

## Mark 'Eric' Benbow

Professor  
Department of Entomology  
Department of Osteopathic Medical Specialties  
Michigan State University  
East Lansing, MI 48824

Cell: (517) 410-92477, Fax: (517) 432-7061  
Email: [Benbow@msu.edu](mailto:Benbow@msu.edu) or [eric.benbow@gmail.com](mailto:eric.benbow@gmail.com)  
Website: [ericbenbow.wixsite.com/website](http://ericbenbow.wixsite.com/website)  
Google Scholar: [Benbow Publications](#)

---

### EDUCATION

**Doctor of Philosophy**, Biology, Aquatic Biology, 1999  
UNIVERSITY OF DAYTON, Dayton, Ohio

**Bachelor of Science**, Biology, Psychology Minor, *cum laude* 1994  
UNIVERSITY OF DAYTON, Dayton, Ohio

### PROFESSIONAL APPOINTMENTS

2021 - Present: **Professor**, Dept. of Entomology and Dept. of Osteopathic Medical Specialties, Michigan State University, E. Lansing, MI  
2015 - 2021: **Associate Professor**, Dept. of Entomology and Dept. of Osteopathic Medical Specialties, Michigan State University, E. Lansing, MI  
2013 - Present: **Adjunct Professor**, Dept. of Entomology, Texas A&M University, College Station, TX  
2014 - 2015: **Assistant Professor**, Dept. of Entomology and Dept. of Osteopathic Medical Specialties, Michigan State University, E. Lansing, MI  
2008 - 2013: **Assistant Professor**, Dept. of Biology, University of Dayton, Dayton, OH  
2008 - 2013: **Adjunct Professor**, Dept. of Entomology, Michigan State University, E. Lansing, MI  
2008 - 2009: **Adjunct Professor**, Dept. of Entomology, Ohio State University, Columbus, OH  
2006 - 2008: **Assistant Professor (fixed-term)**, Dept. of Entomology, Michigan State University, E. Lansing, MI  
2005 - 2006: **Assistant Professor**, Dept. of Biology, DePauw University, Greencastle, IN  
2003 - 2005: **Visiting Assistant Professor**, Dept. of Entomology, Michigan State University, E. Lansing, MI  
2001 - 2003: **Visiting Research Associate**, Dept. of Entomology, Michigan State University, E. Lansing, MI  
1999 - 2008: **Adjunct Research Assistant Professor**, Dept. of Biology, University of Dayton, Dayton, OH  
1994 - 1999: **Graduate Research and Teaching Assistant**, Dept. of Biology, University of Dayton, Dayton, OH  
1992 - 1994: **Undergraduate Research Assistant**, Dept. of Biology, University of Dayton, Dayton, OH

**RESEARCH INTERESTS** — *aquatic entomology/ecosystems; microbial-insect community interactions; disease and carrion decomposition ecology*

Research interests involve basic and applied multiscale and multidisciplinary studies of insect-microbial community interactions. Major efforts have been in the following areas: 1) aquatic entomology, ecology and energetics; 2) insect and microbial community ecology of aquatic ecosystems; 3) insect microbiomes; 4) ecology of Buruli ulcer disease; and, 4) carrion decomposition and forensic ecology.

---

### Links to CV Sections

[Publications](#), [Grants](#), [Teaching](#), [Professional Experiences](#), [Seminars](#), [Service](#), [Outreach](#), [Presentations](#),  
[COVID Impact Statement](#)

## PUBLICATIONS

(^ = Benbow as senior/corresponding author on that paper; \*Student/Postdoc/Visiting Scholar author)

### *Submitted Papers, Chapters, and Books*

1. ^\*Larson, CE, \*P Engelken, DG McCullough, ^**ME Benbow**. 2022. Emerald ash borer invasion. Of riparian forests alters organic matter and bacterial subsidies to south Michigan headwater streams. (*Submitted to Biological Invasions*)
2. Butterworth, NJ, **ME Benbow**, PS Barton. 2022. The ephemeral resource patch concept. (*submitted to Biological Reviews*)
3. von Hoermann, C, **ME Benbow**, A-M Rottler-Hoermann, T Lackner, D Sommer, \*JP Receveur, C Bäessler, M Heurich, J Müller. 2021. Factors influencing carrion communities are only partially consistent with deadwood necromass. (*submitted to Insects*)
4. ^\*Kaszubinski, SF, \*JP Receveur, \*E Nestle, JL Pechal, ^**ME Benbow**. 2022. Microbial community succession of submerged bones in an aquatic habitat (*in revisions at Journal of Forensic Science*)
5. \*Englmeier, J, O Mitesser, **ME Benbow**, T Hothorn, C von Hoermann, C Benjamin, U Fricke, C Ganuza, M. Haensel, S Redlich, R Riebl, S Rojas-Botero, T Rummler, I Steffan-Dewenter, E Stengel, C Tobisch, J Uhler, L Uphus, J Zhang, J Müller. 2021. Diverse effects of climate, land use and insects on dung and carrion decomposition. (*in revisions at Ecosystems*)
6. \*Englmeier, J, C von Hoermann, D Rieker, **ME Benbow**, C Benjamin, U Fricke, C Ganuza, M. Haensel, T Lackner, S Redlich, R Riebl, S Rojas-Botero, J-A Slamon, D Sommer, I Steffan-Dewenter, C Tobisch, J Uhler, L Uphus, J Zhang, J Müller. 2021. Land use affects diversity, but climate affects specialization of dung beetle assemblages. (*submitted to Ecography*)
7. Pechal, JL, **ME Benbow**. 2022. Forensic Entomology. *In: Handbook of Forensic Pathology*, 3<sup>rd</sup> Edition. M Hansen, E Brooks, J Prahlow (Eds). CAP Press Publications (*submitted*).
8. \*Receveur, JP, \*A Doretto, EA Baker, D Larson, J. Bauman, R Walquist, **ME Benbow**, KT Scribner. 2022. Abiotic effects on macroinvertebrate and larval fish drift dynamics over multiple recruitment years. (*in revisions at Hydrobiologia*)
9. Houtz, JL, \*JP Receveur, JL Pechal, **ME Benbow**, BM Horton, JR Wallace. 2022. Starling gut microbial community changes through decomposition: a potential approach for wildlife forensics (*submitted to Forensic Science International*)
10. Cammack, JA, JL Pechal, ST Sweet, TL Crippen, AH Knap, **ME Benbow**, JK Tomberlin. Postmortem microbiomes and volatile organic compound emissions during salmon carrion decomposition. (*submitted to Frontiers in Physiology*)
11. \*Lang, JM, RW McEwan, ^**ME Benbow**. Coupled roles of bottom-up and top-down effects throughout stream microbial biofilm succession. (*submitted to ISME J*)
12. ^**Benbow, ME**, ^JR Wallace, L Roach. The role of depth and temperature in structuring spongillafly, *Climacia areolaris* Hagen (Neuroptera: Sisyridae) populations in a temperate quarry. (*submitted to Great Lakes Entomologist*)

### Peer-reviewed Publications

2022

---

1. \*Gruppuso, L, A Doretto, E Falasco, S Fenoglio, M Freppaz, **ME Benbow**, F Bona. 2022. Flow intermittency affects leaf decomposition and benthic consumer communities of Alpine streams: a case study along the Po River. *Water* 14:258 [doi.org/10.3390/w14020258](https://doi.org/10.3390/w14020258)

2021

---

2. \*Naree, S, **ME Benbow**, G Suwannapong, JD Ellis. 2021. Mitigating *Nosema ceranae* infection in western honey bee (*Apis mellifera*) workers using propolis collected from honey bee and stingless bee (*Tetrigona apicalis*). *Journal of Invertebrate Pathology* [185:107666](#). [Doi:10.1016/j.jip.2021.107666](#)
3. \*Doretto, A, \*JP Receveur, EA Baker, **ME Benbow**, KT Scribner. 2021. Macroinvertebrate metacommunities along a river continuum: the roles of spatial scale and local habitat filters. *Rivers, Research & Applications* 1-11 <http://doi.org/10.1002/rra.3889>
4. Dhungel, L, **ME Benbow**, HR Jordan. 2021. Linking the *Mycobacterium ulcerans* environment to Buruli ulcer disease: progress and challenges. *One Health* 13:100311 <doi.org/10.1016/j.onehlt.2021.100311>
5. \*Receveur, JP, \*A Bauer, JL Pechal, \*SC Picq, M Dogbe, HR Jordan, AW Rakestraw, K Fast, M Sandel, C Chevillon, J-F Guégan, JR Wallace, ^**ME Benbow**. 2021. A need for null models in understanding disease transmission: a case study of *Mycobacterium ulcerans* (Buruli ulcer disease). *FEMS Microbiology Reviews*: fuab045 <doi.org/10.1093/femsre/fuab045>
6. Javan, GT, **ME Benbow**, TK Ralebitso-Senior. 2021. Editorial: life and death: new perspectives and application in forensic science. *Frontiers in Ecology and Evolution* 9:725046. <doi:10.3389/fevo.2021.725046>
7. Wallace, JR, \*JP Receveur, PH Hutchinson, \*SF Kaszubinski, HA Wallace, **ME Benbow**. 2021. Microbial community succession on submerged vertebrate carcasses in a tidal river habitat: implications for aquatic forensic investigations. *Journal of Forensic Sciences* 00:1-12 <doi:10.1111/1556-4029.14869>
8. Charabidze, D, A Grzywacz, PS Barton, S Trumbo, JT Costa, **ME Benbow**, S Matuszewski. 2021. Growing under harsh conditions: convergence of social strategies in carrion breeding insects. *BioScience*: biab068, <https://doi.org/10.1093/biosci/biab068>
9. \*Naree, S, JD Ellis, **ME Benbow**, G Suwannapong. 2021. Experimental *Nosema ceranae* infection is associated with microbiome changes in the midguts of four species of *Apis* (honey bees). *Journal of Apicultural Research* 1-13: <https://doi.org/10.1080/00218839.2021.1987086>
10. von Hoermann, C, T Lackner, D Sommer, M Heurich, **ME Benbow**, J Müller. 2021. Carcasses at fixed locations host a higher diversity of necrophilous beetles. *Insects* 12:42 <doi.org/10.339/insects12050412>
11. \*Naree, S, JD Ellis, **ME Benbow**, G Suwannapong. 2021. The use of propolis for preventing and treating *Nosema ceranae* infection in Western honey bee (*Apis mellifera* Linnaeus, 1787) workers. *Journal of Apiculture Research* Published Online: <https://doi.org/10.1080/00218839.2021.1905374>

2020

---

12. Pittner, S, V Bugelli, **ME Benbow**, A Zissler, B Ehrenfellner, CP Campobasso, R Zehner, L Lutz, FC Monticelli, C Staufer, K Helm, V Pinchi, \*JP Receveur, J Geissenberger, P Steinbacher, J Amendt. 2020. A field study to investigate the applicability of advanced stage PMI estimation methods for buried bodies. *PLoS ONE* 15(12):e0243395 <https://doi.org/10.1371/journal.pone.0243395>
13. Lamberti, GA, NM Levesque, MA Brueseke, DT Chaloner, **ME Benbow**. 2020. Animal mass mortalities in aquatic ecosystems: how common and influential? *Frontiers in Ecology and Evolution* 8:343. [Doi:10.3389/fevo.2020.602225](doi:10.3389/fevo.2020.602225) (invited)
14. \*Kaszubinski, SF, JL Pechal, \*K Smiles, CJ Schmidt, HR Jordan, MH Meek, ^**ME Benbow**. 2020. Dysbiosis in the dead: human postmortem microbiome beta-dispersion as an indicator of manner and cause of death. *Frontiers in Microbiology* 11:555347 [doi: 10.3389/fmicb.2020.555347](doi:10.3389/fmicb.2020.555347)
15. Dillard, J, **ME Benbow**. 2020. From symbionts to communities: how wood resources have shaped insect sociality. *Frontiers in Ecology and Evolution* 8:172 <doi.org/10.3389/fevo.2020.00173>
16. Pearson, AL, JL Pechal, Z Lin, **ME Benbow**, CJ Schmidt, S Mavoia. 2020. Associations detected between measures of neighborhood environmental conditions and human microbiome diversity. *Science of the Total Environment* 747:141029 <doi.org/10.1016/j.scitotenv.2020.141029>

17. McCabe, RA, \*JP Receveur, JL Houtz, KL Thomas, **ME Benbow**, JL Pechal, JR Wallace. 2020. The role of ectoparasitic louse flies in microbial dispersal by migratory raptors. *PLoS ONE* 15(6):e0234050 [doi.org/10.1371/journal.pone.0234050](https://doi.org/10.1371/journal.pone.0234050)
18. \*Kaszubinski, SF, JL Pechal, CJ Schmidt, HR Jordan, ^**ME Benbow**, MH Meek. 2020. Evaluating bioinformatic pipeline performance for forensic microbiome analysis. *Journal of Forensic Sciences* 65:513-525 [doi.org/10.1111/1556-4029.14213](https://doi.org/10.1111/1556-4029.14213)
19. \*Kaszubinski, SF, \*JP Receveur, \*B Wydra, \*K Smiles, JR Wallace, \*NJ Babcock, \*CR Weatherbee, ^**ME Benbow**. 2020. Cold case experiment demonstrates the potential utility of aquatic microbial community assembly in estimating a postmortem submersion interval. *Journal of Forensic Sciences* 65:1210-1220. [doi:10.1111/1556-4029.14303](https://doi.org/10.1111/1556-4029.14303) (*JFS Editors' 2020 Noteworthy Article*)
20. Stiegler, J, C von Hoermann, J Müller, **ME Benbow**, M Heurich. 2020. Scavengers in a temperate forest ecosystem – exemplary camera trap footage. *Bulletin of the Ecological Society of America* e01688 [doi.org/10.1002/bes2.1688](https://doi.org/10.1002/bes2.1688)
21. Bump, JK, Barton, PS, MJ Evans, CN Foster, JL Pechal, MM Quaggiotto, **ME Benbow**. 2020. Echoing the need to quantify carrion biomass production. *Trends in Ecology and Evolution* 35:92-94. [doi.org/10.1016/j.tree.2019.11.003](https://doi.org/10.1016/j.tree.2019.11.003)
22. ^**Benbow, ME**, \*JP Receveur, GA Lamberti. 2020. Death and decomposition in aquatic ecosystems. *Frontiers in Ecology and Evolution* 8(17):[doi:10.3389/fevo.2020.00017](https://doi.org/10.3389/fevo.2020.00017)
23. Stiegler, J, C von Hoermann, J Müller, **ME Benbow**, M Heurich. 2020. Carcass introduction for scavenger conservation in a temperate forest ecosystem. *Ecosphere* 11(4):e03063 [doi:10.1002/ecs2.3036](https://doi.org/10.1002/ecs2.3036)
24. \*Larson, CE, JL Pechal, BS Gerig, DT Chaloner, GA Lamberti, ^**ME Benbow**. 2020. Microbial community response to a novel salmon resource subsidy. *Frontiers in Ecology and Evolution* 7:505. [doi.org/10.3389/fevo.2019.00505](https://doi.org/10.3389/fevo.2019.00505) (*invited*)
25. \*Engelkan, PJ, **ME Benbow**, DG McCullough. 2020. Legacy effects of emerald ash borer on riparian forest vegetation and structure. *Forest Ecology and Management* 457:117684 [doi.org/10.1016/j.foreco.2019.117684](https://doi.org/10.1016/j.foreco.2019.117684)
26. \*Babcock, NJ, JL Pechal, ^**ME Benbow**. 2020. Adult blow fly (Diptera: Calliphoridae) community structure across urban-rural landscapes in Michigan, USA. *Journal of Medical Entomology* 57(3):705-714 [doi.org/10.1093/jme/tjz246](https://doi.org/10.1093/jme/tjz246)
27. \*Receveur, JP, S Fenoglio, ^**ME Benbow**. 2020. An initial assessment of insect microbiomes from Italian alpine stream environments. *Hydrobiologia* 847:331-344. [doi.org/10.1007/s10750-019-04097-w](https://doi.org/10.1007/s10750-019-04097-w)

2019

---

28. Pechal, JL, **ME Benbow**, AW Kamng'ona, A Safalaoh, K Masamba, J Kang'ombe. 2019. The need for alternative insect protein in Africa. *Annals of the Entomological Society of America* saz046, [doi: 10.1093/aesa/saz046](https://doi.org/10.1093/aesa/saz046) (*invited*)
29. Barton, PS, MJ Evans, CN Foster, JL Pechal, JK Bump, MM Quaggiotto, **ME Benbow**. 2019. Out of sight, out of mind? Towards quantifying carrion biomass in ecosystems. *Trends in Ecology and Evolution* 34:950-961. [doi.org/10.1016/j.tree.2019.06.001](https://doi.org/10.1016/j.tree.2019.06.001)
30. Uthawarapong, P, **ME Benbow**, G Suwannapong. 2019. First study on the effect of Asiatic honey bee (*Apis cerana*) venom on cutaneous, hepatic and renal rat tissues. *Journal of Apicultural Research* 58:764-771. [DOI:10.1080/00218839.2019.1641382](https://doi.org/10.1080/00218839.2019.1641382)
31. Peng, Bo-Yu, Y Su, Z Chen; J Chen, X Zhou; **ME Benbow**, C Criddle, W-M Wu, Y Zhang. 2019. Biodegradation of polystyrene by dark (*Tenebrio obscurus*) and yellow (*Tenebrio molitor*) mealworms (Coleoptera: Tenebrionidae). *Environmental Science and Technology* 53:5256-5265. [doi.org/10.1021/acs.est.8b06963](https://doi.org/10.1021/acs.est.8b06963)

32. Burcham, ZM, JL Pechal, CJ Schmidt, JL Bose, JW Rosch, **ME Benbow**, HR Jordan. 2019. Total RNA analysis of bacterial community structural and functional shifts throughout vertebrate decomposition. *Journal of Forensic Sciences* 64:1707-1719 [doi.org/10.1111/1556-4029.14083](https://doi.org/10.1111/1556-4029.14083)
33. Burcham, ZM, JL Pechal, CJ Schmidt, JL Bose, JW Rosch, **ME Benbow**, HR Jordan. 2019. Bacterial community succession, transmigration and differential gene transcription in a controlled, vertebrate decomposition model. *Frontiers in Microbiology* 10:745 [doi.org/10.3389/fmicb.2019.00745](https://doi.org/10.3389/fmicb.2019.00745)
34. ^Pechal, JL, TL Crippen, JA Cammack, JK Tomberlin, ^**ME Benbow**. 2019. Microbial communities of salmon resource subsidies and associated necrophagous consumers during decomposition: potential cross-ecosystem microbial dispersal. *Food Webs* 19:e00114 [doi.org/10.1016/j.fooweb.2019.e00114](https://doi.org/10.1016/j.fooweb.2019.e00114) (*invited*)
35. Zhang, Y, JL Pechal, CJ Schmidt, HR Jordan, WW Want, **ME Benbow**, S-H Sze, AM Tarone. 2019. Machine learning performance in a microbial molecular autopsy context: A cross-sectional postmortem human population study. *PLoS ONE* 14(4):e0213829 [doi.org/10.1371/journal.pone.0213829](https://doi.org/10.1371/journal.pone.0213829)
36. Burcham, ZM, CJ Schmidt, JL Pechal, CP Brooks, JW Rosch, **ME Benbow**, HR Jordan. 2019. Detection of critical antibiotic resistance genes through routine microbiome surveillance. *PLoS ONE* 14(3): e0213280 [doi.org/10.1371/journal.pone.0213280](https://doi.org/10.1371/journal.pone.0213280)
37. ^Pearson, AL, A Rzotkiewicz, JL Pechal, CJ Schmidt, HR Jordan, A Zwickle, ^**ME Benbow**. 2019. Initial evidence of the relationship between the human postmortem microbiome and neighborhood blight and greening efforts. *Annals of the American Association of Geographers* 109:958-978. [Doi:10.1080/24694452.2018.1519407](https://doi.org/10.1080/24694452.2018.1519407)
38. Javan, GT, SJ Finley, S Tuomistor, A Hall, **ME Benbow**, D Mills. 2019. An interdisciplinary review of the thanatomicrobiome in human decomposition. *Forensic Science, Medicine and Pathology* 15(1):75-83. [doi.org/10.1007/s12024-018-0061-0](https://doi.org/10.1007/s12024-018-0061-0)
39. ^**Benbow, ME**, PS Barton, MD Ulyshen, JC Beasley, TL DeVault, MS Strickland, JK Tomberlin, HR Jordan, JL Pechal. 2019. The necrobiome: the community of organisms associated with death and decomposition in ecosystems. *Bulletin of the Ecological Society of America* 100: e01454, <https://doi.org/10.1002/bes2.1454>
40. ^**Benbow, ME**, PS Barton, MD Ulyshen, JC Beasley, TL DeVault, MS Strickland, JK Tomberlin, HR Jordan, JL Pechal. 2019. Necrobiome framework for bridging decomposition ecology of autotrophically and heterotrophically-derived organic matter. *Ecological Monographs* 89(1):e01331. [doi.org/10.1002/ecm.1331](https://doi.org/10.1002/ecm.1331)

2018

---

41. The National Academies of Sciences, Engineering and Medicine. 2018. Review of the Edwards Aquifer Habitat Conservation Plan: Report 3. Committee to Review Edwards Aquifer Habitat Conservation Plan. Water Science and Technology Board, Division on Earth and Life Studies. The National Academies of Sciences, Engineering and Medicine. 164 pg. The National Academies Press, Washington D.C. (**ME Benbow** as a member of 12 scientist committee that authored this report)
42. Yang, S-S, W Wu, AW Brandon; H-Q Fan, JP Receveur, Y Li, Z-Y Wang, R Fan, RL McClellan, S-H Gao, D Ning, DH Phillips, B-Y Peng, H Wang, S-Y Cai, P Li, W-W Cai, L-Y Ding, J Yang, J Ren, Y-L Zhang, J Gao, D Xing, N-Q Ren, RM Waymouth, J Zhou, H-C Tao, CJ Picard, **ME Benbow**, CS Criddle. 2018. Ubiquity of polystyrene digestion and biodegradation within yellow mealworms, larvae of *Tenebrio molitor* Linnaeus (Coleoptera: Tenebrionidae). *Chemosphere* 212:262-271 [doi.org/10.1016/j.chemosphere.2018.08.078](https://doi.org/10.1016/j.chemosphere.2018.08.078)
43. \*McNeish, RE, **ME Benbow**, RW McEwan. 2018. Riparian invasion of *Lonicera maackii* influences throughfall chemistry and rainwater availability. *Ecological Restoration* 33(5):1021-1030. [doi.org/10.1007/s11284-018-1620-2](https://doi.org/10.1007/s11284-018-1620-2)
44. ^Pechal, JL, CJ Schmidt, HR Jordan, ^**ME Benbow**. 2018. A large-scale survey of the postmortem human microbiome, and its potential to provide insight into the living health condition. *Nature Scientific Reports* 8:5724 [doi:10.1038/s41598-018-23989-w](https://doi.org/10.1038/s41598-018-23989-w) (*Media coverage by Live Science*,

- Michigan NPR) [Top 100 read articles in Scientific Reports, Editor's choice, and Top 100 in Microbiology (#25)]**
45. \*Receveur, JP, JL Pechal, **ME Benbow**, G Donato, T Rainey, JR Wallace. 2018. Changes in larval mosquito microbiota reveal non-target effects of insecticide treatments in hurricane created habitats. *Microbial Ecology* 76:719-728 [doi.org/10.1007/s00248-018-1175-3](https://doi.org/10.1007/s00248-018-1175-3)
  46. Suwannapong, G, S Maksong, M Phainchajoen, **ME Benbow**, C Mayack. 2018. Survival and health improvement of *Nosema* infected *Apis florea* (Hymenoptera: Apidae) bees after treatment with propolis extract. *Journal of Asia-Pacific Entomology* 21(2):437-444. [doi.org/10.1016/j.aspen.2018.02.006](https://doi.org/10.1016/j.aspen.2018.02.006)
  47. Vizza, C, JL Pechal, **ME Benbow**, \*JM Lang, DT Chaloner, SE Jones, GA Lamberti. 2018. Nitrate amendment reduces biofilm biomass and shifts microbial communities in remote, oligotrophic ponds. *Freshwater Science* 37(2):251-263. [doi:10.1086/697897](https://doi.org/10.1086/697897)
  48. Yang, S-S, AM Brandon, JCA Flanagan, J Yang, D Ning, S-Y Cai, H-Q Fan, Z-Y Wang, J Ren, **ME Benbow**, N-Q Ren, RM Waymouth, J Zhou, CS Criddle, W-M Wu. 2018. Biodegradation of polystyrene wastes in yellow mealworms (larvae of *Tenebrio molitor* Linnaeus): factors affecting biodegradation rates and the ability of polystyrene-fed larvae to complete their life cycle. *Chemosphere* 191:979-989 [doi.org/10.1016/j.chemosphere.2017.10.117](https://doi.org/10.1016/j.chemosphere.2017.10.117)
  49. Singh, B, KJ Minick, MS Strickland, K Wickings, TL Crippen, AM Tarone, **ME Benbow**, N Sufirin, JK Tomberlin, JL Pechal. 2018. Temporal and spatial impact of human cadaver decomposition on soil bacterial and arthropod community structure and function. *Frontiers in Microbiology* 8, 2616. [doi:10.3389/fmicb.2017.02616](https://doi.org/10.3389/fmicb.2017.02616)

2017

---

50. \*McNeish, RE, **ME Benbow**, RW McEwan. 2017. Removal of an invasive shrub (*Lonicera maackii*) from a headwater stream riparian zone shifts taxonomic and functional composition of the aquatic biota. *Invasive Plant Science and Management* 10(3):232-246. [doi.org/10.1017/inp.2017.22](https://doi.org/10.1017/inp.2017.22) **(Featured on Cover)(Highlighted in Cambridge Core Blog)**
51. \*Pheukpipoon, T, **ME Benbow**, G Suwannapong. 2017. Detection of *Nosema* spores contamination in commercial bee pollen of *Apis mellifera* in Thailand. *Journal of Apicultural Research* 56(4):376-386. doi:[10.1080/00218839.2017.1327936](https://doi.org/10.1080/00218839.2017.1327936)
52. Pileggi, SM, HR Jordan, JA Clennon, E Whitney, **ME Benbow**, RW Merritt, MD McIntosh, RK Kimbirauskus, PLC Small, D Boakye, C Quayle, J Qi, L Campbell, J Gronseth, E Ampadu, W Opare, LA Waller. 2017. Landscape and environmental influences on *Mycobacterium ulcerans* among aquatic sites in Ghana. *PLoS ONE*: e0176375 doi:10.1371/journal.pone.0176375
53. \*Moore, HE, JL Pechal, **ME Benbow**, FP Drijfhout. 2017. The potential use of cuticular hydrocarbons analysis to age the puparial cases of *Calliphora vicina* and *Lucilia sericata*. *Nature Scientific Reports* 7:1933. [doi.10.1038/s41598-017-01667-7](https://doi.org/10.1038/s41598-017-01667-7)
54. \*Weatherbee, CR, JL Pechal, TI Stamper, **ME Benbow**. 2017. Post-colonization interval estimate using multi-species Calliphoridae larval masses and spatially distinct temperature data sets: a case study. *Insects* 8(2), 40; [doi:10.3390/insects8020040](https://doi.org/10.3390/insects8020040) **Invited**
55. Yuan, Y, Y Zhang, S Fu, T Crippen, D Visi, **ME Benbow**, M Allen, JK Tomberlin, S-H Sze, AM Tarone. 2017. Genome sequence of a *Providencia stuartii* strain isolated from *Lucilia sericata* salivary glands. *Genome Announcements* 5(17), e00250-17, [doi:10.1128/genomeA.00250-17](https://doi.org/10.1128/genomeA.00250-17)
56. The National Academies of Sciences, Engineering and Medicine. 2017. Review of the Edwards Aquifer Habitat Conservation Plan: Report 2. Committee to Review Edwards Aquifer Habitat Conservation Plan. Water Science and Technology Board, Division on Earth and Life Studies. The National Academies of Sciences, Engineering and Medicine. 164 pg. The National Academies Press, Washington D.C. (**ME Benbow** as a member of 12 scientist committee that authored this report)
57. Barton, PS, MJ Evans, JL Pechal, **ME Benbow**. 2017. Necrophilous insect dynamics at small vertebrate carrion in a temperate eucalypt woodland. *Journal of Medical Entomology* 54(4):946-973. [doi:10.1093/jme/tjw242](https://doi.org/10.1093/jme/tjw242)

