

Thomas H. Q. Powell

Department of Biological Sciences
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Current Appointment

Associate Professor (2023-current)
Department of Biological Sciences
Binghamton University

Education

PhD Biological Sciences 2005-2012

University of Notre Dame, Notre Dame, Indiana

Advisor: Dr. Jeffrey Feder

Dissertation: *Ecological Divergence, Host Race Formation, and Speciation: Host Plant Adaptation as a Driver of Insect Diversification.*

BS Biology 2001-2005

Shepherd University, Shepherdstown, West Virginia

Undergraduate Thesis: *Microsatellite assessment of a putative breeding population of Atlantic sturgeon from the Chesapeake Bay*
summa cum laude

Previous Positions

Assistant Professor (2016-2023)

Department of Biological Sciences
Binghamton University

Postdoctoral associate 2013-2016

University of Florida, Gainesville, Florida
Entomology and Nematology Department
Advisor: Dr. Dan Hahn

Visiting Postdoctoral Fellow 2012-2013

University of Toronto, Toronto, Ontario
Department of Ecology and Evolutionary Biology, Koffler Scientific Reserve
Advisor: Dr. Arthur Weis

Conservation Genetics Technician 2004-2005

U.S. Geological Survey, Leetown, WV.
Aquatic Ecology Branch
Advisor: Dr. Timothy King

Publications (total citations: 2066, h-index: 24)

46. Tan, K., R.A. Ines, C.M. Buono, Q. Evans, **T.H.Q. Powell**, and K.M. Prior. 2025. Differences in foraging phenology dampen the impact of an invasive slug on ant-mediated seed dispersal of understory forests. *Acta Oecologia* 126: 104041
45. Prior K.M, D.G. Jones, S.A. Meadley-Dunphy, S. Lee, S. Daughton, and **T.H.Q. Powell**. 2023. Loss of specialized interactions and incomplete biotic resistance facilitate ecological release in a range-expanding species. *Diversity and Distributions* 29: 1355-1370.
44. Lackey, A.C.R., A.M. Murray, N. Mirza, and **T.H.Q. Powell**. 2023. Sexual behavior contributes to reproductive isolation early in ecological speciation: a new axis of divergence in *Rhagoletis pomonella*. *Journal of Evolutionary Biology*. 36: 882-892.
43. Lackey, A.C.R, P.M. Deneen, J.L. Feder, G.R. Ragland, D.A. Hahn and **T.H.Q. Powell**. 2023. Simulated climate change causes asymmetric responses in insect life history timing potentially disrupting a classic ecological speciation system. *Ecology Letters* 26: 1411-1418. See press in [Newsweek](#)
42. Jones, D.G., J. Kobelt, J. Ross, **T.H.Q. Powell**, & K.M. Prior. 2022. Latitudinal gradient in species provides high niche opportunities for a range-expanding phytophagous insect. *Journal of Animal Ecology*. 91: 2037-2049.
41. Buono, C.M. †, G.I. Quartuccia†, W.R. Smisko, A.J. Lupinski, A.Q.W. Radin, **T.H.Q. Powell**, & K.M. Prior. 2022. Uncovering how behavioral variation underlying mutualist partner quality is partitioned within a species complex of keystone seed-dispersing ants. *Insectes Sociaux*. 69: 247-260. †authors contributed equally
40. **Powell, T.H.Q**, G.R. Hood, M.M. Doellman, P.M. Deneen, J.J. Smith, S.H. Berlocher, & J.L. Feder. 2022. The Build-up of population genetic divergence along the speciation continuum in a recent adaptive radiation of *Rhagoletis* flies. *Genes*. 13:275.
39. Calvert, M.B., M.M. Doellman, J.L. Feder, G.R. Hood, P.J. Meyers, S.P. Egan, **T.H.Q. Powell**, M.M. Glover, C. Tait, H. Schuler, S.H. Berlocher, J.J. Smith, P. Nosil, D.A. Hahn, & G.J. Ragland. 2021. Genomic evidence for correlated trait combinations and antagonistic selection contributing to counterintuitive genetic patterns of adaptive diapause divergence in *Rhagoletis* flies. *Journal of Evolutionary Biology*. 35: 146-163
38. Inskeep, K.A., M.M. Doellman, **T.H.Q. Powell**, S.H. Berlocher, N.R. Seifert, G.R. Hood, G.J. Ragland, P.J. Meyers, and J.L. Feder. 2022. Divergent diapause life history timing drives both allochronic isolation and reticulate hybridization in an adaptive radiation of *Rhagoletis* flies. *Molecular Ecology*. 31: 4031-4049.
37. St. Mary, C. †, **T.H.Q. Powell**†, J.S. Kominoski†, & E. Weinert†. 2021. Rescaling Biology: Increasing Integration Across Biological Scales and Subdisciplines to Enhance Understanding and Prediction. *Integrative and Comparative Biology*. 61: 2031-2037. †all authors contributed equally
36. Dowle, E.J. †, **T.H.Q. Powell**†, M.M. Doellman, P.J. Meyers, M.B. Calvert, K.K.O. Walden, H.M. Robertson, S.H. Berlocher, J.L. Feder, D.A. Hahn, and G.J. Ragland. 2020. Genome-wide variation and transcriptional changes in diverse developmental

