# Todd M. Palmer

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## Research Interests

Mutualism, plant-herbivore interactions, rangeland ecology, biological invasions

## Education

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| Ph.D. | Ecology | University of California at Davis | 2001 |
| M.S. | Zoology | University of Wisconsin at Madison | 1994 |
| B.A. | Biology | Oberlin College | 1989 |

## Appointments

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| 2018-present | Professor, Department of Biology, University of Florida |
| 2012-2018 | Associate Professor, Department of Biology, University of Florida |
| 2006-2012 | Assistant Professor, Department of Biology, University of Florida |
| 2016-present | Affiliate Faculty, School for Natural Resources and the Environment, UF |
| 2012-present | Affiliate Faculty, Center for African Studies, UF |
| 2013-present | Subject Matter Editor, ***Ecology*** |
| 2001-2006 | Post-doctoral Associate, Center for Population Biology, UC Davis |
| 2001-2005 | Adjunct Faculty, UC Santa Barbara (Director, The Kenya Wildlands Program) |

## Awards and Honors

- Elected Fellow, American Association for the Advancement of Science, 2026
- UF Research Foundation Professor, 2024-2027
- Fellow, Pan-African Scientific Research Council
- UF Term Professor, 2018-2021.
- Colonel Allan R. and Margaret G. Crow Professor, 2016-2017.
- UF Student Council Excellence in Teaching Award, 2015-2016.
- Faculty Honoree, Excellence in Teaching, Anderson Scholars, UF, 2012, 2014, 2016.
- International Educator of the Year, College of Liberal Arts and Sciences, UF, 2008 and 2009.
- Associate Faculty Member (invited), Faculty of 1000 Biology, 2009-2016.
- First-authored research papers featured in seven popular biology and ecology textbooks.
- Excellence in Postdoctoral Research Award, UC Davis, 2006.
- Merton-Love Award—Best Dissertation in Ecology and Evolution, UC Davis, 2001.

## Research Grants

- 2025-28: "Resilience and elasticity of a foundational mutualism following the removal of a global "Top 100" invader", **National Science Foundation** (with PI Jacob Goheen and co-PI Patrick Milligan). **$400,800**

## Research Grants (continued)

- 2016-22: "Landscape-scale consequences of mutualism disruption: invasive ants threaten a widespread ant-plant mutualism in East Africa", **National Science Foundation, $1,216,860** (PI, with co-PIs Jacob Goheen and Corinna Riginos).

- 2012-19: "**CAREER award**—The ontogeny of mutualism: exploring variation in costs and benefits within an ant-plant symbiosis", **National Science Foundation**, **$650,000** (PI).

- 2005-11: "A mutualism in context: costs, benefits and conditionality in a multi-species ant-plant symbiosis", **National Science Foundation, $360,000** (PI, with co-PIs Maureen Stanton and Truman Young)

- 2005-10: "Interactions among keystone species: effects of termites and ungulates", **National Science Foundation, $770,000** (co-PI, multi-institution collaborative proposal with Alison Brody and Dan Doak)

- 2009-10: "Intraspecific genetic variation and the maintenance of biodiversity", **UF Singer Award, $10,000**

- 2005-06: "Elephants in rangelands: ecology in critical unprotected habitats", **U.S. Fish and Wildlife Service, $8570**

- 2001-04: "Testing multiple mechanisms of species coexistence in an African acacia-ant guild", **National Science Foundation, $311,000** (co-PI with Maureen Stanton and Truman Young)

- 1997-01: "Mechanisms of coexistence in an African acacia-ant guild", **National Science Foundation, $153,000** (co-author with Maureen Stanton and Truman Young)

## Teaching

**Instructor** UF Dept. of Biology, How to Give the Best Talk of Your Life (Spring 2015, Spring 2016, 2018)

*This is a 1-credit graduate-level seminar on the art of giving compelling scientific presentations, borrowing heavily from the business psychology literature.*

**Instructor**, UF Dept. of Biology, Community Ecology

*This is a 4-credit graduate-level course in community ecology that I developed, focusing on the history, theory and practice of community ecology.*

**Instructor**, UF Dept. of Biology, Integrated Principles of Biology

*I developed the "ecology" section of an introductory biology course with an enrollment of approximately 1000 students, which I teach each fall semester. I've consistently received very high evaluation scores in this course.*

**Instructor**, UF International Center, Ecology of East African Savannas

*I developed a 6-credit summer field course taught in Kenya in alternating summers. The course is focused on hands-on and experiential approaches to learning ecology and conservation in East Africa, along with participation in rural development projects.*

## Other Teaching Experience

2001-2005 **Instructor and Director**, Kenya Field Ecology Program, UC Santa Barbara.
1995, 1996 **Instructor**, Global Routes Program.
1991-1993 **Instructor**, UW Madison. Introductory Zoology
1991 **Teaching assistant**, UW Madison. Ecology.
1990-1991 **Instructor**, The School for Field Studies, Kenya.
1987 **Instructor**, Upward Bound Program, Cleveland. Biology.

## Publications (Reprints available here)

1. Gijsman, F., C. M. Nutter, F. Erii, F. M. Khamis, F. L. Ombura, M. C. Hutchinson, T. M. Palmer, J. R. Goheen, S. E. Miller and R. M. Pringle. 2026. Importance of megaherbivores for dung-beetle biodiversity and ecosystem functions. ***Science*** 392:eaeb7062