58. Sanders, ML, HR Jordan, C Serewis-Pond, L Zheng, **ME Benbow**, PLC Small, JK Tomberlin. 2017. *Mycobacterium ulcerans* toxin, mycolactone may enhance host-seeking and oviposition behavior by *Aedes aegypti* (L.) (Diptera: Culicidae). *Environmental Microbiology* 19(5):1750-1760. [doi:10.1111/1462-2920.13629](https://doi.org/10.1111/1462-2920.13629)
59. Pechal, JL, CJ Schmidt, HR Jordan, **ME Benbow**. 2017. Frozen: thawing and its effects on the postmortem microbiome in two pediatric cases. *Journal of Forensic Science* 62(5):1399-1405. [doi: 10.1111/1556-4029.13419](https://doi.org/10.1111/1556-4029.13419)
60. Brundage, A, TL Crippen, B Singh, **ME Benbow**, W Liu, AM Tarone, TK Wood, JK Tomberlin. 2017. Interkingdom cues by bacteria associated with conspecific and heterospecific eggs of *Cochliomyia macellaria* and *Chrysomya rufifacies* (Diptera: Calliphoridae) potentially govern succession on carrion. *Annals of the Entomological Society of America* 110(10):73-82. **Invited** [doi.org/10.1093/aesa/saw090](https://doi.org/10.1093/aesa/saw090)
61. \*Zhu, G, Z Jia, X Yu, K Wu, L Chen, J Lv, **ME Benbow**. 2017. Predictable weathering of puparial hydrocarbons of necrophagous flies for determining the postmortem interval: A field experiment using *Chrysomya rufifacies*. *International Journal of Legal Medicine* 131(3):885-894. [doi: 10.1007/s00414-016-1507-0](https://doi.org/10.1007/s00414-016-1507-0)
62. \*Weatherbee, CR, JL Pechal, **ME Benbow**. 2017. The dynamic maggot mass microbiome. *Annals of the Entomological Society of America* 110(1):45-53. [doi: http://dx.doi.org/10.1093/aesa/saw088](http://dx.doi.org/10.1093/aesa/saw088) **Invited**

2016

---

63. Morris, A, J-F Guégan, **ME Benbow**, H Williamson, PLC Small, C Quaye, D Boakye, RW Merritt, RE Gozlan. 2016. Functional diversity as a new framework for understanding the ecology of an emerging generalist pathogen. *EcoHealth* 13(3): 570-581. [DOI: 10.1007/s10393-016-1140-x](https://doi.org/10.1007/s10393-016-1140-x)
64. Yuan, Y, Y Zhang, S Fu, T Crippen, D Visi, **ME Benbow**, M Allen, JK Tomberlin, S-H Sze, AM Tarone. 2016. Genome sequence of a *Proteus mirabilis* strain, isolated from the salivary glands of larval *Lucilia sericata*. *Genome Announcements* 4 (4), e00672-16 [doi:10.1128/genomeA.00672-16](https://doi.org/10.1128/genomeA.00672-16)
65. \*Yanmanee, S, M. Husemann, **ME Benbow**, G Suwannapong. 2016. Larval development rates of *Chrysomya rufifacies* Macquart, 1842 (Diptera: Calliphoridae) within its native range in South-East Asia. *Forensic Science International* 266:63-67. [doi.org/10.1016/j.forsciint.2016.04.033](https://doi.org/10.1016/j.forsciint.2016.04.033)
66. ^Pechal, JL, **ME Benbow**. 2016. Microbial ecology of the salmon necrobiome: Evidence salmon carrion decomposition influences aquatic and terrestrial insect microbiomes. *Environmental Microbiology* 18:1511-1522 [doi:10.1111/1462-2920.13187](https://doi.org/10.1111/1462-2920.13187)
67. Burcham, ZM, JA Hood, JL Pechal, KL Krausz, JL Bose, CJ Schmidt, **ME Benbow**, HR Jordan. 2016. Fluorescently labeled bacteria provide insight on post-mortem microbial transmigration. *Forensic Science International* 264:63-6. [doi.org/10.1016/j.forsciint.2016.03.019](https://doi.org/10.1016/j.forsciint.2016.03.019)
68. ^\*Lang, JM, R Erb, JL Pechal, JR Wallace, RW McEwan, **ME Benbow**. 2016. Microbial biofilm community variation in flowing habitats: potential utility as bioindicators of postmortem submersion intervals. *Microorganisms* 4(1):1. [doi:10.3390/microorganisms4010001](https://doi.org/10.3390/microorganisms4010001)
69. Finley, SJ, JL Pechal, **ME Benbow**, BK Robertson, G Javan. 2016. Microbial signatures of cadaver gravesoil during decomposition. *Microbial Ecology* 71:524-529. [doi:10.1007/s00248-015-0725-1](https://doi.org/10.1007/s00248-015-0725-1)

2015

---

70. Yemor, T, **ME Benbow**, G Suwannapong. 2015. Effects of stingless bee propolis on *Nosema ceranae* infected Asian honey bees, *Apis cerana*. *Journal of Apicultural Research* 54: 468-473 [doi:10.1080/00218839.2016.1162447](https://doi.org/10.1080/00218839.2016.1162447)
71. ^**Benbow, ME**, JL Pechal. 2015. Microbial interactions of the necrobiome: basic research and forensic applications. *Microbiologist* 16(3):26-29. (**invited**)
72. Tomberlin, JK, A van Huis, **ME Benbow**, H Jordan, DA Astuti, D Azzollini, I Banks, V Bava, C Borgemeister, JA Cammack, RS Chapkin, H Čičková, TL Crippen, A Day, H Deventer, M Dicke,

- S Diener, D Drew, C Emhart, M Epstein, U Fanger, M Finke, CH Fischer, D Gatlin, NT Grabowski, R Han, C He, L Heckman, A Hubert, J Joseph, HR Jordan, SK Khanal, JF Kleinfinger, G Klein, A Lawrence, C Leach, A Llecha, Y Liu, GL Newton, R Olivier, JL Pechal, CJ Picard, E Pieterse, S Rojo, A Roncarati, C Sheppard, A Stamer, AM Tarone, K Unger, A van Huis, B Verstappen, A Vickerson, H Yang, A Yen, Z Yu, J Zhang, W Zheng, and L Zheng. 2015. Protecting the environment through insect farming as a means to produce protein for use as livestock, poultry, and aquaculture feed. *Journal of Insects as Food and Feed* 1(4):307-309. [doi.org/10.3920/JIFF2015.0098](https://doi.org/10.3920/JIFF2015.0098)
73. Finley, SJ, **ME Benbow**, G Javan. 2015. Microbial communities associated with human decomposition and their potential use as postmortem clocks. *International Journal of Legal Medicine* 129:623-632. [doi:10.1007/s00414-014-1059-0](https://doi.org/10.1007/s00414-014-1059-0)
74. Finley, SJ, **ME Benbow**, G Javan. 2015. Potential applications of soil microbial ecology and next-generation sequencing in criminal investigations. *Applied Soil Ecology* 88:69-78. [doi.org/10.1016/j.apsoil.2015.01.001](https://doi.org/10.1016/j.apsoil.2015.01.001)
75. National Research Council Committee. 2015. Review of the Edwards Aquifer Habitat Conservation Plan: Report 1. Committee to Review Edwards Aquifer Habitat Conservation Plan. Water Science and Technology Board, Division on Earth and Life Studies. National Research Council of the National Academies. 173 pg. The National Academies Press, Washington D.C. (**ME Benbow** as a member of 12 scientist committee that authored this report)
76. Campbell, LP, AO Finley, **ME Benbow**, J van Ravensway, PLC Small, R Christian Johnson, G Soppin, RM Merritt, H Williamson, J Qi. 2015. Spatial analysis of anthropogenic landscape disturbance and Buruli ulcer disease in Benin. *PLoS Neglected Tropical Diseases* 9(10): e0004123. [doi:10.1371/journal](https://doi.org/10.1371/journal)
77. ^\*Lang, JM, RW McEwan, **ME Benbow**. 2015. Abiotic autumnal organic matter deposition and grazing disturbance effects on epilithic biofilm succession. *FEMS Microbiology Ecology* 91:fiv060 [doi: 10.1093/femsec/fiv060](https://doi.org/10.1093/femsec/fiv060)
78. ^**Benbow, ME**, JL Pechal, \*JM Lang, R Erb, JR Wallace. 2015. The potential of high-throughput metagenomic sequencing of aquatic bacterial communities to estimate the postmortem submersion interval. *Journal of Forensic Sciences* 60(6):1500-1510 PMID: 26294275 [doi.org/10.1111/1556-4029.12859](https://doi.org/10.1111/1556-4029.12859)
79. Pechal, JL, **ME Benbow**, JK Tomberlin, TL Crippen, AM Tarone, B Singh, PA Lenhart. 2015. Field documentation of unusual postmortem wound infliction on human remains by arthropods. *Journal of Medical Entomology* 52(1):105-108. [DOI: 10.1093/jme/tju012](https://doi.org/10.1093/jme/tju012)
80. \*McNeish, RE, EM Moore, **ME Benbow**, RW McEwan. 2015. Removal of an invasive shrub from riparian forests mediates headwater stream biota and ecosystem function. *Rivers, Research and Applications* 31:1131-1139. [DOI: 10.1002/rra.2808](https://doi.org/10.1002/rra.2808)

2014

---

81. Pechal, JL, \*HE Moore, F Drijfhout, **ME Benbow**. 2014. Hydrocarbon profiles throughout adult Calliphoridae aging: a promising tool for forensic entomology. *Forensic Science International* 245:65-71. [doi.org/10.1016/j.forsciint.2014.10.019](https://doi.org/10.1016/j.forsciint.2014.10.019)
82. ^\*Shewhart, L, RW McEwan, ^**ME Benbow**. 2014. Evidence for facilitation of *Culex pipiens* L. life history traits by the non-native invasive shrub Amur honeysuckle. (*Lonicera maackii*). *Environmental Entomology* 43(6):1584-1593. [doi.org/10.1603/EN14183](https://doi.org/10.1603/EN14183)
83. Brundage, A, **ME Benbow**, JK Tomberlin. 2014. Priority effects on the life-history traits of two carrion blow fly (Diptera, Calliphoridae) species. *Ecological Entomology* 39:539-547 [doi:10.1111/een.12128](https://doi.org/10.1111/een.12128)
84. Tarone, AM, JR Wallace, JK Tomberlin, R Mohr, **ME Benbow**, JS Johnston, E Mondor, S VanLaerhoven. 2014. A correspondence from a maturing discipline. *Journal of Medical Entomology* 51(3):490-492

85. Pechal, JL, **ME Benbow**, TL Crippen, A Tarone, JK Tomberlin. 2014. Delayed insect colonization alters vertebrate carrion necrophagous community assembly and decomposition. *Ecosphere*. 5(4): art45. [doi.org/10.1890/ES14-00022.1](https://doi.org/10.1890/ES14-00022.1)
86. \*McIntosh, MD, HR Williamson, **ME Benbow**, RK Kimbirauskus, C Quaye, D Boakye, PLC Small, RW Merritt. 2014. Associations between *Mycobacterium ulcerans* and aquatic plant communities of West Africa: implications for Buruli ulcer disease. *EcoHealth* 11(2):184-196. [doi:10.1007/s10393-013-0898-3](https://doi.org/10.1007/s10393-013-0898-3)
87. ^**Benbow, ME**, \*RK Kimbirauskus, \*MD McIntosh, HR Williamson, C Quaye, D Boakye, PLC Small, RW Merritt. 2014. Aquatic macroinvertebrate assemblages of Ghana, West Africa: understanding the ecology of Buruli ulcer disease. *EcoHealth* 11(2):168-183. [doi:10.1007/s10393-013-0886-7](https://doi.org/10.1007/s10393-013-0886-7), PMID: 24306551
88. ^\*Gorbach, KR, \*ME Shoda, AJ Burky, **ME Benbow**. 2014. Benthic community responses to water removal in tropical mountain streams. *Rivers, Research and Applications*: 30: 791-803. [doi: 10.1002/rra.2679](https://doi.org/10.1002/rra.2679)
89. ^Pechal, JL, T Crippen, **ME Benbow**, A Tarone, JK Tomberlin. 2014. The potential use of bacterial community succession in forensics as described by high throughput metagenomic sequencing. *International Journal of Legal Medicine* 128:193-205: [doi:10.1007/s00414-013-0872-1](https://doi.org/10.1007/s00414-013-0872-1) PMID: 23749255 **\*ONE OF THE MOST FREQUENTLY DOWNLOADED PAPERS IN 2015**

2013

---

90. Roche, B, **ME Benbow**, RW Merritt, \*RK Kimbirauskas, \*MD McIntosh, PLC Small, HR Williamson, J Guégan. 2013. Identifying Achilles' heel of multi-host pathogens: the concept of keystone host illustrated by *Mycobacterium ulcerans* transmission. *Environmental Research Letters* 8(4):045009 PMID: 24554969, [doi:10.1088/1748-9326/8/4/045009](https://doi.org/10.1088/1748-9326/8/4/045009)
91. ^\*Lang, JM, **ME Benbow**. 2013. Species interactions and competition. *Nature Education Knowledge* 4(4):8
92. ^Pechal, JL, TL Crippen, AM Tarone, \*A Lewis, JK Tomberlin, **ME Benbow**. 2013. Microbial community functional change during carrion decomposition. *PLoS ONE* 8(1): e79035. [doi:10.1371/journal.pone.0079035](https://doi.org/10.1371/journal.pone.0079035) **\* TOP 25% MOST CITED PLOS ONE ARTICLES**
93. Suwannapong, G, S Maksong, T Yemor, N Junsuri, **ME Benbow**. 2013. Three species of native Thai honey bees exploit overlapping pollen resources: identification of bee flora from pollen loads and midguts of *Apis cerana*, *A. dorsata* and *A. florea*. *Journal of Apicultural Research* 52(5):196-201
94. Zheng, L, TL Crippen, L Holmes, B Singh, ML Pimsler, **ME Benbow**, AM Tarone, S Dowd, Z Yu, S vanLaerhoven TK Wood, JK Tomberlin. 2013. Bacteria mediate oviposition by the Black Soldier Fly, *Hermetia illucens* (L.), (Diptera: Stratiomyidae). *Nature Scientific Reports* 3:2563, [doi:10.1038/srep02563](https://doi.org/10.1038/srep02563) PMID: PMC3759047
95. ^**Benbow, ME**, \*AJ Lewis, JK Tomberlin, JL Pechal. 2013. Seasonal necrophagous insect community assembly during carrion decomposition. *Journal of Medical Entomology* 50(2):440-450. [doi.org/10.1603/ME12194](https://doi.org/10.1603/ME12194)
96. \*Berg, MC, ^**ME Benbow**. 2013. Environmental factors associated with *Phormia regina* (Meigen) (Diptera: Calliphoridae) oviposition. *Journal of Medical Entomology* 50(2):451-457. [doi.org/10.1603/ME12188](https://doi.org/10.1603/ME12188)
97. \*Willson, SJ, M Kaufman, RW Merritt, HR Williamson, **ME Benbow**. 2013. Fish and amphibians as potential reservoirs of *Mycobacterium ulcerans*, the causative agent of Buruli ulcer disease. *Infection Ecology and Epidemiology* 3: 10.3402/iee.v3i0.19946. PMID: PMC3580280 [doi.org/10.3402/iee.v3i0.19946](https://doi.org/10.3402/iee.v3i0.19946)

2012

---

98. van Ravensway, J, **ME Benbow**, AA Tsonis, S Pierce, LP Campbell, JAM Fyfe, JA Hayman, PDR Johnson, JR Wallace, J Qi. 2012. Climate and landscape factors associated with Buruli ulcer

- incidence in Victoria, Australia. *PLoS ONE* 7(12): e51074. [doi:10.1371/journal.pone.0051074](https://doi.org/10.1371/journal.pone.0051074), PMID: PMC3519496
99. Mondor, EB, MN Tremblay, JK Tomberlin, **ME Benbow**, AM Tarone, TL Crippen. 2012. The ecology of carrion decomposition. 2012. *Nature Education Knowledge* 3(10):21
100. Tomberlin, JK, TL Crippen, A Tarone, B Singh, K Adams, Y Rezenom, **ME Benbow**, JL Pechal, D Russel, R Bier, T Wood. 2012. Interkingdom responses of flies to bacteria mediated by fly physiology and bacterial quorum sensing. *Animal Behaviour* 84:1449-1465. [doi.org/10.1016/j.anbehav.2012.09.013](https://doi.org/10.1016/j.anbehav.2012.09.013)
101. Tomberlin, JK, JH Byrd, JR Wallace, **ME Benbow**. 2012. Assessment of decomposition studies indicates need for standardized and repeatable methods in forensic entomology. *Journal of Forensic Research* 3:147. [doi:10.4172/2157-7145.1000147](https://doi.org/10.4172/2157-7145.1000147)
102. \*Campbell, EY, RW Merritt, KW Cummins, **ME Benbow**. 2012. Spatial and temporal variability of macroinvertebrates in spawning and non-spawning habitats during a salmon run in Southeast Alaska. *PLoS ONE* 7(6): e39254. [doi:10.1371/journal.pone.0039254](https://doi.org/10.1371/journal.pone.0039254)
103. ^\*Gorbach, KR, **ME Benbow**, MD McIntosh, AJ Burky. 2012. Dispersal and upstream migration of a neritid snail: implications for restoring migratory pathways in tropical streams. *Freshwater Biology* 57(1):1643-1657. [doi:10.1111/j.1365-2427.2012.02826.x](https://doi.org/10.1111/j.1365-2427.2012.02826.x) (Benbow & Gorbach contributed equally)
104. \*McNeish, RE, **ME Benbow**, RW McEwan. 2012. Riparian forest invasion by a terrestrial shrub (*Lonicera maackii*) impacts aquatic biota and organic matter processing in headwater streams. *Biological Invasions* 14(9):1881-1893. [doi:10.1007/s10530-012-0199-8](https://doi.org/10.1007/s10530-012-0199-8)
105. \*Williamson, HR, **ME Benbow**, LP Campbell, CR Johnson, G Sopoh, RW Merritt, PLC Small. 2012. Detection of *Mycobacterium ulcerans* in the environment predicts prevalence of Buruli ulcer in Benin. *PLoS Neglected Tropical Diseases* 6(1): e1506. [doi:10.1371/journal.pntd.0001506](https://doi.org/10.1371/journal.pntd.0001506) PMID: PMC3269429
106. Suwannapong, G, J Noiphrom, **ME Benbow**. 2012 Ultramorphology of antennal sensilla in Thai single open nest honeybees (Hymenoptera: Apidae). *Lepcey: Journal of Tropical Asia Entomology* 1:1-12.

2011

---

107. \*Lewis, AJ, ^**ME Benbow**. 2011. When entomological evidence walks away from a crime scene: *en masse* maggot migration. *Journal of Medical Entomology* 48(6):1112-1119. [doi.org/10.1603/ME11093](https://doi.org/10.1603/ME11093)
108. \*Wesener, M, RW Merritt, **ME Benbow**, RT Edwards, \*EY Campbell, EC Norberg. 2011. Hyporheic and benthic macroinvertebrate communities of three southeast Alaska stream types. *Pan-Pacific Entomologist* 87(3):145-160.
109. \*Pechal, JL, **ME Benbow**, JK Tomberlin. 2011. *Merope tuber* (Mecoptera: Meropidae) collected in association with carrion in Greene County, Ohio, USA: an infrequent collection of a rare species. *The American Midland Naturalist* 166(2):453-457.
110. Suwannapong, G, S Maksong, **ME Benbow**. 2011. Stingless bee propolis effects on experimental infection of *Apis florea* with *Nosema ceranae*. *Journal of Agricultural Science and Technology*, A1, 1(6A):818-825.
111. Tomberlin, JK, R Mohr, **ME Benbow**, AM Tarone, S Vanlaerhoven. 2011. A roadmap for bridging basic and applied research in forensic entomology. *Annual Review of Entomology* 56:401-421. (invited) PMID: 20822449 [doi.org/10.1146/annurev-ento-051710-103143](https://doi.org/10.1146/annurev-ento-051710-103143)
112. Suwannapong, G, **ME Benbow**, C Chinokul, P Seanbualuang, V Sivaram. 2011. Bioassay of the mandibular gland pheromones of *Apis florea* on foraging activity of dwarf honeybees. *Journal of Apiculture Research* 50(3):212-217.
113. \*Campbell, EY, **ME Benbow**, SD Tieg, JP Hudson, GA Lamberti, RW Merritt. 2011. Timber harvest intensifies spawning-salmon disturbance of macroinvertebrates in Southeast Alaska streams. *Journal of the North American Benthological Society* 30(1):49-59. [doi: 10.1899/10-040.1](https://doi.org/10.1899/10-040.1)

114. Tomberlin, JK, **ME Benbow**, AM Tarone, R Mohr. 2011. Basic research in evolution and ecology enhances forensics. *Trends in Ecology and Evolution* 26(2):53-55 (**invited**) (*Benbow & Tomberlin contributed equally*) PMID: 21185105 [doi.org/10.1016/j.tree.2010.12.001](https://doi.org/10.1016/j.tree.2010.12.001)
115. Suwannapong, G, T Yemor, C Boonpakdee, **ME Benbow**. 2011. *Nosema ceranae*, a new parasite in Thai honeybees. *Journal of Invertebrate Pathology* 106: 236-241.
116. Suwannapong, G, P Seanbualuang, **ME Benbow**. 2011. Using sensillum potential analysis to quantify pheromone sensing of the antennal sensillae of *Apis florea* Fabricius (1787), foragers and guards. *Journal of Asia-Pacific Entomology* 14:7-10.

2010

---

117. ^\*Shoda, ME, \*KR Gorbach, **ME Benbow**, AJ Burky. 2010. Cascade macroinvertebrate assemblages for in-stream flow criteria and biomonitoring of high gradient, tropical streams. *Rivers Research and Applications*, [doi:10.1002/rra.1458](https://doi.org/10.1002/rra.1458)
118. Merritt, RW, ED Walker, PLC Small, JR Wallace, PDR Johnson, **ME Benbow**, DA Boakye. 2010. Ecology and transmission of Buruli ulcer disease: a systematic review. *PLoS Neglected Tropical Diseases* 4(12):e911. [doi:10.1371/journal.pntd.0000911](https://doi.org/10.1371/journal.pntd.0000911), PMID: PMC3001905
119. Fyfe, JAM, CJ Lavender, KA Handasyde, AR Legione, CR O'Brien, TP Stinear, SJ Pidot, T Seemann, **ME Benbow**, JR Wallace, C McCowan, PDR Johnson. 2010. A major role for mammals in the ecology of *Mycobacterium ulcerans*. *PLoS Neglected Tropical Diseases* 4(8):e791. [doi:10.1371/journal.pntd.0000791](https://doi.org/10.1371/journal.pntd.0000791), PMID: PMC2919402
120. Suwannapong, G, S Maksong, P Seanbualuang, **ME Benbow**. 2010. Experimental infection of dwarf honeybee with *Nosema ceranae* isolated from *Apis florea* Fabricius, 1787: A new parasite in Thai honeybee. *Journal of Asia-Pacific Entomology* 13:361-364.
121. Suwannapong, G, S Chaiwongwattanakul, P Seanbualuang, **ME Benbow**. 2010. Histochemical comparison of the hypopharyngeal gland in *Apis cerana* Fabricius, 1793 and *Apis mellifera* Linnaeus, 1758 workers. *Psyche – A Journal of Entomology*: 1-7.
122. Wallace, JR, MC Gordon, L Hartsell, L Mosi, **ME Benbow**, RW Merritt, PLC Small. 2010. Interaction of *Mycobacterium ulcerans* with mosquito species: implications for transmission and trophic relationships. *Applied and Environmental Microbiology* 76(18):6215-6222. PMID: PMC2937476 [DOI:10.1128/AEM.00340-10](https://doi.org/10.1128/AEM.00340-10)
123. Suwannapong, G, P Seanbualuang, SV Gowda, **ME Benbow**. 2010. Detection of odor perception of Asiatic honeybee, *Apis cerana* Fabricius, 1793 workers by changing membrane potential of the antennal sensillae. *Journal of Asia-Pacific Entomology* 13:197-200.
124. Chuluunbat, S, JC Morse, J Lessard, **ME Benbow**, M Wesener. 2010. Evolution of terrestrial habitat in *Manophylax* species (Trichoptera: Apataniidae), with a new species from Alaska. *Journal of the North American Benthological Society* 29(2):413-430.

2009

---

125. Tiegs, SD, EY Campbell, PS Levi, J Rüegg, **ME Benbow**, DT Chaloner, RW Merritt, JL Tank, GA Lamberti. 2009. Separating physical disturbance and nutrient enrichment caused by Pacific salmon in a stream ecosystem. *Freshwater Biology* 54:1864-1865.
126. \*Zurawski, KN, **ME Benbow**, JR Miller, RW Merritt. 2009. Examination of nocturnal blow fly (Diptera: Calliphoridae) oviposition on pig carcasses in mid-Michigan. *Journal of Medical Entomology* 46(3): 671-679.

2008

---

127. Lavender, CJ, TP Stinear, PDR Johnson, J Azuolas, **ME Benbow**, JR Wallace, JAM Fyfe. 2008. Application of VNTR typing to the identification of *Mycobacterium ulcerans* in environmental samples from Victoria, Australia. *FEMS Microbiology Letters* 287(2): 250-255. PMID: 18754785.
128. ^**Benbow, ME**. 2008. Role of larval sexual dimorphism, biased sex ratios and habitat on the energetics of a tropical chironomid. *Environmental Entomology* 27(5): 1162-1173. PMID: 19036195
129. ^**Benbow, ME**, \*HR Williamson, \*RK Kimbirauskus, \*MD McIntosh, R Kolar, \*C Quaye, F Akpabey, D Boakye, PLC Small, RW Merritt. 2008. Aquatic invertebrates as unlikely vectors of Buruli ulcer disease. *Emerging Infectious Diseases* 14(8): 1247-1254. [doi:10.3201/eid1408.071503](https://doi.org/10.3201/eid1408.071503) PMID: PMC2600397
130. Wagner, T, **ME Benbow**, TO Brenden, J Qi, RC Johnson. 2008. Buruli ulcer disease prevalence in Benin, West Africa: associations with land use/cover and the identification of disease clusters. *International Journal of Health Geographics* 7:25. PMID: 18505567 (Benbow and Wagner equally contributed)
131. \*McIntosh, MD, JA Schmitz, **ME Benbow**, AJ Burky. 2008. Structural and functional changes of tropical riffle macroinvertebrate communities associated with stream flow withdrawal. *River Research and Applications* 24: 1-11. (Benbow & McIntosh contributed equally)
132. \*Williamson, HR, **ME Benbow**, KD Nguyen, DC Beachboard, \*RK Kimbirauskus, \*MD McIntosh, EO Ampadu, D Boakye, RW Merritt, PLC Small. 2008. Distribution of *Mycobacterium ulcerans* in Buruli ulcer endemic and non-endemic aquatic sites in Ghana. *PLoS Neglected Tropical Diseases* 2(3):e205. Doi:10.1371/journal.pntd.0000205. PMID: 18365034; PMID: PMC2268743
133. Wagner, T, **ME Benbow**, M Burns, RW Merritt, J Qi, PLC Small, C Johnson. 2008. A landscape-based model for predicting *Mycobacterium ulcerans* infection (Buruli ulcer Disease) presence/absence in Benin, West Africa. *EcoHealth* 5:69-79. DOI: 10.1007/s10393-007-0148-7. PMID: 18648799 (Benbow & Wagner contributed equally)
134. Wallace, JR, RW Merritt, RK Kimbirauskas, **ME Benbow**, MD McIntosh. 2008. Caddisflies assist homicide case: determining a postmortem submersion interval (PMSI) using aquatic insects. *Journal of Forensic Sciences* 53(1): 219-221. PMID: 18279261

2007

---

135. Merritt, RW, R Snider, JL deJong, **ME Benbow**, RK Kimbirauskas, R Kolar. 2007. Collembola of the grave: a cold case history involving arthropods 27 years after death. *Journal of Forensic Sciences* 52(6): 1359-1361. PMID: 18093066

2005

---

136. Merritt, RW, **ME Benbow**, PLC Small. 2005. Unraveling an emerging disease associated with disturbed aquatic environments: the case of Buruli ulcer. *Frontiers in Ecology and the Environment* 3(6): 323-331. (Benbow & Merritt contributed equally) (Featured on Cover)
137. ^**Benbow, ME**, MD McIntosh, AJ Burky, CM Way. 2005. The influence of stream flow reduction on the energetics of endemic Hawaiian torrenticolous aquatic insects, *Telmatogeton* Schiner and *Procanace* Hendel. *Journal of Insect Conservation* 9: 175-185.
138. Burky, AJ, **ME Benbow**, CM Way. 2005. Two modified Breder traps for quantitative studies of tropical amphidromous migration. *Hydrobiologia* 532: 209-214.