processes underlie the rapid evolution of seasonal adaptation. *Proceedings of the National Academy of Sciences*. 117: 23960-23969. †authors contributed equally

35. **Powell, T.H.Q.**, A. Nguyen, Q. Xia, J.L. Feder, G.J. Ragland, and D.A. Hahn. 2020. A rapidly evolved shift in life history timing during ecological speciation is driven by the transition between developmental phases. *Journal of Evolutionary Biology*. 33: 1371-1386.
34. Doellman, M.M., G. St. Jean, S.P. Egan, **T.H.Q. Powell**, G.R. Hood, H. Schuler, D. Bruzese, M. Glover, J.J. Smith, W. Yee, R. Goughnour, J. Rull, M. Aluja, and J.L. Feder. 2020. Evidence of spatial clines and mixed geographic modes of speciation for North American cherry-infesting *Rhagoletis* (Diptera:Tephritidae) flies. *Ecology and Evolution*. 10: 12727-12744.
33. Meyers, P.J., M.M. Doellman, G.J. Ragland, G.R. Hood, S.P. Egan, **T.H.Q. Powell**, P. Nosil, and J.L. Feder. 2020 Can the genomics of ecological speciation be predicted across The divergence continuum from host races to species? A case study in *Rhagoletis*. *Philosophical Transactions of the Royal Society B*. 375: 20190534. - in special issue on "Towards the completion of speciation: the evolution of reproductive isolation beyond the first barriers"
32. Hood, G.R.†. **T.H.Q. Powell**‡,§, M.M. Doelman, S.B. Sim, M.M. Glover, W.L. Yee, R.B. Goughnour, M. Mattsson, D. Scwhart, & J.L. Feder. 2020. Rapid and repeatable host plant shifts drive reproductive isolation following a recent human-mediated introduction of the apple maggot fly, *Rhagoletis pomonella*. *Evolution*. 74: 156-168.
†authors contributed equally, ‡ corresponding author
31. Doellman, M.M., H. Schuler, G. St. Jean, G.R. Hood, S.P. Egan, **T.H.Q. Powell**, M.M. Glover, D.J. Bruzese, J.J. Smith, W.L. Yee, R. Goughnour, J. Rull, M. Aluja, & J.L. Feder. 2019. Geographic and ecological dimensions of host plant-associated genetic differentiation and speciation in the *Rhagoletis cingulate* (Diptera: Tephritidae) sibling species group. *Insects*. 10: 275.
30. Doellman, M.M., S.P. Egan, G.J. Ragland, P.J. Meyers, G.R. Hood, **T.H.Q. Powell**, P. Lazorchak, D.A. Hahn, S.H. Berlocher, P. Nosil. & J.L. Feder. 2019. Standing geographic variation in eclosion time and the genomics of the host race formation in *Rhagoletis pomonella* fruit flies. *Ecology and Evolution*. 9:393-409.
29. Dong, C, **T.H.Q. Powell**, J.L. Feder , & C.E Linn. 2018. Identification of a new blend of host volatiles from red downy hawthorn, *Crataegus mollis*, attractive to *Rhagoletis pomonella* flies from the northeastern United States. *Journal of Chemical Ecology*.
28. St Jean, G., G.R. Hood, S.P. Egan, **T.H.Q. Powell**, H. Schuler, M.M. Doellman, J.J. Smith, W.L. Yee, R.B. Goughnour, N. Keyghobhadi, J. Rull, M. Aluja, & J.L. Feder. 2018. Limited genetic evidence for host plant related differentiation in the Western cherry fruit fly, *Rhagoletis indifferens*. *Entomologia Experimentalis et Applicata*. 166: 739-751.
27. Doellmann, M.M., G.J. Ragland, G.R. Hood, P.J. Meyers, S.P. Egan, **T.H.Q. Powell**, P. Lazorchak, M.M. Glover, C. Tait, H. Schuler, D.A. Hahn, S.H. Berlocher, J.J. Smith, P.

