

Erika T. Machtinger, PhD, CWB®*

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*Certified Wildlife Biologist, The Wildlife Society

EDUCATION

PhD – Entomology University of Florida **2015**

Advisor: Dr. Christopher J. Geden

PhD Dissertation: Studies on the biology and chemical ecology of *Spalangia cameroni* (Hymenoptera: Pteromalidae), a pupal parasitoid of filth flies.

MS – Entomology University of Florida **2011**

Advisor: Dr. Norman C. Leppa

MS Thesis: Field ecology, breeding biology, and parasitism of house flies, *Musca domestica* and stable flies, *Stomoxys calcitrans*, (Diptera: Muscidae) to improve integrated pest management for north Florida small equestrian farms.

BS - Wildlife Conservation and Ecology University of Delaware **2005**

PROFESSIONAL EMPLOYMENT

2017-Present **Assistant Professor of Entomology**, The Pennsylvania State University, Principal Investigator of the Veterinary Entomology Laboratory.

2015 – 2017 **Post-Doctoral Scientist**, USDA, ARS-Beltsville Agricultural Research Center, Laboratory of Dr. Andrew Li.

2015 **Post-doctoral Researcher**, University of Florida, Laboratory of Dr. Emma Weeks.

2011- 2015 **Graduate Assistant / Laboratory Manager**, University of Florida, Laboratory of Dr. Chris Geden.

2006 - 2009 **Senior Environmental Scientist**, LPG Environmental & Permitting Services, Inc. Mount Dora, FL.

2005 - 2006 **Wildlife Biologist**, Wildlife Habitat Council, Silver Springs, MD.

TEACHING EXPERIENCE

2012 – 2015 **Supervisory Teaching Assistant**, Principles of Entomology, University of Florida Department of Entomology and Nematology.

2010 – 2011 **Teaching Assistant**, Principles of Entomology, Department of Entomology and Nematology, University of Florida.

2004 – 2005 **Program Coordinator**, Iron Hill Museum, Newark, DE.

PROFESSIONAL CERTIFICATIONS

Certified Wildlife Biologist®

Chemical Immobilization of Animals Certification

PATENTS

- 2018 **Hummel, G., E. T. Machtinger, and A. Y. Li.** Tick Lick, a novel wildlife tick treatment device – *Submitted and pending*

HONORS AND AWARDS

- 2020 **Medical, Urban, and Veterinary Entomology Early Career Professional Award**, Entomological Society of America, Lanham, MD.
- 2019 **Entomological Society of America Early Career Professionals Extension Award**, Entomological Society of America, Lanham, MD.
- 2017 **Entomological Society of America Early Career Professionals Teaching Award**, Entomological Society of America, Lanham, MD.
- 2016 **Award for Outstanding Performance**, USDA-ARS, IIBBL, Beltsville, MD.
- 2014 **Monsanto Student Travel Award**, Entomological Society of America, Lanham, MD.
- 2014 **Entomological Society of America, Medical, Urban and Veterinary Entomology Section Scholarship**, Entomological Society of America, Annapolis, MD.
- 2014 **Graduate Student Teaching award**, University of Florida Graduate School, Gainesville, FL.
- 2014 **Robert T. Gast Award, PhD Student Paper Competition**. Entomological Society of America Southeastern Branch Annual Meeting, Greenville, SC.
- 2013 **Presidents Prize, PhD Student Paper Competition**, Entomological Society of America Annual Meeting, Austin, TX.
- 2013 **Vam C. York Graduate Women in Agriculture Scholarship**, College of Agriculture and Life Sciences, University of Florida, Gainesville, FL.
- 2013 **1st place PhD Student Poster Competition**, Entomological Society of America, Annual Meeting of the Southeastern Branch, Baton Rouge, LA.
- 2012 **Gahan Fellowship**, University of Florida, Gainesville, FL (\$17,500 + tuition, 3 yrs).
- 2012 **1st Place MS Student Paper Competition**, Entomological Society of America: joint meeting of the Southeastern and Southwestern Branches, Little Rock, AR.
- 2011 **Best Master of Science Thesis and Outstanding Masters Student**, Department of Entomology and Nematology, University of Florida, Gainesville, FL.
- 2011 **A.S Herlong, Sr. Graduate Scholarship**, College of Agricultural and Life Sciences, University of Florida, Gainesville, FL.
- 2011 **1st Place MSc Student Paper Competition**, Florida Entomological Society, Sanibel Island, FL.
- 2010 **Graduate Student Scholarship**, Florida Entomological Society, Lutz, FL.

REFEREED RESEARCH PUBLICATIONS SUBMITTED/IN DEVELOPMENT

(Underlined and italics designates undergraduate author)

1. Olafson, P. U., K. C. Poh, J. R. Evans, M. J. Skvarla, **E. T. Machtinger**. Deer keds (*Lipoptena cervi*) and blacklegged ticks (*Ixodes scapularis*) do not appear to harbor the same rickettsial bacteria while co-parasitizing a host. *Medical and Veterinary Entomology*. *Submitted*
2. **Machtinger, E. T.**, E. R. Burgess, J. E. Brown. Association of biting flies with swine facilities in the Southeastern United States. *Journal of Swine Health and Production*. *Submitted*.

3. Schuler, E. J. A., K. R. Van Why, H. S. Tiffin, J. E. Brown, **E. T. Machtinger**, R. T. Marconi. Serological survey of wildlife from Pennsylvania for exposure to *Leptospira*. *Journal of Wildlife Disease*. *In development*.
4. Poh, K. C., Z. Cole, D. Smarsh, H. Springer, K. Kelly, L. B. Kenney, **E. T. Machtinger**. Assessment of permethrin treatments on equine skin and effectiveness as a tick repellent on equines. *American Journal of Veterinary Research*. *In development*.
5. Pagac, A. A., C. J. Geden, N. E. Jenkins, G. P. Martin, P. H. Patterson, **E. T. Machtinger**. Susceptibility of adult house flies (Diptera: Muscidae) and three of its principle parasitoids (Hymenoptera: Pteromalidae) to the GHA strain of *Beauveria bassiana* and to four isolates of field-collected muscid flies. *Journal of Medical Entomology*. *In development*.
6. **Machtinger, E. T.**, D. N. Smarsh, B. Kirkland, L. B. Kenny, K. C. Poh, H. R. Springer. Knowledge and perceptions of equine veterinarians in the United States towards ticks and tick-borne diseases. *Equine Veterinary Education*. *In development*.

REFEREED RESEARCH PUBLICATIONS

(Underlined and italics designates undergraduate author)

1. Pagac, A. A., C. J. Geden, M. R. Riggs, E. R. Burgess, IV, **E. T. Machtinger**. Filth fly parasitoid (Hymenoptera: Pteromalidae) monitoring techniques and species composition in poultry layer facilities. *Journal of Medical Entomology* *Accepted*
2. Roberts, C. E., E. Burgess, IV, T. M. Miller, A. Wise, C. J. Dickerson, M. Skvarla, A. Y. Li, **E. T. Machtinger**. 2022. Tissue-damaging marking methods do not affect tick burdens on field captured *Peromyscus* spp. *Wildlife Society Bulletin* *Accepted*
3. Green, K. D., H. S. Tiffin, J. E. Brown, E. R. Burgess, IV, **E. T. Machtinger**. 2022. Small mammal use of cotton in tick control tubes is dependent on the month of use but independent of odor or cotton size. *Ecosphere* 13:7 <http://dx.doi.org/10.1002/ecs2.4155>
4. Kumar, D., L. P. Downs, A. Adegoke, **E. T. Machtinger**, K. Oggenfuss, R. S. Ostfeld, M. Embers, S. Karim. 2022. An Exploratory study on the microbiome of northern and southern populations of *Ixodes scapularis* ticks predicts changes and unique bacterial interactions. *Pathogens* 11: 130 <https://doi.org/10.3390/pathogens11020130>
5. Kimpston, C. N., A. L. Hatke, H. S. Tiffin, **E.T. Machtinger**, J. D. Brown, K. R. Van Why, R. T. Marconi. 2022. High prevalence of antibodies against canine parvovirus and canine distemper virus among coyotes and foxes from Pennsylvania: Implications for the intersections of companion animals and wildlife. *Microbiology Spectrum* 10: <https://doi.org/10.1128/spectrum.02532-21>
6. Poh, K. C., J. R. Evans, M. Skvarla, P. Olafson, G. Hicking, J. Mullinax, **E. T. Machtinger**. 2022. Patterns of deer ked (Diptera: Hippoboscidae) and tick (Ixodida: Ixodidae) infestation on white-tailed deer (*Odocoileus virginianus*) in the eastern United States. *Parasites & Vectors* 15: 31 <https://doi.org/10.1186/s13071-021-05148-9>
7. Tiffin, H. S., M. J. Skvarla, **E. T. Machtinger**. 2021. Tick abundance and life-stage segregation on the American black bear (*Ursus americanus*). *International Journal for Parasitology* 16: 208-216 <https://doi.org/10.1016/j.ijppaw.2021.10.004> *Featured in Field and Stream* <https://www.fieldandstream.com/survival/bear-population-tied-to-tick-increase/>
8. **Machtinger, E. T.**, R. M. Nadolny, B. T. Vinyard, L. Eisen, A. Hojgaard, S. A. Haynes, L. Bowman, C. Casal, A. Y. Li. 2021. Spatial heterogeneity of sympatric tick species and tick-borne

pathogens emphasizes the need for surveillance for effective tick control. Vector-borne and Zoonotic Diseases 21: 843-853 <https://doi.org/10.1089/vbz.2021.0027>

