2014 The role of arthropods in soil carbon and nitrogen cycling. Biogeochemistry and Ecosystem Studies Seminar Series, Cornell University *(Oral)*

Wickings, K., Grandy, A.S. 2013 Consequences of agricultural management intensity for litter-inhabiting arthropods and their role in decomposition. Ecological Society of America Annual Meeting, Minneapolis, MN *(Organized Oral Session)*

Wickings, K., Grandy, A.S. 2012 Invertebrate-microbe interactions during plant litter decomposition, Entomological Society of America Annual Meeting, Knoxville, TN *Oral – ESA Member Symposium, Microbe-Insect Interactions in Decomposition and Disease Ecology*

Wickings, K., Grandy, A.S. 2010 The influence of oribatid mites on decomposition and nutrient cycling, XIII International Congress of Acarology, Recife, Brazil, *unable to attend*

Wickings, K., Grandy, A.S. 2010 Variation in the composition and activity of soil communities alters litter decomposition, Entomology Department Seminar Series, Michigan State University, *unable to attend*

Wickings, K., Ruberson, J.R. 2008 Relative effects of cotton type, tillage strategy, and cover crops on arthropod communities, University of Vermont, Plant and Soil Science Department, Burlington, VT *(Oral)*

Wickings, K., Hunter, M.D. 2007 Biotic and abiotic factors affecting arthropod biodiversity in cotton agroecosystems, Soil Ecology Workshop, Wageningen, the Netherlands *(Oral)*

<u>Contributed</u>

Bray, N., Thompson, G., Kao-Kniffin, J., **Wickings, K.** 2017 Soil macrofauna modify soil microbial community composition and function and alter belowground carbon inputs. Ecology of Soil Health Summit and Soil Ecology Society, Fort Collins, CO (Poster)

Helmberger, M., **Wickings, K.** 2017 Microarthropod response to foot traffic in sports turf. Ecology of Soil Health Summit and Soil Ecology Society, Fort Collins, CO (Poster)

Gan, G., Liang, C., **Wickings, K.** 2017 Invasive root herbivores accelerate soil carbon inputs and soil organic matter decomposition. Ecology of Soil Health Summit and Soil Ecology Society, Fort Collins, CO (Oral)

Wickings, K., Gan, H., 2017 Soil ecological responses to pest management practices in turfgrass vary with pesticide use intensity, identity, and application program. Ecology of Soil Health Summit and Soil Ecology Society, Fort Collins, CO (Oral)

Ball, B., **Wickings, K.**, Christenson, L. 2017 Pathways and patterns of plant litter chemistry throughout decomposition. Ecology of Soil Health Summit and Soil Ecology Society, Fort Collins, CO (Oral)

Gan, H., Liang, C., **Wickings, K.** 2017 Going back to the roots: consequence of root herbivory for soil organic matter cycling. 2nd Global Soil Biodiversity Conference, Section 11. Nanjing, China (Oral)

Helmberger, M., **Wickings, K.** 2017 They're safe and legal, but will entomopathogenic nematodes play ball? Entomological Society of America, Denver, CO (Oral)

Schmidt-Jeffris, **Wickings, K.**, Moretti, E., Wolfin, M., Nault, B. 2017 Bottom's up for Bt: Below-ground effects complicate the corn borer story. Entomological Society of America, Denver, CO (Oral)

Wickings, K., Gan, H. 2017 Root herbivory alters soil microbial function and belowground carbon cycling. Entomological Society of America, Denver, CO (Oral)

Wickings, K., Ball, B.A., Christenson, L. 2016 Introduction - Linking knowledge about short and long-term decomposition processes involved in soil organic matter formation. Ecological Society of America, Fort Lauderdale, FL (Oral)
Co-organizer of member symposium - Litter Decomposition in the Anthropocene: Do we understand the regulators of decomposition well enough to predict future consequences?