2. Sakhalkar, S. P., N. Blüthgen, L. A. Burkle, P. CaraDonna, B. Dalsgaard, C. F. Dormann, C. N. Kaiser-Bunbury, T. M. Knight, J. Ollerton, J. Resasco, M. Schleuning, D. P. Vázquez, R. N. Afagwu, R. Alarcón, F. W. Amorim, M. D. Amorim, D. Anýž, B. Arroyo-Correa, M. Artamendi, Z. Atalay, J. A. Bain, K. C. R. Baldock, G. Ballantyne, C. S. Ballarin, B. Balmaki, M. Bartoš, V. Belavadi, P. Biella, A. D. Bjorkman, J. P. R. Borges, J. Bosch, C. Bosenbecker, S. Boyer, K. T. Burghardt, E. Cardona, Q. Casiá, A. M. T. Castagna, F. Celep, M. N. Chisté, Y. Clough, J. M. Cook, L. P. Crowther, F. D. Reis, L. P. da Silva, W. Dáttilo, V. De Cárdenas, J. Díaz-Calafat, L. V. Dicks, R. Dickson, M. L. Donald, L. A. Dyer, F. F. Dzekashu, N. Escobedo Kenefic, T. M. Fayle, L. L. Figueroa, J. Filip, R. García-Camacho, A.-M. Gilpin, L. Giménez-Benavides, I. N. Gomes, H. Grab, I. Grass, T. J. Guy, V. Hederström, C. Hernández-Castellano, S. Hervías-Parejo, A. Holzschuh, S. Hopfenmüller, J. M. Iriondo, Š. Janecek, J. Jersakova, S. Jha, A. Kantsa, T. Keasar, L. Kendall, Y. Klomberg, I. N. Kobe, T. Krausl, P. Landaverde, C. Lara-Romero, H. M. G. Lattorff, F. Librán-Embid, T. C. Ling, S. Lozada-Gobilard, F. E. Luma, P. Luna, L. M. S. Aguiar, A. C. P. Machado, I. C. Machado, A. Magrach, F. Maihoff, G. Marcacci, C. Martínez-Núñez, P. K. Maruyama, N. Matsubara, M. Mayberry, M. A. R. Mello, U. Mendes Diniz, M. Méndez, J. E. J. Mertens, R. Milla, J. Morente-López, T. L. Nadia, G. Nakas, A. Nielsen, A. Ornai, S. Osorio-Canadas, W. H. A. Osterman, T. M. Palmer, T. Petanidou, C. W. W. Pirk, K. S. Prendergast, R. Primack, L. M. Primo, M. Querejeta, Z. Quirino, A. R. Rech, S. Reverté, P. J. Rey, L. C. Rocha-Filho, A. Rodrigo Domínguez, M. A. Rostami, A. L. Russell, S. Santamaría, F. A. R. Santos, T. Sasaki, M. E. Saunders, V. H. D. Silva, M. P. Simanonok, A. Sounapoglou, I. Steffan-Dewenter, S. Tarrant, R. Torices, A. Traveset, T. Tscharntke, G. Uceda-Gómez, K. R. Urban-Mead, C. J. van der Kooi, C. Westphal, A. Yusuf, and R. Tropek. 2026. Global patterns in plant–pollinator specialisation. ***Nature Ecology and Evolution*** https://doi.org/10.1038/s41559-026-03170-7

3. Wedel, E. R., A. B. Davies, J. R. Goheen, T. M. Palmer, R. M. Pringle and T. C. Coverdale. Reduction of Tree Water Stress by Large Herbivores in an African Savanna. 2026. ***Ecology Letters*** in press**.**

4. Abraham, J. O., M. Stahl, S. Kurukura, A. A. Hassan, J. R. Goheen, T. M. Palmer, T. R. Kartzinel and R. M. Pringle. 2026. Impacts of large herbivores on savanna plant communities: predictive models of consumer selectivity and plant response. ***Ecology*** 107(7):e70445**.**

5. Louthan, A. M., E. M. Lombardi, J. R. Goheen, T. M. Palmer, and D. F. Doak. 2026. Trees facilitate *Hibiscus meyeri*, a common savanna forb, via multiple mechanisms. ***Journal of Vegetation Science*** in press.

6. Khasoha, L. M., J. A. Rick, C. E. Wagner, E. M. Mwangi, G. Busienei, L. Galland, A. Hassan, R. P. Jakopak, S. Kurukura, P. Lokeny, S. M. Musila, A. W. Mweu, S. D. Newsome, G. L. Opiyo, C. G. Reed, J. M. Alston, T. M. Palmer, R. M. Pringle, T. R. Kartzinel and J. R. Goheen. 2026. Consumer-resource interactions drive the abundance-occupancy relationship in savanna small mammals: field tests of a macroecological pattern with populations and individuals. ***Ecology*** in press.

7. Brown, B. R. P., L. M. Khasoha, P. Lokeny, R. P. Jakopak, M. Dyck, A. Wambua, S. D. Newsome, T. M. Palmer, R. M. Pringle, J. R. Goheen and T. R. Karzinel. 2026. Experimental defaunation modifies diet and gut microbiome of a wild gerbil, *Gerbilliscus robustus*. ***Proceedings of the Royal Society Series B*** accepted pending revision.

8. Querns, A., J. R. Goheen, T. M. Palmer and A. Louthan. 2026. Large mammalian herbivores disrupt demographic compensation along an aridity gradient ***Ecosphere*** 17:e70551. https://doi.org/10.1002/ecs2.70551

9. Grames, E. M., J. A. Noriega, M. Sanchez Herrera, J. Earl, E. Lichtenberg,M. Alleyne, K., C. Guo, T. Carvalho Moretti, C. Munyai, P. King, M. Pintar, K. I. Perry, L. Yang, P. Manning, M. Bulbert, N. Haan, G. Gurr, A. Jones, J. Ollerton, T. M. Palmer, G. Sahlen, S. Seibold, D. Thom, C. Halsch, C. Bahlai, M. Forister, C. Elphick, D. Wagner, and J. Ware. 2026. Insects' contributions to people: ecosystem services and functions provided by insects. ***Annals of the Entomological Society of America*** *in press*.

10. Mizell, G. M., P. D. Milligan, T. M. Palmer, J. Mosiany, J. S. Lemboi and E. G. Pringle. 2025. The impact of shade on whole-plant carbon allocation in a dominant East African tree sapling. ***AoB Plants*** 17: plaf039. https://doi.org/10.1093/aobpla/plaf039

11. Milligan, P. D., J. Rossiter, A. Zare, T. M. Palmer, J. Lemboi, G. Mizell, J. Mosiany, C. Riginos, J. R. Goheen and E. G. Pringle. 2025. Mutualism, herbivory, and invasive ants as seasonally dependent drivers of root surface area in a foundational savanna ant-plant. ***New Phytologist*** https://doi.org/10.1111/nph.70553