9. **Machtinger, E. T.**, J. E. Brown, E. R. Burgess, IV. 2021. Landscape distribution and abundance of animal-associated adult filth flies on commercial swine facilities in North Carolina, US. Medical and Veterinary Entomology 35: 633-645 <https://doi.org/10.1111/mve.12542>
10. **Machtinger, E. T.**, H. R. Springer, J. E. Brown, P. U. Olafson. 2021. Sudden mortality in captive white-tailed deer with atypical infestation of winter tick. Journal of Medical Entomology 58: 1962-1965 <https://doi.org/10.1093/jme/tjab043>
11. **Evans, J. R.**, K. C. Poh, M. Skvarla, **E. T. Machtinger**. 2021. The Keds are alright: community collection of ticks (Ixodidae: Ixodidae) and keds (Diptera: Hippoboscidae) from hunter-harvested deer. Annals of the Entomological Society of America 114: 686-693 <https://doi.org/10.1093/aesa/saab003>
12. Milholland, M. T., L. Eisen, A. Hojgaard, R. M. Nadolny, **E. T. Machtinger**, J. M. Mullinax, A. Y. Li. 2021. Surveillance of ticks and tick-borne pathogens in suburban natural habitats of central Maryland. Journal of Medical Entomology 58: 1352–1362 <http://doi.org/10.1093/jme/tjaa291>
13. Milholland, M. T., G. Xu, S. M. Rich, **E. T. Machtinger**, J. M. Mullinax, A. Y. Li. 2020. Pathogen coinfections harbored by *Ixodes scapularis* from white-tailed deer compared to questing adults across sites in Maryland, USA. Vector-borne and Zoonotic Diseases 21: 86-91 <http://doi.org/10.1089/vbz.2020.2644>
14. Skvarla, M. J., R. Trout-Fryxell, R. Butler, C. Jones, M. Burrell, S. Bacca, K. Poh, J. Evans, **E. T. Machtinger**. 2020. First Canadian record and additional new state records for North American deer keds (Diptera: Hippoboscidae: *Lipoptena cervi* (Linnaeus) and *L. mazamae* Rondani). Journal of the Entomological Society of Ontario 151: 33-40.
15. Roden-Reynolds, P., **E. T. Machtinger**, A. Y. Li, J. M. Mullinax. 2020. Trapping white-tailed deer (Artiodactyla: Cervidae) in suburbia for study of tick-host interaction. Journal of Insect Science 20: <https://doi.org/10.1093/jisesa/ieaa044>
16. Tiffin, H. S., *R. Cockerill*, J. Brown, **E.T. Machtinger**. 2020. Protocol for efficient digestion of skin tissue samples to determine *Sarcoptes scabiei* mite density. Journal of Insect Science 20 <https://doi.org/10.1093/jisesa/ieaa105>
17. Burgess, E. R., C. J. Geden, K. H. Lohmeyer, B. H. King, **E. T. Machtinger**, J. G. Scott. 2020. Toxicity of fluralaner, a companion animal insecticide, relative to industry-leading agricultural insecticides against resistant and susceptible strains of filth flies. Scientific Reports 10: <https://doi.org/10.1038/s41598-020-68121-z>
18. **Machtinger, E. T.** and E. R. Burgess, IV. 2020. Evaluation of filth fly species composition and abundance using two monitoring methods in swine confinement housing. Journal of Medical Entomology 57: 1812-1820 <https://doi.org/10.1093/jme/tjaa104>
19. **Brown, J. E.**, *T. M. Miller*, **E. T. Machtinger**. 2020. Reduction of blacklegged tick (*Ixodes scapularis*, Acari: Ixodidae) burdens on white-footed mice (*Peromyscus leucopus*) with use of tick control tubes in Pennsylvania, USA. Journal of Applied Entomology 144: 542-545 <https://doi.org/10.1111/jen.12758>
20. Jones, A. M., M. T. Van de Wyngaerde, **E. T. Machtinger**, E. G. Rajotte. 2020. Choice of laboratory tissue homogenizers matters when recovering nucleic acid from medically important ticks. Journal of Medical Entomology 57: 1821-1827 <https://doi.org/10.1093/jme/tjaa006>

21. **Fedele, K., K. C. Poh, J. E. Brown, A. Jones, L. A. Durden, H. S. Tiffin, A. Pagac, A. Y. Li, E. T. Machtinger.** 2020. Host distribution and pathogen infection of fleas (Siphonaptera) recovered from small mammals in Pennsylvania. *Journal of Vector Ecology* 45: 32-44
<https://doi.org/10.1111/jvec.12371>
22. **Tuorinsky, E. V., and E. T. Machtinger.** 2020. Behavioral inhibition of the house fly, *Musca domestica* (Diptera: Muscidae), when exposed to commercial equine fly repellents. *Journal of Economic Entomology* 113: 518–526 <https://doi.org/10.1093/jee/toz243>
23. Poh, K. C., M. J. Skvarla, J. Evans, **E. T. Machtinger.** 2020. Collecting *Lipoptena cervi* (Diptera: Hippoboscidae) and ticks (Parasitiformes: Ixodidae) from hunter-harvested deer. *Journal of Insect Science* 20: <https://doi.org/10.1093/jisesa/ieaa024>
24. **Machtinger, E. T.,** and A. Y. Li. 2019. Tick control bait box use by *Peromyscus* spp. influenced by habitat placement but raises questions on disease ecology. *Ecosphere* 10: <https://doi.org/10.1002/ecs2.2972>
25. **Machtinger, E. T.,** A. Y. Li, Y. Liu. 2019. Tick bite risk and tick-borne disease perceptions of schools in the Mid-Atlantic United States. *Journal of School Health* 89: 959-968.
<https://doi.org/10.1111/josh.12835>
26. Skvarla, M. J., and **E. T. Machtinger.** 2019. Deer keds (Diptera: Hippoboscidae: *Lipoptena* and *Neolipoptena*) in the United States and Canada: New state and county records, pathogen records, and an illustrated key to species. *Journal of Medical Entomology* 56:744-760.
<https://doi.org/10.1093/jme/tjy238> *Featured in PennLive*
<https://www.pennlive.com/life/2019/07/parasitic-deer-flies-more-widespread-than-we-thought.html>
27. **Ryan-Reynolds, P., G. Hummel, E. T. Machtinger,** A. Y. Li. 2018. Development of nontarget wildlife exclusion devices for small mammal trap protection. *Wildlife Society Bulletin* 42
<http://doi.org/10.1002/wsb.905>
28. **Machtinger, E. T.,** and A. Y. Li. 2018. Repellencies and toxicities of five ant-derived defensive compounds against the lone star ticks, *Amblyomma americanum* (Acari:Ixodidae). *Applied Entomology and Zoology* 53: 307-313 <http://doi.org/10.1007/s13355-018-0559-7>
29. **Machtinger, E. T.,** and A. Y. Li. 2017. Evaluation of the toxicity and repellency of four commercial natural products to *Amblyomma americanum*. *Experimental and Applied Acarology* 73: 451-460.
<http://doi.org/10.1007/s10493-017-0185-z>
30. Weeks, E. N. I., **E. T. Machtinger,** S. A. Gezman, P. E. Kaufman, C. J. Geden. 2017. Effect of four commercial fungal formulations on mortality and sporulation of house flies (*Musca domestica*) and stable flies (*Stomoxys calcitrans*). *Medical and Veterinary Entomology* 31:
<http://doi.org/10.1111/mve.12201>
31. **Taylor, C., E. T. Machtinger,** C. J. Geden. 2016. Manure preferences and postemergence learning of two of common filth fly parasitoids, *Spalangia cameroni* and *Muscidifurax raptor* (Hymenoptera: Pteromalidae). *PLoS One* <http://doi.org/10.1371/journal.pone.0167893>
32. **Machtinger, E. T.,** E. N. I. Weeks, C. J. Geden, P. E. Kaufman. 2016. House fly (*Musca domestica*) (Diptera: Muscidae) mortality after exposure to commercial fungal formulations in a sugar bait. *Biocontrol Science and Technology* 26: 1444-1450.
33. **Machtinger, E. T.,** E. N. I. Weeks, C. J. Geden. 2016. Oviposition deterrence and immature survival of filth flies (Diptera:Muscidae) when exposed to commercial fungal products. *Journal of Insect Science* <http://dx.doi.org/10.1093/jisesa/iew032>. *Featured in "Entomology Today"*
<https://entomologytoday.org/2016/06/14/entomopathogenic-fungi-can-help-to-control-filth-flies/>

34. **Machtinger, E. T.**, N. C. Leppla, J. A. Hogsette. 2016. An assessment of the seasonal abundance and species composition of filth flies and their parasitoids on Florida equine farms to improve biological control. *Neotropical Entomology* 45: 433-440.
35. **Machtinger, E. T.**, C. J. Geden, E. D. LoVullo, P. D. Shirk. 2016. Impacts of extended laboratory rearing on female fitness in the parasitoid *Spalangia cameroni* (Hymenoptera: Pteromalidae) with an analysis of *Wolbachia* strains in Florida colonies. *Annals of the Entomological Society of America* 109: 176-182.
36. **Machtinger, E. T.**, and C. J. Geden. 2015. Comparison of the olfactory preferences of four filth fly pupal parasitoid species (Hymenoptera: Pteromalidae) for hosts in equine and bovine manure. *Environmental Entomology* 44:1417-1424.
37. **Machtinger, E. T.**, C. J. Geden, N. C. Leppla. 2015. The effect of linear distance on the parasitism of house fly (Diptera: Muscidae) hosts by *Spalangia cameroni* (Hymenoptera: Pteromalida). *PLoS One* <https://doi.org/10.1371/journal.pone.0129105>.
38. **Machtinger, E. T.**, C. J. Geden, P. E. Teal, N. C. Leppla. 2015. Comparison of host-seeking strategies used by the filth fly pupal parasitoids *Spalangia cameroni* and *Muscidifurax raptor* (Hymenoptera: Pteromalidae). *Environmental Entomology* 44: 330-337.
39. **Machtinger, E. T.**, C. J. Geden, N. C. Leppla, J. A. Hogsette. 2014. Oviposition preference and development of house flies and stable flies in six common substrates found in equine facilities. *Journal of Medical Entomology* 51: 1144 – 1150.
40. **Machtinger, E. T.**, and C. J. Geden. 2013. Host location by *Spalangia cameroni* in equine associated substrates. *Biological Control* 65: 130-134.

