CURRICULUM VITAE

James T. Cronin
George C. Kent Professor

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Personal data

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Education

Ph.D. 1991, Biological Science, Florida State University, Tallahassee, FL. Dissertation: Parasitoid foraging behavior and the stabilization of host-parasitoid populations. Major Professor: Dr. Donald R. Strong/Dr. Joseph Travis.

M.S. 1987, Zoology, University of Maryland, College Park, MD. Thesis: The factors influencing the rate of parasitism of the evergreen bagworm. Major Professor: Dr. Douglas E. Gill.

B.S. 1984, Biological Science, Florida State University, Tallahassee, FL.

Professional Positions Held

2017 - George C. Kent Professor. Department of Biological Sciences, Louisiana State University, Baton Rouge, LA

2012 - Professor. Department of Biological Sciences, Louisiana State University, Baton Rouge, LA

2004 - 2012. Associate Professor, Department of Biological Sciences, Louisiana State University, Baton Rouge, LA.

2001 - 2004. Assistant Professor, Department of Biological Sciences, Louisiana State University, Baton Rouge, LA.

1997 - 2001. Assistant Professor, Department of Biology, University of North Dakota, Grand Forks, ND. *and* Director of Graduate Studies in Biology (2000-2001).

1995 - 1997. David Burpee Postdoctoral Fellow, Department of Biology, Bucknell University, Lewisburg, PA. Warren G. Abrahamson, advisor.

1993 - 1995. Post-doctoral researcher, Southern Research Station, USDA-Forest Service, Pineville, LA. Peter Turchin and Jane L. Hayes, advisors.

1991 - 1993. Post-doctoral researcher, Center for Population Biology, University of California - Davis, CA and Bodega Marine Laboratory, Bodega Bay, CA. Donald R. Strong, advisor.

Areas of Research Interest

Animal foraging behavior; Biogeography, Biological control of plant pests; Conservation biology; Evolution of host choice by herbivores and their natural enemies; Evolution of plant resistance and tolerance mechanisms; Interactions among plants, herbivores, and natural enemies; Invasive species; Predator-prey population dynamics; Quantitative and evolutionary genetics; Remote sensing; Spatial/landscape ecology.

Teaching Experience

Undergraduate Courses:

Introductory Biology II (FSU, UND), General Ecology with laboratory (UND, LSU); Concepts in Biology (UND); Organic Evolution (Bucknell), Community/Ecosystem Ecology (Bucknell)

Undergraduate Research (BIOL 3999):

Katy Euliss, Dawn Back, Andrea Widdell, Bryan Anderson, Brian Tompkins, Quintin Good, Erick Rietschier, Maria Waight, Amanuel Zeccarias, Luke Brown, Veaceslav Fedorcenco, Randee Young, Erin Baldwin, Jordan Croy, Jamie Kendrick, Cao-Tri Tran, Florencia Scaglia Drusini, Nicholas Bologna

Graduate Courses:

Population Ecology (LSU); Advanced Biometry (UND)

Graduate Seminars:

Theory of Ecological Communities (LSU); Invasion Biology: Climate change and species interactions (LSU), 50 years since Charles Elton (LSU), Invasion Biology (LSU); Population Viability Analysis (LSU); Biodiversity and Biogeography (LSU); Macroecology (UND); Hybridization and Evolution (UND).

Mentoring Activities

1. *Postdoctoral Associates*

Kristen Baum, 2003-2005. An experimental analysis of factors influencing patch connectivity and population dynamics in a host-parasitoid system**.**

Ana Salgado-Maldonado, 2019-2021. Resistance to and tolerance of a nonnative scale insect, pest management and restoration of marsh grasses.

Andrea Glassmire, 2020-2022. Roseau cane die-off: soil chemistry, above and belowground interactions and long-term monitoring.

2. *Graduate Students*

Present students:

Aaron Krivchenia (PhD, 2021-2026)

Past students:

Herie Lee (MS, 2019-2021), Rachel Harman (PhD, 2020), Nathan Harms (PhD, 2020), Lorissa Radunzel-Davis (MS, 2019), Warwick Allen (PhD, 2016), Ganesh Bhattarai (PhD, 2015), Anthony Chow (MS, 2014), Forrest Dillemuth (PhD, 2012), Amanda Accamando (M.S., 2011), Heather Jackson (PhD, 2010), Alyssa Hakes (PhD, 2010), Lee Stanton (LSU; minor advisor; PhD 2005), Kyle Haynes (LSU, PhD, 2004), Allison Poff (UND, MS, 2003), Mark Williams (UND, MS, 2001).