- Nosil, & J.L. Feder. 2018. Genomic differentiation during speciation-with-gene-flow: comparing geographic and host-related variation in divergent life history adaptation in *Rhagoletis pomonella*. **Genes** 9: 5.
26. Sim, S.B., M.M Doelmann, G.R. Hood, W.L. Yee, **T.H.Q. Powell**, D. Schwarz, R.B. Goughnour, J.J. Smith, T.E. Arcella, and J.L. Feder. 2017 Genetic evidence for the introduction of *Rhagoletis pomonella* into the northwestern United States. **Journal of Economic Entomology** 110: 2599-2608.
 25. Ragland, G.J., P. Meyers, M. Doellman, G.R. Hood, S.P. Egan, **T.H.Q. Powell**, P. Nosil, D.A. Hahn and J.L. Feder. 2017. A test of genomic modularity among life history adaptations promoting speciation-with-gene. **Molecular Ecology** 25: 326-3942.
 24. Meyers, P., **T.H.Q. Powell**, K. Walden, A. Shieferecke, J.L. Feder, D.A. Hahn, H. Robertson, S.H. Berlocher, and G.J. Ragland. 2016. Evolutionary divergence of the diapause Transcriptome in apple maggot flies: winter chilling and post-winter transcriptional repression. **Journal of Experimental Biology** 219: 2613-1622.
 23. **Powell, T.H.Q.** and K.M. Prior. Coevolution: predation and parasitism. In **Encyclopedia of Evolutionary Biology** ed. R. Kliman. Oxford Academic. Press. Pp. 322-338.
 22. Hood, G.R., A.A. Forbes, **T.H.Q. Powell**, S.P. Egan, G. Hamerlinck, J.J. Smith, and J.L. Feder. 2015. Sequential divergence and the multiplicative origin of community diversity. **Proceedings of the National Academy of Sciences** 112: E5980-E5989.
-covered by the Wall Street Journal
 21. Arcella, T.E†, G.R. Hood †, **T.H.Q. Powell†**, S.B. Sim, W.L. Yee, D. Schwarz, S.P. Egan, R.B. Goughnour, J.J. Smith, and J. L. Feder. 2015. Hybridization and the spread of the apple maggot fly, *Rhagoletis pomonella* (Diptera: Tephritidae) in the northwestern United States. **Evolutionary Applications**. 8: 834-846.
†authors contributed equally
 20. Egan, S.P., G.J. Ragland, L. Assour, **T.H.Q. Powell**, G.R. Hood., S. Emrich, P. Nosil, and J.L. Feder. 2015. Experimental evidence of genome-wide impact of ecological selection during early stages of speciation-with-gene-flow. **Ecology Letters**. 18: 817-825.
-Recommended by F1000
 19. Cunan, E., **T.H.Q. Powell**, and A.E. Weis. 2015. Evidence for plant mediated competition between defoliating and gall-forming specialists attacking *Solidago altissima*. **American Midland Naturalist**. 173: 208-217.
 18. Prior, K.M., **T.H.Q. Powell**, A. Joseph, and J.J. Hellmann. 2015. Insights from community ecology into the role of enemy release in causing invasion success: the importance of native enemy effects. **Biological Invasions**. 17: 1283-1297.
 17. **Powell, T.H.Q.**, A.A. Forbes, G.R. Hood, and J.L. Feder. 2014. Ecological adaptation and reproductive isolation in sympatry: genetic and phenotypic evidence for multiple native host races of *Rhagoletis pomonella*. **Molecular Ecology**. 23: 688-704.
 16. Smith, J.J., **T.H.Q. Powell**, L. Teixeira, W.O. Armstrong, R.J. McClowry, R. Isaacs, G. R. Hood, J.L. Feder, and L. Gut. 2014. Genetic structure of cherry fruit fly (*Rhagoletis cingulata*) populations across managed, unmanaged, and natural habitats. **Entomologia**