12. Sakhalkar, S. P., N. Blüthgen, L. A. Burkle, P. CaraDonna, B. Dalsgaard, C. F. Dormann, C. N. Kaiser-Bunbury, T. M. Knight, J. Ollerton, J. Resasco, M. Schleuning, D. P. Vázquez, R. N. Afagwu, R. Alarcón, F. W. Amorim, M. D. Amorim, D. Anýž, B. Arroyo-Correa, M. Artamendi, Z. Atalay, J. A. Bain, K. C. R. Baldock, G. Ballantyne, C. S. Ballarin, B. Balmaki, M. Bartoš, V. Belavadi, P. Biella, A. D. Bjorkman, J. P. R. Borges, J. Bosch, C. Bosenbecker, S. Boyer, K. T. Burghardt, E. Cardona, Q. Casiá, A. M. T. Castagna, F. Celep, M. N. Chisté, Y. Clough, J. M. Cook, L. P. Crowther, F. D. Reis, L. P. da Silva, W. Dáttilo, V. De Cárdenas, J. Díaz-Calafat, L. V. Dicks, R. Dickson, M. L. Donald, L. A. Dyer, F. F. Dzekashu, N. Escobedo Kenefic, T. M. Fayle, L. L. Figueroa, J. Filip, R. García-Camacho, A.-M. Gilpin, L. Giménez-Benavides, I. N. Gomes, H. Grab, I. Grass, T. J. Guy, V. Hederström, C. Hernández-Castellano, S. Hervías-Parejo, A. Holzschuh, S. Hopfenmüller, J. M. Iriondo, Š. Janecek, J. Jersakova, S. Jha, A. Kantsa, T. Keasar, L. Kendall, Y. Klomberg, I. N. Kobe, T. Krausl, P. Landaverde, C. Lara-Romero, H. M. G. Lattorff, F. Librán-Embid, T. C. Ling, S. Lozada-Gobilard, F. E. Luma, P. Luna, L. M. S. Aguiar, A. C. P. Machado, I. C. Machado, A. Magrach, F. Maihoff, G. Marcacci, C. Martínez-Núñez, P. K. Maruyama, N. Matsubara, M. Mayberry, M. A. R. Mello, U. Mendes Diniz, M. Méndez, J. E. J. Mertens, R. Milla, J. Morente-López, T. L. Nadia, G. Nakas, A. Nielsen, A. Ornai, S. Osorio-Canadas, W. H. A. Osterman, T. M. Palmer, T. Petanidou, C. W. W. Pirk, K. S. Prendergast, R. Primack, L. M. Primo, M. Querejeta, Z. Quirino, A. R. Rech, S. Reverté, P. J. Rey, L. C. Rocha-Filho, A. Rodrigo Domínguez, M. A. Rostami, A. L. Russell, S. Santamaría, F. A. R. Santos, T. Sasaki, M. E. Saunders, V. H. D. Silva, M. P. Simanonok, A. Sounapoglou, I. Steffan-Dewenter, S. Tarrant, R. Torices, A. Traveset, T. Tscharntke, G. Uceda-Gómez, K. R. Urban-Mead, C. J. van der Kooi, C. Westphal, A. Yusuf, and R. Tropek. 2025. Climate-driven specialisation in plant–pollinator networks peaks outside the tropics. ***bioRxiv***10.08.680666

13. Kamaru, D. N., T. M. Palmer, C. Riginos, R. M. Chira, A. T. Ford, J. M. Githaiga, B. C. Gituku, A. K. Kibungei, C. T. Lamb, S. Mutisya, M. Ogutu, A. G. Pietrek, B. T. Wildt and J. R. Goheen. 2024. Disruption of an ant-plant mutualism shapes interactions between lions and their primary prey. ***Science*** 383:433-438.

    a. *Press coverage in* USA Today*,* The Washington Post, The Atlantic*,* The Guardian*,* Scientific American, Discover, Axios*,* BBC*,* CBS News, Popular Science *& others.*

14. Silliman, B. R., M. J. S. Hensel, J. P. Gibert, P. Daleo, C. S. Smith, C. Angelini, A. B. Paxton, A. M. Adler, S. Zhang, A. H. Altieri, T. M. Palmer, H. P. Jones, R. K. Gittman, J. N. Griffin, M. O'Connor, J. van de Koppel, D. J. Wieczynski, J. R. Poulsen, M. Reitkerk, Q. He, M. D. Bertness and S. R. Valdez. 2024. Harnessing ecological theory to enhance ecosystem restoration. ***Current Biology*** 34: R418-R434.

15. Karp, A. T., S. I. Koerner, G. P. Hempson, J. O. Abraham, T. M. Anderson, W. J. Bond, D. E. Burkepile, E. Fillion, J. R. Goheen, J. A. Guyton, T. R. Kartzinel, D. M. Kimuyu, N. Mohanbabu, T. M. Palmer, L. M. Porensky, R. M. Pringle, M. E. Ritchie, M. D. Smith, D. I. Thompson, T. P. Young, and C. S. Staver. 2024. Grazing herbivores reduce herbaceous biomass and fire activity across African savannas. ***Ecology Letters*** 27:e14450.

16. Coverdale, T. C., P. B. Boucher, J. Singh, T. M. Palmer, J. R. Goheen, R. M. Pringle, and A. B. Davies. 2024. Herbivore regulation of savanna vegetation: structural complexity, diversity, and the complexity–diversity relationship. ***Ecological Monographs*** e1624. https://doi.org/10.1002/ecm.1624

17. Brown, B. R. P., L. Malingati, P. Lokeny, R. P. Jakopak, C. G. Reed, S. D. Newsome, T. M. Palmer, R. M. Pringle, J. R. Goheen and T. R. Kartzinel. 2024. Spatiotemporal variation in the gut microbiomes of co-occurring wild rodent species. ***Ecosphere***, 15:e4854.

18. Palmer, T. M. 2023. Acacia ants. ***Current Biology***, 33:469-471

19. Xu, C., B. R. Silliman, J. Chen, X. Li, M. S. Thomsen, Q. Zhang, J. Lee, J. S. Lefcheck, P. Daleo, B. B. Hughes, H. P. Jones, R. Wang, S. Wang, C. Smith, X. Xi, A. H. Altieri, J. van de Koppel, T. M. Palmer, L. Liu, J. Wu, B. Li and Q. He. 2023. Herbivory limits success of vegetation restoration globally. ***Science*** 382:589-594.

    a. *Press coverage in EurekaAlert, Anthropocene, ScienceDaily, Mongabay & others.*

20. Radujkovic, D., S. Vicca, E. Verbruggen, I. Janssens, D. Camptella, T. M. Palmer, L. Yonghong, P. D. Milligan, R. Lodge, M. Hohn, H. Henry, K. Reinhart, C. A. Hill, R. Beck, M. Jouri, L. Enrico, L. Brown, P. Wilfahrt, B. Sandor, C. Brown, Z. Zimmerman, A. M. Csergo and K. Van Sundert. 2023. Consistent predictors of soil bacterial and fungal community composition in global grasslands. ***Molecular Ecology*** 00: 1-15. https://doi. org/10.1111/mec.17178

21. Mizell, G., T. Kim, B. W. Sullivan, J. S. Lemboi, J. Mosiany, T. M. Palmer and E. G. Pringle. 2023. Carbon allocation by trees in a tropical savanna: field-testing methods for evaluating biotic impacts on the carbon cycle. ***Plant Ecology*** doi.org/10.1007/s11258-023-01350-0.