2004

---

139. ^**Benbow, ME**, AJ Burky, CM Way. 2004. The use of two modified Breder traps to quantitatively study amphidromous upstream migration. *Hydrobiologia* 527: 139-151.
140. ^**Benbow, ME**, AJ Burky, CM Way. 2004. Morphological characteristics and species separation of Hawaiian postlarval amphidromous fishes. *Micronesica* 37(1): 127-143.

141. ^**Benbow, ME**, RW Merritt. 2004. Road salt toxicity of Michigan wetland macroinvertebrates under different testing conditions. *Wetlands* 24(1): 68-76.

2003

---

142. ^McIntosh, MD, **ME Benbow**, AJ Burky. 2003. Effect of water removal on introduced caddisflies from a tropical mountain stream. *Annales de Limnologie — International Journal of Limnology* 39(4): 297-306.
143. ^**Benbow, ME**, AJ Burky, CM Way. 2003. The life cycle of a torrenticolous chironomid (*Telmatogeton torrenticola* Terry) endemic to Hawaii: stream flow and microhabitat effects. *Annales de Limnologie — International Journal of Limnology* 39(2): 103-114.

2002

---

144. Merritt, RW, **ME Benbow**, PL Hudson. 2002. Wetland macroinvertebrates of Prentiss Bay, Lake Huron, Michigan: Diversity and functional group composition. *The Great Lakes Entomologist* 35(2): 51-62
145. ^McIntosh, MD, **ME Benbow**, AJ Burky. 2002. Effects of stream diversion on riffle macroinvertebrate communities in a Maui, Hawaii, stream. *River Research and Applications* 18: 569-581.
146. ^**Benbow, ME**, LL Orzetti, MD McIntosh, AJ Burky. 2002. A note on cascade climbing of migrating goby and shrimp postlarvae in two Maui streams. *Micronesica* 34: 243-248.

2001

---

147. ^**Benbow, ME**, AJ Burky, CM Way. 2001. Hawaiian freshwater Polychaeta: a potentially substantial trophic component of stream depositional habitats. *Micronesica* 34: 35-46.

2000

---

148. Burky AJ, CM Way, S. Hau, **ME Benbow**. 2000. The occurrence of the freshwater clams, *Musculium partumeium* (Say) and *Pisidium casertanum* (Poli) (Bivalvia: Sphaeriidae), in the Hawaiian Islands. *Micronesica* 33: 163-166.

1998

---

149. Glasby, CJ, **ME Benbow**, AJ Burky, CM Way. 1998. New records of Namanereidinae (Polychaeta: Nereididae) from Hawaii. *Bishop Museum Occasional Papers*. 56(2): 67-70.

1997

---

150. ^**Benbow, ME**, AJ Burky, CM Way. 1997. Larval habitat preference of the endemic Hawaiian midge, *Telmatogeton torrenticola* Terry (Telmatogetoninae). *Hydrobiologia* 346: 129-136.

## Books

2015 - 2021

---

1. Javan, GT, **ME Benbow**, K Ralebitso-Senior (Eds). 2021. *Life and Death: New Perspectives and Applications in Forensic Science*. (e-book). Frontiers in Ecology and Evolution and Frontiers in Microbiology, Frontiers Media SA, Lausanne. [doi:10.3389/978-2-88971-489-6](https://doi.org/10.3389/978-2-88971-489-6)

2. ^**Benbow, ME**, GA Lamberti (Eds). 2021. *Death and Decomposition in Aquatic Ecosystems*. (e-book). Frontiers in Ecology and Evolution, Frontiers Media SA, Lausanne. [doi: 10.3389/978-2-88966-339-2](https://doi.org/10.3389/978-2-88966-339-2)
3. Carter, DO, JK Tomberlin, ^**ME Benbow**, JL Metcalf (Eds). 2017. *Forensic Microbiology*. John Wiley & Sons, Limited, West Sussex, UK, pp. 391.
4. ^**Benbow, ME**, JK Tomberlin, AM Tarone, (Eds). 2015. *Carrion Ecology, Evolution and Their Applications*. CRC Press, Boca Raton, FL, pp. 577. (*shortlisted for The Wildlife Society Wildlife Publication Awards*)
5. Tomberlin, JK, ^**ME Benbow**, (Eds). 2015. *Forensic Entomology: International Dimensions and Frontiers*. CRC Press, Boca Raton, FL, pp. 443.

#### Book chapters (\* = peer-reviewed)

2019

---

1. ^**Benbow, ME**, JL Pechal. 2019. Forensic Entomology and the Microbiome. *In: Forensic Entomology: The Utility of Arthropods in Legal Investigations*. J Byrd, J Tomberlin (Eds). CRC Press, Boca Raton, FL, pp. 499-518.
2. ^**Benbow, ME**, \*JP Receveur, \*G Nowak. 2019. An Overview of the Aquatic Insect Ecological Tables. *In: An Introduction to the Aquatic Insects of North America*. RW Merritt, KW Cummins, MB Berg (Eds). Kendall Hunt Publishing, Dubuque, Iowa, pp. 165-174.

2018

---

3. ^**Benbow, ME**, JL Pechal, JK Tomberlin, HR Jordan. 2018. Interkingdom interactions in disease ecology. *In: Advances in Environmental Microbiology, Volume 5: Connections between ecology and infectious disease*. CJ Hurst (Ed), Springer, pp. 3-38.

2017

---

4. ^Wallace, JR, **ME Benbow**. 2017. Competition. *In: Encyclopedia of Ecology, 2<sup>nd</sup> Edition, Earth Systems and Environmental Sciences*. Pethybridge, H (Ed). Elsevier, London, UK. [doi.org/10.1016/B978-0-12-409548-9.10597-4](https://doi.org/10.1016/B978-0-12-409548-9.10597-4) Published online 11 December 2017.
5. Tomberlin, JK, **ME Benbow**, KM Barnes, HR Jordan. 2017. Arthropod-invertebrate interactions on vertebrate remains: potential applications in the forensic sciences. *In: Forensic Microbiology*. DO Carter, JK Tomberlin, ME Benbow, JL Metcalf (Eds). John Wiley & Sons, Limited, pp. 274-311.
6. ^Pechal, JL, **ME Benbow**. 2017. Sampling methods and data generation. *In: Forensic Microbiology*. DO Carter, JK Tomberlin, ME Benbow, JL Metcalf (Eds). John Wiley & Sons, Limited, pp. 72-93.
7. ^**Benbow, ME**, JL Pechal. 2017. Approaches and considerations for forensic microbiology decomposition research. *In: Forensic Microbiology*. DO Carter, JK Tomberlin, ME Benbow, JL Metcalf (Eds). John Wiley & Sons, Limited, pp. 56-71.
8. ^**Benbow, ME**, R Simmonds, RW Merritt, HR Jordan. 2017. Buruli ulcer: case study of a neglected tropical disease. *In: Advances in Environmental Microbiology, Volume 4: Modeling the transmission and prevention of infectious disease*. CJ Hurst (Ed), Springer International Publishing, Cham, Switzerland, pp. 105-149.

2016

---

9. ^\***Benbow, ME**, JL Pechal, AK Ward. 2016. Heterotrophic bacteria production and Microbial Community Assessment. *In: Methods in Stream Ecology, Volume I, 3<sup>rd</sup> Edition*. FR Hauer and GA Lamberti (Eds), Academic Press, New York, NY, Pp. 161-176

10. ^**Benbow, ME**, BS Hall, L Mosi, S Roberts, R Simmonds, HR Williamson-Jordan. 2016. *Mycobacterium ulcerans* and Buruli ulcer. *In: Human Emerging and Re-Emerging Infections: Bacterial & Mycotic Infections, Volume II, First Edition.* SK Singh (Ed), John Wiley & Sons, Ltd., New Jersey, pp. 841-861.

2015

---

11. ^**Benbow, ME**, JK Tomberlin, AM Tarone. 2015. Introduction to carrion ecology, evolution and their applications. *In: Carrion ecology, evolution and their applications.* ME Benbow, JK Tomberlin and AM Tarone (Eds). CRC Press, Boca Raton, FL, pp. 3-12.
12. ^**Benbow, ME**, JL Pechal, RM Mohr. Community and landscape ecology of carrion. 2015. *In: Carrion ecology, evolution and their applications.* ME Benbow, JK Tomberlin and AM Tarone (Eds). CRC Press, Boca Raton, FL, pp. 151-186.
13. Crippen, TL, **ME Benbow**, JL Pechal. 2015. Microbial interactions during decomposition. *In: Carrion ecology, evolution and their applications.* ME Benbow, JK Tomberlin and AM Tarone (Eds). CRC Press, Boca Raton, FL, pp. 31-63.
14. Jordan, HR, JK Tomberlin, TK Wood, **ME Benbow**. 2015. Interkingdom interactions of carrion decomposition. *In: Carrion ecology, evolution and their applications.* ME Benbow, JK Tomberlin and AM Tarone (Eds). CRC Press, Boca Raton, FL, pp. 433-460.
15. ^**Benbow, ME**, JK Tomberlin, AM Tarone. 2015. Frontiers in carrion ecology and evolution. *In: Carrion ecology, evolution and their applications.* ME Benbow, JK Tomberlin and AM Tarone (Eds). CRC Press, Boca Raton, FL, pp. 561-562.
16. Pechal, JL, **ME Benbow**. Community Ecology. 2015. *In: Forensic Entomology: International Dimensions and Frontiers.* JK Tomberlin and ME Benbow (Eds). CRC Press, Boca Raton, FL, pp. 347-360.
17. Tomberlin, JK, **ME Benbow**. Current global trends and frontiers. 2015. *In: Forensic Entomology: International Dimensions and Frontiers.* JK Tomberlin and ME Benbow (Eds). CRC Press, Boca Raton, FL, pp. 417-422.

2013

---

18. ^**Benbow, ME**, RW Merritt, JL Pechal. 2013. Entomology. *In: Wiley Encyclopedia of Forensic Science*, A. Jamieson and A.A. Moenssens (Eds), John Wiley & Sons, Ltd., New Jersey. DOI: 10.1002/9780470061589.fsa072.pub2.
19. Qi, J, L Campbell, J van Ravensway, AO Finley, RW Merritt, **ME Benbow**. 2013. Buruli ulcer disease: the unknown environmental and social ecology of an environmental pathogen. *In: Ecologies and Politics of Health.* BH King and KA Crews (Eds.). Taylor and Francis Books, London. Vol 41:75-97.

2012

---

20. Suwannapong, G, Eiri, DM, **ME Benbow**. 2012. Honeybee communication and pollination. *In: New Perspectives in Plant Pollination.* AR Bandani (Ed). InTech, 41-62, DOI: 10.5772/2299.

2011

---

21. Suwannapong, G, **ME Benbow**. 2011. Biology of insect odors: sources, olfaction and responses. *In: The Biology of Odors.* LE Weiss and JM Atwood (Eds.). Nova Science Publishers, Inc., Hauppauge, NY.

22. Suwannapong, G, **ME Benbow** and JC Nieh. 2011. Biology of Thai honeybees: natural history and threats. *In: Bees: Biology, Threats and Colonies*, RM Florio (Eds.). Nova Science Publishers, Inc., Hauppauge, NY. 1-101 pgs.

2010

---

23. Johnson, PDR, C Demangel, TP Stinear, **ME Benbow**, JAM Fyfe. 2010. Buruli ulcer (*Mycobacterium ulcerans* infection) – still mysterious. *In: Emerging Infections 9*. WM Michael, ML Grayson, JM Hughes (Eds.). ASM Press, Washington DC.

2009

---

24. Merritt, RW, **ME Benbow**. 2009. Entomology. *In: Wiley Encyclopedia of Forensic Science*. A Jamieson and A Moenssens (Eds.). John Wiley & Sons, Ltd., New Jersey, pp. 1-12.
25. **Benbow, ME**. 2009. Annelida, Oligochaeta and Polychaeta. *In: Encyclopedia of Inland Waters: GE Likens* (Ed.). Vol. 2, pp. 124-127. Elsevier, Ltd., Oxford, England.
26. **Benbow, ME**, MD McIntosh. 2009. Benthic Invertebrate Fauna, Tropical Stream Ecosystems. *In: Encyclopedia of Inland Waters: GE Likens* (Ed.). Vol. 2, pp. 216-231. Elsevier, Ltd., Oxford, England.
27. Wallace, JR, **ME Benbow**. 2009. Flatworms (Turbellarians). *In: Encyclopedia of Inland Waters: G.E. Likens* (Ed.). Vol. 2, pp. 315-316. Elsevier, Ltd., Oxford, England.

2005

---

28. **Benbow, ME**, AJ Burky, \*MD McIntosh. 2005. A History of Hawaiian Freshwater Resources. *In: Water Encyclopedia: Oceanography; Meteorology; Physics and Chemistry; Water Law; and Water History, Art, and Culture*. Lehr, J, J Keeley (Eds.). John Wiley & Sons, Inc. 832 pgs.
29. **Benbow, ME**, RW Merritt. 2005. Road Salt. *In: Water Encyclopedia: Water Quality and Resource Management*. Lehr, J, J Keeley and J. Lehr (Eds.). John Wiley & Sons, Inc. 717 pgs.

### **The National Academies of Sciences, Medicine and Engineering Reports (*peer-reviewed*)**

2018

---

1. The National Academies of Sciences, Medicine and Engineering. 2018. *Review of the Edwards Aquifer Habitat Conservation Plan: Report 3*. Committee to Review Edwards Aquifer Habitat Conservation Plan. Water Science and Technology Board, Division on Earth and Life Studies. The National Academies of Sciences, Engineering and Medicine. 164 pg. The National Academies Press, Washington D.C. (**ME Benbow** as a member of 12 scientist committee that authored this report)

2017

---

2. The National Academies of Sciences, Engineering and Medicine. 2017. *Review of the Edwards Aquifer Habitat Conservation Plan: Report 2*. Committee to Review Edwards Aquifer Habitat Conservation Plan. Water Science and Technology Board, Division on Earth and Life Studies. The National Academies of Sciences, Engineering and Medicine. 164 pg. The National Academies Press, Washington D.C. (**ME Benbow** as a member of 12 scientist committee that authored this report)

2015

---

1. National Research Council Committee, National Academy of Science. 2015. *Review of the Edwards Aquifer Habitat Conservation Plan: Report 1*. Committee to Review Edwards Aquifer Habitat Conservation Plan. Water Science and Technology Board, Division on Earth and Life Studies. National Research Council of the National Academies. 173 pg. The National Academies Press, Washington D.C. (**ME Benbow** member of a 12 scientist committee that authored this report)

## Technical Reports

2017

---

1. Doretto, A, JP Receveur, **Benbow, ME**. 2017. Physical and biotic variables associated with macroinvertebrate diversity and abundance. In: Interplay of abiotic and biotic constraints to survival of age-0 Lake Sturgeon with implications for restoration. Scribner, K, E Baker (Eds). Final Report to the US Fish and Wildlife Service Coastal Program.

2013

---

2. **Benbow, ME**, T Blair, W Kmetz. 2013. Outfall drainage water quality assessment of the Great Miami River, Wolf Creek, and Mad River Dayton, Ohio 2013. Technical report prepared for the City of Dayton, Department of Water, Division of Environmental Management, Dayton, OH. February 19, 2013.

2011

---

3. **Benbow, ME**, T Blair, A Lewis, J White. 2011. Drainage water quality assessment of storm runoff, Dayton, Ohio 2011. Technical report prepared for the City of Dayton, Department of Water, Division of Environmental Management, Dayton, OH. December 20, 2011.

2010

---

4. **Benbow, ME**, J Lang, A Lewis, T Blair. 2010. Outfall drainage water quality assessment of the Great Miami River, Dayton, Ohio 2010. Technical report prepared for the City of Dayton, Department of Water, Division of Environmental Management, Dayton, OH. December 20.

2007

---

5. **Benbow, ME**, KR Jennings AJ Burky, A Oleson, T Holm. 2007. Field studies for evaluating the use of stream invertebrates for including in watershed assessments of Palau. Report prepared for the Palau Community College, Republic of Palau Bureau of Marine Resources, Republic of Palau Office of Environmental Response and Coordination and Belau National Museum. Oct. 2007.

2004

---

6. **Benbow, ME**, AJ Burky, KR Jennings, T Holm. 2004. A preliminary protocol for assessing stream condition in the Republic of Palau: An approach using Invertebrate Functional Group Rapid Bioassessment. Report prepared for the Palau Community College, Republic of Palau Bureau of Marine Resources, Republic of Palau Office

PEER-REVIEWED PUBLISHED PROCEEDINGS

1. Nestle, E, S Kaszubinski, JP Receveur, JL Pechal, **ME Benbow**. 2021. Decontamination strategies for sampling internal bone microbiomes submerged in aquatic environments. *Proceedings of the 73<sup>rd</sup> Annual Meeting of the American Academy of Forensic Science*, 15-19 February, Virtual Meeting.
2. Pechal, JL, CJ Schmidt, HR Jordan, **ME Benbow**. 2021. Trends in postmortem microbiome research activities: a ten-year review. *Proceedings of the 73<sup>rd</sup> Annual Meeting of the American Academy of Forensic Science*, 15-19 February, Virtual Meeting.
3. Bernstein, KF, JP Receveur, JL Pechal, N Babcock, **ME Benbow**. 2021. Geographic, landscape and sex variation in adult blow fly microbiomes: implications for forensics. *Proceedings of the 73<sup>rd</sup> Annual Meeting of the American Academy of Forensic Science*, 15-19 February, Virtual Meeting.
4. Kaszubinski, S, E Nestle, JP Receveur, JL Pechal, **ME Benbow**. 2021. Bone microbial community succession during multi-year decomposition in an aquatic habitat. *Proceedings of the 73<sup>rd</sup> Annual Meeting of the American Academy of Forensic Science*, 15-19 February, Virtual Meeting.
5. Kaszubinski, S, JL Pechal, HR Jordan, CJ Schmidt, **ME Benbow**. 2020. Developing novel microbial metrics for predicting manner of death (MOD). *Proceedings of the 72<sup>nd</sup> Annual Meeting of the American Academy of Forensic Science*, 17-22 February, Anaheim, CA.
6. Receveur, JP, S Kaszubinski, BR Wydra, B Timmons, KA Smiles, N Babcock, C Weatherbee, **ME Benbow**. 2020. Aquatic decomposition of vertebrate remains: an experimental test for a cold case investigation. *Proceedings of the 72<sup>nd</sup> Annual Meeting of the American Academy of Forensic Science*, 17-22 February, Anaheim, CA.
7. Smiles, KA, JL Pechal, CJ Schmidt, HR Jordan, **ME Benbow**. 2020. Signatures of suicide in the human postmortem microbiome. *Proceedings of the 72<sup>nd</sup> Annual Meeting of the American Academy of Forensic Science*, 17-22 February, Anaheim, CA.
8. **Benbow, ME**. 2019. Navigating and networking in forensic science in the emergence of using microbiomes in death investigation. *Proceedings of the 71<sup>st</sup> Annual Meeting of the American Academy of Forensic Science*, 18-23 February, Baltimore, MD.
9. Kaszubinski, S, JL Pechal, HR Jordan, CJ Schmidt, and **ME Benbow**. 2019. Evaluating bioinformatic pipeline performance for forensic microbiome analysis. *Proceedings of the 71<sup>st</sup> Annual Meeting of the American Academy of Forensic Science*, 18-23 February, Baltimore, MD.
10. Pechal, JL, CJ Schmidt, HR Jordan, and **ME Benbow**. 2019. International associations of the postmortem microbiome. *Proceedings of the 71<sup>st</sup> Annual Meeting of the American Academy of Forensic Science*, 18-23 February, Baltimore, MD.
11. Jordan, HR, ZM Burcham, JL Pechal, H Campbell, J Rosch, CJ Schmidt, and **ME Benbow**. 2018. Autopsy sampling to uncover human resistome diversity. *Proceedings of the 70<sup>th</sup> Annual Meeting of the American Academy of Forensic Science*, 19-24 February, Seattle, WA.
12. Burcham, ZM, JL Pechal, JL Bose, **ME Benbow**, CJ Schmidt and HR Jordan. 2018. Fluorescent bacteria in the gut of mice carcasses provides insight on postmortem microbial translocation. *Proceedings of the 70<sup>th</sup> Annual Meeting of the American Academy of Forensic Science*, 19-24 February, Seattle, WA.
13. **Benbow, ME**, Pechal, JL, HR Jordan, V Mesli, E Le Graff, V Hedouin, C Campobasso, V. Bugelli, S. Pittner, F Monticelli and CJ Schmidt. 2018. A global partnership to study geographic variation in the human postmortem microbiome (HPMM). *Proceedings of the 70<sup>th</sup> Annual Meeting of the American Academy of Forensic Science*, 19-24 February, Seattle, WA.
14. Pechal, JL, CJ Schmidt, HR Jordan, and **ME Benbow**. 2018. The ecology of the postmortem microbiome: insights from a large-scale study. *Proceedings of the 70<sup>th</sup> Annual Meeting of the American Academy of Forensic Science*, 19-24 February, Seattle, WA.
15. Pechal, JL, CJ Schmidt, HR Jordan, MM Brewer, and **ME Benbow**. 2017. Postmortem Microbiome Changes During Thaw for Autopsy: Two Pediatric Case Studies. *Proceedings of the 69<sup>th</sup> Annual Meeting of the American Academy of Forensic Science – Vol. XXVIII*, 13-18 February. New Orleans, LA.
16. **Benbow, ME**, JL Pechal, HR Jordan, MM Brewer, and CJ Schmidt. 2017. Coupled Microbiome and Insect Evidence in Death Investigation. *Proceedings of the 69<sup>th</sup> Annual Meeting of the American Academy of Forensic Science – Vol. XXVIII*, 13-18 February. New Orleans, LA.

17. Weatherbee, CR, JL Pechal, MM Brewer, TI Stamper, and **ME Benbow**. 2017 Forensic Implications of Multi-Species Blow Fly Larval Masses and Their Associated Microbiomes. *Proceedings of the 69<sup>th</sup> Annual Meeting of the American Academy of Forensic Science* – Vol. XXVIII, 13-18 February. New Orleans, LA.
18. Burcham, ZM, JL Pechal, J Rosch, JL Bose, CJ Schmidt, **ME Benbow**, and HR Jordan. 2017. Internal Microbial Community Translocation Throughout Decomposition in a Controlled Vertebrate Model. *Proceedings of the 69<sup>th</sup> Annual Meeting of the American Academy of Forensic Science* – Vol. XXVIII, 13-18 February. New Orleans, LA.
19. Jordan, HR, ZM Burcham, JL Bose, JL Pechal, J Rosch, CJ Schmidt, and **ME Benbow**. 2017. Analyses of Necrobiome Structure and Function for Utility in Forensic Science. *Proceedings of the 69<sup>th</sup> Annual Meeting of the American Academy of Forensic Science* – Vol. XXVIII, 13-18 February. New Orleans, LA.
20. Pechal, JL, CJ Schmidt, HR Jordan, and **ME Benbow**. 2016. Drugs and Bugs (Bacteria): Does What You Use Relate to What You Grow? *Proceedings of the 68<sup>th</sup> Annual Meeting of the American Academy of Forensic Science* – Vol. XXVII, 22-27 February. Las Vegas, NV.
21. **Benbow, ME**, JL Pechal, CJ Schmidt, and HR Jordan. 2016. The Human Postmortem Microbiome and Manner of Death. *Proceedings of the 68<sup>th</sup> Annual Meeting of the American Academy of Forensic Science* – Vol. XXVII, 22-27 February. Las Vegas, NV.
22. Weatherbee, C, JL Pechal, TI Stamper, and **ME Benbow**. 2016. Using microbial communities to estimate the postmortem interval: a validation study. *Proceedings of the 68<sup>th</sup> Annual Meeting of the American Academy of Forensic Science* – Vol. XXVII, 22-27 February. Las Vegas, NV.
23. Burcham, ZM, JL Pechal, JL Bose, **ME Benbow**, CJ Schmidt, and HR Jordan. 2016. Decomposition of Mouse Carcasses Infected With Fluorescently Labeled Bacteria Provide Insight on Postmortem Microbial Translocation. *Proceedings of the 68<sup>th</sup> Annual Meeting of the American Academy of Forensic Science* – Vol. XXVII, 22-27 February. Las Vegas, NV.
24. Finley, SJ, JL Pechal, **ME Benbow**, BK Robertson, and GT Javan. 2016. Cadaver Gravesoil Microbial Profiles During Decomposition. *Proceedings of the 68<sup>th</sup> Annual Meeting of the American Academy of Forensic Science* – Vol. XXVII, 22-27 February. Las Vegas, NV.
25. Sufirin, V, TL Crippen, JK Tomberlin, AM Tarone, JL Pechal, **ME Benbow**, and B Singh. 2016. The Utility of Soil Eukaryotes During Human Decomposition and Their Potential Forensic Applications. *Proceedings of the 68<sup>th</sup> Annual Meeting of the American Academy of Forensic Science* – Vol. XXVII, 22-27 February. Las Vegas, NV.
26. Pechal, JL, CJ Schmidt, **ME Benbow**. 2015. The First Use of Postmortem Microbiomes in Human Death Investigations. *Proceedings of the 67<sup>th</sup> Annual Meeting of the American Academy of Forensic Science*. Vol. XXVI 16-21 February. Orlando, FL.
27. Finley, SJ, JL Pechal, **ME Benbow**, GT Javan. 2015. Sequencing Approaches to Evaluate Soil Microbial Communities Associated With Human Death Scenes. *Proceedings of the 67<sup>th</sup> Annual Meeting of the American Academy of Forensic Science*. Vol. XXVI 16-21 February. Orlando, FL.
28. Pechal, JL, TL Crippen, **ME Benbow**, B Sing, AM Tarone, and JK Tomberlin. 2014. Collecting Microbiological Evidence From Cadavers: Techniques and Implications of Using Bacterial Communities in Decomposition Estimates. *Proceedings of the 66<sup>th</sup> Annual Meeting of the American Academy of Forensic Science*. Vol. XXV, p357 17-22 February. Seattle, WA. (*Invited Presentation*)
29. **Benbow, ME**, JL Pechal, B Singh, JK Tomberlin, AM Tarone, M Burke, R Rohde, and TL Crippen. 2014. An Initial Assessment of the Structure and Function of the Postmortem Human Microbiome: Forensic Applications. *Proceedings of the 66<sup>th</sup> Annual Meeting of the American Academy of Forensic Science*. Vol. XXV, p360, 17-22 February. Seattle, WA. (*Invited Presentation*)
30. Crippen, TL, **ME Benbow**, JL Pechal, B Singh, JK Tomberlin, AM Tarone, SE Dowd, R Rohde, and M Burke. Swine as a Model for Decomposition: A Comparison of Postmortem Microbiomes. *Proceedings of the 66<sup>th</sup> Annual Meeting of the American Academy of Forensic Science*. Vol. XXV, p362-363 17-22 February. Seattle, WA. (*Invited Presentation*)
31. Singh, B, TL Crippen, AM Tarone, JL Pechal, **ME Benbow**, M Burke, R Rohde, and JK Tomberlin. 2014. Utility of Bacteria Associated With Human Cadavers in Estimation of Postmortem Interval (PMI).