15. **Powell, T.H.Q.**, G.R. Hood, M.O. Murphy, J.S. Heilveil, P. Nosil, S.H. Berlocher, and J.L. Feder. 2013. Genetic divergence across the speciation continuum: the transition from host race to species in *Rhagoletis*. **Evolution**. 67: 2561-2576.
In special section on Genome Evolution and Speciation
14. Hood, G.R., W.L. Yee, R.B. Goughnour, S. Sim, T. Arcella, G. St. Jean, **T.H.Q. Powell**, C. Xu, and J. L. Feder. 2013. The geographic distribution of *Rhagoletis pomonella* (Diptera:Tephritidae) in the western United States: introduced species or native population? **Annals of the Entomological Society of America**. 106:59-65.
13. Linn, C.E., W.L. Yee, S. Sim, D.H. Cha, **T.H.Q. Powell**, R.B. Goughnour, and J.L. Feder. 2012. Behavioral evidence for fruit odor discrimination and sympatric host races of *Rhagoletis pomonella* flies in the western United States. **Evolution**. 66: 3632-3641.
12. **Powell, T.H.Q.**, D. Cha, C. Linn, and J. L. Feder. 2012. On the scent of standing variation for speciation: behavioral evidence for native sympatric host races of *Rhagoletis pomonella* (Diptera: Tephritidae) in the southern United States. **Evolution**. 66: 2739-2756.
11. Cha, D., **T.H.Q. Powell**, J. L. Feder, and C. Linn. 2012. Geographic variation in fruit volatiles emitted by the hawthorn *Crataegus mollis* and its consequences for host race formation in the apple maggot fly, *Rhagoletis pomonella*. **Entomologia Experimentalis et Applicata** 143: 254-268.
10. Cha, D., Y. Wee, R. Groughour, S.B. Sim, **T.H.Q. Powell**, J.L. Feder, and C. Linn. 2012. Identification of host fruit volatiles from domestic apple (*Malus domestica*), native Black hawthorn (*Crataegus douglasii*), and introduced ornamental hawthorn (*C. monogyna*) attractive to *Rhagoletis pomonella* flies from the western United States. **Journal of Chemical Ecology**. 38: 319-329.
9. Cha, D., **T.H.Q. Powell**, J. L. Feder, and C. Linn. 2011. Identification of host fruit volatiles from three mayhaw species (*Crataegus series Aestivales*) attractive to mayhaw-origin *Rhagoletis pomonella* flies. **Journal of Chemical Ecology** 37: 961-973.
8. Cha, D., **T.H.Q. Powell**, J. L. Feder, and C. Linn. 2011. Identification of host fruit volatiles from green hawthorn (*Crataegus viridis*) and blueberry hawthorn (*Crataegus brachyacantha*) host plants attractive to different phenotypes of *Rhagoletis pomonella* flies in the southern United States. **Journal of Chemical Ecology** 37: 974-983.
7. Feder, J.L., R. Gejii, **T.H.Q. Powell**, and P. Nosil. 2011. Adaptive chromosomal divergence driven by mixed geographic mode of evolution. **Evolution** 65: 2157-2170.
6. Feder, J. L., **T.H.Q. Powell**, K. Filchak, and B. Leung. 2010. The diapause response of *Rhagoletis pomonella* to varying environmental conditions and its significance for geographic and host plant-related adaptation. **Entomologia Experimentalis et Applicata** 136: 31-44.
5. Michel, A.P., S. Sim, **T.H.Q. Powell**, M.S. Taylor, P. Nosil, and J.L. Feder. 2010. Widespread genomic divergence during sympatric speciation. **Proceedings of the National Academy of Sciences of the United States of America** 107: 9724-9729.