REFEREED REVIEW PUBLICATONS

1. Poh, K. C., J. R. Evans, M. J. Skvarla, **E. T. Machtinger**. 2022. All for one health and one health for all: Considerations for successful citizen science projects conducting vector surveillance from animal hosts. *Insects* 13: <https://doi.org/10.3390/insects13060492>
2. Smith, K. V., K. DeLong, C. Boyer, J. M. Thompson, S. Lenhart, W. C. Strickland, E.R. Burgess, IV, Y. Tian, J. Talley, **E. T. Machtinger**, R. T. Trout-Fryxell. 2022. A Call for the development of a sustainable pest management program for the economically important pest flies of livestock: A beef cattle perspective. *Journal of Integrated Pest Management* 13: <https://doi.org/10.1093/jipm/pmac010> *Featured in "Entomology Today" Featured in "Entomology Today"* <https://entomologytoday.org/2022/05/12/new-guide-improved-integrated-pest-management-flies-cattle/>
3. Gallagher, M. R., J. Kreye, **E. T. Machtinger**, N. Schmidt, A. Everland, N. S. Skowronski. 2022. Can restoration of fire-dependent ecosystems reduce ticks and tick-borne disease prevalence in the Eastern US? *Ecological Applications* <https://doi.org/10.1002/eap.2637>
4. **Machtinger, E. T.**, A. C. Gerry, J. Talley, and A. Murillo. 2021. Filth fly species and their impacts on animal production in the United States. *Journal of Integrated Pest Management* 12: <https://doi.org/10.1093/jipm/pmab026>
5. Brewer, G. J., D. J. Boxler, L. D. Domingues, B. Trout-Fryxell, K. M. Loftin, **E. T. Machtinger**, B. Smythe, J. L. Talley, W. Watson. 2021. Horn fly (Diptera: Muscidae): Biology, management, and future research directions. *Journal of Integrated Pest Management* 12: <https://doi.org/10.1093/jipm/pmab019>

6. Geden, C. J., D. Nayduch, J. Scott, E. Burgess, A. Gerry, P. E. Kaufmann, J. Thompson, V. Pickens, **E. T. Machtinger**. 2021. House fly (*Musca domestica* [Diptera: Muscidae]) - Biology, pest status, current management prospects, and research needs. Journal of Integrated Pest Management 12: <https://doi.org/10.1093/jipm/pmaa021>
7. **Machtinger, E. T.** and S. C. Williams. 2020. Practical guide to trapping *Peromyscus leucopus* and *Peromyscus maniculatus* for vector and vector-borne pathogen surveillance and ecology. Journal of Insect Science 20: <https://doi.org/10.1093/jisesa/ieaa028> Featured in "Entomology Today" Featured in "Entomology Today" <https://entomologytoday.org/2020/11/09/a-new-guide-for-tick-researchers-on-working-with-mice/>
8. Skvarla, M., K. C. Poh, **E. T. Machtinger**. 2020. A Technique for dissecting the salivary glands from the abdomens of deer keds (Diptera: Hippoboscidae: *Lipoptena* Nitzsch, 1818 and *Neolipoptena* Bequaert, 1942). Journal of Insect Science 20: <https://doi.org/10.1093/jisesa/ieaa027>
9. **Machtinger, E. T.**, C. J. Geden, P. E. Kaufman, A. M. House. 2015. Use of pupal parasitoids as biological control agents of filth flies on equine facilities. Journal of Integrated Pest Management 6: <https://doi.org/10.1093/jipm/pmv015> Featured in "Entomology Today" <https://entomologytoday.org/2015/09/23/jipm-horse-owners-biological-control-against-flies/>

REFEREED TEACHING PUBLICATIONS

1. Poh, K. C., H. T. Tiffin, J. R. Evans, J. E. Brown, M. J. Skvarla, **E. T. Machtinger**. 2021. Tales from the field: Training undergraduate researchers for fieldwork. American Entomologist 67: 26-30. <https://doi.org/10.1093/ae/tmab007>
2. **Machtinger, E. T.** 2014. Using a combined approach of guided-inquiry and direct instruction to explore how physiology affects behavior. American Biology Teacher 76: 595 – 600.

BOOKS

1. **Machtinger, E. T.**, E. N. I. Weeks, C. J. Geden, E. Lacher. 2022. Pests and parasites of horses. Wageningen Academic Publishers, The Netherlands. 396pp. <http://doi.org/10.3920/978-90-8686-923-7>

BOOK CHAPTERS

1. Talley, J., and **E. T. Machtinger**. 2020. Livestock Pests. In J.K. Tomberlin and M.E. Benbow (eds), Forensic Entomology: International Dimensions and Frontiers. CRC Press, Boca Raton, Florida, USA
2. Weeks, E. N. I., **E. T. Machtinger**, D. Leeomon, C. J. Geden. 2018. Biological Control of Livestock Pests: Entomopathogens. Parasitoids. In C. Garros and J. Bouyer (eds), Ecology and Control of Vector-Borne Diseases, Wageningen Academic Publishers, Wageningen, Gelderland, The Netherlands.
3. **Machtinger, E. T.**, and C. J. Geden. 2018. Biological control of livestock pests: Parasitoids. In C. Garros and J. Bouyer (eds), Pests and Vector-borne Diseases in the Livestock Industry: Ecology and Control of Vector-Borne Diseases, Wageningen Academic Publishers, Wageningen, Gelderland, The Netherlands.

OTHER PUBLICATIONS

1. Poh, K. C., and **E. T. Machtinger**. 2021. An Extension of their work: Extension's Role in Vector-borne disease education. *American Entomologist*. 67: 22-25. <https://doi.org/10.1093/ae/tmab006>
2. **Machtinger, E. T.**, and K. C. Poh. 2020. Special Collection: Protocols in Medical and Veterinary Entomology. *Journal of Insect Science* 20. <http://doi.org/10.1093/jisesa/ieaa122>
3. Skvarla, M. J., and **E. T. Machtinger**. 2018. Tracking another pest - Better understanding deer keds and their risks. *Outdoor News*.
4. Stewart, K. L., and **E. T. Machtinger**. 2018. Working with Nature to Control Nature. USDF Connection.

GRANTS AND FELLOWSHIPS AWARDED

Summary

Total funding External to Pennsylvania State University (2017-Present)	\$1,955,345.00
Total extramural funding	\$4,774,166.00
Total intermural funding (2017-Present)	\$714,060.64
Total gift funds (2017-Present)	\$157,476.10
<i>Total funding</i>	\$7,601,047.74

Extramural funding

1. Patterson, P. H., N. E. Jenkins, **E. T. Machtinger** (25%). 2021. Poultry bed bug surveillance, identification, and outreach. Pennsylvania Center for Poultry and Livestock Excellence. \$81,636 (1 year)
2. **Machtinger, E. T.** (75%), J. Boney. 2021. Evaluation of the field effectiveness of fluralaner administered orally in the treatment of northern fowl mites in layer chickens. Merck Sharp & Dohme, LLC. \$187,915 (1 year).
3. **Machtinger, E. T.** (80%) and J. H. Tumlinson. 2020. Challenging the generalist paradigm: Leveraging tick chemical ecology for new control methods. National Institute of Health, National Institute of Allergy and Infectious Disease R21. \$441,375 (2 years)
4. **Machtinger, E. T.** (100%). 2020. Evaluation of new acaricide formulations against immature stages of the blacklegged tick. USDA, ARS. \$35,000 (1 year).
5. **Machtinger, E. T.** (100%). 2019. Genetic analysis of *Sarcoptes scabiei* in Pennsylvania black bears and canids. National Center for Veterinary Parasitology. \$13,864 (2 years).
6. **Machtinger, E. T.** (100%). 2019. Development of biological control options and education for pest fly control in poultry facilities. Northeast Sustainable Agriculture Research and Education (SARE). \$224,003 (3 years).
7. **Machtinger, E. T.** (70%), J. Boney, E. A. Wallner-Pendleton. 2019. Dose confirmation study for fluralaner solution administered to broiler-breeder chickens for control of poultry mite. University of California Riverside & Merck Sharp & Dohme, LLC. \$179,266 (1 year).
8. **Machtinger, E. T.** (100%). 2018. Development of an effective, safe, and organic-friendly delivery method for newly isolated biopesticides for muscoid fly control. Pennsylvania Department of Agriculture. \$27,540 (1 year).
9. **Machtinger, E. T.** (100%). 2018. Tracking and treating mange infections of Pennsylvania black bears. The Summerlee Foundation. \$27,560 (2 years)

10. Walter, W. D. and **Machtinger, E. T.** (1%). 2018. Modeling the risk of West Nile virus to ruffed grouse populations in Pennsylvania. Pennsylvania Game Commission. \$222,487 (4 years).
11. **Machtinger, E. T.** (100%). 2017. Mechanisms of tick-host interaction and implications to deer tick parasitism, pathogen transmission, and tick control. USDA, ARS. \$451,196 (5 years).
12. **Machtinger, E. T.** (100%). 2017. Improved fly control on poultry facilities with microbial products. U.S. Poultry & Egg Association. \$63,413 (2 years)
13. Li, A. Y., **E. T. Machtinger** (40%) K. Stafford III, S. Williams, G. Molaei, L. Eisen, E. Stromdahl, K. Feldman, F. Guerrero, A.A. Perez de Leon, J. Murrow, P. Norman, and V. D'Amico. 2016. Areawide Suppression of Vector Tick Populations by Integrated Host-Targeted and Biological Management in the Suburban Landscape. USDA Areawide Pest Management Program. \$2,750,000 (5 years)
14. **Machtinger, E. T.** (80%), and A.Y. Li. 2016. Risk Assessment and Evaluation of IPM for Tick Control on School Grounds. Northeastern Area IPM Center. \$49,469 for 2 yrs.
15. **Machtinger, E. T.** (100%). 2014. Entomological Society of America, Medical, Urban and Veterinary Entomology Section Travel Grant. Received for travel to the Entomological Society of America Annual Meeting, Knoxville, TN; November 11-14, 2012. \$500.
16. **Machtinger, E. T.** (100%). 2013. Chemical Ecology of Biological Control Agents of Filth Flies. Entomological Society of America., Monsanto Research Grant Award. \$7,320.
17. **Machtinger, E. T.** (100%). 2012. The effect of laboratory colonization on searching efficiency in *Spalangia cameroni* (Hymenoptera: Pteromalidae). Florida Entomological Society. \$250.
18. **Machtinger, E. T.** (100%). 2012. The effect of laboratory colonization on parasitization rate and fitness of *Spalangia cameroni* (Hymenoptera:Pteromalidae), a pupal parasitoid of filth flies on livestock facilities. Entomological Society of America. \$700.
19. **Machtinger, E. T.** (100%). 2011. University of Florida IFAS Travel Grant. Received for travel to the International IPM Symposium in Memphis, TN; March 27-29, 2012. \$200.
20. **Machtinger, E. T.** (85%) and N.C. Leppla. 2011. Understanding olfactory cues in host location and dispersal range of the filth fly parasitoid *Spalangia cameroni* (Hymenoptera:Pteromalidae) to improve the use as sustainable biological control agents for fly control on livestock operations. Southern Region Sustainable Agriculture Research and Education (SARE). \$9,882 (2 year)
21. **Machtinger, E.T.** (100%). 2011. University of Florida, Graduate Student Council Travel Grant. Received for travel to the Annual Florida Society for Vector Ecology Meeting in Flagstaff, AZ; September 25-29th. \$250.
22. **Machtinger, E. T.** (100%). 2010. Improving IPM for Filth Fly Management on Small Equestrian Farms in North Florida. Florida Entomological Society. \$250.