- Proceedings of the 66<sup>th</sup> Annual Meeting of the American Academy of Forensic Science. Vol. XXV, p360-361 17-22 February. Seattle, WA. (*Invited Presentation*)
32. ^Tomberlin, JK, **ME Benbow**, and DO Carter. 2014. Microbes and Decomposition: Foundations in Decomposition Ecology and Forensic Applications. Proceedings of the 66<sup>th</sup> Annual Meeting of the American Academy of Forensic Science. Vol. XXV, p357-358, 17-22 February 2014. Seattle, WA. (*Invited Presentation*)
  33. Crippen, TL, **ME Benbow**, AM Tarone, TK. Wood, and JK Tomberlin. 2014. Quorum Sensing Regulates Blow Fly Attraction and Colonization of Human Remains: Greater Insight Into the Pre-Colonization Interval. Proceedings of the 66<sup>th</sup> Annual Meeting of the American Academy of Forensic Science. Vol. XXV 17-22, p365, 17-22 February 2014. Seattle, WA. (*Invited Presentation*)
  34. ^**Benbow, ME**, \*AJ Lewis, JL Pechal, T Blair, \*MC Berg, \*MF Diaz, JK Tomberlin, TL Crippen, A Tarone. 2012. The microbial ecology of carcass decomposition between habitats and through time. Proceedings of the 64<sup>th</sup> Annual Meeting of the American Academy of Forensic Science. Vol XXIII 20-25 February 2012. Atlanta, GA.
  35. ^Berg MC, AJ Lewis\*, M Shoda, T Blair, **ME Benbow**. 2012. Blow fly oviposition dynamics on liver bait and swine carcasses exposed at dusk. Proceedings of the 64<sup>th</sup> Annual Meeting of the American Academy of Forensic Science. Vol XXIII 20-25 February 2012. Atlanta, GA.
  36. ^Pechal, JL, **ME Benbow**, TL Crippen, A Tarone, JK Tomberlin. 2012. Invertebrate species diversity, richness, and evenness indicate delayed colonization of remains. Proceedings of the 64<sup>th</sup> Annual Meeting of the American Academy of Forensic Science. Vol XXIII 20-25 February 2012. Atlanta, GA.
  37. ^**Benbow, ME**, JK Tomberlin, TL Crippen, A Lewis\*, J Pechal\*. 2010. Using Biolog EcoPlates™ as an economical approach to determining postmortem body dump sites through microbial community level physiological profiling. Proceedings of the 62<sup>nd</sup> Annual Meeting of the American Academy of Forensic Science. Vol XXI 22-27 February 2010. Seattle, WA.
  38. Tomberlin, JK, **Benbow, ME**, TL Crippen, F Ortiz, J Ross. 2010. Microbes associated with decomposing remains regulate insect colonization. Proceedings of the 62<sup>nd</sup> Annual Meeting of the American Academy of Forensic Science. Vol XXI 22-27 February 2010. Seattle, WA.
  39. ^**Benbow, ME**, J Tomberlin, R Mohr. 2009. A new framework for guiding research in forensic entomology: improving the science relevant to PMI estimates. Proceedings of the 61<sup>st</sup> Annual Meeting of the American Academy of Forensic Science. Vol XX: 18-22 February 2009, Denver, CO.
  40. Wallace, JR, RK Kimbirauskas, RW Merritt, **ME Benbow**, \*MD McIntosh. 2007. Caddisfly cases assist homicide case: determining a postmortem submersion interval (PMSI) using aquatic insects. Proceedings of the 59<sup>th</sup> Annual Meeting of the American Academy of Forensic Science. Vol XIII:291-292.19-24 February 2007, San Antonio, TX.
  41. Merritt RW, **ME Benbow**, JL deJong, R Snider, RK Kimbirauskas. 2006. Insects of the grave: a cold case history involving insects 27 years after death. Proceedings of the 58<sup>th</sup> Annual Meeting of the American Academy of Forensic Science. Vol XII:243. 20-25 February 2006, Seattle, WA.
  42. Kimbirauskas RK, RW Merritt, **ME Benbow**, JR Wallace, JK Tomberlin. 2005. An instructional DVD on collecting entomological evidence for court. Proceedings of the 57<sup>th</sup> Annual Meeting of the American Academy of Forensic Science. Vol XII: 20-25 February 2006, Seattle, WA.

#### PROFESSIONAL PUBLICATIONS – BOOK REVIEWS, MANUALS, DVDS

1. **Benbow, ME**. 2014. Invited Book Review: Review of: “*The Science of Forensic Entomology*”, by RB Rivers and GA Dahlem. Journal of Forensic Sciences 59: 1451.
2. **Benbow, ME**. 2004. Invited Book Review: “*A problem-solving approach to aquatic chemistry*”, by JN Jensen. Journal of the American Water Resources Association 40(2): 547-549.
3. Pechal, JL, **ME Benbow**. 2012. *An Introductory Manual for Multivariate Statistical Analysis of Community Data Using PCORD*. Manual for North American Forensic Entomology Association Workshop. Las Vegas, NV, 17 July 2012.
4. **Benbow, ME**, JM Lang & AJ Burky. 2012. *Watershed Biomonitoring for Palau/MC Jurisdictions*. Manual

- for the 2<sup>nd</sup> Micronesian Challenge Terrestrial Measures Workshop. Koror, Palau, 18-21 June 2012.
5. Kimbirauskas, RK, RW Merritt, JK Tomberlin, **ME Benbow**, JW Wallace. 2008. Forensic Entomology: the collection and preservation of insect evidence from crime scenes. DVD. Independent Productions
  6. **Benbow, ME** & AJ Burky. 2005. *Culture, Biodiversity, and Resources Management: Managing Natural Resources in Costa Rica*. 2005. Lecture and Lab Guide.
  7. **Benbow, ME** & AJ Burky. 2002-2004 *Island Environmental Biology: A Brief History of Water Resource Issues of the Hawaiian Islands*. Lecture and Lab Guide. 113 pages.
  8. **Benbow, ME** & AJ Burky. 2002-2003. *Island Environmental Biology: Mountain Stream – Ocean Connections in the Republic of Palau, Assessing Stream Quality as a Measure of Impact on Marine Communities*. Lecture and Lab Guide. 46 pages.
  9. **Benbow, ME**. 1998. Evolution: how it happens. In “*SCI 230 Lab Manual: Organisms, Evolution and Environments*”. 2<sup>nd</sup> edition. Wolfe, C. (ed.). The McGraw-Hill Companies, Inc., New York.

## GRANTS, CONTRACTS AND FELLOWSHIPS

### Successful Funding

---

1. **NIJ - National Institute of Justice (Research and Development in Forensic Science for Criminal Justice Purposes), 2020** – JL Pechal (PI), HR Jordan (co-PI), **ME Benbow (co-PI)**. *Potential postmortem microbial biomarkers of infant death investigation*. (**Benbow Budget = \$106,000**) ..... \$530,248
2. **Forensic Research Outdoor Station, Northern Michigan University, 2020** – **ME Benbow (PI)**. *Postmortem microbiomes during human decomposition*. (**Benbow Budget = \$7,199**) ..... \$7,199
3. **NSF - National Science Foundation (Ecology and Evolution of Infectious Diseases, 1911457), (7/1/2019-6/30/2023)** — **ME Benbow (PI)**, JF Guegan (co-PI), JL Pechal (co-PI), H Jordan (co-PI), and M Sandel (co-PI). *Novel weapon evolution in mycobacterial pathogenesis, dispersal and ecological persistence*. (**Benbow budget = \$1,253,599**) ..... \$2,499,999
4. **MSU-APP – Michigan State University Alliance for African Partnerships, (1/1/2020-6/30/2020)** – **ME Benbow (multi-PI)**, JL Pechal (multi-PI), J Kang’ombe (co-PI), K Masamba (co-PI), A Safalaoh (co-PI), AW Kamng’ona (co-PI), M Jume (collaborator). *Insects as alternative feed in Malawi: Growing black soldier fly farms from partnerships* (Submitted November 2019) (**Benbow Budget = \$40,000**) ..... \$40,000
5. **Feed the Future Innovation Lab for Fish (USAID) (RFA-FIL-19-000001), 2019-2022**. JL Pechal (PI), S Valle de Souza (co-PI), A Bennett (co-PI), **ME Benbow (collaborator)**, BT Omonona (PI), OB Adedeji (collaborator), Y Agbeja (collaborator). No longer bugged by feed costs: Farming insects as sustainable and scalable aquaculture feedstock to improve catfish (Claridae) producers’ and consumers’ livelihoods towards food security in Nigeria (**Benbow Budget = \$0**) ..... \$500,000
6. **Mediterranean Centre for Environmental and Biodiversity Laboratory of Excellence**. 2019. ME Benbow (PI). *Novel Weapon Evolution and Coincidental Virulence in Environmental Pathogens: A Case Study of the *Mycobacterium marinum* complex and Buruli ulcer* (Travel Fellowship)..... \$6,000
7. **Forensic Sciences Foundation, American Academy of Forensic Sciences Lucas Grant, 2019**. SF Kaszubinski (PI), J Receveur (co-PI), JL Pechal (PI), **ME Benbow (co-PI)**. *Microbial community succession of submerged bones in an aquatic habitat* (**Benbow Budget = \$5,300**)..... \$5,300
8. **Michigan Department of Natural Resources/Michigan State University Joint Wildlife Disease Initiative, 2019-2021** – R Michitsch (PI), K Herrman (co-PI), M. **ME Benbow (co-PI)**. *Composting deactivation of CWD prions* (**Benbow Budget = \$0**) ..... \$226,876

9. **MSU-APP – Michigan State University Alliance for African Partnerships African Futures Program: Postdoctoral Mentor Program** — 2019-2020 (\$10,000) (**Benbow budget = \$10,000**) **ME Benbow (PI)**, JL Pechal (co-PI): *Farming Insects for Feed in Africa: Postdoctoral Training and Capacity Development (Benbow Budget = \$10,000)*..... \$10,000
10. **The Avielle Foundation (Neuroscience and Clinical Research Grant to Prevent Violence and Build Compassion)** — 2019-2021. (\$100,000) AJ Robison (PI), C Kwiatkowski (co-PI), A Zeoloi (co-PI), **ME Benbow (co-PI)**, A Moeser (co-PI). *Aggression and the gut-brain axis. (Benbow Budget = \$0)* .  
..... \$100,000
11. **Forensic Sciences Foundation, American Academy of Forensic Science Acorn Grant** — 2018. BR Wydra (PI), **ME Benbow (co-PI)**, JC Wankmiller (co-PI), JL Pechal (co-PI). Necrophagous insect communities and how they associate with human decomposition at a new northern latitude outdoor forensic research facility (**Benbow Budget = \$1,497**).....\$1,497
12. **MSU CANR Professional Development Microgrant** — 2018 **ME Benbow (PI)**. Travel funding to improve international collaborative NSF proposal.....\$3,000
13. **MSU-APP – Michigan State University Alliance for African Partnerships** — 2017-2019. (**Benbow budget = \$50,000**) **ME Benbow (multi-PI)**, JL Pechal (multi-PI), J Kang’ombe (co-PI), K Masamba (co-PI), A Safalaoh (co-PI), AW Kamng’ona (co-PI): *Farming Insects for Feed: Developing Partnerships for Sustainable Food Security in Malawi (Benbow Budget = \$50,000)*.....\$50,000
14. **CDC (Centers for Disease Control and Prevention: National Center for Emerging and Zoonotic Infectious Diseases)** — 12/31/2016 – 12/30/2021. (\$1,213,224) (**Benbow budget = \$0**) E Walker (PI), M Kaufman (co-PI), J Tsao (co-PI), Z Xi (co-PI), J Owen (co-PI), **ME Benbow (co-PI)**: *The Upper Midwest Regional Center of Excellence in Vector-borne Disease*.
15. **MSU CANR Professional Development Microgrant** — 2016 (\$3,000) **ME Benbow (PI)**. Travel funding to French Guiana for new research partnerships.
16. **NIJ (National Institute of Justice)** (2014-DN-BX-K008) — 2015 - 2018 (\$886,408) (**Benbow sub-award budget = \$391,832**): H Jordan (PI), **ME Benbow (co-PI)**, *Postmortem changes and translocation of bacterial community structure and function for use in criminal investigations*.
17. **USFS Forest Health Monitoring Program, Evaluation Monitoring** — 2015 – 2017 (\$126,043) (Benbow budget of \$63,022): DG McCullough (PI), **ME Benbow (co-PI)**. *Conditions of riparian forest corridors invaded by Emerald Ash Borer*.
18. **NSF (Population & Community Ecology)** (DEB-1352995) — 4/15/2013-3/15/2017 (\$541,964), (**Benbow sub-award of \$110,027**), R McEwan (PI) and **ME Benbow (co-PI)**. A mechanistic framework for bottom-up biodiversity effects: riparian forest invasion impacts on headwater stream microbial and macroinvertebrate communities.
19. **MSU VISTAS Program (Visiting Scholars to Advance Science Grants)** — 2015 (\$4,852) **ME Benbow (PI)**. VISTAS Grant to host visiting scholars from Penn State University, Texas A&M University and Mississippi State University.
20. **Forensic Sciences Foundation, American Academy of Forensic Science Lucas Grant** — 2014. (\$4,974) JL Pechal (PI), **ME Benbow (co-PI)**, CJ Schmidt (co-PI). Prediction of the postmortem interval using bacterial communities collected from human remains discovered in a major, metropolitan city.

21. **Forensic Sciences Foundation, American Academy of Forensic Science Lucas Grant** — 2012. (\$3,000) **ME Benbow (PI)**, JR Wallace (co-PI), JL Pechal (co-PI), JM Lang (co-PI). Aquatic microbial communities to estimate the postmortem submersion interval.
22. **NIJ (National Institute of Justice) (2010-DN-BX-K243)** — 2010 - 2012 (\$476,348), (**Benbow sub-award of \$163,972**): JK Tomberlin (PI), **ME Benbow (co-PI)** T Crippen (co-PI), A Tarone (co-PI). Development and validation of standard operating procedures for measuring microbial populations for estimating a postmortem interval
23. **City of Dayton (Department of Water, Division of Environmental Management)** — 2012. (\$30,000) **ME Benbow (PI)**. Storm water monitoring for the City of Dayton. City of Dayton, Dayton, OH.
24. **City of Dayton (Department of Water, Division of Environmental Management)** — 2011. (\$30,000) **ME Benbow (PI)**. Storm water monitoring for the City of Dayton. City of Dayton, Dayton, OH.
25. **City of Dayton (Department of Water, Division of Environmental Management)** — 2010. (\$30,000) **ME Benbow (PI)**. Storm water monitoring for the City of Dayton. City of Dayton, Dayton, OH.
26. **Hamilton County Park District** — 2011. (\$2,000) (**Benbow sub-award of \$1100**) MD McIntosh (PI) and **ME Benbow (co-PI)**. A temporal assessment of invertebrate structure and function within vernal pools of Southwestern Ohio.
27. **Hamilton County Park District** — 2010. (\$2,000) (**Benbow sub-award of \$1000**) MD McIntosh (PI) and **ME Benbow (co-PI)**, G Farnsworth (co-PI). A temporal assessment of invertebrate structure and function within vernal pools of Southwestern Ohio.
28. **Research Council SEED Grant: Summer Research Fellowship, Grant-In-Aid-Award and Equipment (University of Dayton)** — 2011. (\$11,000) **ME Benbow (PI)**. Vertebrate scavenging on microbial-insect interactions: potential influence on postmortem interval estimates in forensics. University of Dayton, Dayton, OH.
29. **Research Council SEED Grant: Summer Research Fellowship, Grant-In-Aid-Award and Equipment (University of Dayton)** — 2011. (\$6,500) **ME Benbow (PI)**. Effects of an antimicrobial agent on microbial-insect interactions: implications for potential pathogen dispersal by flies. University of Dayton, Dayton, OH.
30. **Research Council SEED Grant: Summer Research Fellowship, Grant-In-Aid-Award and Equipment (University of Dayton)** — 2010. (\$11,000) **ME Benbow (PI)**. Microbial succession and potential pathogen dispersal by flies. University of Dayton, Dayton, OH.
31. **Research Council SEED Grant: Summer Research Fellowship and Grant-In-Aid-Award (University of Dayton)** — 2009. (\$6000) **ME Benbow (PI)**. Ecology of carrion decomposition and application to forensic and medical entomology. University of Dayton, Dayton, OH.
32. **Sustainability, Energy, and the Environment (SEE) Seed Grant (University of Dayton)** — 2009. (\$10,000) **ME Benbow (PI)**. Understanding invertebrate-microbial relationships for wetland bioassessment. University of Dayton, Dayton, OH.
33. **NIH-BMRD (Biostatistical Methods) (1-R01 ES015525-01A1)** — 2008-2011 (\$1,541,922) (**Benbow sub-award of \$100,093**): L Waller (PI), LA Real (co-PI), **ME Benbow (co-PI)**, E Whitney (co-PI). Spatial statistics for disease ecology.

34. **UBS Optimus Foundation** — 2008-2010 (\$661,699: **Benbow travel and supplies of \$60,000**): **Collaborator** with G Pluschke (PI), PLC Small, F. Portaéls, T Stinear, P. Johnson, C. Johnson, D Yeboah-Manu, A Um Boock. Investigations into the transmission of Buruli ulcer.
35. **NIH (EID) Ecology of Infectious Diseases – Fogarty International Center (1R01 TW007550-01)** — 2005 - 2010 (\$2,000,000) (**Benbow sub-award of \$132,670**): RW Merritt (PI), **ME Benbow (co-PI)**, RJ Stevenson (co-PI), J Qi (co-PI), G Hickling (co-PI). Ecology of *Mycobacterium ulcerans*: evaluating landscape relationships with freshwater communities and disease occurrence.
36. **USGS** — 2007 (**\$20,000**): **ME Benbow (PI)**. Baseline studies of benthic macroinvertebrate communities in diverted streams of West Maui, Hawaii.
37. **NIAID (RO3 A1062719-01 A1)** — 2005 - 2007 (\$100,000): RW Merritt (PI) and **ME Benbow (co-PI)**. The role of aquatic invertebrates in *Mycobacterium ulcerans* disease.
38. **USDA-CSREES (2006-35101-16566)** — 2006-2008 (\$497,041; \$70,000 subcontract): GA Lamberti (PI), JL Tank (co-PI), DT Chaloner (co-PI), RW Merritt (co-PI), **ME Benbow (co-PI)**, RT Edwards (co-PI), DV D'Amore (co-PI), and SD Bridgham (co-PI). The role of salmon-derived nutrients in managed U.S. forests.
39. **NSF Travel Grant Award** — 2004 (\$2,300): **ME Benbow (PI)**. Competitive award for postdoctoral associates through the Entomological Society of America for travel to the International Conference of Entomology, Brisbane, Australia.
40. **World Health Organization** — 2004-2005 (\$91,200): RW Merritt (PI), PLC Small (co-PI), D Boakye (co-PI), **ME Benbow Collaborator**. Investigations into the role of aquatic reservoirs in the transmission of Buruli ulcer: Ecological relationships among aquatic invertebrates, habitat and *Mycobacterium ulcerans* in Ghana, West Africa.
41. **Michigan Department of Transportation** — 2001 – 2004 (\$200,000): RW Merritt (PI) and **ME Benbow (co-PI)**. Road salt impact on marsh invertebrates.
42. **The Christopher Hills Foundation** — 2001 (\$10,500): **ME Benbow (PI)** An assessment of aquatic research potentials in the Federated States of Micronesia and Republic of Palau.
43. **The Center for Field Research at Earthwatch Institute** — 1999-2001 (\$108,910): **ME Benbow (PI)**, AJ Burky (co-PI), CM Way (co-PI). Impact of human development on isolated oceanic island streams: understanding seasonal recruitment and migration patterns of endemic, Hawaiian amphidromous gobies, shrimp, and limpets for stream restoration.
44. **Ohio Biological Survey** — 1998, (\$500): **ME Benbow (PI)**. A comparative study of the aquatic macroinvertebrate composition of restored and natural wetlands in the Beavercreek Watershed, Beavercreek, OH.
45. **University of Dayton Summer Research Fellowship** — 1995-1998 (\$1,200/summer). **ME Benbow (PI)**. Natural history of the endemic Hawaiian midge, *Telmatogeton torrenticola*: life-history strategies for life in a harsh environment.

#### **Pending & Rejected Proposals for Current Year**

---

- NIJ - National Institute of Justice (Research and Development in Forensic Science for Criminal Justice Purposes), (1/1/2022 – 12/31/2024) –HR Jordan (PI), JL Pechal (co-PI), ME Benbow (co-PI).** *Microbial biomarker validation for early postmortem interval detection across the US* (Submitted June 2021) ..... ~\$ 800,000 (Benbow Budget ~ \$464,749)
- NIH - National Institutes of Health (NIAID), (GRANT13415939), (1/1/2022-12/31/2027) — H Jordan (PI), ME Benbow (co-PI), L Campbell (co-PI), JL Pechal (co-PI), R Philips (co-PI), CR Johnson (co-PI), L Waller (co-PI).** *Defining the Mycobacterium exposome to understand disease etiology.* **\$2,600,000** (Benbow Budget ~ \$847,721)(Submitted July 2021)

#### HONORS AND AWARDS

- Award for Achievement in the Forensic Life Science, Pathology/Biology Section, American Academy of Forensic Sciences, February 2021
- Fellow of the American Academy of Forensic Sciences, February 2019
- Invited Keynote Speaker – 6<sup>th</sup> Annual Meeting of Laboratoire d'Excellence Centre d'étude de la Biodiversité Amazonienne, Cayenne, French Guiana, 5 October 2017
- Fellow of the Academy for Global Engagement Program, Michigan State University, MI — 2016
- Invited Keynote Speaker – 60<sup>th</sup> Annual Meeting of the Michigan Entomological Society, Saginaw, MI, 15 June 2014
- Invited Plenary Speaker – Global Conference on Entomology, Chiang Mai, Thailand, 5-9 March 2011
- Invited Keynote Speaker – First Annual Meeting of the Malaysia Association of Forensic Entomology, Kuala Lumpur, Malaysia, 6 July 2011
- Invited Keynote Speaker – One Day Seminar on Forensic Entomology and It's Implications in Medicine, Kuala Lumpur, Malaysia, 5 July 2011
- Beta Beta Beta Biological Honor Society Honorary Member, Theta Kappa, University of Dayton — 2010
- Platinum Award for DVD entitled "*Forensic entomology: collection and preservation of entomological evidence for court*". Ava Awards — 2008
- Telly Award for DVD entitled "*Forensic entomology: collection and preservation of entomological evidence for court*" — 2007
- NSF Travel Grant Award through the Entomological Society of America for the 2004 International Congress of Entomology, Brisbane, Australia — 2004
- Invited Research Director for JASON Foundation Online Expedition — 2001
- Sigma Xi Graduate Research Award, University of Dayton Chapter — 1998
- University of Dayton Teaching Assistant Scholarship — 1995 - 1999
- University of Dayton Graduate Teaching Award — 1996
- Society of Sigma Xi Membership, University of Dayton Chapter — 1996
- University of Dayton Scholars Program — 1992 - 1994
- University of Dayton Special Achievement Award — 1992 - 1993
- Wittenberg University Alumni Scholarship — 1990 - 1991

#### PROFESSIONAL EXPERIENCE & SERVICE

##### *Federal and International Reviewer as Ad hoc or on Panels:*

*The National Academies of Sciences, Engineering and Medicine (formerly the National Research Council) Review Committee Member (2017-2019) — Appointed Member of the Review of the Edwards Aquifer Conservation Program – Phase III.*

*The National Academies of Sciences, Engineering and Medicine (formerly the National Research Council) Review Committee Member (2015-2016) — Appointed Member of the Review of the Edwards Aquifer*

Conservation Program – Phase II.

**National Academy of Sciences, National Research Council Review Committee Member (2014-2015)** — Appointed Member of the Review of the Edwards Aquifer Conservation Program – Phase I.

**Swiss National Research Foundation** –*ad hoc proposal reviewer* (2020)

**French National Research Agency**– *Review Panel Committee Member* (Health-Environment: Environment, pathogenic agents and emerging and re-emerging infectious diseases, adaptation and resistance to antimicrobials, 2018-2019)

**French National Research Agency Foundation** –*ad hoc proposal reviewer* (Challenge 4: Life, Health and Well-Being, 2017)

**Biodiversa (European Biodiversity Funding Program)** –*ad hoc proposal reviewer* (2019)

**National Science Foundation - DEB Preliminary Proposal Review Panel** (Population and Community Ecology, 2015); *Dimensions of Biodiversity* (2019); *ad hoc reviews* (6)

**National Science Foundation - Doctoral Dissertation Improvement Grants (DDIG) Panel** (Population and Community Ecology, 2012)

**National Institutes of Health – NIH PAR Panel: Community Interventions to Address the Consequences of the COVID-19 Pandemic Among Health Disparity and Vulnerable Populations (ZRG1 HDM-H (58))** (2021)

**Biotechnology and Biological Sciences Research Council of the United Kingdom, ad Hoc Proposal Reviewer** (2017)

**National Geographic Society, ad Hoc Proposal Reviewer** (2017)

**United State Department of Agriculture – NIFA, ad Hoc Proposal Reviewer** (2016)

**Romanian – USA Fulbright Commission, ad Hoc Proposal Reviewer** (2016)

**Department of Energy - SCGF** (Office of Science Graduate Fellowship, 2010)

**Expert Reviewer** — Proposed Rule of Critical Habitat for U.S. Fish and Wildlife Service, Honolulu, HI (2005)

**Invited Speaking Engagements:**

**Invited Speaker** — World Health Organization (6), Michigan State University (5), Ohio State University (2), University of California Berkeley, Mediterranean Centre for Environmental and Biodiversity Laboratory of Excellence (2), LabRoots, University of Notre Dame, Purdue University, Texas A&M University, University of Texas El Paso, Emory University, University of Surrey (United Kingdom), University of Würzburg (Germany), Waldgeschichtliche Museum at the Nationalparkverwaltung Bayerischer Wald (Bavarian National Forest) (Germany), University of Malawi, Malawi University of Science and Technology, Bowling Green State University, Wright State University, Indiana University-Purdue University (Ft. Wayne), DePauw University (2), University of Dayton (3), Central Michigan University (2), Oakland University, West Virginia University, Hope College, University of Toledo, Millersville University, Kellogg Biological Station, Lorain County Community College, The Freshwater Society, Burapha University (Thailand) (6), Ubon Ratchathani University (Thailand), Texas State University (Forensic Anthropology Center), Kettering College, Indiana University-

*Purdue University (Indianapolis), Huazhong Agricultural University (China), Zhejiang University (China), Zhuhai Agricultural Center (China), Universiti Teknologi Mara (Malaysia), Guangdong Police College (China), Northwest Agricultural and Forestry University (China), Pacific Whale Foundation, National Research Council of the Republic of Palau, Christopher Hills Foundation, Maui Watershed Awareness Involvement Forum*

**Invited Keynote Speaker** – *1<sup>st</sup> African Conference on Edible Insects*, 14-16 August 2019, Harare, Zimbabwe, 15 August 2019

**Invited Keynote Speaker** – *6<sup>th</sup> Annual Meeting of Laboratoire d'Excellence Centre d'étude de la Biodiversité Amazonienne*, Cayenne, French Guiana, 5 October 2017

**Invited Keynote Speaker** – *60th Annual Meeting of the Michigan Entomological Society*, Saginaw, MI, 13-15 June 2014

**Invited Plenary Speaker** – *Global Conference on Entomology*, Chiang Mai, Thailand, 5-9 March 2011

**Invited Keynote Speaker** – *First Annual Meeting of the Malaysia Association of Forensic Entomology*, Kuala Lumpur, Malaysia, 6 July 2011

**Invited Keynote Speaker** – *One Day Seminar on Forensic Entomology and It's Implications in Medicine*, Kuala Lumpur, Malaysia, 5 July 2011

**Scientific Organization Activities and Editorial Service:**

**Past President** — *North American Forensic Entomology Association, Executive Committee (2013 - 2014)*

**President** — *North American Forensic Entomology Association, Executive Committee (2012 - 2013)*

**President-Elect** — *North American Forensic Entomology Association, Executive Committee (2011 - 2012)*

**Associate Guest Editor** —

*Frontiers in Ecology and Evolution, Population and Evolutionary Dynamics: Death and Decomposition in Aquatic Ecosystems Special Issue (2018-2019)*

*Frontiers in Ecology and Evolution, Frontiers in Microbiology, Frontiers in Genetics, Evolutionary and Population Genetics: Life and Death: New Perspectives and Applications in Forensic Science Special Issue (2019-2021)*

**Editorial Board, Subject Editor** — *PCI Infections (2021 - Present)*

**Editorial Board, Subject Editor** — *World Journal of Clinical Infectious Diseases (2011 - 2015)*

**Editorial Board, Subject Editor** — *Lepcey – Bulletin on Entomological Studies of Tropical Asia (2011 - 2015)*

**Editorial Board, Subject Editor** — *Pan-Pacific Entomologist (2008 - 2013)*

**Editorial Board, Subject Editor** — *Entomology Digital Library of the AAAS - Medical and Veterinary Entomology/Forensics Section (2006 - 2009)*

**Editorial Board, Section Editor (Invertebrates)** — *Encyclopedia of Inland Waters*. Elsevier Press. GE Likens

(Editor-In-Chief) (2006-2008)

**Associate Subject Editor** — *Journal of Medical Entomology* (2003 - 2006)

**Additional Professional Experience and Service:**

**LabRoots Conference Planning Committee Member:** Virtual Webinars and Educational Events (<https://www.labroots.com/>) (2020 – present)

**V Sivaram Research Foundation (Bangalore)** — Research Advisory Board (2021 – present)

**World Health Organization Buruli Ulcer Research Coordination Working Group: Transmission Sub-Working Group Committee Member** — Technical Advisory Committee to the WHO (2010 – 2012)

**Consultant for World Health Organization, Buruli ulcer Initiative** — Ecology of Buruli ulcer disease, Ghana, Africa (2004 – 2006): Invited research seminars annually from 2005-2010.