Ball, B.A., Christenson, L.M., **Wickings, K.** 2016 Synthesizing the vision for decomposition in the Anthropocene. Ecological Society of America, Fort Lauderdale, FL (Oral)

Vega, M.N., Ball, B.A., Christenson, L.M., **Wickings, K.**, Berry, K. 2016 Pathways and patterns of litter chemistry during decomposition. Ecological Society of America, Fort Lauderdale, FL (Poster)

Bray, N., **Wickings, K.** 2016 Effects of imidacloprid on microarthropods and belowground carbon cycling. Ecological Society of America, Fort Lauderdale, FL (Poster)

Gan, H., **Wickings, K**. (presenter) 2015 Fungicides alter soil biota and ecological services in turfgrass. Entomological Society of America, Minneapolis, MN *(Oral)*

Lessord, T., Agnello, A., Shields, E.J., **Wickings, K.** 2015 Evaluation of native New York entomopathogenic nematodes for biocontrol of plum curculio (*Conotrachelus nenuphar*) in apple orchards. Entomological Society of America, Minneapolis, MN (Oral)

Gan, H., **Wickings, K.** 2015 Endophytic fungi and herbivore interactions in the rhizosphere: consequence on plant protection and soil C dynamics. Soil Ecology Society, Colorado Springs, CO *(Oral)*

Wickings, K., Gan, H. 2015 Fungicides alter soil biotic communities and suppress belowground ecological services. Soil Ecology Society, Colorado Springs, CO *(Poster)*

Gan, H., **Wickings, K.**, Rogers, L. 2014 The effects of golf course fungicides on community structure and function of soil organisms. Entomological Society of America, Portland, OR *(Poster)*

Wickings, K., Grandy, A.S. 2013 Drivers of arthropod community structure in litter decomposing under different management intensities. Biennial Meeting of the Soil Ecology Society, Camden, NJ. *(Oral)*

Grandy, A.S., McDaniel, M.D., Tiemann, L.K., Kallenbach, C.M., **Wickings, K.** 2013 One plant, two plants, three plants, four: in agricultural soils does it really matter if we increase diversity by one plant more? Biennial Meeting of the Soil Ecology Society, Camden, NJ. *(Oral)*

Daly, A.B., **Wickings, K.**, Grandy, A.S. 2013 Enzyme activities of mesofaunal endosymbionts across host taxon and ecosystem. Biennial Meeting of the Soil Ecology Society, Camden, NJ. *(Oral)*

Wickings, K., Grandy, A.S., Reed, S.C., Cleveland, C.C. 2012 The origins of chemical complexity during plant litter decomposition. Ecological Society of America Annual Meeting, Portland, OR *(Oral)*

Wickings, K., Grandy, A.S., Reed, S.C., Cleveland, C.C. 2011 Litter quality constrains the effect of management on decomposers and litter chemistry. Ecological Society of America Annual Meeting, Austin, TX *(Oral)*

Wickings, K., Grandy, A.S., Reed, S.C., Cleveland, C.C. 2010 Changes in litter chemistry via biological pathways. Ecological Society of America Annual Meeting, Pittsburgh, PA *(Oral)*

Wickings, K., Grandy, A.S., Fierer, N. 2009 The effects of nitrogen fertilization on decomposition dynamics in no-till ecosystems, USDA/CSREES NRI Soil Processes Project Directors Meeting, Michigan State University, East Lansing, MI *(Oral)*

Wickings, K., Grandy, A.S. 2009 Microbial-invertebrate interactions and their role in residue decomposition in a Michigan agroecosystem, Kellogg Biological Station, Long-Term Ecological Research site meeting, Hickory Corners, MI *(Poster)*

Wickings, K., Ruberson, J.R. 2007 The impact of the red imported fire ant on detrital food webs, Soil Ecology Society, Moab, UT *(Oral)*

Wickings, K., Ruberson, J.R. 2007 Impact of the red imported fire ant (*Solenopsis invicta*) on soil fauna in a cotton agroecosystem, Georgia Entomological Society, Athens, GA *(Poster)*

Wickings, K., Ruberson, J.R. 2006 Relative effects on arthropod communities: cotton type, tillage strategy, and cover crop identity, Entomological Society of America Annual Meeting, Indianapolis, IN *(Oral)*

Wickings, K., Hunter, M.D., Coleman, D.C. 2005 Tillage, cover crops and cotton residue: relative effects on arthropod communities, Dave Coleman retirement symposium, Athens GA *(Poster)*

Wickings, K., Hunter, M.D., Coleman, D.C. 2005 The relative effects of Bt cotton on above and belowground arthropod communities, Institute of Ecology Graduate Student Symposium, University of Georgia, Athens, GA *(Oral)*

Meetings organized

2016 Member symposium - Litter Decomposition in the Anthropocene: Do we understand the regulators of decomposition well enough to predict future consequences? Co-organizer Ecological Society of America, Fort Lauderdale, FL