Intermural funding

1. **Machtinger, E. T.**, (80%) J. Kreye. 2022. Prescribed fire effects on wildlife and subsequent tick parasitism. Institute of Energy and the Environment seed funding \$15,000 (1 year).
2. **Machtinger, E. T.** (90%), R. T. Marconi, T. Mather. 2021. Ticks fighting ticks: Can bite-induced acquired tick resistance change host suitability for tick infestation? McIntire-Stennis Capacity Funds Program \$196,834 (2 years)
3. Skvarla, M. J., and **E. T. Machtinger** (50%). 2021. Deer, ticks, and keds, oh my! Assessing how tick repellents affect deer and deer parasites and educating hunters on repellent use. Pennsylvania State University Extension Science to Practice Grant. \$10,000 (1 year).

4. **Machtinger, E. T.** (50%), and D. N. Smarsh. 2021. Evaluation of permethrin treated sheets for tick control on horses. Pennsylvania State University Extension Science to Practice Grant. \$10,000 (1 year).
5. Poh, K. C., **Machtinger, E. T.** (40%), D. N. Smarsh. 2020. Evaluation of a passive permethrin-treated applicator for tick prevention on equines and an assessment of post-exposure dermal sensitivity. Pennsylvania State University Extension Science to Practice Grant. \$10,000 (1 year).
6. **Machinger, E. T.** (70%), K. C. Poh, J. H. Tumlinson. 2019. Laws of attraction: Evaluating responses of the Lyme disease vector *Ixodes scapularis* nymphs to tick- and host-produced semiochemicals and their utility in surveillance and control tools. McIntire-Stennis Capacity Funds Program \$198,051 (2 years)
7. **Machtinger, E. T.** (100%). 2019. The tick-borne disease epidemic: Addressing critical research and Extension needs to improve capacity for control and prevention. Pennsylvania State University Extension Graduate Program. \$70,628.80 (3 years)
8. Skvarla, M. J., Poh, K, V. D'Amico, A. Jones, **E. T. Machtinger** (25%). 2019. Survey of ticks and deer keds using hunter-harvested deer in the Mid-Atlantic. Pennsylvania State University Extension Integrated Program grant \$ 24,999.64 (1 year)
9. **Machtinger, E. T.** (70%), B. Trout-Fryxell, J. Talley, A. Gerry, P. Kaufman, W. Watson, N. Hinkle, S. Swinger, D. Boxler, A. Murillo, B. Smythe, G. Schuster, K. Rochon, K. Loftin. 2019. Improving national coordination of veterinary entomologist Extension educators and development of educational material for stakeholders in animal production. Pennsylvania State University Extension Multistate Funding \$24,594.40 (1 year).
10. **Machtinger, E. T.** (60%), W. D. Walter, L. Williams, E. H. Thomas, C. Mahan, D. Miller, K. Price, A. M. Foyle, M. Hutchinson, J. Brown. 2019. Modeling the risk of West Nile virus to ruffed grouse populations in Pennsylvania. Institute of Energy and the Environment seed funding \$49,952.80 (1 year).
11. **Machtinger, E.T.** (100%). 2017. Development of an auto-dissemination device for improved fly control on poultry facilities with microbial products. Animal Health and Disease Program Funding, USDA, NIFA. \$104,000 (3 years)

Gift funding

1. **Machtinger, E. T.** 2018. Development of a novel, safe, and organic-friendly biopesticide for muscoid fly control. Pennsylvania Poultry Checkoff Fund \$27,402.80
2. **Machtinger, E. T.** 2018. Improving cultural control for muscoid flies in layer houses with new FLIR technology and applications of a natural product to reduce fly development. Pennsylvania Poultry Checkoff Fund \$28,805
3. **Machtinger, E. T.** 2019. Thermacell, Inc. Gift to the Veterinary Entomology Laboratory \$1,500
4. **Machtinger, E. T.** 2020. Thermacell, Inc. Gift to the Veterinary Entomology Laboratory \$6,907.59
5. **Machtinger, E. T.** 2020. Thermacell, Inc. Gift to the Veterinary Entomology Laboratory \$3,000
6. **Machtinger, E. T.** 2021. Thermacell, Inc. Gift to the Veterinary Entomology Laboratory \$25,312.22
7. **Machtinger, E. T.** 2022. Thermacell, Inc. Gift to the Veterinary Entomology Laboratory. \$45,000
8. **Machtinger, E. T.** 2022. AVT Naturals, Gift to the Veterinary Entomology Laboratory. \$17,085
9. **Machtinger, E. T.** 2022. Genesis Labs, Gift to the Veterinary Entomology Laboratory \$1,437.52
10. **Machtinger, E. T.** 2022. Genesis Labs, Gift to the Veterinary Entomology Laboratory \$1,026.00

INVITED PRESENTATIONS

1. **Machtinger, E. T., F. Maleki, J. E. Brown, K. C. Poh, J. H. Tumlinson.** 2022. The Curious response of the blacklegged tick (*Ixodes scapularis*) to odors of sympatric rodent hosts. International Society of Chemical Ecology-Asia-Pacific Association of Chemical Ecologists Joint Meeting. Kuala Lumpur, Malaysia. August 8-12.
2. **Machtinger, E. T.** 2022. Mission and activities in the Pennsylvania State University Veterinary Entomology Laboratory. Pike County Tick Working Group, online. July 28.
3. **Machtinger, E. T.** 2022. Mission and activities in the Pennsylvania State University Veterinary Entomology Laboratory. Interagency Lyme Disease Workgroup, online. June 9.
4. **Machtinger, E. T.** 2022. Picky ticks or hapless hosts? How ticks and their meals interact. Ticks on the Horizon Webinar. Eastern Branch of the Entomological Society of America, Webinar. May 10.
5. **Machtinger, E. T.** 2022. Exploring the cause of heterogenous tick burdens on blacklegged tick hosts. University of Maine Ecology Seminar, Orono, ME. April 15.
6. **Machtinger, E. T., K. Green, H. Tiffin, J. Brown, T. Miller, E. Burgess, IV.** 2022. “Questing” for ways to improve tick control tubes. IPM Center of America Working Group, online. February 9.
7. **Machtinger, E. T., H. S. Tiffin, J. E. Brown, K. C. Poh, K. Green, T. Miller.** 2021. Embracing the “nasty” parasites of wildlife to improve animal welfare and human health. Annual meeting of the Entomological Society of America. On Demand. November.
8. **Machtinger, E. T., R. Nadolny, L. Bowman, C. Casal, M. Milholland, A. Y. Li.** 2020. Look before you leap: A cautionary tale of tick control in an era of population expansions. Annual meeting of the Entomological Society of America, virtual meeting, On Demand. November.
9. **Machtinger, E. T., M. Milholland, R. Nadolny, S. Haynes, A. Y. Li.** 2019. Evaluation of tick abundance and tick-borne disease risk on school property in suburban Maryland and efficacy of integrated tick control. Annual meeting of the Entomological Society of America, St. Louis, MO. November 20.
10. **Machtinger, E. T.** 2019. Veterinary Entomology: A small group facing big challenges in the era of resistance and change. Animal Science Department seminar. State College, PA. October 24.
11. **Machtinger, E. T., H. S. Greenberg, M. Ternent, J. Brown.** 2018. The challenge of sarcoptic mange in Pennsylvania black bears: The role of the one health initiative in veterinary entomology. Annual meeting of the Entomological Society of America. Vancouver, Canada. Nov 10-14.
12. **Machtinger, E. T.** 2018. Science delivery to the community: Establishing an extension program at academic institutions. Annual meeting of the Eastern Branch of the Entomological Society of America. Annapolis, MD. March 17-19.
13. **Machtinger, E. T., and A.Y. Li.** 2017. Integrated tick management in Maryland: the effect of current control products on ticks and their hosts. Annual meeting of the Eastern Branch of the Entomological Society of America, Newport, RI. March 17-21.
14. **Machtinger, E. T., and A. Y. Li.** 2017. Integrated tick management in suburban Maryland. International Urban Wildlife Conference, San Diego, CA. June 4-6.
15. **Machtinger, E. T.** 2016. The role of competition in vector control. University of Kentucky Entomology Department Seminar Series, Lexington, KY. October 26.
16. **Machtinger, E. T.** 2016. Manure preferences and postemergence learning of two of common filth fly parasitoids, *Spalangia cameroni* and *Muscidifurax raptor* (Hymenoptera: Pteromalidae). International Congress of Entomology, Orlando, FL. September 25-30.

17. **Machtinger, E. T.**, N. C. Leppla, C. J. Geden, J. A. Hogsette. 2011. Oviposition substrate preference and development ability of house flies (*Musca domestica*) in common substrates to improve integrated pest management for North Florida small equestrian farms. Annual Conference of the Society of Vector Ecology, Flagstaff, AZ. September 25-29.