**Invited Workshop Member** — Texas State University Forensic Entomology Workshop, San Marcos, TX (2011)

**Expert Scientific Witness** — Contested case on stream flow in Maui Streams (Earthjustice, Honolulu, HI) (2007 – 2009): Commission on Water Resource Management, State of Hawaii. `Īao Ground Water Management Area High Level Source Water Use Permit Applications and Petition to Amend Interim Instream Flow Standards of Waihe`e, Waiehu, `Īao, & Waikapū Streams. Contested Case Hearing Case No. CCH-MA06-01.

**NSF HBCU-UP Advisory Committee** — committee for Historically Black Colleges and Universities Undergraduate Program grant award to G. Javan, Alabama State University (2014-2016)

**Research Director** — Earthwatch Institute Hawaii's Mountain Streams Project 1999-2001 (110 volunteers). JASON Foundation 2001 Online Expedition (Hawaii's Mountain Streams); included mentoring 6 middle school students in field research, data analysis and conference presentation

**Michigan State University International Research and Teaching Delegation** — one of three scientists that visited Can Tho University, Vietnam to evaluate/facilitate potential research and teaching opportunities for Michigan State University - 2006

**Scientific Advisor (*Forensic Entomology*)** — New Jersey Forensic Science Commission, Forensic Anthropology and Associated Forensic Specialties Sub-Committee (2005 – 2011)

**Invited Workshop Member** — the Na Wai Eha Stream Biology Working Group, Maui, HI (2006)

**Conference & Symposium Organizing Committees** — First Annual Meeting of North American Forensic Entomologists (2003); Aquatic Entomology Symposium at the Annual Meeting of the Entomological Society of America (2004, 2005, 2011, 2012); International Congress of Entomology (2012); Committee Chair of the Local Arrangements Committee of the 11th Annual Meeting of the North American Forensic Entomology Association held in Dayton, OH (2013); Local Arrangements Committee for the 2018 Annual Meeting of the Society for Freshwater Science (2017-2018); Death and Decomposition in Aquatic Ecosystems Special Symposium at the Annual Meeting of the Society for Freshwater Science (2018)

**Conference Session Moderator** — Annual Meeting of the North American Benthological Society/Society for Freshwater Science (2007, 2015, 2018), Annual Meeting of the Entomological Society of America (2004, 2005,

2008, 2011, 2012, 2013); Annual Meeting of the American Academy of Forensic Science (2009, 2010, 2012, 2014, 2015, 2016, 2017, 2018, 2019), Annual Meeting of the World Health Organization Buruli Ulcer Initiative (2009, 2010), Annual Meeting of the North American Forensic Entomology Association (2009, 2010, 2011, 2012, 2013), European Association for Forensic Entomology (2012)

**International Advisory Board** — Global Conference on Entomology, Chiang Mai, Thailand, 5-9 March 2011

**Webmaster** — North American Forensic Entomology Association (2003-2011); Island Environmental Biology Course (2002-2009); Culture, Biodiversity and Resources Management Course (2003-2009)

**Executive Committee Member** — North American Forensic Entomology Association, Webmaster and Newsletter Editor (2004-2011), President-Elect (2011-2012), *President (2012-2013)*, Member of the first Executive Committee that created this organization (2004)

**Professional Service Committees** — North American Forensic Entomology Association (NAFEA): Membership Survey Committee; Annual Conference Organization Committee Chair (2013); American Academy of Forensic Science, Awards Committee (2018-2020), Program Committee (2018-2019); Society for Freshwater Science Career Awards Committee (2021-2024)

**Scientific Advisor (*Watershed Ecology*)** — Watershed biomonitoring program for the Republic of Palau; Christopher Hills Foundation, Maui, HI (2002-2008)

**Visiting Scholar** — Belau National Museum, Republic of Palau (2009-2012); Burapha University, Thailand (2010, 2011); Ubon Ratchatani University, Thailand (2010); Faculty of Medicine, Universiti Teknologi Mara, Malaysia (2011); Huazhong Agricultural University, China (2011); University of Surrey, United Kingdom (2012)

## PROFESSIONAL REVIEWING ACTIVITIES

***Ad hoc* Reviewer** (# of reviews) —

### Funding Agencies

*NSF (6) • NIH (2) • USGS (3) • USDA-NIFA • US Forest Service • The French National Research Agency (ANR)(3) • Swiss National Science Foundation • National Geographic Society (2) • BBSRC (Biotechnology and Biological Research Council [UK] • Fulbright Commission • National Sciences and Research Council (NSERC) of Canada • National Institute of Justice • The Leverhulume Trust (UK) • BiodivERsA (European Biodiversity Network)*

### Publishers (Book proposals)

*Elsevier • Harvard University Press*

### Journals

*Ecology Letters (2) • Ecology (5) • Biological Reviews • ISME J (Nature) • Current Biology • Ecosphere (3) • FEMS Microbiol Rev • Scientific Data (Nature) (2) • Oikos • Ecosystems • Oecologia (2) • PLoS ONE (2) • PLoS Neg Trop Dis (15) • J N Am Benthol Soc/Freshwat Sci (5) • Freshwater Biology • Appl Environ Microbiol • Emerg Infect Dis • J Animal Ecology • Scientific Reports (Nature) • Environ Microbiol • Peer J (3) • Ecological Processes • Front Ecol Evol (3) • Front Microbiol • Environ Entomol (3) • EcoHealth (3) • Infect, Gen, Evol • Infect Immun • J Environ Qual • J Am Wat Res Assoc (6) • Mar Freshwat Res • J Trop Ecol • Ecol Entomol*

(5) • *J Am Mos Cont Assoc* • *Great Lakes Entomol* • *J Med Entomol* (15) • *Landscape Ecol.* • *Physio Entomol.* (2) • *Ann Limnol* — *Int J Lim* (2) • *Caribb J. Sci.* (2) • *J Vect Ecol* (2) • *J Insect* • *Aquat Sci* • *Pertanika J Trop Agric Sci* • *Wetlands* (2) • *Applied Herp* (2) • *Trans Am Fish Soc* • *Acta Oecol* (2) • *Hydrobiologia* (4) • *Environ Biol Fish* • *Aquat Sci* • *Environmental Pollution* • *Pan-Pac Entomol* (3) • *J Insect Sci* • *J East Afri Nat His* • *Entomologia Experimentalis et Applicata* • *BMC Public Health* (2) • *J Forensic Sci* (18) • *Forensic Sci Internat* (7) • *J Wat Sanit Develop* • *African J Agric Res* • *J Microbiol Methods* • *EcoHealth* • *Conservation Biology* • *Entomological News* • *BMC Research Notes* • *Waste Management* (2) • *The Canadian Field-Naturalist* • *Ulcers* • *J Mar Sci: Res and Develop* • *Aquatic Insects* • *Int J Legal Med* (4) • *J Insect Conserv* • *Acta Tropica* • *Appl Microbiol Biotechnol* • *J Mollusc Studies* • *Int J Health Geographics* (2) • *J Hydrol Reg Stud* (2) • *Bull Southern Calif Acad Sci* • *Rev Brasileira Entmol* • *Am J Trop Med Hyg* • *J Great Lakes Res* • *Pacific Science* • *J Insect Behav* • *Curr Opinion Insect Sci* • *Canadian J Infect Dis & Med Microbiol* • *Microbes and Environments* • *Behav* • *Southeast Nat* • *Southwest Entomol* • *Micronesica* (2) • *Food Webs* (3)

## MEMBERSHIPS

American Association for the Advancement of Science • Ecological Society of America • Society for Freshwater Science (formerly the North American Benthological Society) • Entomological Society of America • American Academy of Forensic Science • North American Forensic Entomology Association • Ohio Academy of Science • Xerces Society • The Association for Tropical Biology • Malaysia Association of Forensic Entomology • European Association of Forensic Entomology

## INVITED SEMINARS, ADDRESSES & CONFERENCE PRESENTATIONS

1. *Novel Weapon Evolution and Coincidental Virulence in Environmental Pathogens: A Case Study of the Mycobacterium marinum complex and Buruli ulcer disease.* Invited Presentation at the Mediterranean Centre for Environmental and Biodiversity Laboratory of Excellence (CeMEB) Conseil Scientifique. Faculté de Médecine, Ecole de Médecine, Montpellier, France, 30 November 2021. (Virtual Presentation) **International Invitation**
2. *The Potential for Black Soldier Fly Farming in Malawi: Recent Progress and Future Directions.* Invited Presentation at MwAPATA Institute, Lilongwe, Malawi, 2 June 2021. (Virtual Presentation) **International Invitation**
3. *Novel Weapon Evolution and Coincidental Virulence in Environmental Pathogens: A Case Study of Mycobacteria and Buruli ulcer.* Invited Seminar at Burapha University, Chonburi, Thailand 29 January 2021. (Virtual Seminar) **International Invitation**
4. *Novel Weapon Evolution and Coincidental Virulence in Environmental Pathogens: A Case Study of Mycobacteria and Buruli ulcer.* Invited Seminar at Mediterranean Centre for Environmental and Biodiversity Laboratory of Excellence (CeMEB), Montpellier, France, 6 November 2020. (Virtual Seminar) **International Invitation**
5. *Considering Spatial and Temporal Scales in Forensic Entomology.* Invited Presentation for 1<sup>st</sup> Digital World Congress of Forensic Entomology, 17 September 2020. (Virtual Presentation) **International Invitation**
6. *Deciphering the Necrobiome and Postmortem Microbiomes for Use in Forensics.* Invited Seminar for Labroots Virtual Webinars: Forensic Sciences 2020 Series (labroots.com), 6 May 2020. (Virtual Seminar) **International Invitation**
7. *Novel Weapon Evolution in Mycobacterial Pathogenesis, dispersal and ecological persistence in French Guiana.* Invited Seminar at Laboratoire d'Excellence Centre d'étude de la Biodiversité

Amazonienne, EcoFoG, Cayenne, French Guiana, 27 March 2020. (postponed due to COVID-19 pandemic) **International Invitation**

8. *Postmortem Microbiomes in Forensics and Public Health Surveillance*. Invited Seminar at Los Alamos National Laboratory, Los Alamos, NM, 23 October 2019.
9. *Bridging Ecology and Applications Through High Throughput Sequencing Technology*. Invited Seminar at University of Turin, Italy, 14 March 2019. **International Invitation**
10. *Sample Types and Validation in PMI Research: Bridging Basic and Applied Science in Forensics?* Invited Presentation at the Stakeholder Meeting for Estimating the Postmortem Interval (PMI) using Microbes. Baltimore, MD, 18 February 2019.
11. *Using High Throughput Sequencing Technologies to Advance Insect Science*. Invited Seminar at Burapha University, Thailand, 7 February 2019. **International Invitation**
12. *The Dark Side of the Necrobiome: The Role of Carrion in Ecosystems*. Invited Seminar at Waldgeschichtliche Museum at the Nationalparkverwaltung Bayerischer Wald (Bavarian National Forest), Germany, 11 October 2018. **International Invitation**
13. *The Ecological Importance of Carrion and the Necrobiome in Human and Natural Systems*. Invited Seminar at University of Würzburg, Würzburg, Germany, 10 October 2018. **International Invitation**
14. *Exploring Lake Midge Emergences to Determine Natural Aquatic Insect Colony Feasibility in Malawi*. Next Generation of Food Security in Malawi Symposium, Salima, Malawi, 18-19 July 2018. **International Invitation**
15. *The necrobiome and forensic science: understanding death and decomposition for societal good*. Invited seminar at Northern Michigan University, Marquette, MI, 16 May 2018.
16. *The human postmortem microbiome: past, present and future*. Invited Seminar at University of Salzburg, Salzburg, Austria, 4 May 2018. **International Invitation**
17. *Insects and human health: how studying aquatic insects has led from searching for a mysterious disease in Africa to observing autopsies in Michigan*. Invited seminar at Lake Superior State University, Sault Ste. Marie, MI, 9 March 2017.
18. *Microbiome Systems Ecology*. Invited Address at Michigan State University Global Innovation Forum, East Lansing, MI, 5 November 2016.
19. *Bugs, bacteria and bodies: potential applications of the necrobiome in forensic investigation*. Invited seminar at Sam Houston State University, Huntsville, TX, 20 October 2016.
20. *The human postmortem microbiome: potential applications in forensics and novel translations for investigating human health and disease*. Invited seminar at College of Medicine, University of Malawi, Blantyre, Malawi, 8 June, 2016. **International Invitation**
21. *The human postmortem microbiome: potential applications in forensics*. Invited seminar at Malawi Institute of Technology, Malawi University of Science and Technology, Blantyre, Malawi, 7 June, 2016. **International Invitation**

22. *The human postmortem microbiome and potential forensic applications*. Invited address at Advances in Forensic Medicine & Pathology, Department of Pathology, University of Michigan, Ann Arbor, MI, 11-12 May, 2016.
23. *More than marine derived nutrients: additional insights into the ecology of salmon carcass decomposition*. Invited Seminar at Kellogg Biological Station, Michigan State, MI, April 29, 2016.
24. *The human postmortem microbiome: a new frontier in forensics*. Invited Seminar at Bowling Green State University, Bowling Green, OH, February 17, 2016.
25. *Insect-microbe interactions of decomposition and forensics: a next-generation approach to integrating basic and applied science*. Invited seminar in the Department of Biological Sciences, Burapha University, Thailand, December 16, 2015. **International Invitation**
26. *Carrion decomposition, forensics and disease: tales of microbes and insects from death scenes to scenic streams*. Invited Seminar at University of Notre Dame, South Bend, IN, November 25, 2015.
27. *Riparian invader ripple effects in headwater stream ecosystems*. Invited Seminar at Bowling Green State University, Bowling Green, OH, October 10, 2015.
28. *Insights from the living dead: what flies and microbes can reveal about death, decomposition and incarceration*. Invited Seminar at Central Michigan University Biological Research Station on Beaver Island, MI, June 3, 2015.
29. *Salmon carcass effects on stream-riparian forest networks: bottom up effects from microbes and insects*. Invited Seminar at Central Michigan University Biological Research Station on Beaver Island, MI, June 2, 2015.
30. *So what, who cares? Why insects, microbes and their interactions are important in forensics and medicine*. Invited Seminar for Future Forensic Scientists Club, Michigan State University, April 27, 2015.
31. *Exotic plant invasions and salmon decomposition mediate insect-microbe interactions*. Invited Seminar in the Department of Biological Sciences, University of Windsor, Canada, October 3, 2014. **International Invitation**
32. *Insects and Microbiomes: An (un)likely intersection of ecology, disease and forensics*. Invited Seminar in the Department of Entomology, Michigan State University, September 12, 2014.
33. *Terrestrial invaders and aquatic insect-microbe interactions*. Invited Keynote Speaker for the 60<sup>th</sup> Michigan Entomological Society Annual Meeting, Saginaw, MI, June 14, 2014.
34. *New research in microbe-insect interactions*. Invited Seminar at College of Plant Protection, Shandong Agricultural University, Shanghai, China, June 12, 2014. **International Invitation**
35. *The insect microbiome within a biogeographic context*. Invited Seminar at the Institute of Entomology, Northwest Agricultural and Forestry University, Yangling, Shaanxi, China, June 9, 2014. **International Invitation**
36. *Microbe-insect partnerships: the importance of biogeographic variation*. Invited Seminar at the State Key Laboratory of Agricultural Microbiology, Huazhong Agricultural University, Wuhan, China, June 7, 2014. **International Invitation**

37. *Diverse applications in carrion decomposition ecology research*. Invited Seminar at the State Key Laboratory of Agricultural Microbiology, Huazhong Agricultural University, Wuhan, China, June 6, 2014. **International Invitation**
38. *Diverse applications in carrion decomposition ecology research*. Invited Seminar at the College of Agricultural and Biotechnology, Zhejiang University, Hangzhou City, China, June 3, 2014. **International Invitation**
39. *Emerging multidisciplinary research efforts in carrion ecology and forensic entomology*. Invited Seminar in the Department of Entomology, Purdue University, March 6, 2014.
40. *Aquatic community responses to riparian invaders*. Invited Seminar in the Department of Entomology, Michigan State University, July 23, 2013.
41. *Bugs and bodies: new frontiers and dimensions of forensic entomology*. Invited Presentation for the 32nd Annual Empire State Association of Two Year College Biologists, Albany, New York, April 20, 2013.
42. *Carrion ecology, evolution and their applications: new insights into microbe-insect interactions of ephemeral resources*. Invited Graduate Luncheon Seminar in the Department of Integrative Biology, University of California Berkeley, April 15, 2013.
43. *Insects and incarceration - maggots, medicine and microbes, oh my!* Invited Seminar in the Division of Arts and Sciences, Kettering College, February 14, 2013.
44. *Watershed Biomonitoring for Pacific Ocean islands*. Invited Workshop speaker for the Nature Conservancy, Koror, Republic of Palau, June 18-21, 2012. **International Invitation**
45. *The mysteries of Mycobacterium ulcerans infection (Buruli ulcer) - a neglected tropical disease*. Invited Seminar in the Department of Biology, Indiana University-Purdue University, Oct 5, 2012.
46. *Ecological eavesdropping: implications for forensic science*. Invited Seminar in the Department of Microbial and Molecular Science, University of Surrey, United Kingdom, May 31, 2012. **International Invitation**
47. *A mysterious infectious disease system and a complex systems approach to understanding transmission of Mycobacterium ulcerans infection*. Invited Seminar in the Faculty of Medicine, Universiti Teknologi Mara, Kuala Lumpur, Malaysia, July 5-6, 2011. **International Invitation**
48. *Understanding the mechanistic role of blow flies in the microbial ecology of carrion decomposition: implications to food borne disease spread*. Invited Keynote Speaker for “Forensic Entomology and It’s Implications in Medicine” at the Faculty of Medicine, Universiti Teknologi Mara, Kuala Lumpur, Malaysia, July 5, 2011. **International Invitation**
49. *New approaches for understanding the mechanistic role of microbial community-blow fly interactions during carrion decomposition: applications to forensic science*. Invited Seminar for the Department of Forensic Science and Technology, Guangdong Police College, Guangzhou, China, June 28, 2011. **International Invitation**

50. *Understanding the mechanistic role of blow flies in the microbial ecology of carrion decomposition: implications to food borne disease spread.* Invited Seminar at Zhuhai Agricultural Center, Zhuhai, China, June 27, 2011. **International Invitation**
51. *Understanding the mechanistic role of blow flies in the microbial ecology of carrion decomposition: implications to food borne disease spread.* Invited Seminar at the State Key Laboratory of Agricultural Microbiology, Huazhong Agricultural University, Wuhan, China, June 24, 2011. **International Invitation**
52. *A mysterious infectious disease system and a complex systems approach to understanding transmission of *Mycobacterium ulcerans* infection.* Invited Seminar at the State Key Laboratory of Agricultural Microbiology, Huazhong Agricultural University, Wuhan, China, June 23, 2011. **International Invitation**
53. *Blow flies, bacteria and inter-kingdom ecological interactions during decomposition: implications for forensic science and beyond.* Invited Plenary Speaker for the Global Conference on Entomology, Chiang Mai, Thailand, March 5-9 2011. **International Invitation**
54. *A new approach to the mechanistic role of microbial community-blow fly interactions during carrion decomposition: applications to forensic science.* Invited seminar in the Department of Biological Sciences, Burapha University, Thailand, January 10, 2011. **International Invitation**
55. *Understanding the role of ecology in infectious disease systems: complex environmental interactions beyond medical entomology.* Invited seminar in the Department of Biological Sciences, Ubon Ratchathani University, Thailand, July 24, 2010. **International Invitation**
56. *Understanding carrion decomposition ecology for application to forensic science.* Invited seminar in the Department of Biological Sciences, Burapha University, Thailand, January 2, 2009. **International Invitation**
57. *Forensic Entomology: the collection and preservation of insect evidence from crime scenes.* Invited seminar in the Department of Biological Sciences, Burapha University, Thailand, January 3, 2009. **International Invitation**
58. *Mycobacterium ulcerans* infection: the ecology of a neglected tropical disease. Invited seminar in the Department of Microbiology, The Ohio State University, January 21, 2009.
59. *Large scale patterns of land use and aquatic invertebrate community structure as part of a West African disease system.* Invited seminar in the Department of Entomology, Texas A&M University, April 23, 2009.
60. *Multiple-scale and multi-disciplinary ecological studies on a mysterious emerging disease in West Africa.* Invited seminar in the Department of Biology, West Virginia University, October 26, 2009.
61. *The ecology of worldwide emerging diseases: how and why do infectious agents emerge from the environment.* Invited seminar in the Department of Biological Sciences, Burapha University, Thailand, December 29, 2008. **International Invitation**
62. *Complexities of studying a neglected tropical disease: *Mycobacterium ulcerans* infection.* Invited seminar in the Department of Biological Sciences, Burapha University, Thailand, December 30, 2008. **International Invitation**

63. *The ecology of an emerging infectious disease in West Africa*. Invited seminar in the Department of Biology, University of Dayton, January 31, 2008.
64. *The role of biting hemipterans in the emergence of a mysterious infectious disease in West Africa*. Invited seminar in the Department of Entomology, Ohio State University, February 19, 2008.
65. *Starting from ground zero: the first ecological studies of a worldwide emerging infectious disease*. Invited seminar in the Department of Biological Sciences, Wright State University, October 20, 2008.
66. *Deciphering a disease system by integrating ecosystem ecology and molecular biology*. Invited seminar in the Department of Biological Sciences, Oakland University, November 25, 2008.
67. *From satellites to gene probes: understanding the ecology of an emerging mycobacterial disease in tropical West Africa*. Invited seminar in the Department of Biology, University of Texas El Paso, El Paso, TX. April 14, 2006.
68. *Ecology of Mycobacterium ulcerans Infection: evaluating landscape relationships with freshwater food webs and disease occurrence*. Invited seminar in the Department of Biology, DePauw University, Greencastle, IN. March 31, 2005.
69. *Human impacts on freshwater ecosystems: the case study of Mycobacterium ulcerans Infection*. Invited seminar in the Department of Biological Sciences, University of Toledo, Toledo, OH. March 1, 2005.
70. *Environmental drivers of Buruli ulcer disease in West Africa*. Invited seminar in the Department of Entomology, Michigan State University, East Lansing, MI. October 2004.
71. *Water flow reduction effects on Hawaiian stream communities*. Invited seminar in the Department of Biology, Hope College, Holland, MI. May 1999.

#### INVITED WORKSHOP SPEAKER/LEADER

**Benbow, ME**. Bridging Ecology and Applications Through High Throughput Sequencing Technology. *Invited* workshop at University of Turin, Italy, 14 March 2019.

Pechal, JL and **ME Benbow**. Collecting Entomological Evidence at Death Scenes. *Invited* workshop at Northern Michigan University for local law enforcement, Marquette, MI, 16 May 2018.

Tomberlin, JK, HR Jordan, S Bankson, **ME Benbow**, D Botluck, JA Cammack, S Domitrovich, RT Kennedy, PAW King, JJ Maltese, JL Pechal, HM Pitluck, L Sare, and DE Shelton. 2017. Viewing Research Through Different Lenses: How to Achieve Success in Court. 68<sup>th</sup> Annual Meeting of the American Academy of Forensic Science. New Orleans, LA, February 13-18, 2017.

Jordan, HR and **ME Benbow**. 2017. Forensic Microbiology and Its Applications Today. Meeting of the American Academy of Forensic Science. New Orleans, LA, February 13-18, 2017.

Pechal, JL, CJ Schmidt, HR Jordan, and **ME Benbow**. 2016. Human Postmortem Microbiomes: The Hows, Wheres and Whys. Advances in Forensic Medicine & Pathology, Ann Arbor, MI, 11-12 May.

**Benbow, ME** with G. Javan. American Academy of Forensic Science Workshop: Hands-On Evaluation of the Thanatomicrobiome and Epinecrotic Communities, Meeting of the American Academy of Forensic Science.

Orlando, FL, February 16-21, 2015 (*co-chair for this workshop*)

**Benbow, ME.** 2015. The Importance of Thanatomicrobiome and Epinecrotic Communities for Forensic Entomology. In: Hands-On Evaluation of the Thanatomicrobiome and Epinecrotic Communities. 67<sup>th</sup> Annual Meeting of the American Academy of Forensic Science. Orlando, FL, February 16-21, 2015. (*co-chair for this workshop*)

Pechal, JL, **ME Benbow.** 2015. Bioinformatic Data Analysis and Multivariate Statistical Interpretation. In: Hands-On Evaluation of the Thanatomicrobiome and Epinecrotic Communities. 67<sup>th</sup> Annual Meeting of the American Academy of Forensic Science. Orlando, FL, February 16-21, 2015. (*co-chair for this workshop*)

**Benbow, ME,** TL Crippen. 2014. Why are Microbes Important to Pathology? Invited Speaker and Session Leader. In: Forensic Microbiology: Where do we begin? 66<sup>th</sup> Annual Meeting of the American Academy of Forensic Science. Seattle, WA, February 17-22, 2014. (*co-chair for this workshop*)

Pechal, JL, **ME Benbow.** 2014. Sampling, Data Collection and Equipment. Invited Speaker and Session Leader. In: Forensic Microbiology: Where do we begin? 66<sup>th</sup> Annual Meeting of the American Academy of Forensic Science. Seattle, WA, February 17-22, 2014. (*co-chair for this workshop*)

**Benbow, ME,** JL Pechal. 2014. Data Analysis and Interpretation. Invited Speaker and Session Leader. In: Forensic Microbiology: Where do we begin? 66<sup>th</sup> Annual Meeting of the American Academy of Forensic Science. Seattle, WA, February 17-22, 2014. (*co-chair for this workshop*)

**Benbow, ME,** JL Pechal. 2014. Experimental Design for Future Research. Invited Speaker and Session Leader. In: Forensic Microbiology: Where do we begin? 66<sup>th</sup> Annual Meeting of the American Academy of Forensic Science. Seattle, WA, February 17-22, 2014. (*co-chair for this workshop*)

Tomberlin, JK, **ME Benbow.** 2014. Research Opportunities. Invited Speaker and Session Leader. In: Forensic Microbiology: Where do we begin? 66<sup>th</sup> Annual Meeting of the American Academy of Forensic Science. Seattle, WA, February 17-22, 2014. (*co-chair for this workshop*)

**Benbow, ME,** JL Pechal. 2012. Multivariate statistical approaches for analyzing community succession in forensic entomology. Invited Speaker and Session Leader. 10<sup>th</sup> Annual Meeting of the Forensic Entomology Association. Las Vegas, NV, July 16-20, 2012.

**Benbow, ME,** J Lang, AJ Burky. 2012. An approach to rapid biological stream assessments for island watersheds. Invited Speaker and Session Leader. 2<sup>nd</sup> Micronesian Challenge Terrestrial Measures Workshop. Koror, Palau, June 18-21, 2012. *International Invitation*

**Benbow, ME.** 2011. The role of aquatic organisms in forensic investigations. Invited Speaker. Forensic Entomology Workshop. Forensic Anthropology Center at Texas State – Grady Early Forensic Anthropology Research Laboratory, Texas State University, San Marcos, TX, November 6, 2011.