22. Lujan, Ema, R. Nielsen, Z. Short, S. Wicks, W. N. Watetu, L. M. Khasoha, T. M. Palmer, J. R. Goheen, and J. M. Alston. 2023. Symbiotic acacia ants drive nesting behavior by birds in an African savanna. ***Biotropica*** 00: 1-5. doi.org/10.1111/btp.13276

23. Brown, B. R. P., J. R. Goheen, S. D. Newsome, R. M. Pringle, T. M. Palmer, K. M. Leo and T. R. Kartzinel. 2023. Host phylogeny and functional traits differentiate gut microbiomes in a diverse natural community of small mammals. ***Molecular Ecology***, doi.org/10.1111/mec.16874

24. Milligan, P. D., T. M. Palmer, J. S. Lemboi, J. Mosiany, S. Mutisya, B. Gituku and E. G. Pringle. 2023. Ant invasion alters the distribution and density of coarse lateral roots in a foundational tree. ***Biological Invasions***, doi.org/10.1007/s10530-023-03008-4

25. Thurman, T. J., T. M. Palmer, J. J. Kolbe, A. Askary, J. H. Daskin, K. M. Gotanda, O. Lapiedra, T. R. Kartzinel, N. Man in't Veld, L. Revell, J. Wegener, T. W. Schoener, D. A. Spiller, J. B. Losos, R. M. Pringle, R. D. H. Barrett. 2023. The difficulty of predicting evolutionary change in response to novel ecological interactions: a field experiment with lizards. ***American Naturalist*** doi.org/10.1086/723209

26. Wells, H. B. M., R. D. Crego, J. M. Alston, K. S. Ndung'u, L. M. Khasoha, C. G. Reed, A. A. Hassan, S. Kurukura, J. Ekadeli, M. Namoni, M. Sankaran, D. J. Augustine, T. R. Kartzinel, T. M. Palmer, J. R. Goheen, D. M. Kimuyu, A. A. Wolf, T. P. Young and R. M. Pringle. 2023. Wild herbivores resist invasion by exotic cacti in an African savanna. ***Journal of Ecology***, 111:33–44.

27. Milligan, P. D., T. A. Martin, E. G. Pringle, K. M. Prior and T. M. Palmer. 2022. Variation in symbiotic ant traits affects host plant carbon and water relations in a multi-species mutualism. ***Ecology***, 104:e3880.

28. Hays, B. R., C. Riginos, T. M. Palmer, D. F. Doak, B. C. Gituku, N. J. Maiyo, S. Mutisya, S. Musila and J. R. Goheen. 2022. Demographic consequences of mutualism disruption: synergies between browsing and big-headed ant invasion drive declines of an African acacia. ***Ecology*** 103:e3655.

29. Milligan, P. D., T. A. Martin, E G. Pringle, C. Riginos, G. M. Mizell, and T. M. Palmer. 2022. A soil-nesting invasive ant disrupts carbon dynamics in saplings of a foundational ant-plant. 2022. ***Journal of Ecology*** 110:359-373.

30. Alston, J.M., C.G. Reed, L. Khasoha, B.R.P. Brown, G. Busienei, N. Carlson, T.C. Coverdale, M.O. Dudenhoeffer, M. Dyck, J. Ekeno, A.A. Hassan, R. Hohbein, R.P. Jakopak, B. Kimiti, S. Kurukura, P. Lokeny, A.M. Louthan, S. Musila, P.M. Musili, T. Tindall, S. Weiner, T.R. Kartzinel, T.M. Palmer, R.M. Pringle, and J.R. Goheen. 2022. Ecological consequences of large herbivore exclusion in an African savanna: data from the UHURU experiment (2012-2019). ***Ecology*** doi.org/10.1002/ecy.3649

31. Guy, T. J., M. C. Hutchinson, K. C. R. Baldock, E. Kayser, B. Baiser, P. P. A. Staniczenko, J. R. Goheen, R. M. Pringle and T. M. Palmer. 2021. Large herbivores transform plant-pollinator networks in an African savanna. ***Current Biology*** 31:2964-2971.

    a. *Featured article with companion piece in Current Biology.*

32. Coverdale, T.C., R. D. O'Connell, M. C. Hutchinson, A. Savagian, T. R. Kartzinel, T. M. Palmer, J. R. Goheen, D. J. Augustine, M. Sankaran, C. E. Tarnita, and R. M. Pringle. 2021. Large herbivores suppress liana infestation in an African savanna. ***Proceedings of the National Academy of Sciences*** 118: e2101676118

33. Wells, H. B. M. , R. D. Crego, O. H. Opedal, L. M. Khasoha, J. M. Alston, C. G. Reed, S. Weiner, D. M. Kimuyu, T. P. Young, S. Kurukura, A. A. Hassan, T. R. Kartzinel, T. M. Palmer, R. M. Pringle and J. R. Goheen. 2021. Experimental evidence that effects of megaherbivores on mesoherbivore space use are influenced by species' traits. ***Journal of Animal Ecology*** 90:2510-2522.

34. Milligan, P. D., T. A. Martin, G. John, C. Riginos, J. R. Goheen, S. Carpenter and T. M. Palmer. 2021. Invasive ants reduce carbon fixation for a foundational East African ant-plant. ***Ecology Letters*** 24:1052-1062.

35. Prince, K. D., S. M. Crotty, A. Cetta, J. J. Delfino, T. M. Palmer, N. D. Denslow and C. Angelini. 2021. Mussels drive PCB biomagnification in a coastal food web. ***Nature Scientific Reports*** 11:9180.

36. Pietrek, A. G., J. R. Goheen, C. Riginos, N. Jepkurui and T. M. Palmer. 2021. Density dependence and the spread of invasive big-headed ants (*Pheidole megacephala*) in an East African savanna. **Oecologia** 195:667-676.

37. Palmer, T. M., C. Riginos, P. D. Milligan, B. R. Hayes, A. G. Pietrek, N. J. Maiyo, S. Mutisya, B. Gituku, S. Musila, S. Carpenter and J. R. Goheen. 2021. Frenemy at the gate: invasion by the predatory ant *Pheidole megacephala* facilitates a competitively subordinate plant ant in Kenya. ***Ecology*** 102: e03230.

38. Hays, B. R., C. Riginos, T. M. Palmer, B. Gituku and J. R. Goheen. 2020. Using photography to estimate above-ground biomass of small trees. ***Journal of Tropical Ecology*** 36:213-219.

39. ** Pringle, R. M., T. R. Kartzinel**, T. M. Palmer**, T. J. Thurman, K. Fox-Dobbs, T. C. Coverdale, J. H. Daskin, D. A. Evangelista, K. M. Gotanda, J. J. Kolbe, N Man in 't Veld, J. E. Wegener, C. C. Y. Xu, T. W. Schoener, D. A. Spiller, J. B. Losos and R. D. H. Barrett. 2019. Predator-induced collapse of niche structure and species coexistence. ***Nature*** 570:58-64.

    a. ** Authors contributed equally to this work.
    b. *Cover article, and press coverage in* Nature News and View

40. Hu, J., A. M. Askary, T. J. Thurman, Dave Spiller, T. M. Palmer, R. M. Pringle, and R. D.H. Barrett. 2019. The epigenetic signature of colonizing new environments. ***Molecular Biology and Evolution*** 36:2165-2170.