Grant review panels

2018: Atkinson Center For a Sustainable Future – Toward Sustainability Foundation Grants Program; NY State Integrated Pest Management Program – Community IPM Grants Program

2015: USDA review panel, Climate and Microbial Processes in Agroecosystems

Consulting

None

Resource for media (i.e., called upon as an expert for electronic or print media)

Wickings, K. (2014) Grub sightings: first assess, then address. *In* How to fix the 5 most common lawn problems: make your lawn the envy of the block with Consumer Reports' expert advice. Consumer Reports.org. April 2014

PUBLICATIONS

Refereed Papers (* denotes joint or senior author status)

37. Bell, T.H., Hockett, K.L., Alcala-Briseno, R.I., Barbercheck, M., Beatie, G.A., Bruns, M.A., Carlson, J.E., Chung, T., Collins, A., Emmett, B., Esker, P., Garrett, K.A., Glenna, L., Gugino, B.K., Jimenez-Gasco, M., Kinkel, L., Kovac, J., Kowalski, K.P., Kuldau, G., Leveau, J.H.J., Michalska-Smith, M.J., Myrick, J., Peter, K., Salazar, M.F.V., Shade, A., Stopnisek, N., Tan, X., Welty, A.T.,

Wickings, K., Yergeau, E. (2019) Manipulating Wild and Tamed Phytobiomes: Challenges and Opportunities. Phytobiomes Journal. 3: 3-21.

36. Bray, N., Kay-Kniffin, J., Frey, S.D., Fahey, T., Wickings, K. (2019) Soil macroinvertebrate presence alters microbial community composition and activity in the rhizosphere. Frontiers in Microbiology. Doi: 10.3389/fmicb.2019.00256

35. Helmberger, M.S., Thaler, J.S., Shields, E.J., and **Wickings, K.G.** (2018) Entomopathogenic nematode performance against *Popillia japonica* (Coleoptera: Scarabaeidae) in school athletic turf: Effects of traffic and soil properties. Biological Control. 126: 177-184

34. Oliveira, A., Gan, H., **Wickings, K.**, Fierer, N. (2018) DNA metabarcoding of bulk soil to characterize belowground arthropod communities. Soil Biology and Biochemistry. 125: 37-43.

33. Gan, H., Liang, C., ***Wickings, K.** (2018) Root herbivores accelerate carbon inputs to soil and drive changes in biogeochemical processes. Rhizosphere. 6: 112-115.

32. **Wickings, K.** (2018) Inoculative release of Heterorhabditis bacteriophora Poinar (Oswego) and Steinernema feltiae Filipjev (NY04) mixture can enhance biological control of soil-dwelling pests in turfgrass production systems. Biocontrol Science & Technology. doi: 10.1080/09583157.2018.1447086

31. Helmberger, M.S., Shields, E.J., ***Wickings, K.** (2018) Soil microarthropod communities reduce Heterorhabditis bacteriophora (Nematoda: Heterorhabditidae) host infection. Agricultural and Forest Entomology. doi: 10.1111/afe.12285

30. Singh, B., Minick, K.J., Strickland, M.S., **Wickings, K.G.**, Crippen, T.L., Tarone, A.M., Benbow, M.E., Sufrin, N., Tomberlin, J.K., Pechal, J.L. (2018) Temporal and Spatial Impact of Human Cadaver Decomposition on Soil Bacterial and Arthropod Community Structures and Function. Frontiers in Microbiology. doi: 10.3389/fmicb.2017.02616

29. Helmberger, M.S., Shields, E.J., ***Wickings, K.** (2017) Ecology of belowground biological control: Entomopathogenic nematode interactions with soil biota. Applied Soil Ecology 121: 201-213.

28. Wu, P., Zhang, H., Cui, L., **Wickings, K.**, Fu, S., Wang, C. (2017) Impacts of alpine wetland degradation on the composition, diversity and trophic structure of soil nematodes on the Qinghai-Tibetan Plateau. Scientific Reports. doi:10.1038/s41598-017-00805-5

27. Gan, H., ***Wickings, K.** (2017) Soil ecological responses to pest management in golf turf vary with management intensity, pesticide identity, and application program. Agriculture, Ecosystems and Environment 246: 66-77.