#### SCHOLARLY PRESENTATIONS

[Please see full list of presentation citations at the end of the CV.](#)

#### TEACHING

***Courses taught at Michigan State University:***

**Aquatic Entomology with Lab** (ENT 422) — Fall 2015, 2017, 2019, Spring 2021  
**Advances in Insect Microbiomes** (ENT 812) — Spring 2020  
**Forensic Entomology** (ENT 401) — Fall 2018  
**Forensic Entomology** (ENT 812) — Spring 2017  
**Forensic Applications of the Necrobiome** (ENT 812) — Spring 2016  
**Insects, Disease and Natural Resources Management** (ENT 812) — Fall 2014  
**Graduate Independent Study** (ENT 890) — Fall 2017  
**Honors Capstone Project** (MMG 499H) — Fall 2017, Spring 2018, Spring 2019, Fall 2020 (2), Spring 2021(2)  
**Insect Production and Energetics** (ENT 812) — 2003  
Guest Lecture in **Conservation Criminology** (FW 847) – Fall 2019  
Guest Lecture in **Introduction to Health and the Environment** (GEO 235)– Spring 2015  
Guest Lectures in **Survey in Forensic Science** (CJ 805) – Fall 2014, 2015, 2016, 2017, 2018  
Guest Lectures in **Introduction to Forensic Science** (CJ 210) – Fall 2014, 2015, 2016, 2017, 2019  
Guest Lecture in **Pests, Society and the Environment** (ENT 205) – Spring 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021  
**Earth Systems Science** (*Honors Course – co-taught with other faculty*) — 2007  
**Forensic Entomology** (*Freshman Seminar Course – co-developed*) — 2005  
**Online Forensic Entomology** (*co-developed*) — 2005  
**Aquatic Entomology, Tropical Biology, & Insect Ecology** (*Multiple Guest Lectures*) — 2001 – 2006

***Guest Lectures at Other Universities/Institutions***

Guest Lecture in *Health Science* - Northern Virginia Community College (virtual lecture) – Fall 2014

***Courses Developed and Taught at DePauw University or the University of Dayton as Assistant Professor:***

**Disease Ecology** (BIO 465) — 2010-2013  
**Guest Lecture in Restoration Ecology** – Multiple Semesters from 2009-2013  
**Guest Lecture in Ecology** – Multiple Semesters from 2009-2013  
**Ecological Methods and Instrumentation** (BIO 552 P2) — 2010  
**Introduction to Biology — Ecology and Evolution** (BIO 152) — 2008-2013  
**Introduction to Multivariate Statistics** (BIO 596) — 2009, 2013  
**Invertebrate Sampling and Identification** (BIO 596) — 2010  
**Island Environmental Biology** (BIO 360) - (*co-developed*) (*Study Abroad*) — 2002-2005, 2009  
**Culture, Biodiversity and Resources Management** (BIO 340) (*co-developed*) (*Study Abroad*) — 2005, 2010  
**Sophomore Seminar** (BIO 299) — 2009, 2011, 2013  
**Undergraduate Independent Study** (BIO 421) — 2009-2013  
**Comparative Animal Physiology** (BIO 465) — 1998, 2000  
**Science 230 Introductory Biology for non-majors** (SCI 230) — 2000  
**General Biology** (BIO 101, *majors and non-majors*)— 1998  
**Invertebrate Zoology** — 1997 (5 weeks)  
**Introduction to Ecology and Evolution** — 2005, 2006 (DePauw University)  
**Senior Seminar** — 2005 (DePauw University)

***Laboratory Courses Developed and Taught at the University of Dayton:***

Restoration Ecology (co-taught 2010) • Island Environmental Biology (2002-2004) • General Biology for majors (1999) • Ecology (1998) • Comparative Animal Physiology (1997–1998) • Physiological Ecology for General Biology (1994 –1999) • Invertebrate Zoology (1994-1997) • Biology/Computer Development for non-majors (1997) • Microbiology (1996) • Bioinstrumentation (molecular/microbial research techniques) (1995)

**Lab Development at the University of Dayton:**

**Island Environmental Biology** (co-developed with AJ Burky) — 2001-2002; 2008-2011

**Culture, Biodiversity and Resources Management** (co-developed with AJ Burky)— 2004-2005; 2010

**LECTURE/LABORATORY/WORKSHOP MANUALS & SUPPLEMENTAL TEACHING MATERIALS**

Pechal, JL, **ME Benbow**. 2012. *An Introductory Manual for Multivariate Statistical Analysis of Community Data Using PCORD*. Manual for North American Forensic Entomology Association Workshop. Las Vegas, NV, 17 July 2012.

**Benbow, ME**, JM Lang & AJ Burky. 2012. *Watershed Biomonitoring for Palau/MC Jurisdictions*. Manual for the 2<sup>nd</sup> Micronesian Challenge Terrestrial Measures Workshop. Koror, Palau, 18-21 June 2012.

**Benbow, ME** & AJ Burky. 2005. *Culture, Biodiversity, and Resources Management: Managing Natural Resources in Costa Rica*. 2005. Lecture and Lab Guide.

**Benbow, ME** & AJ Burky. 2002-2004 *Island Environmental Biology: A Brief History of Water Resource Issues of the Hawaiian Islands*. Lecture and Lab Guide. 113 pages.

**Benbow, ME** & AJ Burky. 2002-2003. *Island Environmental Biology: Mountain Stream – Ocean Connections in the Republic of Palau, Assessing Stream Quality as a Measure of Impact on Marine Communities*. Lecture and Lab Guide. 46 pages.

**MENTORING & NON-COURSE TEACHING**

**Faculty Mentoring at MSU**

**Faculty Mentor Committees:**

Peter White, PhD (Assistant Professor in Lyman Briggs and the Department of Entomology) (2014 – 2018)

Jennifer Pechal, PhD (Assistant Professor, fixed-term, Department of Entomology) (2015 – 2018)

**Graduate and Post-Graduate Major Advisor or Co-Advisor**

**Postdoctoral Advisor or Co-Advisor:** Mollie D. McIntosh, PhD (2008-2010); Jennifer L. Pechal, PhD (2012-2014); Deborah Ruth Amulen, PhD (2019-2020)

**Graduate Advisor or Co-Advisor – Graduation Year:**

Alexandra Bauer (PhD) – 2020 - present – major advisor

Joseph Receveur (PhD) – 2016 - 2021 – major advisor

Sanchai Naree (PhD) – 2018 - present – major co-advisor, Burapha University, Thailand

Courtney Larson (PhD) (2020) – major advisor

Sierra Kaszubinski (MS) (2020) – major co-advisor

Breanna Wydra (MS) (2019) – major advisor

Nicholas Babcock (MS) (2018) – major advisor

Courtney Weatherbee (MS) (2016) – major advisor

Gerald Nowak (MS) – (2016) – major advisor

Samrit Maksong (PhD) (2015) –major co-advisor, Burapha University, Thailand

Jennifer Lang (PhD) (2015) – major advisor at University of Dayton until move to MSU

Rachel Barker-McNeish (MS - 2011 and PhD - 2016) – major co-advisor

Kathleen Jennings-Gorbach (PhD) – (2012) – major co-advisor

Andrew Lewis (MS) – (2011) – major advisor

Megan Shoda (MS) – (2010) – major co-advisor

**Graduate Committee Member:**

Christine Kwiatkowski (MS) – 2017 - 2021  
Rex Mbewe (MS) – 2017 - present  
Patrick Stillson (MS) – 2018 - 2020  
Samantha Tank (MS) – 2017 - 2019  
Joel Betts (MS) – 2017 – 2018  
Patrick Engelken (MS) – 2015 - 2018  
Jason Matlock (PhD) – 2015 - 2018  
Rebecca Vinit (MS) – 2015 - 2017  
Ellen Jesmok (MS) – 2015

***Service on Graduate Committees at Other Institutions and prior to 2014 at MSU (graduation year)***

Alex Thomas (MS) – University of Wisconsin, Stevens Point (2020-present)  
Magdalene Dogbe (PhD) – Mississippi State University (2020-present)  
Alex Rakeshaw (MS) – University West Alabama (2020-present)  
Khadija Moctar (PhD) – Indiana University-Purdue University (2020-present)  
Jana Englmeier (PhD) – University of Würzburg (2019-present)  
Supine Away Chankong (MS) – Burapha University, Thailand (2015-present)  
Laxmi Dhungel (PhD) – Mississippi State University (2016-2020)  
Alberto Doretto (PhD) – University of Turin, Italy (outside examiner) (2018-2019)  
Tharindu Bambaradeniya (M.Phil) – University of Peradeniya, Sri Lanka (outside examiner) (2018-2019)  
Zanthe Kotze (PhD) – Texas A&M University (2017-2019)  
Zachary Burcham (PhD) – Mississippi State University (2015-2019)  
Aumaporn Pongura (MS) – Burapha University, Thailand (2015-2018)  
Lindsay Harrison (PhD) – Mississippi State University (2017-2018)  
Joseph Receveur (BS Honors Thesis) – Millersville University (2016)  
Rachel McNeish (PhD) – University of Dayton (2016)  
Tanawat Yemor (PhD) – Burapha University, Thailand (2015)  
Jennifer Lang (PhD) – University of Dayton (2015)  
Allison Blystone – University of Dayton (2014)  
Jessica Davis (MS) – University of Dayton (2013)  
Brandon King (MS) – University of Dayton (2013)  
Sean Goins – University of Dayton (2012)  
J. Chapman (MS) – University of Dayton (2012)  
Jennifer Pechal (PhD) – Texas A&M University (2012)  
Peter Levi (PhD) – University of Notre Dame (2012)  
Ryan Kimbirauskas (PhD) – Michigan State University (2011)  
Sarah Willson (MS) – Michigan State University (2011)  
Lindsay Campbell (MS) – Michigan State University (2011)  
Heloise Breton (PhD) – University of Ontario Institute of Technology (outside examiner) (2012)  
Todd White (MS) – Michigan State University (2010)  
Emily Campbell (MS) – Michigan State University (2010)  
Kristi Zurawski (MS) – Michigan State University (2009)  
Oswaldo Hernandez (PhD) – Michigan State University (2008)  
Allison Oleson (MS) – Michigan State University (2007)  
Sarah Wolf (MS) – Michigan State University (2007)

***Visiting Faculty Scholars***

Dr. Deborah Ruth Amulen – Makerere University, Kampala, Uganda (August 2019 - 2020)  
Dr. Tatiana Oliveira – Federal University of Pernambuco, Brazil (June-July, 2018)  
Dr. Luc Djogbénou – Institut Régional de Santé Publique /University of Abomey-Calavi, Ouidah, Bénin (Sept., 2016)  
Dr. Guang-hui Zhu – Shantou University Medical College, China (May 2015- May 2016)  
Dr. Philip Barton – Australian National University, Australia (June 2015, October 2016)  
Dr. Heather Jordan – Mississippi State University, MS, USA (March, 2014)  
Dr. Rachel Simmonds - University of Surrey, United Kingdom (October, 2011)

### ***Visiting Student Scholars***

Alexandra Bauer – PhD Student, University of Göttingen, Göttingen, Germany (February 2020 – August 2020)  
Laura Gruppuso – PhD Student, University of Turin, Turin, Italy (January 2020 – May 2020)  
Jana Englmeier – PhD Student, University of Würzburg, Würzburg, Germany (January 2020 – May 2020)  
Alberto Doretto – PhD Student, University of Turin, Turin, Italy (August 2017 – December 2017)  
Diego Oliveira – PhD Student, Universidade Federal De Pernambuco, Brazil (May 2017 – September 2017)  
Juanjuan Guo – PhD Student, Xiangya School of Medicine, Ghansha, Hunan, China (September 2016-September 2017)  
Andre Akira Yoshikawa – BS Student, University Federal of Santa Catarina, Florianopolis, SC, Brazil (May – August 2016)  
Maiara Rodrigues Oliveira Leite – BS Student, University Federal of Viçosa, Brazil (May – August 2015)  
Carmella Vizza - PhD Student, University of Notre Dame, IN (April, 2014)  
Jennifer Mauer - BS Student, Kettering College, OH (May – August 2013)  
Hannah Moore - PhD Student, Keele University, United Kingdom (June, 2012)  
Jennifer Pechal - PhD Student, Texas A&M University, TX (June – July 2010 and June – July 2011)  
Michael Diaz - BS Student, California State University, CA (May – August 2011)

**Undergraduate Research Advisor, Co-Advisor or Supervisor:** > 120 students

### ***Mentor of Undergraduate Research Assistants (years in lab) (IS = Independent Study for Credit)***

#### *Michigan State University*

Kadie Bernstein (2020-Present) (Honors Capstone Project and IS)	Brianna Timmons (2018) Mack McGinn (2017-2018) (Honors Capstone Project and IS)	Hadley O'brien (2016-2017) McKinley Brewer (2014-2018)
Emily Nestle (2019-Present) (Honors Capstone Project and IS)	Ryan Walquist (2017)	Sydney Manning (2016)
Emilie Parkanzky (2019-2020) (IS)	Caleb Armstrong (2017)	Lucy Schroeder (2014-2015)
Katelyn Smiles (2018-2020)	Katie Kierczynski (2016-2017) (Honors Thesis and IS)	Sadie Boyd (2014)
Makayla Scott (2018 – 2019)	Benjamin Bejcek (2016-2017, IS)	

#### *University of Dayton*

Patrick Vrablik (2012-2013)	William Kmetz (2011-2013, IS)	Jon White (2010-2012)
Elizabeth Gleason (2012-2013)	Nichole Henger (2012-2013, IS)	Court Wille (2011)
Olivia Hart (2013)	Ali Wright (2012-2013, IS)	Josie Arbogast (2011)
Morgan McHugh (2013, IS)	Kevin Sullivan (2011-2013, IS)	Tiffany Blair (2009-2011, IS)
Erica Watson (2012-2013)	Jamie Alfieri (2010-2013, IS)	Carolyn Teter (2010-2011, IS)
Amy Whitaker (2012-2013, IS)	Joe Roeckner (2010-2012)	Jessica Teater (2010-2011)
Kaitlin Fochesato (2012-2013)	Mary Timko (2011-2012, IS)	James Dawson (2010-2011)
Lauren Shewhart (2011-2013, IS)	Allison Gansel (2009-2012, IS)	Elizabeth Wetzel (2009)
Alexandra Calteaux (2011-2013)	Maureen Berg (2009-2012, IS)	An Lai (2009-2010)

Travis Greenwood (2010)  
Elizabeth Gazdick (2009-2010, IS)

Jessica Henry (2008-2009, IS)  
Elise Malinowski (2008-2009, IS)

### ***K-12 Science Fair Mentoring***

- Josephine Baudendistel - Middle School Student. Mentored from 2011 - 2013 for several county and regional science fairs that resulted in an invitation to the Ohio State Science Day. She received first place several times but was unable to present at state competition because of age restrictions.

### ***Academic Advising (University of Dayton)***

2008-2009: 8 Advisees  
2009-2010: 12 Advisees  
2010-2011: 20 Advisees  
2011-2012: 22 Advisees  
2012-2013: 24 Advisees  
2013-2014: 24 Advisees

### ***Student Achievements***

- Kadi Bernstein (BS) – 1<sup>st</sup> Place Award of the University Undergraduate Research & Arts Forum (UURAF), Michigan State University, \$100 (2021)
- Courtney Larson (PhD) – Society for Freshwater Science, Endowment Award (2020)
- Joe Receveur (PhD) – The Merritt Endowed Fellowship in Entomology, Michigan State University, \$3,000 (2020)
- Joe Receveur (PhD) – The Gordon E. Guyer Fellowship in Aquatic Entomology, Michigan State University, \$4,000 (2020)
- Courtney Larson (PhD) – Department of Entomology Outstanding PhD Student Award, Michigan State University, \$2000 (2020)
- Joe Receveur (PhD) – The Forensic Science Foundation Lucas Research Grant Program, \$5,300 (2019)
- Sierra Kaszubinski (MS) – The Forensic Science Foundation Lucas Research Grant Program, \$5,300 (2019)
- Joe Receveur (PhD) – The Gordon E. Guyer Fellowship in Aquatic Entomology, Michigan State University, \$4,000 (2019)
- Courtney Larson (PhD) – The Merritt Endowed Fellowship in Entomology, Michigan State University, \$2000 (2019)
- Courtney Larson (PhD) – Kellogg Biological Station Graduate Student Research Fellowship, Michigan State University, \$2000 (2019)
- Sierra Kaszubinski (MS) – The Forensic Science Foundation Student Travel Grant, \$1,500 (2018)
- Breanna Wydra (MS) – The Forensic Science Foundation Acorn Grant, \$1,500 (2018)
- Nick Babcock (MS) – The Merritt Endowed Fellowship in Entomology, Michigan State University, \$2,000 (2018)
- Joe Receveur (MS) – The Gordon E. Guyer Fellowship in Aquatic Entomology, Michigan State University, \$4,000 (2018)
- Courtney Larson (PhD) – Department of Entomology Eugenia McDaniel Award, Michigan State University, \$500 (2018)
- Courtney Larson (PhD) – Kellogg Biological Station Graduate Student Research Fellowship, Michigan State University, \$3500 (2018)
- Courtney Larson (PhD) – Kellogg Biological Station Graduate Student Research Fellowship, Michigan State University, \$1700 (2017)
- Joe Receveur (MS) – The Gordon E. Guyer Fellowship in Aquatic Entomology, Michigan State University, \$5,000 (2017)

- Courtney Larson (PhD) – Merritt Endowed Fellowship, Michigan State University, \$2000 (2017)
- Courtney Larson (PhD) – Lechel Memorial Scholarship Presentation Winner, Michigan Mosquito Control Association, \$600 (2016)
- Courtney Larson (PhD) – Graduate School Travel Fellowship, Michigan State University, \$350 (2016)
- Courtney Larson (PhD) – National Science Foundation Graduate Fellowship (2016-2019)
- Courtney Larson (PhD) – The Gordon E. Guyer Fellowship in Aquatic Entomology, Michigan State University, \$2000 (2016)
- Courtney Weatherbee (MS) – Merritt Endowed Fellowship, Michigan State University, \$2000 (2016)
- Courtney Larson (PhD) – General Fund Research Award, Society for Freshwater Science, \$1000 (2016)
- Courtney Weatherbee (MS) – Graduate School Travel Fellowship, Michigan State University, \$350 (2016)
- Courtney Larson (PhD) – The Gordon E. Guyer Fellowship in Aquatic Entomology, Michigan State University, \$1500 (2015)
- Courtney Larson (PhD) – 13<sup>th</sup> Annual Plant Science Graduate Research Symposium, Michigan State University, 3<sup>rd</sup> Place Winner of Applied Poster (2015)
- Scooter Nowak (MS) – The Gordon E. Guyer Fellowship in Aquatic Entomology, Michigan State University, \$1500 (2014)
- Lauren Shewhart (BS) – The Ohio Academy of Science: The Environmental Science & Engineering Scholarship Program, \$1500 (2013)
- Rachel McNeish (PhD) – Sigma Xi Grants-In-Aid of Research, \$1000 (2013)
- Lauren Shewhart (BS) – Sigma Xi Symposium, University of Dayton Chapter Best Poster Award, \$100 (2013)
- Lauren Shewhart (BS) – Lancaster-McDougal Undergraduate Research Award, \$1000 (2013)
- Alex Ulintz (BS) – Invited presentation at the 2013 National Collegiate Research Conference (2013)
- Jennifer Lang (MS) – Entomological Society of America Monsanto Student Travel Award, \$424 (2012)
- Andrew Lewis (MS) – Award for Best MS Student Presentation at the 9<sup>th</sup> Annual Meeting of the North American Forensic Entomology Association, College Station, TX, \$500 (2011)
- Maureen Berg (BS) – The Ohio Academy of Science: The Environmental Science & Engineering Scholarship Program, \$1500 (2011)
- Andrew Lewis (MS) – Award for Best MS Student Presentation at the 8<sup>th</sup> Annual Meeting of the North American Forensic Entomology Association, Windsor, Canada, \$500 (2010)
- Kathy Gorbach (PhD) – University of Dayton Dissertation Fellowship (2010)
- Allison Gansel (BS) – Invited Presentation on Vernal Pools at Cox Arboretum, Dayton, OH (2010)
- Tiffany Blair (BS) – Learn, Lead Serve Award, \$500 (2010)
- Elizabeth Gazdick (BS) & Allison Gansel (BS) – Posters on the Hill, Council for Undergraduate Research. Invited poster and meetings with congressional representatives and senators on Capitol Hill. (2010)
- Elizabeth Gazdick (BS) – International Learn, Lead Serve Award, \$1500 (2009)
- Andrew Lewis (MS) – Dean's Graduate Fellowship Award (2009)

**University of Dayton Stander Symposium Presentations by students (beginning 2009)**

Alfieri, J, N Henger, J Pechal, T Blair, L Shewhart, A Calteux, J Baudendistel, ME Benbow. 2013. A Year-Long Study of Carrion, Insects, and Scavengers, University of Dayton Stander Symposium, April 17, 2013, Dayton, OH

Henger, N, J Alfieri, J Pechal, E Watson, J Baudendistel, ME Benbow. 2013. Succession and Female Gravid Status of *Chrysomya rufifacies* and *Cochliomyia macellaria* on Carrion, University of Dayton Stander Symposium, April 17, 2013, Dayton, OH

Kmetz, W, A Burky, J Lang, K Fochesato, A Wright, ME Benbow. 2013. A Functional Key to the Stream Benthic Macroinvertebrates of the Republic Palau, University of Dayton Stander Symposium, April 17, 2013, Dayton, OH

Lang, JM, R Erb, W Kmetz, J Baudendistel, J Wallace, ME Benbow. 2013. Using Epinecrotic Biofilms for Applications in Forensic Science, University of Dayton Stander Symposium, April 17, 2013, Dayton, OH

McNeish, RE, ME Benbow, RW McEwan. 2013. A Riparian Forest Invader, Alters Cross-System Subsidies That Change Ecosystem Processes, University of Dayton Stander Symposium, April 17, 2013, Dayton, OH

Shewhart, L, R McEwan, ME Benbow. 2013. Impact of Amur Honeysuckle (*Lonicera maackii*) Leachate on *Culex pipiens* Survivorship, Growth, and Pupation, University of Dayton Stander Symposium, April 17, 2013, Dayton, OH

- Sullivan, K, ME Benbow. 2013. Bioassessment of an Outfall of the Mad River as well as Its Effects Downriver Using Aquatic Insects as an Index, University of Dayton Stander Symposium, April 17, 2013, Dayton, OH
- Ulintz, AJ, RE Simmonds, ME Benbow. 2013. The Role of Mycolactone in Suppression of the Innate Immune Response and Alteration of Aquatic Biofilm Metabolic Profiles: Implications for Buruli Ulcer Disease, University of Dayton Stander Symposium, April 17, 2013, Dayton, OH
- Wright, A, T Blair, W Kmetz, K Fochesato, L Shewhart, ME Benbow, Outfall Water Quality Assessments of the Major Rivers of Dayton, Ohio, University of Dayton Stander Symposium, April 17, 2013, Dayton, OH
- Alfieri, J, T Blair, A Calteux, L. Shewhart, J Baudendistel, ME Benbow. 2012. Effects of scavenging on blow flies to carrion. 2012 University of Dayton Stander Symposium, April 18, 2012, Dayton, OH.
- Berg, MC, AJ Lewis, ME Benbow. 2012. Blow fly oviposition dynamics on liver bait and swine carcasses exposed at dusk. 2012 University of Dayton Stander Symposium, April 18, 2012, Dayton, OH.
- Lang, JM, ME Benbow. 2012. Response of invertebrate grazers to the influence of abiotic factors on epilithic biofilm development. 2012 University of Dayton Stander Symposium, April 18, 2012, Dayton, OH.
- Timko, MV, JM Lang, ME Benbow. 2012. Influence of abiotic factors on biofilm succession in the Little Miami River. 2012 University of Dayton Stander Symposium, April 18, 2012, Dayton, OH.
- Kmetz, W, JM Lang, ME Benbow. 2012. Influences of disturbance factors on epilithic biofilm succession throughout the autumn season: stream flow and organic matter pulse dynamics. 2012 University of Dayton Stander Symposium, April 18, 2012, Dayton, OH.
- Shewhart, L, A Calteux, J Alfieri, T Blair, J Baudendistel, ME Benbow. 2012. Scavenging effects on carrion decomposition (SSI: Swine Scene Investigation). 2012 University of Dayton Stander Symposium, April 18, 2012, Dayton, OH.
- Gansel, A, ME Benbow. 2012. Hydroperiod influence on bacterial communities assessed by way of metabolic profiling. 2012 University of Dayton Stander Symposium, April 18, 2012, Dayton, OH.
- White, JB, TB Blair, JM Lang, KR Gorbach, AJ Burky, ME Benbow. 2012. Comparative bioassessment of tropical watersheds relative to habitat degradation in the Republic of Palau. 2012 University of Dayton Stander Symposium, April 18, 2012, Dayton, OH.
- Barker, RE, RW McEwan, ME Benbow. 2012. Riparian forest invasion by a terrestrial shrub (*Lonicera maackii*) impacts aquatic organic matter processing and biota in headwater streams. 2012 University of Dayton Stander Symposium, April 18, 2012, Dayton, OH.
- Barker, RE, ME Benbow, RW McEwan. 2011. Linkages Between Terrestrial and Aquatic Communities: The Invasive Shrub *Lonicera maackii* Influences Ecosystem Processes and Macroinvertebrate Colonization. 2011 University of Dayton Stander Symposium, April 13, 2011, Dayton, OH.
- Braner, J, RE Barker, ME Benbow, RW McEwan. 2011. Ecological restoration of the terrestrial environment can influence aquatic ecosystems: a test using the ubiquitous non-native invasive shrub *Lonicera maackii* (Amur honeysuckle). 2011 University of Dayton Stander Symposium, April 13, 2011, Dayton, OH.
- Teter, C, A Lewis, ME Benbow. 2011. Growth rates of the blowfly, *Lucilia sericata*, on different bovine body tissues. 2011 University of Dayton Stander Symposium, April 13, 2011, Dayton, OH.
- Andrews RM, KR Gorbach, ME Benbow, AJ Burky. 2011. Comparing macroinvertebrate community composition between riffles and runs. 2011 University of Dayton Stander Symposium, April 13, 2011, Dayton, OH.
- Farrelly JC, KR Gorbach, ME Shoda, MD McIntosh, ME Benbow, AJ Burky. 2011. The effects of stream diversions on upstream and downstream Trichoptera and Chironomidae populations in the West Maui Mountains, Hawaii. 2011 University of Dayton Stander Symposium, April 13, 2011, Dayton, OH.
- Gorbach, K, ME Benbow, AJ Burky. 2011. Initial dispersal and upstream migration of a tropical neritid snail: Implications for restoring migratory pathways in tropical streams. 2011 University of Dayton Stander Symposium, April 13, 2011, Dayton, OH.
- Berg, Maureen; White, Jonathan, R Kearns, ME Benbow. 2011. Exploring Bacterial Antibiotic Resistance in Terrestrial and Aquatic Insects. 2011 University of Dayton Stander Symposium, April 13, 2011, Dayton, OH.
- Lewis, A, ME Benbow. 2011. Necrophagous Insect Community Assembly Associated with Replicate *Sus scrofa* Carcasses: An Exploration of Inter-Carcass Variation. 2011 University of Dayton Stander Symposium, April 13, 2011, Dayton, OH.
- Gansel, Allison, MD McIntosh, ME Benbow. 2011. Hydrology Effects on Invertebrate Communities in Artificial and Natural Vernal Pools. 2011 University of Dayton Stander Symposium, April 13, 2011, Dayton, OH.
- Lang, J, ME Benbow. 2011. Grazing, Flow, and Light Effects on Epilithic Stream Biofilm Succession During a Large Pulse of Organic Leaf Litter. 2011 University of Dayton Stander Symposium, April 13, 2011, Dayton, OH.
- Alfieri, J, A Lewis, ME Benbow. 2011. Successional Characteristics of Calliphoridae Colonization on *Sus scrofa*. 2011 University of Dayton Stander Symposium, April 13, 2011, Dayton, OH.
- Blair, T, RW McEwan, ME Benbow. 2011. Toxicity Effects of Native and Introduced Tree Species Leachate on *Daphnia Magna*. 2011 University of Dayton Stander Symposium, April 13, 2011, Dayton, OH.
- Gansel, A, E Gazdick, ME Benbow. 2010. Seasonal Water Fluctuation Effects on Invertebrate-Bacterial Community Associations in Vernal Pools. 2010 University of Dayton Stander Symposium, April 14, 2010, Dayton, OH.
- Berg, MC, A Lewis, ME Shoda, ME Benbow. 2010. Does microbial community structure influence nocturnal oviposition in southwestern Ohio blow flies? 2010 University of Dayton Stander Symposium, April 14, 2010, Dayton, OH.
- Lewis, A, ME Benbow. 2010. Microbial and necrophagous insect community assembly, succession, and species richness associated with *Sus scrofa* carcasses across multiple seasons. 2010 University of Dayton Stander Symposium, April 14, 2010, Dayton, OH.
- Teter, C, J White, K Gorbach, ME Benbow, AJ Burky. 2010. Comparative Time Series of Functional Group Stream Assemblages Relative to Habitat Degradation in the

- Republic of Palau. 2010 University of Dayton Stander Symposium, April 14, 2010, Dayton, OH.
- Blair, T, R McEwan, ME Benbow. 2010. Land Water Interfaces: Invasive Honeysuckle Effects on Stream Invertebrates. 2010 University of Dayton Stander Symposium, April 14, 2010, Dayton, OH.
- Ajdaharian, M, K Galaska, L Hellwig, K Gorbach, ME Benbow, AJ Burky. 2010. Habitat Hydraulic Variations Affect On Community Structure and Biomass of Macroinvertebrate Communities in the Little Miami River, Ohio. 2010 University of Dayton Stander Symposium, April 14, 2010, Dayton, OH.
- Lemier, R, K Gorbach, ME Benbow, AJ Burky. 2010. Assessing Habitat Quality Using Standing Stock Biomass in Diverted Mountain Streams. 2010 University of Dayton Stander Symposium, April 14, 2010, Dayton, OH.
- Ernst, M, K Gorbach, ME Shoda, ME Benbow, AJ Burky. 2010. Effects of Water Withdrawal on Terrestrial and Aquatic Drift in Four West Maui Streams. 2010 University of Dayton Stander Symposium, April 14, 2010, Dayton, OH.
- Gazdick, E, A Gansel, ME Benbow. 2010. Infectious Disease in West Africa: Buruli Ulcer and its Ecological Factors. 2010 University of Dayton Stander Symposium, April 14, 2010, Dayton, OH.
- Gorbach, K, ME Benbow, AJ Burky. 2010. When there is no flow: Changes in migratory movement and benthic community structure across Hawaiian watersheds of variable size and diversion impact. 2010 University of Dayton Stander Symposium, April 14, 2010, Dayton, OH.
- Henry J, E Malinowski, ME Benbow. 2009. Hydraulic and lunar influence on stream drift and amphidromous minimum reproductive potential in tropical streams. 2009 University of Dayton Stander Symposium, April 16, 2009, Dayton, OH.
- Shoda ME, KR Gorbach, ME Benbow, AJ Burky. 2009. Macroinvertebrate community response to water diversions in torrential, tropical stream habitats. 2009 University of Dayton Stander Symposium, April 16, 2009, Dayton, OH.
- Gorbach KR, ME Shoda, MM Ernst, AL Diaz, AJ Burky, ME Benbow. 2009. Stream size effects on benthic community response to water withdrawal. 2009 University of Dayton Stander Symposium, April 16, 2009, Dayton, OH.
- Barron IM, KR Jennings, ME Shoda, GA Diaz, JC Kurzawa, MI Ajdaharian, JB White, K Galaska, ME Benbow, AJ Burky. 2009. Hydraulic constraints on stream macroinvertebrate communities in the Little Miami River, Ohio. 2009 University of Dayton Stander Symposium, April 16, 2009, Dayton, OH.