SCIENTIFIC PRESENTATIONS AT PROFESSIONAL MEETINGS

1. **Machtinger, E. T.**, O. Ashbaugh, B. Staniar, D. Smarsh. 2022. House fly development influenced by animal nutrition. Annual meeting of the United States Department of Agriculture S1076 Multistate Group, online. January 12-14.
2. **Machtinger, E. T.**, K. Green, H. Tiffin, J. Brown, T. Miller, E. Burgess, IV. 2022. “Questing” for ways to improve tick control tubes. IPM Center of America Working Group, online. March 15.
3. **Machtinger, E. T.** 2022. Biological control options for fly control in poultry facilities. Northeastern SARE Annual Meeting, online. March 24.
4. **Machtinger, E. T.** 2021. Sudden mortality in captive white-tailed deer (*Odocoileus virginianus*) with heavy burdens of winter tick (*Dermacentor albipictus*). Annual meeting of the Eastern Branch of the Entomological Society of America, online. March 24.
5. **Machtinger, E. T.** 2021. Look before you leap: A Cautionary tale of tick control in an era of population expansions. Annual meeting of the Entomological Society of America, online. November 5.
6. **Machtinger, E. T.**, M. Milholland, R. Nadolny, S. Haynes, A. Y. Li. 2019. Evaluation of tick abundance and tick-borne disease risk on school property in suburban Maryland and efficacy of integrated tick control. Annual meeting of the Entomological Society of America, St. Louis, MO. November 20.
7. **Machtinger, E. T.**, and M. J. Skvarla. 2019. Ticks, keds, and citizen scientists: Working with hunters to better understand wildlife parasites. Livestock Insect Workers Conference, Madison, WI. July 7.
8. **Machtinger, E. T.** 2019. Updates to novel fly control methods with sanitation and cultural control. Annual Meeting of the United States Department of Agriculture S1060 Multistate Group. Las Cruces, NM. January 16.
9. **Machtinger, E. T.**, and A. Y. Li. 2017. Integrated tick management in Maryland: The Effect of current control products on ticks and their hosts. Annual meeting of the Eastern Branch of the Entomological Society of America. Newport, RI. March 17.
10. **Machtinger, E. T.**, and A. Y. Li. 2017. Integrated tick management in Maryland schools. International Urban Wildlife Conference. San Diego, CA. June 5.
11. **Machtinger, E. T.**, and A. Y. Li. 2017. Tick risk and control in Maryland schools. Tick Summit VI, Laurel, MD. February 22.
12. Weeks, E. N. I., **E. T. Machtinger**, C. J. Geden, P. E. Kaufman. 2016. Non-pesticide management options of house flies and stable flies (*Musca domestica*). Annual Meeting of the United States Department of Agriculture S1030 Multistate Group. San Antonio, TX. January 4-6.
13. **Machtinger, E. T.**, E. LoVullo, C. J. Geden, D. Johnson, P. Shirk. 2014. The effects of colony age and *Wolbachia* as they relate to quality and fitness of *Spalangia cameroni* (Hymenoptera: Pteromalidae). Annual meeting of the Entomological Society of America, Portland, OR. November 16-19.
14. **Machtinger, E. T.**, P. E. Teal, C. J. Geden, N. C. Leppla. 2014. Differential host-seeking cues used by the filth fly parasitoids *Spalangia cameroni* and *Muscidifurax raptor* (Hymenoptera: Pteromalidae). Annual meeting of the Southeastern Branch of the Entomological Society of America, Greenville, SC. March 1-5.

15. **Machtinger, E. T.**, C. J. Geden, P. E. Teal, N. C. Leppla. 2013. Understanding olfactory cues in host location of the filth fly parasitoid *Spalangia cameroni* (Hymenoptera:Pteromalidae) to improve monitoring and release methods on livestock operations. Annual meeting of the Entomological Society of America, Austin, TX. November 10-13.
16. **Machtinger, E. T.**, C. J. Geden, N. C. Leppla. 2012. The effect of laboratory colonization on parasitization rate and fitness of *Spalangia cameroni* (Hymenoptera:Pteromalidae), a pupal parasitoid of filth flies on livestock facilities. Entomological Society of America Annual Meeting, Knoxville, TN. November 11-14.
17. **Machtinger, E. T.**, C. J. Geden, N. C. Leppla, J. A. Hogsette. 2012. Location of house fly and stable fly (Diptera: Muscidae) hosts by *Spalangia cameroni* (Hymenoptera: Pteromalidae) in substrates commonly found on equestrian farms. Joint Annual Meeting of the Southeastern and Southwestern Branches of the Entomological Society of America, Little Rock, AR, March 3-8.
18. **Machtinger, E. T.**, N. C. Leppla, C. J. Geden, J. A. Hogsette. 2011. Oviposition substrate preference and development ability of stable flies (*Stomoxys calcitrans*) and house flies (*Musca domestica*) in common substrates to improve integrated pest management for north Florida small equestrian farms. Entomological Society Annual Conference, Sanibel Island, FL.

SCIENTIFIC POSTERS PRESENTED AT PROFESSIONAL MEETINGS

1. **Machtinger, E. T.**, and A. Y. Li. 2017. Effect of wildlife-targeted tick control products on white-footed mice and white-tailed deer. Entomological Society of America. Annual Meeting. Denver, CO. Nov 5-8.
2. **Machtinger, E. T.**, and A. Y. Li. 2016. Integrated Tick Management in Maryland Schools. Integrated Tick Management Symposium, Washington, D.C., May 16-17th.
3. **Machtinger, E. T.**, and A. Y. Li. 2016. Host-targeted approaches to improving tick monitoring and control in Maryland (Poster). Mid-Atlantic Tick Summit V. Laurel, MD, March 2
4. **Machtinger, E. T.**, C. J. Geden, N. C. Leppla. 2013. Parasitism of house and stable fly pupae in different microhabitats by *Spalangia cameroni* (Hymenoptera: Pteromalidae). Annual meeting of the Southeastern Branch of the Entomological Society of America, Baton Rouge, LA, March 3-5.
5. **Machtinger, E. T.**, C. J. Geden, N. C. Leppla, J. A. Hogsette. 2012. Improving biological control on equestrian farms. 7th International IPM Symposium, Memphis, TN, March 24-26.

CONFERENCES AND CONFERENCE COMMITTEES

1. **New approaches to biological and integrated control changing global perspectives on filth fly management. 2016.** Co-organizer of symposium, International Congress of Entomology, Orlando, FL. September 25-30.
2. **Grand challenge: Effective science education with communication. 2014.** Co-organizer of symposium, Annual meeting of the Entomological Society of America, Portland, OR. November 16-19.
3. **Invasive species and novel methods of identification, monitoring, and control. 2013.** Co-organizer of symposium. Annual meeting of the Southeastern Branch of the Entomological Society of America, Baton Rouge, LA. March 3-5.

EXTENSION DIGITAL EDUCATION

1. Brown, J. E. and **E. T. Machtinger**. 2021. Identifying nuisance flies of horses. Pennsylvania State University Extension Learn Now Video. https://www.youtube.com/watch?v=BHN41rxI_2s&t=3s 180 views.
2. Jones, Garrett, B. Trout-Fryxell, **E. T. Machtinger**. 2021. Four of the most harmful flies that affect cattle in North America. https://www.youtube.com/watch?v=6kFQrqv0_PE 299 views.
3. Brown, J. E., and **E. T. Machtinger**. 2021. Identifying nuisance flies for swine fly control. Pennsylvania State University Extension Learn Now Video. <https://www.youtube.com/watch?v=HLpDCM5WknE&t=13s> 65 views.
4. Brown, J. E., and **E. T. Machtinger**. 2021. Understanding nuisance fly life cycles in swine facilities. Pennsylvania State University Extension Learn Now Video. <https://www.youtube.com/watch?v=HLpDCM5WknE&t=4s> 65 views.
5. Tiffin, H. S., and **E. T. Machtinger**. 2021. Integrated pest management (IPM) of nuisance flies on animal facilities. Pennsylvania State University Extension Learn Now Video. <https://www.youtube.com/watch?v=WqhrIq4H6hc&t=12s> 137 views.
6. **Machtinger, E. T.** 2021. Managing insecticide resistance on animal facilities. Pennsylvania State University Extension Learn Now Video. <https://www.youtube.com/watch?v=MuX09aBHP1s> 55 views.
7. **Machtinger, E. T.** 2021. Understanding nuisance fly life cycles on poultry facilities. Pennsylvania State University Extension Learn Now Video. https://www.youtube.com/watch?v=PyPvdXGQ_Vs 76 views
8. **Machtinger, E. T.** 2021. Setting action thresholds for nuisance flies in poultry facilities. Pennsylvania State University Extension Learn Now Video. <https://www.youtube.com/watch?v=YwD-p3BZ3ec> 53 views
9. **Machtinger, E. T.** 2021. Monitoring nuisance flies in poultry facilities. Pennsylvania State University Extension Learn Now Video. <https://www.youtube.com/watch?v=RaU-aCqLY0M> 32 views
10. **Machtinger, E. T.** 2021. Cultural methods for nuisance fly control in poultry facilities. Pennsylvania State University Extension Learn Now Video. <https://www.youtube.com/watch?v=VoHxuSxw3Mw> 40 views
11. **Machtinger, E. T.**, G. Martin, C. J. Geden. 2021. Poultry fly management. Short-course. 10 Hrs. Pennsylvania State University Extension # OLC-G-1093 <http://extension.psu.edu/poultry-fly-management>
12. **Machtinger, E. T.** 2020. Identifying nuisance flies for poultry pest control. Pennsylvania State University Extension Learn Now Video. <https://www.youtube.com/watch?v=QhFyVARRVI0&t=275s>. 1,448 views

EXTENSION WORKSHOPS

1. Poh, K. P., Skvarla, M., Tiffin, H., Springer, H., **E. T. Machtinger**. 2019. Vectors and vector-borne diseases. Workshop for Extension educators. State College, PA October 26.

EXTENSION PRODUCTS

1. **Machtinger, E. T.** 2022. Equine Tick Removal Kit. Pennsylvania State University Extension publication #*Number TBD*
2. **Machtinger, E. T.** 2022. Equine Tick ID Card. Pennsylvania State University Extension publication #EE0627