-Featured in Nature “News and Views” and Science “Editor’s choice”

4. Forbes, A.A., **T.H.Q. Powell**, L.L. Stelinski, J.J. Smith and J.L. Feder. 2009. Sequential sympatric speciation across trophic levels. **Science** 323: 776-779.
-Recommended by F1000
3. Senapati, S., A.R. Mahon, J. Gordon, C. Nowak, S. Sengupta, **T.H.Q. Powell**, J.Feder, D.M. Lodge, and C.H. Chang. 2009. Rapid on-chip genetic detection microfluidic platform for real world applications. **Biomicrofluidics** 3:2:022407.
2. Forbes, A.A., **T.H.Q. Powell**, M.A.F. Noor, N.F. Lobo and J.L. Feder. 2008. Polymorphic microsatellite loci for *Diachasma alloeum* (Hymenoptera: Braconidae). **Molecular Ecology Resources** 8:373-376
1. Forbes, A.A., **T.H.Q. Powell**, N.F. Lobo, and J.L. Feder. 2007. Resolving a DNA sequencing artifact associated with Topoisomerase I generated clones in the plasmid pCR®2.1. **Biotechniques** 42:458-462.

Funded External Grants

NSF- DEB – Dimensions of Biodiversity Program

“Dimensions: Collaborative Research: Time after Time: Adaptive Seasonal Timing Drives the Sequential Origin of Community Diversity”- 10/1/2016 – 9/30/22

Total award: \$1.95M; portion as co-PI: \$420,108

Note this proposal was submitted after my job offer at Binghamton University, the award decision was not made until after I accepted the faculty position here, and the funding period did not begin for over 1 month after my appointment at Binghamton University began.

National Geographic Society:

“Altered interactions for species on the move: comparing host-parasitoid interactions along a species native and expanded ranges”. 7/1/2019 – 6/30/2020. Co-PI. along with Dr. Kirsten Prior.
Award amount: \$23,828

Pending Grant Proposal Submissions

NSF DEB (Evolutionary Processes), Submitted 10/23/2024. “Collaborative Research: Sexual isolation in the wake of ecological adaptation and speciation: how multifaceted reproductive isolation evolves early in divergence” 4-year collaborative proposal with University of Louisville (Dr. Alycia Lackey) and Wayne State University (Dr. Glen Ray Hood). Total requested budget: ~\$1.55M, Binghamton University budget: \$307,501.

Pending

Public Presentations

Invited Talks:

Powell, T.H.Q., 2025. Climate change and temporal specialist insects: diapause as both a vulnerability and target for rapid adaptation. **Wayne State University Biological Sciences**

Seminar Series, Detroit, MI.

Powell, T.H.Q., 2025. Darwin's tangled bank in a changing world: the ecological and evolutionary implications of climate change for insects in temperate environments. **Southern Tier Sierra Club**, Vestal, NY.

Powell, T.H.Q., 2024. Climate change and temporal specialist insects: diapause as both a vulnerability and target for rapid adaptation. **The Ohio State University**, Department of Entomology, Annual DeLong Lecture. Columbus, OH.

Powell, T.H.Q., 2024. Darwin's tangled bank in a changing world: the ecological and evolutionary implications of climate change for insects in temperate environments. **Broome County Naturalists Society**, Vestal, NY.