41. Tamashiro, R. A., P. D. Milligan and T. M. Palmer. 2019. Left out in the cold: temperature dependence of defense in an African ant-plant mutualism. ***Ecology*** 100: e02712.

    a. *Press coverage in* Futurity

42. Coverdale, T. C., I. J. McGeary, R. D. O'Connell, T. M. Palmer, J. R. Goheen, M. Sankaran, D. J. Augustine, A. T. Ford and R. M. Pringle. 2019. Strong but opposing effects of associational resistance and susceptibility on defense phenotype in an African savanna plant. ***Oikos*** 128:1772-1782.

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## Manuscripts in Review/in Prep

1. Milligan, P. D., T. M. Palmer, J. R. Goheen and E. G. Pringle. Biotic stress legacies for a savanna tree: browsing prolongs carbohydrate deficits but invasive ants drive carbohydrate accumulation. ***Ecology Letters*** in review.

2. Gomes, S. G., K. C. R. Baldock, R. Bommarco, D. W. Carstensen, R. Cartar, N. Chacoff, L. V. Dicks, C. Emer, J. Fründ, T. J. Guy, M. Hiraiwa, A. Holzschuh, R. R. Junker, C. Kaiser-Bunbury, J. Ollerton, T. M. Palmer, M. Rundlöf, H. G. Smith, R. S. Souza, S. Tarrant, A. Ushimaru, D. P. Vázquez, N. M. Williams, L. G. Carvalheiro. 2026. Land use change influences pollinator-mediated competition and facilitation among plants. Submitted to ***Global Change Biology***

3. Reed, C. G., L. Albert, C. Gomez, A. Hassan, S. Kurukura, P. M. Musili, M. Stahl, T. P. Young, T. M. Palmer, J. R. Goheen, R. M. Pringle and T. R. Kartzinel. 2026. Experimental

defaunation alters foraging behavior of a small antelope in Kenya. ***Journal of Mammalogy*** in second review.

4. Riginos, C., J. Belnap, J. R. Goheen, S. Carpenter, N. Maiyo, J. Ekadeli, A. Pietrek, L. Porensky, S. Mutisya, P. D. Milligan and T. M. Palmer. 2026. Beyond mutualism disruption: cascading consequences of big-headed ant invasion on critical forage for African megafauna. ***Ecological Applications*** submitted.

5. González Chaves, A. D., R. Heleno, K. C. R. Baldock, A. Bennett, R. Bommarco, D. Boscolo, L. Burkle, D. W. Carstensen, A. M. Castaño, N. Chacoff, A. Classen, L. Dicks, J. Ekroos, C. Emer, D. Evans, V. Ferrero, B. Freitas, L. Garibaldi, S. G. Gomes, A. G. Demori, F. Gonzalvez, T. J. Guy, M. K. Hiraiwa, A. Holzschuh, H. S. Ishii, G. Joseph, R. R. Junker, C. N. Kaiser-Bunbury, T. Kehinde, M. Lopezaraiza, H. J. Marrero, L. Marshall, C. Morales, E. Moss, I. L. Nelson, O. Norfolk, J. Ollerton, A. Pacheco-Filho, T. M. Palmer, G. G. Perez, T. Petanidou, M. Rundlöf, M. Sabatino, C. L. Seymour, L. D. Simba, H. G. Smith, R. S. Souza, J. Stout, H. Taki, S. Tarrant, A. Traveset, T. Tscheulin, A. Ushimaru, D. P. Vázquez, M. Vilá, K. Ward, N. M. Williams, F. C. G. Woitowicz, Y. Yu, L. G. Carvalheiro. 2026. The invisible threat: air pollution rewires pollinator networks worldwide. **In prep.**

6. Komatsu, K. J., A. Terui, S. E. Koerner, R. Brenneman, E. Grabda, A. LaRoque, M. Ortiz, J. Winter, A. L. Young, P. B. Adler, J. M. Alatalo, A. Angassa, C. A. Arnillas, M. L. Avolio, S. Bagchi, J. D. Bakker, K. H. Beard, E. A. Beever, R. T. Belote, S. Bokhorst, A. J. Britton, L. A. Brudvig, Y. M. Buckley, M. N. Bugalho, D. E. Burkepile, J. Cahill, M. C. Caldeira, C. Carbutt, J. A. Catford, T. Crowther, C. R. Dickman, I. Donohue, C. Dwyer, N. Eisenhauer, B. D. Elderd, K. J. Elgersma, A. Eskelinen, B. L. Foster, L. H. Fraser, D. J. Gibson, D. M. Griffith, D. S. Gruner, N. Hagenah, N. P. Hanan, H. Harmens, K. E. Harms, W. S. Harpole, Y. Hautier, H. A. L. Henry, E. Hersch-Green, G. R. Houseman, M. J. Hovenden, S. W. Husheer, F. Isbell, A. K. Jägerbrand, A. Jentsch, S. O. Jimoh, D. S. Johnson, C. C. Kern, K. Klanderud, J. M. H. Knops, M. Kohli, J. Kreyling, A. Kulmatiski, L. Laanisto, F. Lezama, M. Liang, G. Loucougaray, A. Loydi, X.-T. Lü, A. S. MacDougall, P. Macek, J. P. Martina, H. M. Martinson, J. R. McLaren, J. Millett, J. L. Moore, J. W. Morgan, M.-C. Nilsson, Y. Niu, H. Olde Venterink, H. Olff, J. Padullés Cubino, T. M. Palmer, M. Pärtel, S. C. Pennings, L. Pérez-Camacho, N. A. Pichon, L. M. Porensky, S. A. Power, X. Raynaud, S. Rebollo, A. C. Risch, C. H. Robinson, C. Roscher, J. Ru, M. Rueda, M. Sankaran, T. Sasaki, N. L. Schultz, E. W. Seabloom, L. Shoemaker, F. Siebert, N. G. Smith, M. D. Smith, N. A. Soudzilovskaia, M. Spohn, K. A. Stahlheber, C. J. Stevens, M. Tedder, R. S. Terry, D. I. Thompson, P. M. Tognetti, M. L. Vandegehuchte, K. E. Veblen, G. F. (Ciska) Veen, L. T. Vermeire, R. Virtanen, J. Wang, G. R. Wheeler, K. R. Wilcox, A. A. Wolf, Z. Xu, P. Zhang, and Y. Zhang. 2026. The prevalence and functional basis of codominance in global herbaceous ecosystems. **Proceedings of the National Academy of Sciences** submitted.