### ***Mentoring before 2009***

- *Mentor of Independent Research Projects for 2 undergraduate students at DePauw University 2005-2006.*
- *Co-Mentor for 20 undergraduates from the University of Dayton and Michigan State University involved in various research projects where they were included as an author on national conference abstracts or referred publications*
- *Co-Mentor for 29 undergraduates who presented posters at University of Dayton's Stander Symposium*
- *Co-Mentor for 12 University of Dayton students that received institutional undergraduate Learn, Lead, Serve Awards*

### **PROFESSIONAL SERVICE**

#### ***National Service:***

**The National Academies of Sciences, Engineering and Medicine (formerly the National Research Council) Review Committee Member (2016-2018)** — Appointed Committee Member of the Review of the Edwards Aquifer Conservation Program.

**The National Academies of Sciences, Engineering and Medicine (formerly the National Research Council) Review Committee Member (2015-2016)** — Appointed Committee Member of the Review of the Edwards Aquifer Conservation Program.

**National Academy of Sciences, National Research Council Review Committee Member (2014-2015)** — Appointed Committee Member of the Review of the Edwards Aquifer Conservation Program.

**American Academy of Forensic Sciences, Pathology/Biology Research Committee Member (2016-2018)** — Committee member to review research efforts and conference abstracts.

**American Academy of Forensic Sciences, Pathology/Biology Awards Committee (2018)** — Committee member to review society award nominees.

**American Academy of Forensic Sciences, Pathology/Biology Forensic Biologist Trainee Paper Award Committee (2018)** — Committee member to review trainee papers.

**Society for Freshwater Science: Career Awards Sub-committee (2021-2024)** — Committee member for evaluating award nominations.

**Society for Freshwater Science: Local Arrangements Committee (Detroit 2018) (2016-2018)** — Committee member for local arrangement planning and organization.

***Regional, Local and Outside University Service:***

**Saginaw County Mosquito Abatement Commission, Technical Advisory Committee (2014-present)**  
**Promotion and Tenure Review for Ohio State University (2017)**  
**Promotion and Tenure Review for Purdue University (2020)**

***Michigan State University Service:***

**Ecology, Evolution and Behavior Program Faculty Awards Committee – (Chair: 2020-present)**  
**MSU University Jurisdictional Panel – (2020)**  
**COM Chairperson 5-Year Evaluation Committee – (2020)**  
**CANR Global Strategy Advisory Committee – (2018-2019)**  
**CANR College Advisory Council – (2016-2018)**  
**AgBioResearch Reviewer – (2020)**  
**Ecology, Evolutionary Biology and Behavior Program Executive Committee – (2016-2018)**  
**MSU Graduate School Panel: Effective Dissertation Writing (2018)**  
**COM Reappointment, Promotion and Tenure Committee – (2016)**  
**Communications and Marketing Committee: Department of Entomology (2014 – 2017)**  
**Awards Committee: Department of Entomology (2015 – 2016) (Chair: 2016 – 2017)**  
**Graduate Committee: Department of Entomology (2014 – 2016) (Chair: 2016 – 2017)**  
**Search Committee - Quantitative Entomologist (Chairperson): Department of Entomology (2015-2016)**  
**Interview Committee (Administrative Assistant): Department of Entomology (2015)**  
**Academic Program Review Coordinating Committee: Department of Entomology (2014 – 2015)**  
**Plagiarism Inquiry Panel (Chairperson): General Legal Council, Office of Intellectual Integrity (2006-2007)**  
**DOW Internship Program Development Committee Member: MSU-DOW Internship Program (2006-2007)**  
**Ethics and Academic Misconduct Panel Member: Michigan State University seminar series (2007)**

***Service at the University of Dayton:***

**Departmental Search Committee (2 faculty searches) — 2008/2009, 2011/2012**  
**Undergraduate Curriculum Committee — 2012-2013**  
**Graduate Admissions Committee — 2011/2012**  
**Environmental Biology Program Steering Committee — 2008-2014**  
**Undergraduate Recruitment Committee — 2010-2014**  
**Career Seminars Committee — 2009/2010**  
**Career Seminars Committee (Chairperson) — 2010-2011**  
**Departmental By-laws Committee — 2009/2010**  
**Discovery Day Lab Participant — 2011, 2012**

**PROFESSIONAL DEVELOPMENT ACTIVITIES (2015 – PRESENT)**

18 April 2020 – Workshop on Conceptualizing and Assessing the Broader Impacts of Your Research. Michigan State University (*virtual attendee*)  
16 May 2017 – Improvisation for Scientists to Strengthen Public Communication Skills. Michigan State University (*attendee*)  
1 January 2016 – 31 December 2016 – MSU Academy for Global Engagement (*fellow*)  
8 January 2015 - Write Winning Grant Proposals. Michigan State University (*attendee*)  
13 February 2015 – CSTAT Workshop Hierarchical Linear Models (*attendee*)

## FORENSIC CASEWORK AND EXPERT WITNESS SERVICE

**Forensic Case:** June - December 2018 — Evaluated evidence and conducted an experiment to determine aquatic and terrestrial insect evidence related to postmortem submersion interval estimate range in Michigan.

**Forensic Case:** September 2017 — Identified arthropod evidence and constructed a minimum postmortem interval estimate range with Dr. Jennifer Pechal for a death scene investigation in Kalamazoo, MI.

**Forensic Case:** September 2014 — Identified arthropod evidence and constructed a minimum postmortem interval estimate range with Dr. Jennifer Pechal for a death scene investigation in Lansing, MI.

(<http://www.lansingstatejournal.com/story/news/local/2014/09/24/body-found-tuesday-belonged-lansing-man/16161747/>)

**Forensic Case:** December 2013 — Identified arthropod evidence and constructed a minimum postmortem interval estimate range with Dr. Jennifer Pechal for a death scene investigation in Summit County, OH.

**Forensic Case:** October 2013 — Identified arthropod evidence and constructed a minimum postmortem interval estimate range with Dr. Jennifer Pechal for a death scene investigation in Summit County, OH

**Forensic Case:** August 2011 — Identified and examined arthropod evidence with Mr. Andrew Lewis from a suspected stored product case in Dayton, OH

## COMMUNITY OUTREACH & EXTENSION

### *Outreach Activities*

- Labroots Virtual Educational Webinars: Forensic Sciences 2020 Series. 6 May 2020 attracted 723 live and on-demand viewers (<https://www.labroots.com/virtual-event/forensics-toxicology-2020>) (May 2020)
- Filming for Marco Polo Films (German): Salmon decomposition and movement of microbiomes and microplastics in river ecosystems. (Oct 2019)
- Filming for Marco Polo Films (German): Feast of the Animals. (Oct 2018)
- EVO Conversion Systems Blog Post. A Developing Partnership to Promote Insects for Food, Feed and Health in Sub-Saharan Africa: The Global Alliance for Insect Farming in Africa. (<https://www.evoconsys.com/blog>). (April 2018)
- JASON STEM Role Model Online Interview, JASON Learning ([www.jason.org](http://www.jason.org)). JASON STEM Role Model Online Interview, JASON Learning ([www.jason.org](http://www.jason.org)). (<https://www.youtube.com/watch?v=ArZ5QbhFBjA>) (Nov. 2016)
- CSI Fright After Dark, Cranbrook Institute of Science, Bloomfield Hills, MI (<http://science.cranbrook.edu/find-program-event/cis-after-dark-October>) *Maggot Art Activity* (Oct. 2015)
- Michigan State University Science Festival (April 2015)
- Science Reviewer for Indiana University's PODcast, A Moment of Science (2013-present)
- Michigan State University Honors College Fireside Chat, Faculty Host (Oct. 2014)
- Michigan State University Bug House Halloween Open House – *Maggot Art Activity* (Oct. 2014)
- Michigan State University Middle School Girls' Math & Science Day – *Maggot Art Activity* (Mar. 2014)
- ShamROCK Science Day, Boonshoft Museum of Discovery – *Maggot Art Activity* (Mar. 2013)
- Family Science Fest, Liebold Catholic High School – *Maggot Art Activity* (Feb. 2013)
- STEMM Celebration for Families, Ignite Innovation, Dayton Regional Science Festival, Chaminade Julianne Catholic High School – *Maggot Art Activity* (Nov. 2012)
- Chemistry and Cocktails, Ignite Innovation, Dayton Regional Science Festival, Boonshoft Museum of Discovery – *Maggot Art Activity* (Nov. 2012)

### **Outreach Presentations**

- *The Living Dead: Using postmortem microbiomes to solve crimes and monitor public health.* Lansing Torch Club, East Lansing, MI: April 2019
- *Frontiers in Forensic Entomology.* MSU Bug Club, Michigan State University, East Lansing, MI: April 2019
- *The Living Dead: Tales of Science and Crimes.* Kinawa Middle School, Okemos, MI: Oct. 2018
- *The Dark Side of the Necrobiome: The Role of Carrion in Ecosystems.* Waldgeschichtliche Museum at the Nationalparkverwaltung Bayerischer Wald (Bavarian National Forest), Germany: Oct. 2018
- *The Living Dead: Tales of Science and CSI* — Science on Tap, The Loft, Lansing, MI: Oct. 2017
- *Bugs, Bacteria and Bodies: New Dimensions of Forensic Biology* — Pub Science Series, Boonshoft Museum of Discovery at Blind Bob's, OH: Aug. 2013
- *An Introduction to Forensic Entomology* — Oakwood High School, Oakwood, OH: Oct. 2011
- *Buruli ulcer: A Mysterious Infectious Disease* — West Carrolton Middle School, West Carrolton, OH: April 2011
- *Road Salt Effects on Aquatic Invertebrates* — Minnesota Road Salt Symposium: Feb. 2008
- *Hawaiian Mountain Streams: Life in Limbo* — Maui Ocean Center, Maui, Hawaii: Feb. 2003
- *The Secret Life of Maui Streams* — Maui Community College, Maui, Hawaii: Sept. 2003
- *Applied Forensic Entomological Research* — Lorain County Community College, Cleveland, OH: Oct. 2003
- *The Hawaiian Invertebrates* — Pacific Whale Foundation, Maui, Hawaii: July 2000

### **Media Interviews, Movie and Television Features**

- Online Media Interview, [The Necrobiome](#), FutureProof with Jonathan McCrea, Newstalk Podcast, Ireland (24 October 2021)
- Online Media Interview, [Upper Peninsula Environmental Coalition](#), Michigan (20 September 2021)
- Television Interview, [Newshub Live: The AM Show](#), New Zealand (25 August 2021)
- Online Media Interview, [Newstalk with Sean Moncrieff](#), Newstalk Podcast, Ireland (24 August 2021)
- Online Media Interview, [BBC.com](#), Future Planet, UK (<https://www.bbc.com/future/article/20210817-rewilding-death-germanys-plan-to-restore-the-necrobiome>) (August 2021)
- Television Interview, WLNS, Lansing, MI (<https://www.wlns.com/digital-exclusives/msu-researchers-study-insects-to-help-globally-improve-human-diets/>) (April 2021)
- Magazine Interview, MSU's AgBioResearch Futures Magazine: <https://www.canr.msu.edu/news/studying-how-an-infectious-disease-causing-pathogen-thrives-in-the-environment> (February 2021)
- Nature Documentary Movie on ARTE (The European Culture Channel), Marco Polo Films (German): Festmahl der Tiere (Feast of the Animals) (<https://www.deutscher-naturfilm.de/deutscher-naturfilmpreis/nominierungen/>) (Aug. 2020) Movie premiered on 22 August 2020; **German Biodiversity Film Award 2021** (<https://www.marco-polo-film.de/en/news/>)
- News Magazine Interview, Der Spiegel (<https://www.spiegel.de/plus/biologen-erforschen-die-bedeutung-von-aas-der-tod-und-seine-helfer-a-00000000-0002-0001-0000-000166979815/>) (Nov. 2019)
- Online Media Interview, MSU Today (<https://msutoday.msu.edu/news/2019/msu-entomologists-receive-25-million-grant-to-study-infectious-disease/>) (July 2019)
- Television Interview, Spartan News Room, MSU (<https://www.youtube.com/watch?v=tYjx3n8h8f8>) (April 2019)
- Television Show Episode and Interviews, Oxygen Channel (<https://www.oxygen.com/smiley-face-killers-the-hunt-for-justice/crime-time/todd-geib-decomposition-test>) (Feb. 2019) Show premiered on 23 February 2019
- Online Magazine Article, Forensic News Daily (<https://www.forensicmag.com/news/2019/01/msu-forensic-entomologist-helping-solve-cold-case>) (Jan. 2019)

- Online Media Interview, MSU Today (<https://msutoday.msu.edu/news/2019/msu-forensic-entomologist-is-helping-solve-a-cold-case/>) (Jan. 2019)
- Newspaper Interview, Lansing State Journal, (Jan 2019) <https://www.lansingstatejournal.com/story/news/local/2019/01/18/msu-researcher-looks-into-drowning-smiley-face-killers-tv-show/2613769002/>
- Television Show Filming, 44 Blue Productions for the Oxygen Channel (<https://www.oxygen.com/smiley-face-killers-the-hunt-for-justice/crime-time/todd-geib-decomposition-test>) (June-August 2018) Show premiered on 23 February 2019
- Radio Interview, Michigan Radio WKAR, National Public Radio, Lansing, MI (Sept. 2018)
- Online Media Interview, Vice Magazine ([https://tonic.vice.com/en\\_us/article/in-every-murder-there-are-millions-of-tiny-witnesses](https://tonic.vice.com/en_us/article/in-every-murder-there-are-millions-of-tiny-witnesses)) (May 2017)
- Newspaper Interview, Chicago Tribune, (May 2017) (<http://www.chicagotribune.com/news/obituaries/ct-bernard-greenberg-obituary-20170512-story.html>)
- New York Times Magazine, Featured Article, (Jan. 2016) ([http://www.nytimes.com/2016/01/24/magazine/the-living-dead.html?\\_r=0](http://www.nytimes.com/2016/01/24/magazine/the-living-dead.html?_r=0))
- Magazine Interview, MSU's College of Osteopathic Medicine Communiqué Magazine, (Nov. 2015)
- Magazine Interview, MSU's AgBioResearch Futures Magazine, lab spotlight ([http://agbioresearch.msu.edu/news/mystery\\_solved\\_thanks\\_to\\_insects](http://agbioresearch.msu.edu/news/mystery_solved_thanks_to_insects)) (Oct. 2015)
- Online Media Interview, MSU Today (<http://msutoday.msu.edu/feature/2015/spartan-crime-fighters/>) (Oct. 2015)
- Online Media Interview, Smithsonian.com (<http://www.smithsonianmag.com/science-nature/11-reasons-love-bacteria-fungi-and-spores-180955627/?no-ist>) (June 2015)
- Online Media Interview, BBC - Future, UK, (<http://www.bbc.com/future>) (<http://www.bbc.com/future/story/20150317-the-traits-our-bacteria-tell>) (Jan. 2015)
- Faculty Voice, "Why I Study Dead People", Michigan State University, (<http://msutoday.msu.edu/360/2014/m-eric-benbow-why-do-you-study-dead-people/>), East Lansing, MI (Nov. 2014)
- Online Media Interview, MSU Today, East Lansing, MI (Nov. 2014)
- Online Media Interview, Wired Magazine, www.wired.com (Nov. 2014)
- Radio Interview, Michigan Radio WKAR, National Public Radio, Lansing, MI (Nov. 2014)
- Radio Interview, Michigan Business Network, Lansing, MI (Nov. 2014)
- Radio Interview, Detroit Public Radio, Detroit, MI (Oct. 2014)
- Online Media Interview, Science for the People ([www.scienceforthepeople.ca/](http://www.scienceforthepeople.ca/)) (April 2014)
- Online Media Interview, DugDug.com (Oct. 2013)
- Online Media Interview, Wired Magazine, www.wired.com (Sept. 2013)
- Magazine Interview, Science News (Sept. 2013)
- Magazine Interview, University of Dayton Alumni Magazine (May 2012)
- Newspaper Interview, The Villages Daily Sun (Mar. 2012)
- Television Interview, WDTN, Dayton, Ohio (Feb. 2012)
- Newspaper Interview, Kettering-Oakwood Times (Mar. 2010)
- Phone Interview, Scripps Howard Foundation Wire, Washington, DC (Feb. 2010)
- Television Interview, WHIO, Dayton, Ohio (Aug. 2009)
- Television Interview, WHIO, Dayton, Ohio (Sept. 2009)
- Television Interview, AKAKU Public Broadcasting, Maui Community Television, Maui, Hawaii (Oct. 2006)
- Radio Interview, National Public Radio, El Paso, Texas (Apr. 2006)
- Radio Interview, National Public Radio, Maui, Hawaii (Sept. 2003)
- Television Interview, AKAKU Public Broadcasting, Maui Community Television, Maui, Hawaii (Feb. 2003)
- Radio Interview, NPR Honolulu, Hawaii (Apr. 2001)
- Internet Interview, The JASON Foundation, Needham Heights, MA (Apr. 2001)

#### SCHOLARLY PRESENTATIONS

**Papers and presentations for professional organizations and societies from 2015-Present**  
(260 additional citations from 1994 - 2014 are available upon request)

2021

---

1. Gruppuso, L, A Doretto, JP Receveur, **ME Benbow**, F Bona, S Fenoglio. 2021. Leaf litter decomposition process along the Po River: A multilevel approach to investigate the effects of global climate change. *XVII Incontro Dei Dottorandi e Dei Giovani Ricercatori in Ecologia e Scienze Dei Sistemi Acquatici*, 13-15 April, Napoli, Italy Virtual Meeting.
2. **Benbow, ME**, A Bennett, S Valle de Souza, J Kang'ombe, A Safalaoh, K Masamba, A Kamng'ona, M Jumbe, E Kaunda, M Eilittä, A Mathiesen, D Nkhwazi, M Munthali, W Burke, Pechal, JL. 2021. *The Potential for Black Soldier Fly Farming in Malawi: Recent Progress and Future Directions*. The 2021 Malawi Annual Agricultural Policy Conference, MwAPATA Institute, Lilongwe, Malawi 1-2 June, Virtual Meeting
3. Nestle, E, S Kaszubinski, JP Receveur, JL Pechal, **ME Benbow**. 2021. Decontamination strategies for sampling internal bone microbiomes submerged in aquatic environments. *Proceedings of the 73<sup>rd</sup> Annual Meeting of the American Academy of Forensic Science*, 15-19 February, Virtual Meeting.
4. Pechal, JL, CJ Schmidt, HR Jordan, **ME Benbow**. 2021. Trends in postmortem microbiome research activities: a ten-year review. *Proceedings of the 73<sup>rd</sup> Annual Meeting of the American Academy of Forensic Science*, 15-19 February, Virtual Meeting.
5. Bernstein, KF, JP Receveur, JL Pechal, N Babcock, **ME Benbow**. 2021. Geographic, landscape and sex variation in adult blow fly microbiomes: implications for forensics. *Proceedings of the 73<sup>rd</sup> Annual Meeting of the American Academy of Forensic Science*, 15-19 February, Virtual Meeting.
6. Kaszubinski, S, E Nestle, JP Receveur, JL Pechal, **ME Benbow**. 2021. Bone microbial community succession during multi-year decomposition in an aquatic habitat. *Proceedings of the 73<sup>rd</sup> Annual Meeting of the American Academy of Forensic Science*, 15-19 February, Virtual Meeting.

2020

---

7. Larson, C, **ME Benbow**. 2020. Native and invasive leaf litter decomposition mediated by riparian canopy gaps. *Annual Meeting of the Ecological Society of America*, 3-6 August. (held virtually due to COVID-19 pandemic)
8. Larson, C, P Engelken, D McCullough, **ME Benbow**. 2020. Terrestrial microbial subsidies to headwater streams impacted by riparian invasive species. *Annual Meeting of the Society for Freshwater Science*, 6-13 June. (held virtually due to COVID-19 pandemic)
9. Kaszubinski, S, JL Pechal, HR Jordan, CJ Schmidt, **ME Benbow**. 2020. Developing novel microbial metrics for predicting manner of death (MOD). *Proceedings of the 72<sup>nd</sup> Annual Meeting of the American Academy of Forensic Science*, 17-22 February, Anaheim, CA.
10. Receveur, JP, S Kaszubinski, BR Wydra, B Timmons, KA Smiles, N Babcock, C Weatherbee, **ME Benbow**. 2020. Aquatic decomposition of vertebrate remains: an experimental test for a cold case investigation. *Proceedings of the 72<sup>nd</sup> Annual Meeting of the American Academy of Forensic Science*, 17-22 February, Anaheim, CA.
11. Smiles, KA, JL Pechal, CJ Schmidt, HR Jordan, **ME Benbow**. 2020. Signatures of suicide in the human postmortem microbiome. *Proceedings of the 72<sup>nd</sup> Annual Meeting of the American Academy of Forensic Science*, 17-22 February, Anaheim, CA.

2019

---

12. Schmidt, C, **ME Benbow**, HR Jordan, JL Pechal. 2019. The autopsy as a tool for antibiotic resistance gene surveillance. North American Medical Examiners Annual Meeting, Kansas City, MO 18-22 October.
13. Wu, W, S-S Yang, A Brandon, B-Y Peng, JP Receveur, Y-R Li, R. Fan, Z-Y Wang, S-Y Cai, S-H Gao, D Ning, DH Phillips, H-T Wang, D-F Xing, Y-L Zhang, J Ren, H Tao, NQ Ren, J-Z Zhou, **ME Benbow**, C Criddle. 2019. Microbiota-dependent biodegradation of polystyrene and polyethelene by yellow- and dark-mealworms (Coleoptera: Tenebrionidae: *Tenebrio molitor* and *Tenebrio obscurus*). ASM Microbe, San Francisco, CA, 20-24 June.
14. **Benbow, ME**. 2019. Aquatic and terrestrial insect colonization of vertebrate remains in a pond: an experimental test for a cold case death investigation. 16th European Association for Forensic Entomology Annual Meeting, Bordeaux, France, 5-8 June.
15. Pechal, JL, **ME Benbow**. 2019. Insect-Microbiome interactions, importance, and applications for forensic entomology. 16th European Association for Forensic Entomology Annual Meeting, Bordeaux, France, 5-8 June.
16. **Benbow, ME**, C Larson, S Fenoglio, J Receveur. 2019. Microbes run through it: the role of allocthonous organic matter in structuring stream and river microbial communities. Annual Meeting of the Society for Freshwater Science, Salt Lake City, UT, 19-23 May.
17. Larson, C, **ME Benbow**. 2019. Decadal differences in riparian leaf litter subsidies and decomposition at Augusta Creek. Annual Meeting of the Society for Freshwater Science, Salt Lake City, UT, 19-23 May.
18. Gruppuso, L, A Doretto, M Rappocciolo, J Receveur, **ME Benbow**, F Bona, S Fenoglio. 2019. Impacts of climate change and drought occurrence on CPOM degradation in previously perennial alpine streams (NW Italy). Annual Meeting of the Society for Freshwater Science, Salt Lake City, UT, 19-23 May.
19. Receveur, J, A Doretto, E Baker, **ME Benbow**, K Scribner. 2019. Abiotic conditions alter drifting macroinvertebrate communities following lake sturgeon spawning events. Annual Meeting of the Society for Freshwater Science, Salt Lake City, UT, 19-23 May.
20. Larson, C, **ME Benbow**. 2019. Insects, microbes and leaf litter decomposition in a Michigan headwater stream: changing riparian subsidies alter stream communities. North Central Branch of the Entomological Society of America Scientific Meeting, Cincinnati, OH, 17-20 March.
21. Pechal, JL, J Kang'ombe, A Safalaoh, K Masamba, AW Kamng'ona, **ME Benbow**. 2019. Using insects to decompose and recycle organic matter for developing alternative sources of protein in Malawi. North Central Branch of the Entomological Society of America Scientific Meeting, Cincinnati, OH, 17-20 March.
22. **Benbow, ME**. 2019. Insects, microbes and decomposition. 74<sup>th</sup> North Central Branch of the Entomological Society of America Scientific Meeting, Cincinnati, OH, 17-20 March.

2018

---

23. Pechal, JL, MW DuPont, JA Cammack, TL Crippen, HR Jordan, JK Tomberlin and **ME Benbow**. 2018. Does indigenous microorganism management impact the Calliphoridae microbiome? 66<sup>th</sup> *Entomological Society of American Annual Meeting*, 11-14 November, Vancouver, BC, Canada.
24. Houtz, JL, JP Receveur, JL Pechal, **ME Benbow**, BM Horton, & JR Wallace. *Starling gut microbial community changes through decomposition: a new approach for wildlife forensics*. December 7th, 2018. Cornell University Ecology and Evolutionary Biology Graduate Research Symposium, Cornell University.
25. **Benbow, ME**, P Magni. 2018. Life after death: thanatobiome and its application in forensic science. Global Microbiome Symposium, Perth, Australia, 17 August.