3. *Post Graduate Research Assistants*

Herie Lee, Research Associate, 2021-2023. Field assistant for USDA-funded project on the dieback of *Phragmites australis* in the Mississippi River Delta.

Aaron Krivchenia, Research Associate, 2021. Laboratory manager and research assistant for an NSF-funded project on flour beetle dispersal and competition in a landscape context.

Joseph Johnston, Research Associate, 2018-2020. Field assistant for USDA-funded project on the dieback of *Phragmites australis* in the Mississippi River Delta.

Heidi Stevens, Research Associate II, 2011-present. Laboratory manager and coordinator for research associated with NSF-funded project on weevil-parasitoid population dynamics.

Owen Jones, Post-graduate research assistant, 2010-2011. Taxonomy and identification of arthropods from tall-grass prairie habitats.

Juanita Constible, Post-graduate research assistant, 2003-2004. Lab manager.

4. *Undergraduate Students*

A total of 116 undergraduate and 3 high-school students have worked in my lab. Twenty of those students conducted independent research projects; 13 of which have authored or coauthored publications or manuscripts in press or in review (noted with *).

Kelly Hyland (NSF)* †, Katy Euliss (HHMI)*†, Reyne Schefchik (NSF/RC), Dawn Back (RC)*, Michael Szymanski (NSF)* †, Rebecca Beasler (NSF), Michael Bryant (NSF), Suzanne Jorde (NSF)†, Travis Hanel (NSF), Andrea Widdell (REU)†, Forrest Dillimuth (REU)* †, Adam Caro (CA), Alisa Pickering (RC), Christina Rhodes (NSF/CA), Taylor Arbour (NSF), Neeral Shah (NSF), Kori Legleu (NSF), Eric Bless (REU)†, Craig Nelson (NSF), Benjamin Proctor (CA), Josh Geber (NSF), Klark Eaton (CA), Richard Juneau (CA), Juliet Bernard (CA), Bryan Anderson (REU)* †, Mathew McClindon (REU), Darla Bourgeois (CA), Jeffrey Cutrera (CA), Marly Dows (CA), Mathew Guillory (CA), Michaelyn Hernandez (CA), Ali Hunter (CA), Ashley Soileau (CA), Sarah Whitlock (CA), Brian Thompkins (REU)*, Quintin Good (NSF/RC), Collin McCallum (NSF), Jazmin Varela (NSF) †, Thomas Webb (LBRN), Chantal San Miguel (CA)†, Alexis Barbarin (NSF) †, Katrina Florek (NSF/REU)†, Erick A. Rietschier (NSF/REU)*, Kelly Briggs (NSF)†, Maria Waight (NSF)†, Tristan Roberts (LBRN)*†, Amanuel Zeccarias (WS, REU)*, Charlotte Gates (CFLR)†, Kelly Haywood (WS), Farrar Brown (NSF), Sarah Lodrigues (REU), Jeff Pearson (CA), Luke Browne (NSF/REU)†, Phuong Truong (RC), Matthew Wyatt (NSF), Alexander Allain (NSF), Charlisa Thomas-Ellis (LBRN)†, Allison Higgebothem (CA), Joshua Allison (CA), Michael Mohler (NSF), Erin Francine (NSF/O), Lucia