3. **Machtinger, E. T.** 2022. Equine Tick Collection Card. Pennsylvania State University Extension publication #EE0627
4. **Machtinger, E. T.** 2022. Canine Tick Removal Kit. Pennsylvania State University Extension publication #Number TBD
5. **Machtinger, E. T.** 2022. Canine Tick ID Card. Pennsylvania State University Extension publication #EE0692
6. **Machtinger, E. T.** 2022. Canine Tick Collection Card. Pennsylvania State University Extension publication #EE0695
7. **Machtinger, E. T.** 2022. Tick removal kit. Pennsylvania State University Extension publication #Number TBD
8. **Machtinger, E. T.** 2022. Human Tick ID card. Pennsylvania State University Extension publication #EE0693
9. **Machtinger, E. T.** 2022. Human Tick collection card. Pennsylvania State University Extension publication #EE0691
10. **Machtinger, E. T.** 2022. Tick and mosquito repellent guide and card. Pennsylvania State University Extension publication #EE0681
11. **Machtinger, E. T.** 2022. Protecting horses from horse and deer fly bites. Pennsylvania State University Extension publication #EE0654
12. **Machtinger, E. T.,** H. Springer, J. E. Brown. 2021. Managing winter tick, *Dermacentor albipictus*, on white-tailed deer farms and hunting preserves. Pennsylvania State University Extension publication #EE0536
13. **Machtinger, E. T.,** and M. Tejada de Rivero. 2021. Tick shower hanger. Pennsylvania State University Extension publication #EE0387
14. **E. T. Machtinger.** 2019. IPM for ticks. In E. Rajotte (ed) IPM for Pennsylvania schools and childcares. Pennsylvania State University Extension publication #AGRS-082
15. Springer, H., and **E. T. Machtinger.** 2019. Protecting companion animals against ticks in Pennsylvania. Pennsylvania State University Extension publication #EE0347
16. **Machtinger, E. T.,** and G. P. Martin. 2019. Bed bugs in poultry facilities: Identification, scouting, and control options. Pennsylvania State University Extension publication #EE0247
17. **Machtinger, E. T.,** and H. Springer. 2019. Protecting livestock against ticks in Pennsylvania. Pennsylvania State University Extension publication #EE00348
18. **E. T. Machtinger** and E. Lhamon. 2019. Lesser mealworm beetles in poultry and game bird facilities. Pennsylvania State University Extension publication #EE0346
19. Jacobs, Sr., S, M. J. Skvarla, **E. T. Machtinger.** 2019. Common ticks and tick-borne diseases in Pennsylvania. Pennsylvania State University Extension publication #ART-1808
20. **Machtinger, E. T.** 2018. Ticks and tickborne disease. Pennsylvania State University Extension publication #EE0234
21. **Machtinger, E. T.** 2018. Filth fly control on horse farms. Pennsylvania State University Extension publication #EE0235
22. Jacobs, Sr., S. and **E. T. Machtinger.** 2018. Lyme disease. Pennsylvania State University Extension publication #UF006
23. **Machtinger, E.T.,** M. J. Skvarla. 2018. Asian Longhorned Tick, *Haemaphysalis longicornis*. Pennsylvania State University Extension publication #ART-5502
24. **Machtinger, E. T.,** N.C. Leppla, C. Saunders. 2013. Pest management and perceptions for equine farms in North and Central Florida. Electronic Data Information Source. University of Florida, Gainesville, FL. <https://doi.org/10.32473/edis-in983-2013>

25. **Machtinger, E. T.** 2011. Eye Gnats, *Liohippelates* spp. Electronic Data Information Source publication #EENY-485 <https://edis.ifas.ufl.edu/publication/IN884>
26. **Machtinger, E. T.** 2007. Wildlife-Friendly Wind Energy. USDA Natural Resources Conservation Service and Wildlife Habitat Council Fish and Wildlife Habitat Management Leaflet, Number 48
27. **Machtinger, E. T.** 2007. Wetlands (Temporarily Flooded). USDA Natural Resources Conservation Service and Wildlife Habitat Council Fish and Wildlife Habitat Management Leaflet, Number 47
28. **Machtinger, E. T.** 2007. Native Freshwater Mussels. USDA Natural Resources Conservation Service and Wildlife Habitat Council Fish and Wildlife Habitat Management Leaflet, Number 46
29. **Machtinger, E. T.** 2007. Riparian Systems. USDA Natural Resources Conservation Service and Wildlife Habitat Council Fish and Wildlife Habitat Management Leaflet, Number 45
30. **Machtinger, E. T.** 2007. Cutthroat Trout. USDA Natural Resources Conservation Service and Wildlife Habitat Council Fish and Wildlife Habitat Management Leaflet, Number 43
31. **Smith, E. T.** 2007. Scrub-Shrub Birds. USDA Natural Resources Conservation Service and Wildlife Habitat Council Fish and Wildlife Habitat Management Leaflet, Number 42
32. **Smith, E. T.** 2007. Early Successional Habitat. USDA Natural Resources Conservation Service and Wildlife Habitat Council Fish and Wildlife Habitat Management Leaflet, Number 41
33. **Smith, E. T.** 2006. Bog Turtle. USDA Natural Resources Conservation Service and Wildlife Habitat Council Fish and Wildlife Habitat Management Leaflet, Number 44

EXTENSION PRESENTATIONS

1. **Machtinger, E. T.** 2022. What you can do to protect yourself from tick bites. Bowman's Mill Wildflower Preserve, webinar, August 4.
2. **Machtinger, E. T.** 2022. Working with the vector-borne disease team. Pennsylvania State University Extension Animal Systems Unit Meeting, online. June 28.
3. **Machtinger, E. T.** 2022. Horses and ticks don't mix. Pennsylvania State University webinar. May 17.
4. **Machtinger, E. T.** 2022. Be tick safer: What you can do to protect yourself from tick bites. Osher Lifelong Learning Institute, State College, PA. April 18.
5. **Machtinger, E. T.** 2022. Equine tick checks and tick study. Pennsylvania State University Extension, webinar. April 4.
6. **Machtinger, E. T.** 2022. Equine tick checks and tick study. Pennsylvania State University Extension, webinar. March 31.
7. **Machtinger, E. T.** 2022. Flying insects on equine facilities. Straight from the Horse Doctor's Mouth. Springhill Equine, Newberry, FL. May 17. <https://springhillequine.libsyn.com/s5e13-flying-things-with-dr-erika-machtinger>
8. **Machtinger, E. T.** 2022. Take down ticks! Tick bite prevention tools. Blair County Townhall. Blair Co, PA. March 10.
9. **Machtinger, E. T.** 2022. Managing ticks on horses. Equine Expo, Harrisburg, PA. March 3.
10. **Machtinger, E. T.** 2022. Response to deer tick virus clusters found in Pennsylvania. Pennsylvania State University Extension, online, University Park, PA. February 17.
11. **Machtinger, E. T.** 2021. Tick-talk for hunters: Tick-borne diseases, research and education. Annual Meat and Egg Meeting. PennAg Poultry Council. December 15.

12. **Machtinger, E.T.** and J. Brown. 2020. Tick series. Ecology and how to approach tick control. Pennsylvania State University Extension, webinar. July 30. <https://extension.psu.edu/tick-series-ecology-and-how-to-approach-tick-control>
13. **Machtinger, E. T.** 2020. Tick Series. Protecting yourself from tick bites. Pennsylvania State University Extension, webinar. August 13. <https://extension.psu.edu/tick-series-protecting-yourself-from-tick-bites>
14. **Machtinger, E. T.** and H. Springer. 2020. Tick series. Protecting your horses from tick bites. Pennsylvania State University Extension, webinar. September 10. <https://extension.psu.edu/tick-series-protecting-your-horses-from-tick-bites>
15. **Machtinger, E. T.** 2020. Know your flies: The story of tailoring fly control to the fly, Tack box talk. July 24. <https://www.buzzsprout.com/242373/4701002>
16. **Machtinger, E. T.,** K. E. Machtinger, J. Penn, H. Penn. 2020. Work on your social life: Starting social science collaborations. Entomological Society of America, webinar. May 21. <https://www.entsoc.org/work-your-social-life-starting-social-science-collaborations>
17. **Machtinger, E. T.** 2020. Latest advancements in tick biology in control – Or protecting yourself from tick bites. Osher Lifelong Learning Institute, webinar, State Collage PA April 14.
18. **Machtinger, E. T.** 2020. Time to talk ticks: Best strategies for bite prevention and control. Rose Pest Control Conference, Troy, MI. March 5.
19. **Machtinger, E. T.** 2020. Stop Bugging me! Understanding and controlling pests and vectors on equine farms. Pennsylvania State University Horse Health Symposium, State College, PA. January 25.
20. **Machtinger, E. T.** 2019. Ticks: The most important vector in North America. Northeastern Pest Management Association, Poconos, PA. January 25.
21. **Machtinger, E. T.** 2019. Darkling beetle control. Game Bird Breeders Conferences, State College, PA February 25.
22. **Machtinger, E. T.** 2019. The case of the tail swisher: Identifying and controlling pests on equine farms. Horse World Expo, Harrisburg, PA. February 28.
23. **Machtinger, E. T.** 2019. Introducing the most dangerous vector in North America. Illinois Pest Management Association, Chicago, IL. March 20.
24. **Machtinger, E. T.** 2019. Bugs! bugs! bugs! Pests of poultry and how to control them. PennAg Industries Conference. Keystone Pork Expos and Poultry Progress days. Manheim, PA. Feb 20.
25. **Machtinger, E. T.** 2019. Insect control for horse farms, webinar. The Horse. June 13. <https://thehorse.com/173627/insect-control-for-horse-farms/>
26. **Machtinger, E. T.,** and E. Santini. 2019. Time to talk ticks: Symptoms, treatment, and prevention. Pennsylvania State University Extension, webinar. July 2. <https://extension.psu.edu/time-to-talk-ticks-symptoms-treatment-and-prevention>
27. **Machtinger, E. T.** 2019. Updates on tick research in Pennsylvania. Forest Products Association Meeting, State College, PA. September 10.
28. **Machtinger, E. T.** 2019. Dismiss the myths of ticks and tick-borne diseases. Pennsylvania Pest Management Association, Spooky Nook, PA. November 13.
29. **Machtinger, E. T.** 2019. Dismiss the myths of tick personal protection. Annual Mercer County Dinner, Mercer PA. November 7.
30. **Machtinger, E. T.** 2019. Recent updates in tick biology and control. Professional Pest Managers School, Grantville, PA. December 9.
31. **Machtinger, E. T.** 2018. The case for tick control: Introducing the most dangerous arthropod in North America. PestWorld. Orlando, FL. Oct 23-26.

32. **Machtinger, E. T.** 2018. Fly control on equine facilities. Equine Extension Team, webinar, Pennsylvania State University Extension. August 2.
33. **Machtinger, E. T.** 2018. Ticks and tick control. Pike County Lyme Disease Task Force, online. July 26.
34. **Machtinger, E. T.** 2018. Lymelight: The spread of Lyme disease, ticks, and how it can be stopped. Science Policy Society, State College, PA. July 17.
35. **Machtinger, E. T.** 2018. Death to the \$#! flies.! Straight from the Horse Doctor's Mouth. Springhill Equine, Newberry, FL July 11. <https://springhillequine.libsyn.com/s1e7-death-to-the-flies>
36. **Machtinger, E. T.** 2018. Arthropod Pest Management on Game Bird Facilities. Pennsylvania Game Breeders and Hunting Preserves Conference. State College, PA February 25-27.
37. **Machtinger, E. T.** 2018. Update on arthropods of veterinary importance. PSU Extension Animal Team In-Service, State College, PA. April 3.
38. **Machtinger, E. T.** 2017. Dismiss the myths: Busting myths about ticks and tick-borne disease. Ellsworth Rotary, Ellsworth, ME. December 28.
39. **Machtinger, E. T.** 2017. Important hosts of blacklegged ticks. Ticks and Lyme Disease Hearing. Testimony presented to the Pennsylvania State Senate, Harrisburg, PA. October 21.
40. **Machtinger, E. T.** 2013. Fly control in equine facilities, chemical resistance, and alternatives. Healthy Horses Conference, University of Florida, Gainesville, FL. April 27.
41. **Machtinger, E. T.** 2011. External parasites of horses. Presentation at Springhill Equine Veterinary Clinic Seminar Series, Newberry, FL

CITIZEN SCIENCE PROJECTS

- 2022 **Equine Tick Survey.** Collaborative effort with the Equine Team at Pennsylvania State University Extension to engage 50 horse owners in education on how to conduct tick checks and a seven-week study to collect ticks from their animals. The goal of this study was to better direct vector-borne disease education for horse caretakers.
- 2018 **Pennsylvania Parasite Hunters.** Collaborative effort to engage white-tailed deer hunters in Pennsylvania in research. The goal was to collect deer keds and ticks from hunted animals and on hunters and test for pathogens of concern. Overall, over 300 hunters engaged in the project.