26. Larson, J.L., Dale, A., Held, D., McGraw, B., Richmond, D.S., **Wickings, K.**, Williamson, R.C. (2017) Optimizing pest management practices to conserve

pollinators in turf landscapes: current practices and future research needs. Journal of Integrated Pest Management 8: 1-10.

25. Gan, H., Churchill, A., ***Wickings, K.** (2017) Invisible but consequential: root endophytic fungi have variable effects on belowground plant-insect interactions. Ecosphere 8: e01710.

24. Austin, E.E., **Wickings, K.**, McDaniel, M.D., Robertson, G.P., Grandy, A.S. (2017) Cover crop root contributions to soil carbon in a no-till corn bioenergy cropping system. GCB Bioenergy DOI: 10.1111/gcbb.12428

23. Grandy, A.S., Wieder, W.R., **Wickings, K.**, Kyker-Snowman, E. (2016) Beyond microbe: are food webs the next frontier in soil biogeochemical models? Soil Biology and Biochemistry 102: 40-44.

22. Castle, S.C., Nemergut, D.R., Grandy, A.S., Leff, J.W., Graham, E.B., Hood, E., Schmidt, S.K., **Wickings, K.,** Cleveland, C.C. (2016) Successional processes drive global convergence of soil microbial communities. Soil Biology and Biochemistry 101: 74-84.

21. Liang, C., Kao-Kniffin, J., Sanford, G.R., **Wickings, K.**, Balser, T.C., Jackson, R.D. (2016) Microbes and their residues under restored perennial grassland communities of varying diversity in the upper Midwest of the United States. Soil Biology & Biochemistry 103: 193-200.

20. Ciu, L., Liang, C., Duncan, D., Bao, X., **Wickings, K.**, Zhang, X., Chen, F. (2016) Impacts of vegetation type and climatic zone on neutral sugar distribution in natural forest soils. Geoderma 282: 139-146.

19. Rinkes, Z.L., Bertrand, I., Amin, B.A.Z., Grandy, A.S., **Wickings, K.**, Weintraub, M.N. (2016) Nitrogen alters microbial enzyme dynamics but not lignin chemistry during maize decomposition. Biogeochemistry 128: 171-186.

18. **Wickings, K.**, Ruberson, J. (2016) The red imported fire ant, *Solenopsis invicta*, modifies predation rates at the soil surface and in cotton foliage. Annals of Applied Biology 169: 319-328.

17. **Wickings, K.**, Grandy, A.S., Kravchenko, A.N. (2016) Going with the flow: Landscape position drives differences in microbial biomass and activity in conventional, low input, and organic agricultural systems in the Midwestern U.S. Agriculture, Ecosystems & Environment. 218: 1-10.

16. Thai Hoang, N., Grandy, A.S., **Wickings, K.**, Snapp, S.S., Kirk, W., Hao, J. (2015) Organic amendment effects on potato productivity and quality are related to soil microbial activity. Plant and Soil 386: 223-236.

15. Frey, S.D., Ollinger, S., Nadelhoffer, K., Bowden, R., Brzostek, E., Burton, A., Caldwell, B.A., Crow, S., Goodale, C.L., Grandy, A.S., Finzi, A., Kramer, M.G., Lajtha, K., LeMoine, J., Martin, M., McDowell, W.H., Minocha, R., Sadowsky, J.J., Templer, P.H., **Wickings, K.** (2014) Chronic nitrogen additions suppress

decomposition and sequester soil carbon in temperate forests. Biogeochemistry. 121: 305-316.

14. Lennon, J.T., S.K. Hamilton, S.K., Muscarella, M.E., Grandy, A.S., **Wickings, K.,** Jones, S.E. (2013) A source of terrestrial organic carbon to investigate the browning of aquatic ecosystems. PloS One. 8: #e75771

13. Heckman, K.A., Grandy, A.S., Xiaodong, G., Keiluweit, M., **Wickings, K.**, Carpenter, K., Chorover, J., Rasmussen, C. (2013) Sorptive fractionation of organic matter and formation of organohydroxy-aluminum complexes during litter biodegradation in the presence of gibbsite. Geochimica et Cosmochimica Acta. 31: 667-683.

12. Grandy, A.S., Salam, D.S., **Wickings, K.,** McDaniel, M., Culman, S.W., Snapp, S.S. (2013) Soil respiration and litter decomposition responses to nitrogen fertilization rate in no-till corn systems, Agriculture, Ecosystems, and Environment. 179: 35-40.