Brus (NSF/O), Amanda Marionneaux (O), Macy Linton (CFLR), James Herbert (NSF), Sarah Dawes (NSF), Veaceslav Fedorcenco (NSF), Maggie Joyner (CFLR), Pradip Raj Panta (NSF)†, Bobby Chelette (LBRN), Randee Young (NSF), Erin Baldwin CFLR), Stacy Hulbert (V), Allison Hunt (CA), Devin Roe (CA), Jordan Croy (NSF/REU)*†, Sarah Campbell (CA/REU), Raymond Andrews (NSF), April Simmons (NIH), Patrick Mooney (HHMI)†, Mitchell Guedry (CFLR), Jamie Kendrick (NSF), Florencia Scaglia Drusini (CA), Andrew Barbera (CA), Victoria Tran (CA), Cao-Tri Tran (V)*, Luc Nguyen (V), Austin Flora (V), Madelyn Smith (CFLR), Michael McDonald (WS), Kyle Manley (CA), Edward Haydel (NSF), Ben Becnel (NSF), Raven R. Daigle (NSF), Nick Bologna (V)*, Sean Carney (CFLR), James Bridges (CFLR), Cameron Burris (WS), Elaine Arendt (WS), Nicholas P. Uzee (NSF), Rhae Sevin (LBRN), James Sanders (WS), Daniel A. Ruppert (WS), Celine Rochon (NSF), Philip Becker (V), Charles Stephenson (NSF), Matthew Berry (NSF), Amanda Monceaux (NSF), Kaylyn Riley (CA), Marshall Kellerman (WS), Benjamin Gaither (WS), Melina Keele (WS), Alexander Hollander (NSF), Taylor Washington (NSF), Mary Ponti (NSF), Dane Shackelford (USDA), Mackenzie L. Toussel (USDA), Emma Henkman (P), Rachel Morgan (NSF) Kayla Thomas (WS), Andrew C. Cihon (P).

NSF = National Science Foundation DEB or DMS grant, USDA = United States Department of Agriculture, REU = Research Experience for Undergraduates program, CA = Chancellor's Aide-in-Research Program, HHMI = Howard Hughes Medical Institute Undergraduate Research Program, NIH = NIH Bridges Program, RC = Research Credit, LBRN = Louisiana Biomedical Research Network Program, WS = Work Study, CFLR = Chancellor's Future Leaders in Research program, P = President's Aid, O = other funding sources, V = volunteer.

†Went on to graduate school

5. *High School Students*

Sarah Lodrigues, 2008. Field assistant for the study of habitat fragmentation and its effect on a host-parasitoid interaction.

Austin Flora, 2012. Field assistant associated with latitudinal gradients in *Phragmites australis* – herbivore interactions. Participated in field surveys of *P. australis* herbivores in Europe.

Philip Becker, 2018. Participated in the study of roseau cane dieback in Louisiana.

Service on Graduate Student Advisory Committees

I am currently serving on the graduate committees of 6 PhD and 2 MS students. In total, I have served on 49 PhD and 20 MS committees.

Current students: Carrie Barker, PhD; Madeline Gill, M.S. (School of Renewable and Natural Resources); Scott Grimmell, PhD; Michael Derek Jacobs, MS (Department of Oceanography and Coastal Sciences); Jamie Phelps, PhD; Luis Santiago-Rosario, PhD; Tanner C. Sparks, M.S. (Department of Entomology); Lance Umlang, PhD; George Washburn, PhD (School of the Coast and the Environment).

Past students while at LSU: Leslie Aviles-Lopez, M.S. 2019 (Department of Entomology);

Jennifer Soukup (University of Rhode Island), M.S. 2019; Hovanes, PhD 2019; Scott Kosiba, PhD 2019; Andrew Flick, PhD 2019; John B. Longworth, PhD 2018; Emily Kraus, PhD (Entomology), 2018; Miyanda Moonga, PhD (Entomology), 2016; Sandra Galeano, PhD 2016.; PhD; Metha Klock, PhD 2016; Melissa Burger, PhD (University of Rhode Island); John Dryburgh, MS (Entomology) 2015; Maria Gavilanez, PhD 2013; Adriana Dantin, MS 2013; John McVay, PhD 2013; Kyle Anderson, PhD 2011 (James Cook University, Cairns, Australia; external examiner); Ted Turluck, PhD (UL Lafayette); Joseph Hinton, PhD (School of Renewable and Natural Resources), withdrew; Sebastian Tello, PhD 2011; Ron Eytan, PhD 2010; Stephanie Gross, MS 2010; Ellen Reid, MS 2010; Jonathan Myers, PhD 2010; Brian O'Shea, PhD 2009 (LSU Museum of Natural Science); David Anderson, PhD 2010 (LSU Museum of Natural Science); Tessa Bauman, withdrew; Adriana Bravo, PhD 2009; Jane Carlson, PhD 2007; Jennifer DiMiceli, MS 2006 (School of Renewable Resources); Donald Henne, PhD 2007 (Entomology); Haw-Chuan Lim, PhD (LSU Museum of Natural Science); Heather Passmore, PhD. 2005; Timothy Paine, PhD 2007; Clark Pearson, PhD 2008 (Tulane University); Michael J. Pontif, PhD 2007 (Plant Pathology and Crop Physiology); Maria Sagot, PhD 2012; Lee Stanton, PhD 2005 (Oceanography and Coastal Sciences); Joshua Temple, PhD (Entomology, withdrawn); Hector Urbina, PhD 2012; Gemechu Wirtu, PhD 2003 (School of Veterinary Medicine); Carrie Yoder, PhD (deceased).