7. Young, T. P., J. R. Goheen, W. O. Odadi, T. M. Palmer, L. M. Porensky, K. E. Veblen, H. B.M. Wells, H. S. Young, and D. M. Kimuyu. 2026. KLEE: the Kenya Long-term Exclosure Experiment. ***Oxford Bibliographies in Famous Field Sites.*** Oxford University Press.

8. Silliman, B.R., M.J.S. Hensel, M.D. Bertness, R.J.M. Temmink, J.P. Morton, J.P. Gibert, C. Angelini, C.S. Smith, D.J. Wieczynski, W.N. Ferris, A.B. Paxton, M. Huang, D.W. Johnston, J. van de Koppel, T. van der Heide, T.J. Bouma, L.C. Gaskins, P.N. Halpin, M.E. Hay, E. Hensel, M.D. Smith, A.D. Boyd, S. Barry, P. Daleo, L. Olander, J. Pétillon, A. Delamarre, B. Mei, M.A. Schlaepfer, C. Lopazanski, J. van Belzen, M.I. Saunders, M. Vozzo, S.K. Nordone, J. Virdin, S. Wear, J. Wright, S.R. Valdez, M.S. Thomsen, D. Cerino, R.L. Vidra, J.E.T. McLean, M.D. Campbell, D. Rungta, L. He, J. Donaldson, A. Adler, T. Qiu, G.C. Trussell, P. Brancalion, Q. He, Y.S. Zhang, T.M. Palmer, J.B. Heffernan, and H. Olff. 2026. Ecosystem cultivation: a discipline for developing ecosystems at scale. ***PNAS NEXUS*** in review.

9. Johnson, S. E., et al. Taking the leap: the ecology of wildebeest river crossings and drivers of drowning events. **In prep.**

10. Reed, C. G., L. M. Khasoha, B. R. Palmer-Brown, R. O. Ang'ila, P. Lokeny, G. Busenei, A. Hassan, S. Kurukura, I. Maywar, C. Miano, N. Nantais, T. M. Palmer, R. M. Pringle, J. R. Goheen and T. R. Kartzinel. Competitive release restructures small mammal trophic networks following large herbivore exclusion in a Kenyan savanna. **In prep.**

## Published abstracts and presentations

Goheen, J.R., F. Keesing, T. M. Palmer, R. M. Pringle and T. P. Young. 2007. Contrasting the impacts of megaherbivores and small mammals on the demography of an African acacia: an analysis of life table response experiments. Abstract, Annual Meeting of the American Society of Mammalogists.

Goheen, J.R., T. P. Young, T. M. Palmer, C. Riginos, F. Keesing, and R. M. Pringle. 2007. From local herbivory to regional pattern: Net effects of native and domestic megaherbivores on tree population dynamics along a precipitation gradient in central Kenya. Abstract, Annual Meeting of the Ecological Society of America.

Goheen, J.R., T. P. Young, T. M. Palmer, C. Riginos, F. Keesing, and R. M. Pringle. 2007. Contrasting the impacts of megaherbivores and small mammals on the demography of an African *Acacia*: an analysis of life table response experiments. Abstract, Annual Meeting of the Ecological Society of America.

Doak, D.F., T. M. Palmer, M. L. Stanton and T. P. Young. 2007. Multiple partners confer higher lifetime fitness to host plants in an African ant-plant mutualism. Abstract, Annual Meeting of the Ecological Society of America.

Palmer, T. M., D. F. Doak, M. L. Stanton, T. P. Young, J. R. Goheen and R. M. Pringle. Ants, plants and elephants: long-term dynamics of an ant-plant mutualism. Abstract, Annual Meeting of the Entomological Society of America.

Alison K. Brody, Todd M. Palmer, and Dan F. Doak. 2008. Trait-mediated effects of termites and vertebrate herbivores in East-African savannas. Abstract, International Congress of Entomology.

Jacob R. Goheen, Todd M. Palmer, and Janet E. Maclean. 2009. David and Goliath: ant symbionts force demographic trade-offs in host trees and buffer against megaherbivore-driven landscape change in an African savanna. Abstract, Annual Meeting of the Ecological Society of America.

Amelia A. Wolf, Todd M. Palmer, Peter M. Vitousek. 2009. Divergent effects of different ant partners on host trees in a Kenyan ant-plant mutualism. Abstract, Annual Meeting of the Ecological Society of America.

Rubin, B. E., T. M. Palmer, M. Stanton and I. J. Lovett. 2009. Polygyny and competition in the acacia-ant, *Crematogaster mimosae*. Abstract, Annual Meeting of the Ecological Society of America.

Jacob R. Goheen, Todd M. Palmer, and Janet E. Maclean. 2009. David and Goliath: ant symbionts force demographic trade-offs in host trees and buffer against megaherbivore-driven landscape change in an African savanna. Abstract, Annual Meeting of the American Society of Mammalogists.

J. E. Maclean, J. R. Goheen, D. F. Doak, T. M. Palmer and T. P. Young. Rodents as buffers to tree encroachment following ungulate extinction. Abstract, Annual Meeting of the British Ecological Society.

Goheen, Jacob R. and Todd M. Palmer. 2010. David and Goliath: Ant symbionts buffer against megaherbivore-driven landscape change in a savanna ecosystem. Abstract, 90th Annual Meeting of the American Society of Mammalogists.

Palmer, T. M. and M. L. Stanton. 2011. The high cost of mutualism: effects of four species of East African ant symbionts on their myrmecophyte host tree. Abstract, Annual Meeting of the Ecological Society of America.

Doak, D. F., K. Rudolph, K. Fox-Dobbs, A. K. Brody, T. M. Palmer and R. M. Pringle. 2011. Using spatially structured population processes to elucidate community functioning: demographic responses of a dominant African Acacia tree mediate community-wide effects of termites. European Ecological Federation Congress.

Rudolph, K. E. and Palmer, T.M. 2011 The expense of ant defense: relating positive and negative interaction impacts on *Acacia drepanolobium*. Joint meeting of Association of Tropical Biology and Conservation and Society of Conservation Biology (Africa chapter) – Arusha, Tanzania

Goheen, Jacob R. and Todd M. Palmer. 2012. Ant symbionts buffer against megaherbivore-driven landscape change in a savanna ecosystem. Abstract, 90th Annual Meeting of the Ecological Society of America.

Fraser, L. and the Global HBM Network. 2013. Is there a unimodal relationship between species richness and biomass in herbaceous plant communities? A global, multi-scale investigation. Abstract, International Association of Vegetation Scientists, Estonia.