11. Shevtsov, J., **Wickings, K.,** Patten, B. **(**2013) Evaluating the role of biotic interactions in structuring communities using a gradient analysis of multiple interacting guilds. Oikos. 122: 1594-1605.

10. **Wickings, K.,** Grandy, A.S. (2013) Management intensity interacts with litter chemistry and climate to drive temporal patterns in arthropod communities during decomposition. Pedobiologia. 56: 105-112.

9. **Wickings K.,** Grandy A.S., Reed S.C., Cleveland, C.C. (2012) The origin of litter chemical complexity during decomposition. Ecology Letters. 15: 1180-1188.

8. Phillips, R.P., Meier, I.C., Bernhardt, E.S., Grandy, A.S., **Wickings, K.**, Finzi, A.C. (2012) Roots and fungi accelerate carbon and nitrogen cycling in forests exposed to elevated CO_2. Ecology Letters. 15: 1042-1049.

7. Leff, J.W., Nemergut, D.R., Grandy, A.S., O'Neill, S.P., **Wickings, K.**, Townsend, A.R., Cleveland, C.C. (2012) The effects of soil bacterial community structure on decomposition in a tropical rain forest. Ecosystems. 15: 284-298.

6. Strickland, M.S.**, Wickings, K.,** Bradford, M.A. (2012) The fate of glucose, a low molecular weight compound of root exudates, in the belowground foodweb of forests and pastures. Soil Biology & Biochemistry. 49: 23-29.

5. **Wickings K.,** Grandy A.S., Reed S.C., Cleveland, C.C. (2011) Management intensity alters decomposition via biological pathways. Biogeochemistry. 104: 365-379.

4. **Wickings K.,** Grandy A.S. (2011) The oribatid mite *Scheloribates moestus* (Acari: Oribatida) alters litter chemistry and nutrient cycling during decomposition. Soil Biology and Biochemistry. 43: 351-358.

3. **Wickings K.G.,** Ruberson, J.R. (2011) Impact of the red imported fire ant, *Solenopsis invicta* (Hymenoptera: Formicidae), on epigeic arthropods of cotton agroecosystems. Annals of the Entomological Society of America. 104: 171-179.

2. Hamilton H.C., Strickland M.S., **Wickings K.**, Bradford M.A., Fierer N. (2009) Surveying soil faunal communities using a direct molecular approach. Soil Biology and Biochemistry. 41: 1311-1314.

1. Coleman D., Hunter M., Hendrix P., Crossley Jr. D., Simmons B., **Wickings K.** (2006) Long-term consequences of biochemical and biogeochemical changes in the Horseshoe Bend agroecosystem, Athens, GA. European Journal of Soil Biology. 42: S79-S84.

In Review

Bray, N., Wickings, K. The role of invertebrates in the urban soil microbiome. Frontiers Journals, Special Issue: The Urban Microbiome: uncovering the hidden footprint of cities. *In Review*

In Prep

Panke-Buisse, K., **Wickings, K.**, Kao-Kniffin, J. Microbiome function and drought tolerance of tall fescue genotypes.

Gan, H., **Wickings, K.** Root herbivory as a driver of soil carbon cycling.

Bray, N., Thompson, G., Fahey, T., Kao-Kniffin, **Wickings, K.** Soil macroinvertebrates alter the fate of rhizosphere carbon and nitrogen in an urban grass system.

Bray, N., Wickings, K. Comparing the effects of chemical and biological insecticides on soil biological diversity and function in managed grass systems.

Publications - book chapters

Strickland, M.S., **Wickings, K.** (2015) Carrion effects on soil biogeochemistry. *In* Carrion Ecology, Evolution, and Their Applications (eds. Benbow, M.E., Tomberlin, J.K., Tarone, A.M.). CRC Press, Taylor & Francis Group, LLC, Boca Raton, FL.

Coleman D., Hunter M., Hendrix P., Crossley Jr. D., Arce-Flores S., Simmons B., **Wickings K.** (2009) Long-term consequences of biological and biogeochemical changes in the Horseshoe Bend long-term agroecosystem project. *In* Sustainable Agroecosystem Management: Integrating Ecology, Economics, and Society (eds. Bohlen P.J. and House G.) pp. 195-209. CRC Press, Taylor & Francis Group, LLC, Boca Raton, FL.