University of North Dakota: 2 PhD and 5 MS students.

Bucknell University: 6 MS students.

Service on Undergraduate Honors Thesis Committees
Claire Reuter (2008)
Jordan Croy (2014)

Publications
Google Scholar Profile:
https://scholar.google.com/citations?user=R2FbawYAAAAJ&hl=en&oi=ao
PDFs available at: http://www.biology.lsu.edu/webfac/jcronin/biograph/
* Undergraduate coauthor.

1. Harms, N. E. and **J. T. Cronin**. 2021. Phenology and competitive interactions and implications for management of the invasive wetland plant, *Alternanthera philoxeroides*. ERDC Technical Notes, ERDC/EL TN-21-1. Vicksburg, MS: US Army Corps of Engineer Research and Development Center.

2. Harms, N. E., **J. T. Cronin** and J. Gaskin. 2021. Increased ploidy of *Butomus umbellatus* L. in introduced populations is not associated with higher phenotypic plasticity to N and P. *AoB Plants* 13: https//doi.org/10.1093/aobpla/plab1045.

3. **Cronin, J. T**., J. Goddard II, A. Muthunayake and R. Shivaji. 2020. Modeling the effects of trait-mediated dispersal on coexistence of mutualists. *Mathematical*

Biosciences and Engineering 17: 7838-7861.

4. **Cronin, J. T.**, J. Johnston and R. Diaz. 2020. Multiple potential stressors and dieback of *Phragmites australis* in the Mississippi River Delta, U.S.A. *Wetlands* 40: 2247-2261.

5. Harms, N. E., **J. T. Cronin**, R. Diaz and R. Winston. 2020. A review of causes and consequences of geographical variability in weed biological control success. *Biological Control* https://doi.org/10.1016/j.biocontrol.2020.104398.

6. Meyerson, L. A., P. Pyšek, M. Lučanová, S. Wigginton, C.-T. Tran and **J. T. Cronin**. 2020. Size matters: Plant genome size influences abiotic stress tolerance in native versus invasive plants. *Bulletin of the Ecological Society of America* https://doi-org.libezp.lib.lsu.edu/10.1002/bes2.1731.

7. Croy J. R.*, W. J. Allen, L. A. Meyerson and **J. T. Cronin**. 2020. Lineage and latitudinal variation in *Phragmites australis* tolerance to herbivory: Implications for invasion success. *Oikos* 129: 1341-1357.

8. Harms, N. E. and **J. T. Cronin**. 2020. Biological control agent attack timing and population variability, but not density, best explain host density across a latitudinal gradient. *Scientific Reports* https://doi.org/10.1038/s41598-020-68108-w.

9. Knight, I. A., **J. T. Cronin**, M. Gill, J. A. Nyman, B. Wilson and R. Diaz. 2020. The role of plant phenotype, salinity, and infestation by the Roseau Cane Scale in the die-back of *Phragmites australis* in the Mississippi River Delta, Louisiana, USA. *Wetlands* 40: 1327-1337.

10. Allen, W. J., A. E. DeVries, N. J. Bologna, W. A. Bickford, K. P. Kowalski, L. A. Meyerson and **J. T. Cronin**. 2020. Intraspecific and biogeographic variation in foliar fungi communities and pathogen damage: implications for invasion success. *Global Ecology and Biogeography* 29: 1199-1211.