Ford, A. T., J. R. Goheen, D. J. Augustine, T. O'Brien, T. M. Palmer, R. M. Pringle, and R. Woodroffe. 2014. Trophic repatriation of a savanna ecosystem. Abstract, Annual Meeting of the American Society of Mammalogists, Oklahoma City.

Riginos, C., T. M. Palmer, D. I. Rubenstein and M. E. Karande. 2014. Disruption of a protective ant-plant mutualism by an invasive ant increases elephant damage to savanna trees. Abstract, 92nd Annual Meeting of the Ecological Society of America, Sacramento.

Callis, K., D. J. Levey, T. M. Palmer and E. M. Bruna. 2014. Is herbivory greater at tropical latitudes? 92nd Annual Meeting of the Ecological Society of America, Sacramento.

Louthan, A., J. R. Goheen, T. O. Otieno, R. M. Pringle, T. M. Palmer and D. F. Doak. 2014. Sensitivity of population growth to biotic interactions varies systematically with abiotic stress: drivers of small mammal population dynamics in a Kenyan savanna. 92nd Annual Meeting, Ecological Society of America, Sacramento.

Palmer, T. M., C. Riginos, M. E. Karande, and D. I. Rubenstein. 2014. A mutualism disrupted: invasive big-headed ants threaten a widespread ant-plant symbiosis in East Africa. Annual Meeting of the Entomological Society of America, Portland.

Guy, T., T. M. Palmer, and K. Baldock. 2015. Effects of herbivore extinction and climate change on pollination in an African savanna. Ecological networks: theory, empiricism and practice in a changing world, Bristol, U.K.

Prior, K. M. and T. M. Palmer. 2016. Third partner strengthens a keystone ant-plant mutualism. Annual Meeting of the Ecological Society of America, Ft. Lauderdale, Florida.

Milligan, P. D., K. M. Prior, and T. M. Palmer. 2016. An invasive ant reduces diversity but does not disrupt ecosystem function in an African savanna. Annual Meeting of the Ecological Society of America, Ft. Lauderdale, Florida.

Ruiz-Guajardo, J. C., M. L. Stanton and T. M. Palmer. 2016. Host quality impacts colony-level aggression, survival, and the effectiveness of the defensive mutualism between *Crematogaster mimosae* (Santschi) and its host tree *Acacia drepanolobium*. Annual Meeting of the Ecological Society of America, Ft. Lauderdale, Florida.

Palmer, T. M. 2016. Friends with ~~benefits~~ costs: why a high-performing partner may not always be a mutualist's best friend. International Congress of Entomology, Orlando, Florida.

Milligan, P. D., and T. M. Palmer. 2016. Big-headed ants invade a Kenyan savanna: a threat to decomposers? Student Conference on Conservation Science, American Museum of Natural History, New York City, NY

Milligan, P. D., T. A. Martin, G. Mizell and T. M. Palmer. We picked the wrong day to quit photosynthesis! How an invasive ant is disrupting the physiology of a key East African savanna tree species. Annual Meeting of the Ecological Society of America, Portland, Oregon.

Hays, B., J. R. Goheen, C. Riginos, A. Pietrek and T. M. Palmer. 2017. Native ant-acacia mutualism disruption by invasive big headed ants. Nairobi Science Week, Nairobi, Kenya.

Palmer, T. M. 2017. Keynote address: Costs, benefits and the community ecology of mutualism. 16th Annual Symposium on Insect-Plant Interactions, Tours, France.

Milligan, P. D., T. M. Palmer and T. A. Martin. 2017. Invaders and the bottom line - an invasive ant indirectly reduces photosynthesis of a key savanna tree species. UF Wildlife Graduate Student Association Suds and Science Night, First Magnitude Brewery, Gainesville FL

Milligan, P. D., E. G. Pringle, T. Martin, and T. M. Palmer. 2019. Short-term gains and long-term losses for an East African myrmecophyte, triggered by a biological invasion. Annual Meeting of the Ecological Society of America, Louisville, Kentucky.

Hayes, B., J. R. Goheen, C. Riginos and T. M. Palmer. 2019. Using UAV remote sensing to measure ant-elephant induced shifts in savanna tree cover. Annual Meeting of the Association for Tropical Biology, Madagascar.

Brown, B., J. R. Goheen, L. Malingati, T. M. Palmer, and T. Kartzinel. 2019. Evolutionary history predicts microbiome composition for orders, but not species, of co-occurring mammals. Evolution (Annual Meeting), Providence, Rhode Island.

Mizell, G., T. M. Palmer and E. G. Pringle. 2020. The carbon dynamics of mutualism disruption: invasive ants reduce carbon storage by East African acacia trees. Annual Meeting of the Ecological Society of America (online).

Karp, A. T., S. Koerner, G. Hempson, J. Abraham, T. M. Anderson, D. J. Augustine, W. Bond, D. Burkepile, J. R. Goheen, J. Guyton, D. Kimuyu, N. Mohanbabu, T. M. Palmer, R. M. Pringle, M. Ritchie, M. Sankaran, M. Smith, D. Thompson, K. Veblen, T. P. Young and A. C. Staver. 2022. Combined analysis of remote sensing and experimental data indicates grazers reduce fire activity via fuel reductions across broad-scale savanna gradients. Annual Meeting of the American Geophysical Union, Chicago, Illinois.

Rossiter, J., A. Zare, T. M. Palmer and E. G. Pringle. 2023. Application of transfer learning for root segmentation in assessment of plant health. Annual Meeting of the North American Plant Phenotyping Network, St. Louis, Missouri.

Goheen, J. R., Kamaru, D. M. and T. M. Palmer. 2023. Disruption of an ant-plant mutualism shapes spatial patterns of lion predation. 13th International Mammalogical Congress, Anchorage, Alaska.

Mizell, G. M., T. M. Palmer, B. W. Sullivan, J. S. Lemboi, J. Mosiany, S. Akiba, and E. G. Pringle. 2023. Herbivore loss and invasive ants shift carbon allocation in East African ant-plants. Annual Meeting of the Ecological Society of America, Portland, Oregon.

Wells, H. B. M., R. D. Crego, J. M. Alston, K. S. Ndung'u, L. M. Khasoha, C. G. Reed, A. A. Hassan, S. Kurukura, J. Ekadeli, M. Namoni, M. Sankaran, D. J. Augustine, T. R. Kartzinel, T. M. Palmer, J. R. Goheen, D. M. Kimuyu, A. A. Wolf, T. P. Young and R. M. Pringle. 2023. Wild herbivores resist invasion by exotic cacti in an African savanna. 13th International Mammalogical Congress, Anchorage, Alaska.