GUEST LECTURES

- 2022 **Have a pest problem? The Role of veterinary entomology in veterinary science.** Undergraduate Research Colloquium, Veterinary and Biomedical Sciences 290H. Guest Lecturer, On-Line, Pennsylvania State University, University Park, PA, Spring semester.
- 2021 **Animals and Arthropods: What is Veterinary Entomology?** Undergraduate Research Colloquium, Veterinary and Biomedical Sciences 290H. Guest Lecturer, On-Line, Pennsylvania State University, University Park, Spring semester.
- 2020 **Integrated Vector Control for Ticks: Opportunities and Challenges.** Guest lecture in a multi-institution class Integrated Pest Management (EEMS 5365), ENTO 5163 Advanced Applied Entomology (UA), ENT 695 Special Topics: IPM Case Histories (UK), Spring semester.
- 2018 **Public Engagement in Science,** Entomology 530. Pennsylvania State University, University Park, PA, Spring semester.

- 2018 **Ticks, Tick-Borne Disease, and Tick Control in Turf Management**, Entomology 317. Guest Lecturer. Pennsylvania State University, University Park, PA, Spring semester.
- 2011 **IPM principles, veterinary IPM and biological control, and Florida plant pathogens**. Guest lecture for Agricultural and Environmental Sustainability: Issues and Research (AGR/SWS 6932), University of Florida, Gainesville, FL.
- 2010 **IPM principles, veterinary IPM and biological control, and Florida plant pathogens**. Guest lecture for Agricultural and Environmental Sustainability: Issues and Research (AGR/SWS 6932). University of Florida, Gainesville, FL.

MEDIA

- 2022 **Article**, "How can you protect dogs, cats, and horses from ticks? Watch these free webinars," PennLive, University Park, PA (May 11, 2022) <https://www.pennlive.com/life/2022/05/how-can-you-protect-dogs-cats-and-horses-from-ticks-watch-these-free-webinars.html>
- 2022 **Interview**, "Will deer-tick virus be the next big epidemic? A new study raises troubling questions," Salon (February 22, 2022) <https://www.salon.com/2022/02/22/deer-tick-cases/>
- 2021 **Interview**, "Where to buy legitimate insect repellents," NBS News (June 18, 2021). <https://www.aol.com/where-buy-legitimate-insect-repellents-100012099.html>
- 2021 **Interview**, "Black bears may be major factor in spread of ticks in Pennsylvania: Pennsylvania State University research," PennLive, University Park, PA (December 16, 2021) <https://www.pennlive.com/life/2021/12/black-bears-may-be-major-factor-in-spread-of-ticks-in-pennsylvania-penn-state-research.html>
- 2020 **Article**, "Ticks – biology, threats, protections, are focus of 10-week Pennsylvania State University webinar series," PennLive, PA Township News, July 2020 <http://www.psats.org/subpage.php?pageid=IntheCurrentTwpNews>
- 2020 **Interview**, "Here's how you can protect yourself from ticks," Newspaper, Reading Eagle, Reading, PA. (August 21, 2020). https://www.readingeagle.com/living/heres-how-you-can-protect-yourself-from-ticks/article_c29c50c0-e252-11ea-87ce-cfdb53967998.html
- 2020 **Interview**, "Need to worry about 'murder hornets' in PA.? No, But Here are Bugs to Know About This Summer," Newspaper, Centre Daily Times, State College, PA. (May 26, 2020). <https://www.centredaily.com/sports/outdoors/article242898826.html>
- 2019 **Interview**, "Troublesome ticks," Television, WJAC-TV, Johnstown, PA. (September 23, 2019).
- 2019 **Interview**, "Mosquitoes, ticks thrive in damp weather," Internet, TNOnline, Lehighton, PA. (June 1, 2019). <https://www.tnonline.com/mosquitoes-ticks-thrive-damp-weather>
- 2019 **Article**, "New records show spread of parasitic deer flies Across the US," Internet, Pennsylvania State University News, University Park, PA. (May 30, 2019). <https://news.psu.edu/story/576201/2019/05/30/research/new-records-show-spread-parasitic-deer-flies-across-us>
- 2019 **Interview**, "Experts: Lyme disease numbers to level off," Newspaper, The Daily Item, Sunbury, PA. (May 9, 2019). https://www.pennlive.com/news/2019/05/pa-lyme-disease-cases-appear-to-hit-plateau-but-that-shouldnt-change-your-outdoors-routine.html?outputType=amp&_twitter_impression=true
- 2019 **Interview**, "Asian longhorned tick," Internet, Agriculture.Com/Successful Farming, Des Moines, Iowa. (April 15, 2019). <https://www.agriculture.com/podcast/successful-farming-radio-podcast/asian-longhorned-tick>
- 2019 **Interview**, "Farmer to farmer: We have an abnormal amount of flies and huge spiders. How do I kill them?," Journal or Magazine, Farm and Ranch Living, Milwaukee, WI. (April 2019).

- 2019 **Interview**, "Tick awareness and prevention for hunters," Journal or Magazine, goHunt, Las Vegas, NV. (March 19, 2019). <https://www.gohunt.com/read/life/tick-awareness-and-prevention-for-hunters#gs.1ov5el>
- 2019 **Interview**, "Winter chill won't affect mosquitoes, ticks," Newspaper, The Citizen's Voice, Wilkes-Barre, PA. (March 2, 2019). <https://m.citizensvoice.com/news/winter-chill-won-t-affect-mosquitoes-ticks-1.2452556>
- 2019 **Interview**, "Study tracks the rise of mange in black bears," Internet, On the Pulse. (March 2019).
- 2018 **Interview**, "Asian tick That clones itself could spread in the US, study says," Television, CNN. (December 13, 2018). <https://www.cnn.com/2018/12/13/health/asian-longhorned-tick-us-spread-study/index.html>
- 2018 **Interview**, "What you need to know about the new invasive tick species found in Centre County," Newspaper, Centre Daily Times, State College, PA. (August 2, 2018).
- Interview**, "Interview for TV spot on the Asian Longhorned Tick," Television, WJAC-TV, State College, PA. (August 1, 2018).
- 2018 **Interview**, "Invasive tick species found in neighboring states likely in PA, Experts Say," Newspaper, The Times Tribune, Scranton, PA. (July 23, 2018).
- 2018 **Interview**, "Black bears are going bald. It might be even worse than it looks," Newspaper, Washington Post, Washington, D.C. (June 1, 2018). https://www.washingtonpost.com/news/animalia/wp/2018/06/04/black-bears-are-going-bald-it-might-be-even-worse-than-it-looks/?utm_term=.23710c8c70da
- 2018 **Interview**, "Mange in bears in Pennsylvania reaches epidemic rate, study launched," Internet, Lancaster Online, Lancaster, PA. (May 21, 2018). https://lancasteronline.com/sports/outdoors/mange-in-bears-in-pennsylvania-reaches-epidemic-rate-study-launched/article_8f7d9672-59f6-11e8-a3fc-83ca8aa64243.html
- 2018 **Interview**, "Study aims to find cause, solution for mange in Pennsylvania's black bears," Newspaper, The York Dispatch, York, PA. (May 6, 2018). <https://www.yorkdispatch.com/story/sports/outdoors/2018/05/06/study-aims-find-cause-solution-mange-pa-black-bears/584740002/>
- 2018 **Interview**, "Mange epidemic in Pennsylvania bears under attack by research team," Newspaper, Penn Live. (May 1, 2018). https://www.pennlive.com/wildaboutpa/2018/05/mange_epidemic_in_pennsylvania.html
- 2018 **Interview**, "Introduction to ticks and tick-borne disease," Radio, 98.7 The FREQ, State College, PA.

COMMUNITY SERVICE AND OUTREACH ACTIVITIES

- 2019 **Great Insect Fair Booth**, Entomology Department, Pennsylvania State University.
- 2018 **Great Insect Fair Booth**, Entomology Department, Pennsylvania State University
- 2016 **Volunteer Science Fair Judge**. Prince George's County Public Schools, MD.
- 2014-2015 **Volunteer Veterinary Assistant**. Operation Catnip, University of Florida College of Veterinary Medicine, Gainesville, FL.
- 2012-2015 **Volunteer Animal Care Provider**. Alachua County Humane Society, Gainesville, FL.
- 2012-2015 **Volunteer Science Fair Judge**. School Board of Alachua County, FL.
- 2014 **Building student rapport: Is it possible?** Presentation at the University of Florida. Teaching Assistant Orientation, Gainesville, FL.

- 2014 **What is an insect?** Outreach event, High Springs Community School Kindergarten classes. High Springs, FL.
- 2014 **Insect ecology.** Outreach event, High Springs Community School Gifted 1st and 2nd grade classes. High Springs, FL.
- 2013 **What is an insect?** Outreach event, Little Pioneers Pre-school, High Springs, FL.
- 2012 **Strategies for new teaching assistants: Moving from surviving to thriving.** Panel at the College of Agriculture and Life Science Teaching Symposium, Gainesville, FL.

WORKING GROUPS AND GRANT PANELS

- 2021 **Grant Reviewer**, Peer Review Medical Research Program, United States Department of Defense.
- 2021 **Grant Ad-hoc Reviewer**, Small Business Innovation Research Animal Production and Protection Phase II program, United States Department of Agriculture.
- 2020 **Grant Panel Member**, Tick-Borne Disease Research Program (TBDRP), United States Department of Defense.
- 2021-Present **Member**, Tick-borne Disease Working Group, Changing Dynamics of Tick Ecology, Personal Protection, and Control subcommittee. Tick-borne Disease Working Group. Department of Health and Human Services.
- 2021-Present **Member**, Tick IPM Working Group, IPM Institute of America.
- 2020-Present **Member**, Tick Technical Working Group, National Ecological Observatory Network (NEON).
- 2019 -Present **Member**, Wildlife Disease Working group, The Wildlife Society.