11. Meyerson, L. A., P. Pyšek, M. Lučanová, S. Wigginton, C.-T. Tran and **J. T. Cronin**. 2020. Plant genome size influences stress tolerance of invasive and native plants via plasticity. *Ecosphere* 11: Article e03145.

12. **Cronin, J. T.**, G. Melika and W. G. Abrahamson. 2020. Time-since fire and cynipid gall wasp assemblages on oaks. *Biodiversity and Conservation* 29: 1177-1203.

13. Harman, R. R., J. Goddard II, R. Shivaji and **J. T. Cronin**. 2020. Diverse forms of density-dependent emigration and their population-dynamic consequences. *American Naturalist* 195: 851-867.

14. Harms, N., J. Shearer, **J. T. Cronin** and J. Gaskin. 2020. Geographic and genetic variation in biotic resistance of the invasive wetland plant, *Butomus umbellatus* in the United States. *Biological Invasions* 22: 535-548.

15. **Cronin, J. T.**, N. Fonseka, J. Goddard, J. Leonard and R. Shivaji. 2019. Modeling the effects of density dependent emigration, weak Allee effects, and matrix hostility on patch-level population persistence. *Mathematical Biosciences and Engineering* 17: 1718-1742.

16. Harms, N., J. Shearer, **J. T. Cronin** and J. Gaskin. 2020. Geographic and genetic variation in biotic resistance of the invasive wetland plant, *Butomus umbellatus* in the United States. *Biological Invasions* 22: 535-548.

17. **Cronin, J. T.**, J. Goddard II and R. Shivaji. 2019. Effects of patch matrix and individual movement response on population persistence at the patch level. *Bulletin of Mathematical Biology* doi.org/10.1007/s11538-019-00634-9.

18. Harms, N. and **J. T. Cronin**. 2019. Variability in weed biological control: effects of foliar nitrogen on larval development and dispersal of the alligatorweed flea beetle, *Agasicles hygrophila*. *Biocontrol* 135: 16-22.

19. Kiviat, E., L. A. Meyerson, T. J. Mozdzer, W. J. Allen, A. H. Baldwin, G. P. Bhattarai, H. Brix, J. S. Caplan, K. M. Kettenring, C. Lambertini, J. Weis, D. F. Whigham and **J. T. Cronin**. 2019. Evidence does not support the targeting of cryptic invaders at the subspecies level using classical biological control. *Biological Invasions* 21: 2529-2541

20. Knight, I. A., B. E. Wilson, M. Gill, L. Aveles, **J. T. Cronin**, J. A. Nyman, S. A. Schneider and R. Diaz. 2018. Invasion of *Nipponaclerda biwakoensis* (Hemiptera: Aclerdidae) and associated *Phragmites australis* dieback in southern Louisiana, U.S.A. *Biological Invasions* 20: 2739-2744.

21. Allen, W. J., L. A. Meyerson, A. J. Flick and **J. T. Cronin**. 2018. Intraspecific variation in indirect plant-soil feedbacks influences a wetland plant invasion. *Ecology* 99: 1430-1440.

22. Bowen, J. L., P. J. Kearns, J. E. K. Byrnes, S. Wigginton, W. J. Allen, M. Greenwood, K. Tran, J. Yu, **J. T. Cronin**, and L. A. Meyerson. 2018. Why do invasive species do so well? *Environmental Science Journal for Teens*. January 2018:1-5.

23. Eller, F., B. K. Sorrell, C. Lambertini, D. Whigham, E. Hazelton, H. Skálová, H. Brix, **J. T. Cronin**, J. S. Caplan, K. Kettenring, L. A. Meyerson, M. Burger, M. McCormick, P. Pyšek, T. Mozdzer, W.-Y. Guo, X. Guo, G. P. Bhattarai. 2017. Cosmopolitan species as ecophysiological models for responses to global change: the common reed *Phragmites australis*. *Frontiers in Plant Science*

doi.org/10.3389/fpls.2017.01833

24. Bowen, J. L., P. J. Kearns, J. E. K. Byrnes, S. Wigginton, W. J. Allen, M. Greenwood, K. Tran, J. Yu, **J. T. Cronin** and L. A. Meyerson. 2017. Lineage overwhelms environmental conditions in determining rhizosphere bacterial community structure in a cosmopolitan invasive plant. *Nature Communications* 8: 433 (10.1038/s41467-017-00626-0).