Powell, T.H.Q. 2021 The evolution of dormancy in *Rhagoletis*: divergence in diapause regulation during an adaptive radiation of *Tephritid* flies. In organized symposium: Tephritidae Systematics, Diagnostics, Phylogeny, Evolution & Natural History. **Entomology 2021**, Denver, CO.

Powell, T.H.Q. 2021. Ecological Adaptation and the Origin and Maintenance of Biodiversity. EVOS seminar series, **Binghamton University**, Binghamton, NY.

Powell, T.H.Q. 2020. Ecological Adaptation and the Origin and Maintenance of Biodiversity. Gosnell School of Life Sciences Seminar Series **Rochester Institute of Technology**; Rochester, NY.

Powell, T.H.Q. 2020. Seasonal adaptation across trophic levels: the evolution of dormancy during speciation and in response to climate change. 2nd day Keynote Lecture during annual BGSO symposium, **Binghamton University**, Binghamton, NY.

Powell, T.H.Q., 2019. NSF-funded undergraduate research: insect adaptation to climate change. **SUNY Conversations in the Disciplines: Methods and Models for Undergraduate Research Across the Disciplines**. University at Albany, Albany, NY

Powell, T.H.Q. 2019. Seasonal adaptation across trophic levels: the evolution of dormancy during speciation and in response to climate change in *Rhagoletis* flies and their parasitoids. **Cornell University Annual Evolution Symposium**. Ithaca, NY.

Powell, T.H.Q., E. Dowle, J.L. Feder, G.J. Ragland, and D.A. Hahn. 2018. The gene regulatory basis of phenological divergence in *Rhagoletis pomonella*. In symposium on *Gene Regulatory Evolution in Natural Populations*. **Second Joint Congress on Evolution**: joint annual meetings of of the Society for the Study of Evolution, Society of Systematic Biologists, and American Society of Naturalists, Canadian Society for Ecology and Evolution, and the European Society for Evolutionary Biology. Montpellier, France.

Powell, T.H.Q. 2016 Genetic diversity and the tempo and mode of ecological adaptation. EVOS seminar series, **Binghamton University**, Binghamton, NY.

Powell, T.H.Q. Divergent ecological adaptation, life history timing, and the origin of species.

2015. Seminar in the Biology Department, **University of Florida**, Gainesville, FL.

Powell, T.H.Q., C. Tait, S.B. Olsson, D.A. Hahn, C.E. Linn, and J. L. Feder. 2014. Chemosensory divergence and the origin of species: host-fruit odor discrimination in the apple maggot fly. **University of Florida and Florida State University Joint Chemosensory Sciences Symposium**. Gainesville, FL.

Powell, T.H.Q. 2014. Ecological divergence, host race formation, and speciation: host plant adaptation as a driver of insect diversification. Seminar at the Department of Biology, **University of North Florida**. Jacksonville, FL.

Powell, T.H.Q. 2014. Ecological divergence, host race formation, and speciation: host plant adaptation as a driver of insect diversification. Seminar at the Department of Entomology and Nematology, **University of Florida**. Gainesville, FL.

Powell, T.H.Q., M. Murphy, S.H. Berlocher, and J.L. Feder. 2012 Genomic divergence along the speciation continuum in *Rhagoletis*. In SSE sponsored Genome Evolution and Speciation Symposium at **Evolution 2012**: joint congress of the Society for the Study of Evolution, Society of Systematic Biologists, and American Society of Naturalists, Canadian Society for Ecology and Evolution, and the European Society for Evolutionary Biology. Ottawa, Canada.

Example recent contributed presentations:

Quartuccia, G, C.M. Buono, K.M. Prior, T.H.Q. Powell. 2022. The buildup from intra to interspecific variation in an ecologically important ant complex. **Evolution 2022**. Cleveland, OH.

Deneen, P.M., T.H.Q. Powell. 2022. Tri-trophic effects on ecological speciation in the goldenrod gall fly system. **Evolution 2022**. Cleveland, OH.

Powell, T.H.Q., A.C.R. Lackey, G.J. Ragland, J.L. Feder, & D.A. Hahn. 2018. Experimental warming disrupts ecological and evolutionary processes among divergent host races of *Rhagoletis pomonella* and their parasitoid wasp communities. **Entomology 2018**, Vancouver, Canada.