EDITORIAL SERVICE

- 2022-Present **Associate Editor**, Journal of Medical Entomology, Entomological Society of America.
- 2021-Present **Associate Editor**, Pest Management Science, Society of Chemical Industry.
- 2021-Present **Associate Editor**, Journal of Wildlife Management, The Wildlife Society.
- 2021-Present **Associate Editor**, Medical and Veterinary Entomology, Royal Entomological Society.
- 2020-Present **Subject Editor**, Journal of Insect Science, Entomological Society of America.
- 2021 **Guest Editor**, Special Collection: IPM of fly pests in animal agriculture, Journal of Integrated Pest Management, Entomological Society of America.
https://academic.oup.com/jipm/pages/special_collections
- 2020 **Co- guest Editor**, Collection: Protocols in medical and veterinary entomology, Journal of Insect Science, Special, Entomological Society of America.
<https://academic.oup.com/jinsectscience/pages/protocols-in-medical-and-veterinary-entomology>
- 2019- Present **Associate Editor**, Journal of Economic Entomology, Entomological Society of America.

2016-2019 **Editorial Board Member**, Journal of Integrated Pest Management. Entomological Society of America.

OTHER PROFESSIONAL SERVICE

2022-Present **Initiative leader**, “MUVE-ing together: Connecting entomologists, wildlife biologists, and ecologists to strengthen One Health approaches focusing on human and animal parasites.” Medical, Urban, and Veterinary Entomology Section, Entomological Society of America.

2022-2024 **Chair**, Multistate Group: S1076: Fly management in animal agricultural systems and impacts on animal health and food safety

2021-Present **Member and station representative**, Multistate Group: NE1443: Biology, ecology and management of emerging disease vectors

2020-Present **Committee Member**. Tick Technical Working Group. National Ecological Observatory Network (NEON).

2020-Present **Reviewer**, Early Career Professional Extension Award, Entomological Society of America.

2018-2021 **Vice-chair**, Multistate Group: S1076: Fly management in animal agricultural systems and impacts on animal health and food safety

2018-2020 **Early Career Professionals Committee**, Medical, Veterinary, and Urban Entomology Section representative. Entomological Society of America.

2018 **Committee Member**, Pennsylvania One Health Task Force, Pennsylvania Department of Agriculture.

2017 **Governing Board Task Force, Publications**, Entomological Society of America

2015 - 2017 **Student Transition and Early Professionals Committee**, Member. Entomological Society of America

2014 – 2015 **Student Affairs Committee Representative**, Southeastern Branch Representative to the Entomological Society of America.

2014 – 2015 **University Student Conduct Committee Graduate Student Representative**, Dean of Students office, University of Florida, Gainesville, FL.

2012 – 2014 **Student Affairs Committee Representative**, Florida Representative to the Southeastern Branch of the Entomological Society of America.

2011 – 2012 **Fundraising Director**, Entomology and Nematology Student Organization (ENSO), University of Florida, Gainesville, FL.

UNIVERSITY SERVICE

<i>Year</i>	<i>Service Type</i>	<i>Service Level</i>
2022	Faculty Search Committee	Dept. of Entomology
2022	Extension Educator Search Committee	College of Agriculture
2022-Present	Instructional Committee	Dept. of Entomology
2021	Instructional Peer Review	Dept. of Entomology
2020-Present	Bed Bugs in Poultry Facilities Task Force	College of Agriculture
2020-2021	Awards Committee	Dept. of Entomology
2019	Instructional Peer Review	Dept. of Entomology
2019	Faculty Search Committee (Forestry)	College of Agriculture

2019	Faculty Search Committee	Dept. of Entomology
2019-Present	Vector-Borne Disease Team, Pennsylvania State University Extension, Team Leader	College of Agriculture
2018	Instructional Peer Review	Dept. of Entomology
2018	Social Committee	Dept. of Entomology
2018	Technician Selection Committee	Dept. of Entomology
2018	RAIN Grant Reviewer	College of Agriculture
2018-2019	McDowell Lecture Selection Committee	College of Agriculture
2018-2019	Schreyer Honors College Selection Committee	University
2017-2019	Graduate Student Selection Committee	Dept. of Entomology

CONSULTING

2018-2020 **Expert Consultant**, Fly nuisance lawsuit. McGuireWoods.

GRADUATE STUDENTS ADVISED

<i>Student</i>	<i>Degree</i>	<i>Institution</i>	<i>Role</i>	<i>Expected Graduation</i>	<i>Employment</i>
Carson Coriell	MSc – Wildlife	U. Maryland	Special Member	2024	
Jesse Evans	MSc – Entomology	Pennsylvania State University	Chair	2023	
Sydney Majowicz	PhD – MCIBS ^a	Pennsylvania State University	External Member	2025	
Jessica Brown	PhD – Ecology ^c	Pennsylvania State University	Chair	2024	
Hannah Tiffin	PhD – Entomology & INTAD ^b	Pennsylvania State University	Chair	2022 - Completed	USDA, ARS
Grace Hummell	MSc – Wildlife	U. Maryland	Special Member	2021 - Completed	PhD Candidate
Alex Pagac	MSc – Entomology	Pennsylvania State University	Chair	2020 - Completed	USDA, ARS
Amanda Jones	PhD – Entomology	Pennsylvania State University	Member	2020 - Completed	U.S. Army
Bailey Baisel	MSc – Animal Science	Pennsylvania State University	External Member	2020 - Completed	PhD Candidate

^a Molecular, Cellular, and Integrated Biosciences (intercollege graduate degree program)

^b International Agricultural development dual-degree title

^c Intercollege graduate degree program

UNDERGRADATES RESEARCHERS ADVISED

(Underlined, bold, and italics denotes undergraduate author)

<i>Student</i>	<i>Program</i>	<i>Thesis</i>	<i>Project/Publication</i>
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Jesse Evans	WF ^a	Independent Study	<u>Evans, J. R.</u> , K. C. Poh, M. Skvarla, E. T. Machtinger. 2021. The Keds are alright: community collection of ticks (Ixodidae: Ixodidae) and keds (Diptera: Hippoboscidae) from hunter-harvested deer. <i>Annals of the Entomological Society of America</i> 114: 686-693 http://doi.org/10.1093/aesa/saab003
Olivia Ashbaugh	VBS ^b	Schreyers Honors College Thesis	<u>Ashbaugh, O.</u> , W. Stanier, D. Smarsh, and E. T. Machtinger. Effect of diet on development success of house flies in equine manure. <i>In development</i> .
Chloe Roberts *Funded by Undergraduate Erickson Discovery Grant	VBD ^b	Schreyers Honors College Thesis	<u>Roberts, C. E.</u> , E. Burgess, IV, T. M. Miller, <u>A. Wise, C. J. Dickerson</u> , M. Skvarla, A. Y. Li, and E. T. Machtinger. 2022. Tissue-damaging marking methods do not affect tick burdens on field captured <i>Peromyscus</i> spp. <i>Wildlife Society Bulletin</i> . <i>Accepted</i>
Anna Marie Wise		Independent study	
Cera Dickerson	WF ^a	Independent study	
Montana Riggs	AS ^c	Independent study	Pagac, A. A., C. J. Geden, <u>M. R. Riggs</u> , E. R. Burgess, IV, and E. T. Machtinger. Filth fly parasitoid (Hymenoptera: Pteromalidae) monitoring techniques and species composition in poultry layer facilities. <i>Journal of Medical Entomology</i> . <i>Accepted</i>
Robert Cockerill	IP ^d	Independent study	Tiffin, H.S., <u>R. Cockerill</u> , J. Brown, and E.T. Machtinger. 2020. Protocol for efficient digestion of skin tissue samples to determine <i>Sarcoptes scabiei</i> mite density. <i>Journal of Insect Science</i> . 20 https://doi.org/10.1093/jisesa/ieaa105
Taylor Miller	WF ^a	Independent study	<u>Brown, J.E.</u> , <u>T.M. Miller</u> , E.T. Machtinger. 2020. Reduction of blacklegged tick (<i>Ixodes scapularis</i> , Acari: Ixodidae) burdens on white-footed mice (<i>Peromyscus leucopus</i>) with use of tick control tubes in Pennsylvania, USA. <i>Journal of Applied Entomology</i> . 144: 542-545 https://doi.org/10.1111/jen.12758
Jessica Brown	WF ^a	Independent study	<u>Fedele, K.</u> , K.C. Poh, <u>J.E. Brown</u> , A. Jones, L.A. Durden, H.S. Tiffin, A. Pagac, A.Y. Li, and E.T. Machtinger. 2020. Host distribution and pathogen infection of fleas (Siphonaptera) recovered from small mammals in Pennsylvania. <i>Journal of Vector Ecology</i> . 45: 32-44 https://doi.org/10.1111/jvec.12371
Kaila Fedele	VBD ^b	Independent study	
Elizabeth	AS ^c	Independent study	<u>Tuorinsky, E. V.</u> , and E. T. Machtinger. 2019. Behavioral inhibition of the house fly, <i>Musca</i>

Tuorinsky			<i>domestica</i> (Diptera: Muscidae), when exposed to commercial equine fly repellents. Journal of Economic Entomology. doi.org/10.1093/jee/toz243
Grace Hummell			<u>Ryan-Reynolds, P, G. Hummel</u> , E.T. Machtinger, and A.Y. Li. 2018. Development of Nontarget Wildlife Exclusion Devices for Small Mammal Trap Protection. Wildlife Society Bulletin. 42 doi.org/10.1002/wsb.905
Patrick Ryan-Renolds	WE ^c	Independent study	
Caitlyn Taylor	VS ^f	Independent study	<u>Taylor, C.</u> , E.T. Machtinger, and C.J. Geden. 2016. Manure preferences and postemergence learning of two of common filth fly parasitoids, <i>Spalangia cameroni</i> and <i>Muscidifurax raptor</i> (Hymenoptera: Pteromalidae). PLoS One. dx.doi.org/10.1371/journal.pone.0167893

^a Wildlife and Forestry, Pennsylvania State University

^b Veterinary and Biomedical Sciences, Pennsylvania State University

^c Animal Science, Pennsylvania State University

^d Immunology and Parasitology, Pennsylvania State University

^e Wildlife and the Environment, University of Maryland

^f Veterinary Science, University of Florida