25. Allen, W. P., L. A. Meyerson, D. Cummings*, J. Anderson*, G. P. Bhattarai, and **J. T. Cronin**. 2017. Biogeography of a plant invasion: drivers of latitudinal variation in local enemy release. *Global Ecology and Biogeography* 26: 435-446.

26. Packer J. P. L. A. Meyerson, D. M. Richardson, G. Giuseppe Brundu, W. Allen, G. P. Bhattarai, H. Brix, S. Canavan, S. Castiglione, A. Cicatelli, J. Čuda, **J. T. Cronin**, F. Eller, F. Guarino, W. W.-H. Guo, W.-Y. Guo, X. Guo, J. Hierro, C. Lambertini, J. Liu, V. Lozano, T. J. Mozdzer, H. Skálová, D. Villarreal, R. Wang and P. Pyšek. 2017. Towards a global network for invasion science: benefits, challenges and guidelines. *Biological Invasions* 19: 1081-1096.

27. Bhattarai, G. P., L. A. Meyerson and **J. T. Cronin**. 2016. Geographic variation in apparent competition between native and invasive *Phragmites australis*. *Ecology* 98: 349-358.

28. Bhattarai, G. P., L. A. Meyerson J. Anderson*, D. Cummings*, W. J. Allen and **J. T. Cronin**. 2016. The biogeography of a plant invasion: Genetic variation and phenotypic plasticity in latitudinal clines for plant-herbivore interaction traits. *Ecological Monographs* 87:57-75.

29. Bhattarai, G. P., W. J. Allen, **J. T. Cronin**, E. Kiviat and L. A. Meyerson. 2016. Response to Blossey and Casagrande – Ecological and evolutionary processes make host specificity at the subspecies level exceedingly unlikely. *Biological Invasions* 18(9): 2757-2758.

30. **Cronin, J. T.**, E. Kiviat, L. A. Meyerson, G. P. Bhattarai and W. J. Allen. 2016. Biological control of invasive *Phragmites australis* will be detrimental to native *P. australis*. *Biological Invasions* 18(9): 2749-2752.

31. Meyerson, L. A., **J. T. Cronin**, G. P. Bhattarai, H. Brix, C. Lambertini, M. Lučanová, S. Rinehart, J. Suda and P. Pyšek. 2016. Do ploidy level and nuclear genome size and latitude of origin modify the expression of *Phragmites australis* traits and interactions with herbivores? *Biological Invasions* 18(9): 2531-2549.

32. Meyerson, L. A., **J. T. Cronin** and P. Pyšek. 2016. *Phragmites* as a model organism for plant invasions. *Biological Invasions* 18(9): 2421-2431.

33. **Cronin, J. T.**, J. D. Reeve, D. Xu, M. Xiao and H. N. Stevens. 2016. Variable prey development time suppresses predator-prey cycles and enhances stability. *Ecology Letters* 19: 318-327.

34. Allen, W. J., R. Young*, G. P. Bhattarai, J. Croy*, L. A. Meyerson, A. Lambert and **J. T. Cronin**. 2015. Multitrophic enemy escape of invasive *Phragmites australis* and its introduced herbivores in North America. *Biological Invasions* 17: 3419-3432.

35. **Cronin, J. T.**, L. A. Meyerson, G. Bhattarai and W. Allen. 2015. Biogeography of a plant invasion: plant-herbivore interactions. *Ecology* 96: 1115-1127.

36. Bhattarai, G. and **J. T. Cronin**. 2014. Hurricane activity and the large-scale pattern of spread of an invasive wetland plant. *PLoS One* 9(5): e98478. DOI: 10.1371/journal/pone.0098478.

37. **Cronin, J. T.** and J. D. Reeve. 2014. An integrative approach to understanding host-parasitoid population dynamics in real landscapes. *Basic and Applied Ecology* 15: 101-113.

38. Bezemer, T. M, J. A. Harvey, and **J. T. Cronin**. 2014. The response of native insect communities to invasive plants. *Annual Review of Entomology* 59: 119-141.

39. Jackson, H. B., A. Zeccarias* and **J. T. Cronin**. 2013. Mechanisms driving the density-area relationship in a saproxylic beetle. *Oecologia* 173: 1237-1247.