26. Pechal, JL, J Kang'ombe, K Masamba, A Safalaoh, AW Kamng'ona, and **ME Benbow**. 2018. Insects as an Alternative Protein in Malawi: Successes, Challenges, and Future Directions. Next Generation of Food Security in Malawi Symposium, Salima, Malawi, 18-19 July. (*International invitation*)
27. Mesli, V, JL Pechal, H Jordan, E Le Garff, V Hedouin, C Campobasso, V Bugeli, S Pittner, F Monticelli, C Schmidt, D Gosset, **ME Benbow**. 2018. International collaborative project of the geographic variations in the human postmortem microbiome [Oral communication in French] Projet collaboratif international d'étude des variations géographiques du microbiote cadavérique. Session of the French Society of Legal Medicine, Lyon, France. 11 June.
28. **Benbow, ME**, GA Lamberti. 2018. Death and decomposition in aquatic ecosystems. Annual Meeting of the Society for Freshwater Science, Detroit, MI, 20-24 May
29. Lamberti, GA, **ME Benbow**, DT Chaloner. 2018. Animal mass mortalities in aquatic ecosystems: how common and influential. Annual Meeting of the Society for Freshwater Science, Detroit, MI, 20-24 May
30. Larson, C, C Weatherbee, JL Pechal, B Gerig, DT Chaloner, GA Lamberti, **ME Benbow**. 2018. Short and long-term impacts of salmon carcass decomposition on stream microbial community structure: allochthonous microbial subsidies to downstream foodwebs. Annual Meeting of the Society for Freshwater Science, Detroit, MI, 20-24 May
31. **Benbow, ME**, Weatherbee, J Receveur, JL Pechal. 2018. The postmortem microbiome associated with necrophagous insects during decomposition. 15th European Association for Forensic Entomology Annual Meeting, Munich, Germany, 25-28 April
32. **Benbow, ME**, CJ Schmidt, HR Jordan, JL Pechal. 2018. The human postmortem microbiome: past, present and future. Institute of Forensic Medicine and Forensic Neuropsychiatry, University of Salzburg, Salzburg, Austria, 4 May. (*International invitation*)
33. Pechal, JL, CJ Schmidt, HR Jordan, **ME Benbow**. 2018. Postmortem microbiota variability from a large-scale survey. Institute of Forensic Medicine and Forensic Neuropsychiatry, University of Salzburg, Salzburg, Austria, 4 May. (*International invitation*)
34. McCabe, RA, KL Thomas, JP Receveur, **ME Benbow**, JL Pechal, JR Wallace. 2018. Characterization of the microbiome of parasitic louse flies on migratory raptors. 27<sup>th</sup> *International Ornithological Congress*, 19-26 August, Vancouver, BC, Canada.
35. Pechal, JL, J Kang'ombe, K Masamba, A Safalaoh, AX Kamng'ona and **ME Benbow**. 2018. Developing alternative sources of protein in the developing world. Symposium on Insects and Food and Feed: How to Save the Planet and get protein too!, 22 March, Indianapolis, IN. (*invited*)
36. Wu, W, S-S Yang, A Brandon, Y Yang, D Ning, S-H Gao, H-Q Fan, Y-R Li, R. Fan, Z-Y Wang, S-Y Cai, B-Y Peng, Y-M Su, Q-Q Wu, L-Y Ding, L-J Zhang, W-W Cai, DH Phillips, J Gao, D-F Xing, G-Q Zhuang, X-L Zhuang, J Yang, Y-L Zhang, J Ren, H Tao, N Ren, J-Z Zhou, **ME Benbow**, C Criddle. 2018. Ubiquity of consumption and microbe-dependent biodegradation of petroleum-based plastic by yellow mealworms (Coleoptera: Tenebrionidae: *Tenebrio molitor*). ASM Microbe, Atlanta, GA, 7-11 June.
37. Jordan, HR, ZM Burcham, JL Pechal, H Campbell, J Rosch, CJ Schmidt, and **ME Benbow**. 2018. Autopsy sampling to uncover human resistome diversity. *Proceedings of the 70<sup>th</sup> Annual Meeting of the American Academy of Forensic Science*, 19-24 February, Seattle, WA.
38. Burcham, ZM, JL Pechal, JL Bose, **ME Benbow**, CJ Schmidt and HR Jordan. 2018. Fluorescent bacteria in the gut of mice carcasses provides insight on postmortem microbial translocation. *Proceedings of the 70<sup>th</sup> Annual Meeting of the American Academy of Forensic Science*, 19-24 February, Seattle, WA.
39. **Benbow, ME**, Pechal, JL, HR Jordan, V Mesli, E Le Graff, V Hedouin, C Campobasso, V. Bugelli, S. Pittner, F Monticelli and CJ Schmidt. 2018. A global partnership to study geographic variation in the human postmortem microbiome (HPMM). *Proceedings of the 70<sup>th</sup> Annual Meeting of the American Academy of Forensic Science*, 19-24 February, Seattle, WA.

40. Pechal, JL, CJ Schmidt, HR Jordan, and **ME Benbow**. 2018. The ecology of the postmortem microbiome: insights from a large-scale study. *Proceedings of the 70<sup>th</sup> Annual Meeting of the American Academy of Forensic Science*, 19-24 February, Seattle, WA.

2017

---

41. Receveur, J, L Djogbenou, **ME Benbow**. 2017. Building capacity for NGS data analysis in sub-Saharan Africa to improve public health research. Annual Meeting of the Entomological Society of America, Denver, CO, 5-8 November.
42. Pechal, JL, C Weatherbee, **ME Benbow**. 2017. Calliphoridae microbiome dynamics during decomposition. Annual Meeting of the Entomological Society of America, Denver, CO, 5-8 November.
43. Larson, C, P Engelken, JL Pechal, DG McCullough, **ME Benbow**. 2017. Shedding light on emerald ash borer (*Agilus planipennis*) indirect effects on aquatic ecosystem function. Annual Meeting of the Entomological Society of America, Denver, CO, 5-8 November.
44. **Benbow, ME**, JL Pechal, C Larson, P Engelken, DG McCullough, R McEwan, K Custer. 2017. The ecological importance of resource subsidies on insect-microbe interactions in aquatic ecosystems: The dispersal of novel microbes and their genomes in insect communities. Annual Meeting of the Entomological Society of America, Denver, CO, 5-8 November. (*Invited*)
45. Cammack, JA, JL Pechal, S Sweet, T Crippen, A Knap, **ME Benbow**, JK Tomberlin. 2017. Insects and microbes drive VOC emission from decomposing carrion resources. Annual Meeting of the Entomological Society of America, Denver, CO, 5-8 November.
46. Engelken, P, DG McCullough, C Larson, **ME Benbow**. 2017. Effects of emerald ash borer on riparian forest structure. Annual Meeting of the Entomological Society of America, Denver, CO, 5-8 November.
47. Merritt, RW, **ME Benbow**, MB Berg, K Cummins 2017. An Introduction to the Aquatic Insects of North America: A new edition. Annual Meeting of the Entomological Society of America, Denver, CO, 5-8 November.
48. Thomas, K, R McCabe, J Receveur, **ME Benbow**, JL Pechal, JR Wallace. 2017. The characterization of louse fly microbiomes on migrating raptors: Implications for avian pathogen dispersal. Annual Meeting of the Entomological Society of America, Denver, CO, 5-8 November.
49. Rzotkiewicz A, Pearson AL, Pechal JL, Zwickle A, **Benbow ME**, and Schmidt CJ (2017) Assessing the potential effect of urban decay and recovery on the residents of Detroit, Michigan: A novel utilization of the postmortem microbiome. *American Association of Geographers Conference*, Boston, Massachusetts, 5 – 9 April.
50. Pearson AL, Rzotkiewicz A, Pechal JL, Zwickle A, Schmidt CJ, Jordan HR, and **Benbow ME** (2017) Relationships between neighborhood blight, urban green remediation and the postmortem human microbiome in Detroit, Michigan. *International Medical Geography Symposium*, Angers, France, 1-7 July
51. **Benbow, ME**, Jordan, HR, JL Pechal. 2017. Towards an integrative OneHealth approach to better understand Buruli ulcer and other neglected tropical diseases. 6<sup>th</sup> Annual Meeting of Laboratoire d'Excellence Centre d'étude de la Biodiversité Amazonienne, Cayenne, French Guiana, 5 October. (*International Invitation*)
52. Wu, W-M, S-S Yang, AM Brandon, J Yang, D Ning, S Gao, **ME Benbow**, D Xing, J Zhou, CS Criddle. 2017. Microbe-dependent plastic degradation by yellow mealworms (larvae of *Tenebrio molitor*). Annual Meeting of the China Microbial Ecology Society, China.
53. **Benbow, ME**, CR Weatherbee, JL Pechal. 2017. Maggot masses and microbiomes: The interactions of insects and microbes in the necrobiome. 14th European Association for Forensic Entomology Annual Meeting, Treviso, Italy, 8-9 June.

54. Pechal, JL, CR Weatherbee, **ME Benbow**. 2017. Community assembly of carrion and calliphorid microbiomes. 14th European Association for Forensic Entomology Annual Meeting, 8-9 June, Treviso, Italy.
55. Pechal, JL, J Kang'ombe, K Masamba, A Safalaoh, AW Kamng'ona, **ME Benbow**. 2017. Farming Insects for Feed: Developing Partnerships for Sustainable Food security in Malawi. *Michigan State University Alliance for African Partnership Launch Event*, Dar es Salaam, Tanzania. (*Invited*)
56. Receveur, J, L Djogbenou, **ME Benbow**. 2017. Building capacity for NGS data analysis in Sub-Saharan Africa to improve public health research. Ecology, Evolutionary Biology and Behavior Program First Annual Research Symposium, Michigan State University, 1 May, East Lansing, MI.
57. Kierczynski, K, Larson, C, **ME Benbow**. 2017. Terrestrial vines on submerged woody debris influence macroinvertebrate community structure. Annual Meeting of the Society for Freshwater Science, Raleigh, NC, 4-9 June.
58. Larson, C, JL C Weatherbee, Pechal, B Gerig, DT Chaloner, **ME Benbow**. 2017. Short and long-term impacts of salmon carcass decomposition on stream macroinvertebrate and microbial community structure. Annual Meeting of the Society for Freshwater Science, Raleigh, NC, 4-9 June.
59. **Benbow, ME**. 2017. New dimensions of insect-microbe interactions in aquatics, disease and forensics. Ecology, Evolutionary Biology and Behavior Program First Annual Research Symposium, Michigan State University, 1 May, East Lansing, MI.
60. Kierczynski, KE, CE Larson, **ME Benbow**. 2017. Effects of terrestrial vines on macroinvertebrate communities surrounding partially submerged trees. *Michigan State University Undergraduate Research and Arts Forum* 8 April, East Lansing, MI.
61. Thomas, K, R McCabe, **ME Benbow**, JL Pechal, JP Receveur, R Wallace. The characterization of louse fly micro biomes on migrating raptors: implications for avian pathogen dispersal. Commonwealth of Pennsylvania University Biologists Conference, April 8, 2017, Kutztown, PA.
62. Pechal, JL, CJ Schmidt, HR Jordan, MM Brewer, **ME Benbow**. 2017. Postmortem Microbiome Changes During Thaw for Autopsy: Two Pediatric Case Studies. *69<sup>th</sup> Annual Meeting of the American Academy of Forensic Science*, 13-18 February. New Orleans, LA.
63. **Benbow, ME**, JL Pechal, HR Jordan, MM Brewer, CJ Schmidt. 2017. Coupled Microbiome and Insect Evidence in Death Investigation. *69<sup>th</sup> Annual Meeting of the American Academy of Forensic Science*, 13-18 February. New Orleans, LA.
64. Weatherbee, CR, JL Pechal, MM Brewer, TI Stamper, **ME Benbow**. 2017 Forensic Implications of Multi-Species Blow Fly Larval Masses and Their Associated Microbiomes. *69<sup>th</sup> Annual Meeting of the American Academy of Forensic Science*, 13-18 February. New Orleans, LA.
65. Burcham, ZM, JL Pechal, J Rosch, JL Bose, CJ. Schmidt, **ME Benbow**, HR Jordan. 2017. Internal Microbial Community Translocation Throughout Decomposition in a Controlled Vertebrate Model. *69<sup>th</sup> Annual Meeting of the American Academy of Forensic Science*, 13-18 February. New Orleans, LA.
66. Jordan, HR, ZM Burcham, JL Bose, JL Pechal, J Rosch, CJ Schmidt, **ME Benbow**. 2017. Analyses of Necrobiome Structure and Function for Utility in Forensic Science. *69<sup>th</sup> Annual Meeting of the American Academy of Forensic Science*, 13-18 February. New Orleans, LA.
67. Receveur, J, G Donato, T Rainey, JL Pechal, **ME Benbow**, JR Wallace. 2017. ENSO related storm event impact on mosquitoes: ecological implications on larval habitats and microbial community response to control methods. Michigan Mosquito Control Association Annual Meeting, 1-2 Feb, Ann Arbor, MI.

68. Schmidt, CJ, JL Pechal, **ME Benbow**, and HR Jordan. 2016. A Practical Application of the Postmortem Microbiome. *Michigan Association Of Medical Examiners Annual Meeting*, Mt. Pleasant, MI, 4-6 November.
69. Pechal, JL and **ME Benbow**. 2016. Resource subsidy influence on necrobiome networks. 25<sup>th</sup> *International Congress of Entomology Meeting*, Orlando, FL, 25-30 September. (*invited*)
70. **Benbow, ME**, JL Pechal, P Barton, and CR Weatherbee. 2016. The dynamic necrobiome: The interacting web of organisms associated with animal death and decomposition. 25<sup>th</sup> *International Congress of Entomology Meeting*, Orlando, FL, 25-30 September. (*invited*)
71. Weatherbee, CR, JL Pechal, CE Larson, M Brewer, and **ME Benbow**. 2016. Nested biodiversity: The importance of the insect microbiome in carrion food webs and implications for the forensic sciences. 25<sup>th</sup> *International Congress of Entomology Meeting*, Orlando, FL, 25-30 September. (*invited*)
72. Receveur, J, G Donato, T Rainey, JL Pechal, **ME Benbow**, and JR Wallace. 2016. The characterization of microbiota changes after larval mosquito treatment in post-Hurricane Sandy tree divot habitat in Hunterdon County, NJ. Commonwealth of Pennsylvania University Biologists meeting. Millersville, PA. March 2016.
73. Larson, CE, JL Pechal, DG McCullough, and **ME Benbow**. 2016. Legacy effects of emerald ash borer (*Agrilus planipennis*) on stream ecosystems. 25<sup>th</sup> *International Congress of Entomology Meeting*, Orlando, FL, 25-30 September. (*invited*)
74. Pechal, JL, CJ Schmidt, HR Jordan, and **ME Benbow**. 2016. Drugs and Bugs (Bacteria): Does What You Use Relate to What You Grow? *Proceedings of the 68<sup>th</sup> Annual Meeting of the American Academy of Forensic Science – Vol. XXVII*, 22-27 February. Las Vegas, NV.
75. **Benbow, ME**, JL Pechal, CJ Schmidt, and HR Jordan. 2016. The Human Postmortem Microbiome and Manner of Death. *Proceedings of the 68<sup>th</sup> Annual Meeting of the American Academy of Forensic Science – Vol. XXVII*, 22-27 February. Las Vegas, NV.
76. Weatherbee, C, JL Pechal, TI Stamper, and **ME Benbow**. 2016. Using microbial communities to estimate the postmortem interval: a validation study. *Proceedings of the 68<sup>th</sup> Annual Meeting of the American Academy of Forensic Science – Vol. XXVII*, 22-27 February. Las Vegas, NV.
77. Burcham, ZM, JL Pechal, JL Bose, **ME Benbow**, CJ Schmidt, and HR Jordan. 2016. Decomposition of Mouse Carcasses Infected With Fluorescently Labeled Bacteria Provide Insight on Postmortem Microbial Translocation. *Proceedings of the 68<sup>th</sup> Annual Meeting of the American Academy of Forensic Science – Vol. XXVII*, 22-27 February. Las Vegas, NV.
78. Finley, SJ, JL Pechal, **ME Benbow**, BK Robertson, and GT Javan. 2016. Cadaver Gravesoil Microbial Profiles During Decomposition. *Proceedings of the 68<sup>th</sup> Annual Meeting of the American Academy of Forensic Science – Vol. XXVII*, 22-27 February. Las Vegas, NV.
79. Sufrin, V, TL Crippen, JK Tomberlin, AM Tarone, JL Pechal, **ME Benbow**, and B Singh. 2016. The Utility of Soil Eukaryotes During Human Decomposition and Their Potential Forensic Applications. *Proceedings of the 68<sup>th</sup> Annual Meeting of the American Academy of Forensic Science – Vol. XXVII*, 22-27 February. Las Vegas, NV
80. Larson, C, JL Pechal, DG McCullough, and **ME Benbow**. 2016. A terrestrial invader, Emerald Ash Borer (*Argilus planipennis*), influences stream community species sorting. Annual Meeting of the Society for Freshwater Science, Sacramento, CA, 21-26 May.
81. Larson, CE, DG McCullough, and **ME Benbow**. 2016. Legacy effects of emerald ash borer, *Agrilus planipennis*, on stream ecosystem function. 30<sup>th</sup> Annual Meeting of the Michigan Mosquito Control Association, Ann Arbor, MI, 3-4 February.
82. **Benbow, ME**, JL Pechal, HR Jordan, and CJ Schmidt. 2016. The Human Postmortem Microbiome and Potential Forensic Applications. *Advances in Forensic Medicine & Pathology*, Ann Arbor, MI, 11-12 May.
83. McNeish, RE, **ME Benbow**, RW McEwan. 2016. Terrestrial-aquatic connections: the riparian invasive shrub, *Lonicera maackii*, alters ecosystem subsidies and shifts in aquatic biota and ecosystem processes. Ohio Invasive Plant Council Meeting, Columbus, OH, 11 February.

2015

---

84. Pechal, JL and **ME Benbow**. 2015. Insects, salmon and their microbiomes: The influence of resource pulses on ecological networks. 63<sup>rd</sup> Entomological Society of America Annual Meeting, Minneapolis, MN, 15-18 November.
85. Larson, C, CR Weatherbee, JL Pechal, B Gerig, G Lamberti, and **ME Benbow**. 2015. Aquatic macroinvertebrate and microbial community responses to salmon carrion introduction into a headwater stream. 63<sup>rd</sup> Entomological Society of America Annual Meeting, Minneapolis, MN, 15-18 November.
86. Pizarro, JM, **ME Benbow**, SC Grady, EF McGarrell, JL Pechal, AM Zeoli. 2015. Crime, Education, Maternal Health, and the Microbiome: An integration of criminology, public health, medical geography, and biological discourses in the explanation of criminality. 71<sup>st</sup> Annual Meeting of the American Society of Criminology, Washington DC, 18-21 November.
87. Weatherbee, CR, JL Pechal, TI Stamper, and **ME Benbow**. 2015. Mysteries of the maggot mass microbiome: Microbial communities of Calliphoridae larvae throughout carrion decomposition. 63<sup>rd</sup> Entomological Society of America Annual Meeting, Minneapolis, MN, 15-18 November.
88. Receveur, J, G Donato, T Rainey, JL Pechal, **ME Benbow**, and JR Wallace. 2015. Potential impacts of a Hurricane Sandy sized storm event on tree divot mosquito habitat and population in New Jersey. Entomological Society of Pennsylvania. Climbers Run, PA. 15 September.
89. Receveur, J, G Donato, T Rainey, JL Pechal, **ME Benbow**, and JR Wallace. 2015. The characterization of microbiota changes pre/post larval mosquito treatment in post-Hurricane Sandy tree divot habitat. 63<sup>rd</sup> Entomological Society of America Annual Meeting, Minneapolis, MN, 15-18 November. (*Poster*)
90. Pechal, JL, CJ Schmidt, HR Jordan, and **ME Benbow**. 2015. Postmortem Microbiome and its Role in Health and Disease. Michigan Association Of Medical Examiners Annual Meeting, Mt. Pleasant, MI, 23-25 October. (*invited*)
91. Burcham, ZM J.A. Hood, J.L. Pechal, J.L. Bose, C.J. Schmidt, **M.E. Benbow**, and H.R. Jordan. The Microbial Clock: Tracking Bacterial Translocation through Successional Host Decomposition (Poster). American Society for Microbiology South Central Branch Meeting, Hattiesburg, Mississippi, September, 2015.
92. McEwan, RW, **ME Benbow**, KW Custer, RE McNeish. 2015. A mechanistic framework for cross-habitat bottom-up effects of the invasive terrestrial shrub *Lonicera maackii* on the biology of headwater streams. 100<sup>th</sup> Ecological Society of America Meeting, Baltimore, MD, 9-14 August.
93. McNeish, RE, **ME Benbow**, RW McEwan, EM Moore. 2015. Removal of the invasive shrub, *Lonicera maackii*, from riparian forests influences headwater stream biota and ecosystem function. 100<sup>th</sup> Ecological Society of America Meeting, Baltimore, MD, 9-14 August.
94. Burcham, ZM\*, JA Hood, JL Pechal, JL Bose, CJ Schmidt, **ME Benbow**, and HR Jordan. 2015. Fluorescently Labeled Bacteria Provide Insight on Postmortem Microbial Translocation. 7th European Academy of Forensic Science Conference, Prague, Czech Republic, 6–11 September.
95. Jordan, HR, JL Pechal, ZM Burcham, CJ Schmidt, **ME Benbow**. 2015. Utility of microorganisms for forensics and health. 2015 Summer Conference of the Mississippi Coroner-Medical Examiner's Association, Biloxi, MS, 2 July. (*invited*)
96. Burcham, ZM, JL Pechal, **ME Benbow**, HR Jordan. 2015. Investigating Resistomes of the Human Microbiome. 115<sup>th</sup> Annual Meeting of the American Society for Microbiology, New Orleans, LA, 30 May – 2 June.
97. Lang, JM, RW McEwan, **ME Benbow**. 2015. Abiotic autumnal organic matter deposition and grazing disturbance effects on epilithic biofilm succession. 115<sup>th</sup> Annual Meeting of the American Society for Microbiology, New Orleans, LA, 30 May – 2 June.

98. Pechal, JL, **ME Benbow**. 2015. Influence of resource pulses on ecological networks: insects, salmon and their microbiomes. Society for Freshwater Science Annual Meeting, Milwaukee, WI, 17-21 May.
99. Garner, CM, RE McNeish, **ME Benbow**, RW McEwan. 2015. *Lonicera maackii* riparian invasion impacts macroinvertebrates biomass and secondary production in a headwater stream. Society for Freshwater Science Annual Meeting, Milwaukee, WI, 17-21 May.
100. Vrablik, PM, RE McNeish, **ME Benbow**, RW McEwan. 2015. The removal of a riparian forest invader (*Lonicera maackii*) alters macroinvertebrate abundance and dynamics. Society for Freshwater Science Annual Meeting, Milwaukee, WI, 17-21 May.
101. McNeish, RE, **ME Benbow**, RW McEwan. 2015. Removal of the invasive shrub, *Lonicera maackii*, from riparian forests influences headwater stream biota and ecosystem function. Society for Freshwater Science Annual Meeting, Milwaukee, WI, 17-21 May.
102. Pechal, JL, **ME Benbow**. 2015. Influence of resource pulses on cadaver networks: insects, microbiomes and their potential use in forensic entomology. 12<sup>th</sup> European Association for Forensic Entomology Annual Meeting, Huddersfield, UK, 6-9 May.
103. Garner, CM, RE McNeish, **ME Benbow**, RW McEwan. 2015. Environmental factors are greater than frequent disturbance in driving epilithic biofilm succession. Midwest Ecology and Evolution Conference, Bloomington, IN, 28-29 March.
104. McNeish, RE, EM Moore, **ME Benbow**, RW McEwan. 2015. Removal of the invasive shrub, *Lonicera maackii*, from riparian forests influences headwater stream biota and ecosystem function. Midwest Ecology and Evolution Conference, Bloomington, IN, 28-29 March.
105. Garner, CM, RE McNeish, **ME Benbow**, RW McEwan. 2015. *Lonicera maackii* riparian invasion impacts macroinvertebrates biomass and secondary production in a headwater stream. Midwest Ecology and Evolution Conference, Bloomington, IN, 28-29 March.
106. Lang, JM, RW McEwan, and **ME Benbow**. 2015. Environmental factors are greater than frequent disturbance in driving epilithic biofilm succession. Midwest Ecology and Evolution Conference, Bloomington, IN, 28-29 March.
107. Jordan, HR, JL Pechal, **ME Benbow**. 2015. Utility of Carrion Microorganisms for Forensics and Health...and a bit from the living. Anthropology and Middle Eastern Cultures Brown Bag Event, Mississippi State University, Starkville, MS, 9 April.
108. Pechal, JL, HR Jordan, Z Burcham, JK Tomberlin, MD McIntosh, E Anagonou, PLC Small, Y Barogui, G Sopoh, C Johnson, and **ME Benbow**. 2015. Associations of Microbial Community Structure with *Mycobacterium ulcerans*. World Health Organization – Global Buruli Health Initiative, Geneva, Switzerland, 23-25 March. **International invitation.**
109. Pechal, JL, Jordan, **ME Benbow**, PLC Small, JK Tomberlin, M. Sanders, E. Adogonou, Y Barogui, G Sopoh, C Johnson, and HR Jordan. 2015. Detection of *Mycobacterium ulcerans* DNA on Human Skin. World Health Organization – Global Buruli Health Initiative, Geneva, Switzerland, 23-25 March. **International invitation.**
110. **Benbow, ME**, HR Jordan, R Simmonds, PCL Small, and JL Pechal. Microbial community ecology and the *Mycobacteria ulcerans* niche: Implications for a One Health Initiative approach to understanding transmission. World Health Organization – Global Buruli Health Initiative, Geneva, Switzerland, 23-25 March. **International invitation.**
111. **Benbow, ME**. 2015. The living dead of invasive plant leaf litter leachate effects on *Culex pipiens*. 29<sup>th</sup> Annual Meeting of the Michigan Mosquito Control Association. Bellaire, MI, 4-5 February.
112. Larson, CE, CR Weatherbee, JL Pechal, GA Lamberti, B Gerig, **Benbow, ME**. 2015. Salmon carrion decomposition influences surrounding headwater stream community over time. 29<sup>th</sup> Annual Meeting of the Michigan Mosquito Control Association. Bellaire, MI, 4-5 February.

**COVID IMPACT SUMMARY  
(MARCH 2020 – JUNE 2021)**

- ***Sabbatical postponed.*** My sabbatical was supposed to be from July – December 2020 and in June 2020 it was clear no travel would be allowed to Europe and so I requested that it be postponed to 2021; it has been postponed to July – December 2021. Thus, fall 2020 semester teaching was not possible. This substantially disrupted planning for research and my teaching appointment. One significant change was teaching Aquatic Entomology in spring 2021 as an online only course. Re-developing this course required additional and substantial time commitment in the fall of 2020 and in spring 2021. This refocused teaching effort (and at home parent responsibilities [see below]) impacted my ability to write papers and new grant proposals.
- ***Lab was shut down from mid-March 2020 – early August 2020*** (the building of my lab, Giltner Hall, was one of the last at MSU to re-open)
- Many important, ***expendable molecular-based lab supplies were back ordered*** for months, slowing research productivity in general.
- ***Four visiting scientists in January 2020: 3 PhD students and 1 Postdoc returned home early in 2020.*** They all had to return to their home countries early delaying collaborative research with three different international labs.
- ***New student delayed start by 6 months.*** PhD student from Germany was supposed to start in the summer of 2020 but was unable to get back to the USA until January 4, 2021.
- ***Postponed major NSF supported field data collection trips.*** Two, three-week field research trips to French Guiana for data collection for my NSF EEID grant were cancelled due to travel restrictions: one in March 2020 and one in July 2020 – essentially, we missed an entire year of data collection and associated analyses. Because of the weather patterns in French Guiana our only opportunities to collect field data are primarily in March/April and July/August/October. The March 2021 trip was also postponed due to Covid travel restrictions.
- ***Two new international research collaborations postponed.*** Two research trips to Africa (one to Malawi, the other to Uganda) to initiate two collaborative research programs related insects as feed were cancelled. These trips and collaborative projects were unable to be resumed.
- ***Primary at-home caregiver from March 2020 through June 2021.*** I was the primary parent to stay home with two daughters (elementary and middle school age) since mid-March 2020 through June 2021, as my spouse is a physician. Both daughters were restricted to online only school and I shared home office space with them. This responsibility had substantial impact on my ability to sit and focus on many professional tasks, but especially writing grant proposals and papers. Both daughters would begin online school at 8:30am, and for the elementary school child it ended at 11:30am and for the middle schooler it ended at 1:30pm. When they were finished, I was the only person around for any kind of engagement for both daughters for the rest of each day. I took on the role of school tutor, lunch chef and playmate, in addition to instituting new ‘Dad School’ activities to keep them occupied and learning during the afternoons, like advanced math and learning French – these activities all took away from focusing on new projects/ideas while using time in the early mornings and evenings to simply maintain everyday research program activities, supervising students, teaching online and other professional responsibilities.