P. Milligan. T. A. Martin, T. M. Palmer, and E. G. Pringle. 2023. Let's get physiological: ant-plants adjusting to different plant-ants. American Society of Naturalists Annual Meeting, Asilomar, California.

Milligan, P.D., T. M. Palmer, J. Rossiter, A. Zare, and E. G. Pringle. 2024. Ant invasion and mammalian herbivory drive seasonally dependent changes to rooting and carbohydrate storage in East African ant-acacia trees. Annual Meeting of the Ecological Society of America, Long Beach, California.

Milligan, P.D., T. M. Palmer, B. von Holdt, R. Kartzinel, J. Mosiany, J. Lemboi, E. Pringle. 2024. Interactions with herbivores and mutualists experienced by mother trees drive physiological and epigenetic patterns in their offspring. Annual Meeting of the Ecological Society of America, Long Beach, California.

Mizell, G. M., P. D. Milligan, J. S. Lemboi, J. Mosiany, T. M. Palmer, and E. G. Pringle. 2024. The impacts of understory light on seedling carbon dynamics in a foundational savanna plant. Annual Meeting of the Ecological Society of America, Long Beach, California.

Khasoha, L. M., C. Reed, J. Alston, T. R. Kartzinel, T. M. Palmer, R. M. Pringle and J. R. Goheen. 2026. African megafauna reduce resistance but promote resilience of small mammal communities following an extreme climatic event. American Society of Mammalogists, Norfolk, Virginia.

## Post-doctoral associates

- Dr. Patrick Milligan (2025-present)
- Dr. Alejandro Pietrek (2016 – 2018); currently a Research Scientist at CONICET Argentina.
- Dr. Kirsten Prior (2013-2014); currently an Assistant Professor at SUNY Binghamton.
- Dr. Michael Stastny (2010-2011); currently a Forest Insect Ecologist at the Canadian Forest Service.
- Dr. John Poulsen (2009); currently an Associate Professor of Tropical Ecology at Duke University.
- Dr. Jacob Goheen (2006-2007); currently a Professor of Zoology at the University of Wyoming.

## Graduate Students

- Sarah Johnson, M.S. 2024. Sarah studied the impacts of tourism and geomorphology on the success of wildebeest crossings in the Maasai Mara Reserve.
- Patrick Milligan, Ph.D., 2020. Patrick is currently a post-doc in the Department of Biology at the University of Nevada, Reno.
- Harrison Jones, Ph.D., 2020. Harry is an applied ecologist at the Institute for Bird Populations.
- Travis Guy, MS, 2017. NSF Graduate Research Fellowship Awardee. Travis is currently a research scientist at the NSF McMurdo Antarctic Research Station.
- Kathleen Rudolph, Ph.D., 2012. NSF Graduate Research Fellowship Awardee. Currently funded by the National Geographic Society, Kathleen is continuing her work on ant chemical communication.
- Megan Gittinger, Ph.D., 2013. NSF Graduate Research Fellowship Awardee. Megan has accepted a 3-year postdoctoral fellowship at the University of Kentucky.
- Co-advisor for four Kenyan graduate students and post-docs: John Kagori Mugo (M.Sc., U. Nairobi), Dr. Simon Kuria Kamande (Ph.D., Rhodes University), Dr. Charles Warui

(post-doc, National Museums of Kenya), Esther Abonyo (MSc, International Centre for Insect Physiology and Ecology, Nairobi).

## Professional Affiliations

- The Ecological Society of America, American Association for the Advancement of Science, The Society for Conservation Biology, Laikipia Wildlife Forum, East African Wildlife Society, Association for Tropical Biology

## Invited Seminars (partial list)

- Aarhus University, Stanford University, Harvard University, University of Chicago, University of California at Santa Barbara, University of Colorado at Boulder, University of Arizona, Colorado State University Ft. Collins, University of British Columbia, University of Montana, McGill University, University of Massachusetts Amherst, Emory University, Gordon Research Conference on Plant-Herbivore Interactions, University of Oklahoma, University of Vermont, University of Wyoming, Wake Forest University, University of Louisiana at Lafayette, Clemson University, Florida State University, Skidmore College, Rice University, Bristol Zoological Gardens, University of Tours (France), Universidad Nacional Autónoma de México, Symposium on Insect-Plant Interactions (France), Rocky Mountain Biological Laboratory, Southeastern Conference on Ecology and Evolutionary Biology, Mississippi State University, UF NRM Africa Working Group.

## Professional Service

- *Subject Matter Editor*, Ecology & Ecological Monographs, 2013-present
- *Reviewer,* The National Geographic Society, 2018
- *Ad-hoc reviewer,* National Science Foundation, 2017
- *Panelist,* National Science Foundation, Division of Environmental Biology, 2015
- *Panelist,* National Science Foundation, Division of Environmental Biology, 2009
- *Panelist*, National Science Foundation, Division of Environmental Biology, 2007
- *Panelist,* National Science Foundation, Division of Environmental Biology, 2005
- *Ad-hoc reviewer* for The National Science Foundation 2006-2015.
- *Reviewer,* The National Geographic Society, 2011-2012
- *Reviewer,* Portugal National Council on Science and Technology, Spring 2011, Fall 2012
- *Reviewer* for Science, Ecology Letters, Proceedings of the Royal Society Series B, Ecology, Ecological Monographs, The American Naturalist, Functional Ecology, Plant Ecology, Oecologia, Oikos, Ecoscience, Journal of Ecology, Behavioral Ecology, PLoS One, Insectes Sociaux, Biotropica, Journal of Tropical Ecology, Ecography, Biological Journal of the Linnean Society, Biotropica,
- *Member,* Scientific Advisory Board, Mpala Research Centre, Kenya
- *Scientific Advisor,* BBC Films "Africa" series
- *Scientific Advisor, SkyTV, UK, for a nature series narrated by Sir David Attenborough*
- *Scientific Advisor,* World Book Encyclopedia
- Invited member, NCEAS, "Ecological Stoichiometry" Working Group
- *Co-founder*, Aldo Leopold Chapter, Society for Conservation Biology, UW Madison
- *Review committee member*, National Forest Service Spotted Owl Management Proposal.

- *Organizer*, 17th Midwest Conference on Population Biology
- *Grant Proposal Reviewer*, Council for Earth and Life Sciences, Netherlands

## Other Service and Outreach

- *Founder, Fundraiser and Principal Contractor*, Matangini Secondary School, Ithanga, Kenya
- *Founder, Fundraiser and Principal Contractor*, St. Maurice-Mwira School, Mumias, Kenya
- *Organizer*, with Dr. Laurence Frank, Predator Control Initiatives for Masai Pastoralists, Laikipia, Kenya.
- *Speaker*, Rotary Club of St. Augustine