40. Meyerson, L. A. and **J. T. Cronin**. 2013. Evidence of multiple introductions of *Phragmites australis* to North America. *Biological Invasions* 15: 2605-2608.

41. Xiao, M., J. D. Reeve, D. Xu and **J. T. Cronin**. 2013. Estimation of diffusion rate and return probability for biased edge movement between two different habitat types. *Journal of Mathematical Biology* 41(3): 551-561.

42. Jackson, H. B., K. Baum, and **J. T. Cronin**. 2012. From logs to landscapes: Determining the scale of ecological processes affecting incidence of a saproxylic beetle. *Ecological Entomology* 37(3): 233-243.

43. Accamando, A. K. and **J. T. Cronin**. 2012. Costs and benefits of an inducible defense strategy in soybean. *Environmental Entomology* 41: 551-561.

44. Hakes, A. S. and **J. T. Cronin**. 2012. Successional change in plant resistance and tolerance to herbivory. *Ecology* 93: 1059-1070.

45. Hakes, A. S. and **J. T. Cronin**. 2011. *Solidago altissima* (Asteraceae) resistance and tolerance to herbivory: genetic variability, costs and selection. *American Journal of Botany* 98: 1446-1455.

46. **Cronin, J. T.** 2011. Spatial ecology of the palm-leaf skeletonizer, *Homaledra sabalella* (Lepidoptera: Coleophoridae). *PLoS One* 6(7): e22331. doi: 10.1371/journal.pone.0022331.

47. Hakes, A. S. and **J. T. Cronin**. 2011. Environmental heterogeneity and spatiotemporal variability in plant defense traits. *Oikos* 120: 452-462.

48. Reeve, J. D. and **J. T. Cronin**. 2010. Edge behavior in a minute parasitic wasp. *Journal of Animal Ecology* 79: 483-490.

49. Jackson, H. B., K. A. Baum, T. Roberts* and **J. T. Cronin**. 2009. Habitat-specific movement and edge-mediated behaviour of a saproxylic insect, *Odontotaenius disjunctus* Illiger (Coleoptera: Passalidae). *Environmental Entomology* 38: 1411-1422.

50. Dillemuth, F. P., E. Rietschier* and **J. T. Cronin**. 2009. Patch dynamics of a native grass in response to the spread of invasive smooth brome (*Bromus inermis*). *Biological Invasions* 11: 1381-1391.

51. **Cronin, J. T.** 2009. Edge effects, prey dispersion and parasitoid oviposition behavior. *Ecology* 90: 196-207.

52. **Cronin, J. T.** 2009. Movement, colonization and establishment success of a planthopper of prairie potholes, *Delphacodes scolochloa* (Hemiptera: Delphacidae). *Ecological Entomology* 34: 114-124.

53. Rosso, P. H., **J. T. Cronin** and R. D. Stevens. 2008. Monitoring the invasion of *Phragmites australis* in coastal marshes of Louisiana, USA, using multi-source remote sensing. Remote Sensing for Environmental Monitoring, GIS Applications and Geology. VIII. Proceeding of SPIE. Michel, U., D. L. Civco, M. Ehlers and H. J. Kaufmann, Eds. *The International Society of Optical Engineering*, Bellingham, WA.

54. Reeve, J. D., K. J. Haynes and **J. T. Cronin**. 2008. Diffusion models for herbivores in complex landscapes: incorporating heterogeneity among substrates, individuals and edge behaviors. *Journal of Animal Ecology* 77: 898-904.

55. **Cronin, J. T.** 2007. From population sources to sieves: the matrix alters host-parasitoid source-sink structure. *Ecology* 88: 2966-2976.

56. **Cronin, J. T.** 2007. Shared parasitoids in a metacommunity: indirect interactions inhibit herbivore membership in local communities. *Ecology* 88: 2977-2990.

57. **Cronin, J. T.** and S. W. Wilson. 2007. Description, life history and parasitism of a new

species of delphacid planthopper (Hemiptera: Fulgoroidea). *Annals of the Entomological Society of America* 100: 640-648.