Powell, T.H.Q., Q. Xia, E. Dowle, J.L. Feder, G.J. Ragland, D.A. Hahn. 2017. Rapid adaption to new season regime drives genetic divergences and ecological speciation in the apple maggot fly *Rhagoletis pomonella*. 2017. **SICB 2017: annual meeting of the Society for Integrative and Comparative Biology**, New Orleans, LA.

Powell, T.H.Q., Q. Xia, E. Dowle, J.L. Feder, G.R. Ragland. D.A. Hahn
Speciation and phenological adaption in action: the transcriptomics of differential diapause regulation in *Rhagoletis* - at **Evolution 2016** - the annual meeting of the Society for the Study of Evolution, American Society of Naturalists, and Society of Systematic Biologists in Austin, TX

Courses Taught at Binghamton University:

Biol351 Mechanisms of Evolution- 4 credits, core undergraduate evolutionary biology course
9 semesters, ~155 students each year

Biol437/558 –Biostatistics – 4 credits, R-based biostatistics aimed at advanced undergraduates and beginning graduate students
3 semesters, ~40 students each year

Biol480V/580V – Coevolution – 2 credits
5 semesters, ~20 students each year

Biol533 – Advanced EEB I -4 credits, doctoral-level evolutionary biology course
1 semester, 10 students

Mentoring

Postdoc (1)– Alycia Lackey (Currently Assistant Professor at U. Louisville)

PhD students (5):

Gabbriella Quartuccia (Graduated 2024, currently postdoc at Fordham University) *The distribution ecologically important functional variation across the speciation continuum in a complex of seed dispersing ants*

Pheobe Deneen *Tritrophic interactions during ecological speciation in the goldenrod gall fly and its parasitoid community*

Janelle Talavera (coadvised with Dr. Lindsey Swierk) *The interaction of ecological and sexual selection early in speciation via sensory drive in a radiation of aquatic anoles*

Chris DeAngelis (coavdised with Dr. Kirsten Prior) *Epicuticular hydrocarbons as a link between climate adaptation and behavioral evolution in an ecologically important species complex of ants*

Stephanie Nguyen: *Predicting the capacity for rapid dormancy adaptation under future conditions in Rhagoletis*

Cloe Capalongo: *Testing for cryptic specialization across phytophagous insect-parasitoid communities adapted to a heterogenous resource base.*

MS Students (1):

Jordyn Condrate (graduated Spring 2025) *Potential asynchrony in specialized insect communities under future climate conditions driven by opposing diapause responses*

Undergraduate honors thesis students supervised (4):

Nadia Mirza 2019, *Tradeoffs between adult longevity and dormancy under simulated warming in Rhagoletis* (currently PhD student, Boston U),

Andrew Lupinski 2021, BU Summer Scholars Program, *Morphometric diversity across a cryptic complex of keystone seed dispersing ants* (currently PhD student U. Notre Dame)

Amanda Pizzo 2022, *Thermal reaction norms for pre-winter diapause regulation across latitude and host plant in Rhagoletis*

Philomena Coles-Carruthers, 2025, *Cascading evolution in a complex system: Examining the potential for sympatric speciation across trophic levels* (Currently PhD student at Tufts University)

Other Undergraduate researchers (36) *in chronological order*: Adeenah Ahmed, Maria Santa Cruz, Stephanie Maung, Jessica Chung, Austin Dukat, Brooke Thornhill, Kelsey McCarthy, David Fama, Eden Romeo, Ilana Pytaseky, Maria Molina, Alyssa Murry (currently PhD student, Tufts U.), Gina Rizzo, Steve Silverman, Sydney Silverman, Sophia Hall, Hannah Episcopia, Jordyn Page-Plair, Kathryn Gauthier, Madison Koehl, Amanda Pizzo (BU Summer Scholars), Lea Rosenheim (BU Summer Scholars), Kwame Adu (McNair Scholars Program), Louise Wagenseil, Lourdes Belanger (BUPNUR), Emma Leonard, Antoinetta Raymond, Hannah Roth, Hailey Jurenko, Cassandra Smutny, Linze Li, Kayla Said, John Scandaglia, Marvin Lee, Adina Coates, Dahlia Kleinhaus,

Binghamton University “Career Champion” Award (2018 & 2025)– nominated by students for commitment to mentoring in career exploration and professional development of undergraduates

PhD committees (16): Haley Arnold, Vanessa Wurthner, Irene Martinez, Rachel Kruger, Josh Knecht, Dylan Jones, Rosabell Ines, Aly Milks, Connor Loomis, Allie Martin, Tom Rundell, Michael Stastny, Sarah Bases, Aishwarya Siram, Emily Yarborough, Ustav Nyachyon

MS committees (7): Kelly Vest, Margaret Geertz, Charlotte Heo, Hagar Soliman, Caroline Gilmore, Ava Hameister, Dominic Bonura

Service to Department and University

Department of Biological Sciences Graduate Committee (Fall 2016-2024)

Graduate recruitment coordinator (Fall 2017 – 2024) – Established and continue to lead the organization and execution of department’s graduate recruitment weekend, entering its sixth iteration this January. Also primary responsibility for communication and outreach efforts to prospective students.

Department of Biological Sciences Strategic Planning Committee (Spring 2017)

Department of Biological Sciences Seminar Series- coordinator (Spring 2017-Fall 2021) - Led successfully funded applications to Dean’s seminar series titled “*Biology in the face of the changing world*” & “*Darwin’s tangled bank: species interactions from molecules to ecosystems*” Instructor of record for associated Biol680x graduate seminar course for eight semesters

Faculty advisor for new Ecological Genetics Stream of First-Year Research Immersion program (Fall 2017- Present) One of four faculty members who founded this new FRI stream (3 semester CURE course series). Currently play a lead role ongoing curriculum development of the program which now uses sequencing of circadian clock genes in *Rhagoletis* flies as the model for 2nd semester lab training.

Search committees: Ecological Genetics FRI Research Educator (2018), Ecological Genetics FRI Research Educator (2020), Ecology Lecturer (2022), Integrative Plant Biologist Assistant Professor (2022), Vertebrate Behavioral Ecologist Assistant Professor [chair] (2024)

Sci IV/III Building Renovation Committee (Fall 2019 – Present) – Served as primary biology faculty representative in planning of new a new shared research complex for Global Change Biology Faculty in Binghamton University’s Science IV building, opening in the Fall semester of 2022.

University Graduate Council (Fall 2021- 2023)

External Professional Service

Peer reviewer for: *Molecular Ecology*, *Evolution*, *Proceedings of the National Academy of Sciences*, *Scientific Reports*, *Proceedings of the Royal Society- B*, *Journal of Animal Ecology*, *Oecologia*, *Journal of Evolutionary Biology*, *Ecology and Evolution*, *Environmental Entomology*, *Insect Physiology*, *Journal of Economic Entomology*, *BMC: Evolutionary Biology*, *Comparative Biochemistry and Physiology – Part D: Genomics and Proteomics*, *Entomological Bulletin*, *Oxford Bibliographies*, *Evolution*, *Genetics*, *Biological Journal of the Linnaean Society*, *Annals of the Entomological Society of America*, and *Naturwissenschaften*.

Grant reviewer for: NSF DEB, NSF IOS, German Research Foundation, American Philosophical Society – Lewis & Clark grant program

External reviewer for tenure and promotion cases: The Ohio State University

Invited participant in NSF’s Reintegrating Biology Jumpstart program, Fall 2021

Member: Society for the Study of Evolution, Society for Integrative and Comparative Biology, and Entomological Society of America

Outreach: Co-organized (along with Dr. Kirsten Prior) **B.U.gs!** entomological outreach event at 2018 & 2019 Broome County Cornell Cooperative Extension STEAMfest, elementary school classrooms in the Vestal Central School District, and the 2022 Binghamton EcoBlitz event.