58. Henne, D. C., S. J. Johnson and **J. T. Cronin**. 2007. Characteristics of *Pseudacteon tricuspis* Borgmeier (Diptera: Phoridae) population spread in Louisiana. *Biological Control* 42: 97-104.

59. Haynes, K. J., F. Dillemuth, B. Anderson*, A. Hakes, S. E. Jackson, H. B. Jackson, and **J. T. Cronin**. 2007. Patch geography surpasses patch quality in its effects on herbivore dispersal and distribution. *Oecologia* 151: 431-441.

60. Hofstetter, R. W., **J. T. Cronin**, K. D. Klepzig, M. P. Ayres and J. C. Moser. 2006. Antagonisms, mutualisms and commensalisms affect outbreak dynamics of the southern pine beetle. *Oecologia* 147: 679-691.

61. Haynes, K. J. and **J. T. Cronin**. 2006. Interpatch movement and edge effects: the role of behavioural responses to the landscape matrix. *Oikos* 113: 43-54.

62. **Cronin, J. T.** and J. D. Reeve. 2005. Host-parasitoid spatial dynamics: a plea for a landscape-level synthesis? *Proceedings of the Royal Society of London, Series B-Biological Sciences* 272: 2225-2235.

63. Baum, K. A., K. J. Haynes, F. Dillemuth* and **J. T. Cronin**. 2004. The matrix enhances the effectiveness of corridors and stepping stones. *Ecology* 85: 2671-2676. *The Ecological Society of America issued a press release for this paper.*

64. **Cronin, J. T.** and K. J. Haynes. 2004. An invasive plant promotes unstable host-parasitoid patch dynamics. *Ecology* 85: 2772-2782.

65. Williams, M. A. and **J. T. Cronin**. 2004. Gall former guild response to stressed and vigorous roses. *Environmental Entomology* 33: 1052-1061.

66. **Cronin, J. T.**, K. J. Haynes and F. Dillemuth*. 2004. Spider effects on planthopper mortality, dispersal and spatial population dynamics. *Ecology* 85: 2134-2143.

67. **Cronin, J. T.** 2004. Host-parasitoid extinction and colonization in a native prairie landscape. *Oecologia* 139: 503-514.

68. Haynes, K. J. and **J. T. Cronin**. 2004. Confounding of patch quality and matrix effects in herbivore movement studies. *Landscape Ecology* 19: 119-124.

69. Haynes, K. J. and **J. T. Cronin**. 2003. Matrix composition and the spatial ecology of a prairie planthopper. *Ecology* 84: 2856-2866.

70. Nathan, R., M., G. Perry, **J. T. Cronin**, A. E. Strand and M. L. Cain. 2003. Methods for

estimating long-distance dispersal. *Oikos* 103: 261-273.

71. **Cronin, J. T.** 2003. Matrix heterogeneity and planthopper-parasitoid interactions in space. *Ecology* 84: 1506-1516.

72. **Cronin, J. T.** 2003. Movement and spatial population structure of a prairie planthopper. *Ecology* 84: 1179-1188.

73. **Cronin, J. T.** 2003. Patch structure, oviposition behavior, and the distribution of parasitism risk. *Ecological Monographs* 73: 283-300.

74. Smith, P. T., K. Krager*, **J. T. Cronin** and S. Kambhampati. 2002. Mitochondrial DNA variation among host races of *Eurosta solidaginis* Fitch (Diptera: Tephritidae). *Molecular Phylogenetics and Evolution* 25: 372-376.

75. Poff, A. C., K. Haynes, M. Szymanski*, D. Back*, M. A. Williams, and **J. T. Cronin**. 2002. Bird predation and the host-plant shift by the goldenrod stem galler. *Canadian Entomologist* 134: 215-228.

76. **Cronin, J. T.** and W. G. Abrahamson. 2001. Do parasitoids diversify in response to host-plant shifts by herbivorous insects? *Ecological Entomology* 26: 347-355.

77. **Cronin, J. T.**, W. G. Abrahamson and T. P. Craig. 2001. Temporal variation in host-plant preference and offspring performance: constraints on host-plant specialization. *Oikos* 93: 312-320.

78. **Cronin, J. T.** and W. G. Abrahamson. 2001. Goldenrod stem-galler preference and performance: effects of multiple herbivores and plant genotypes. *Oecologia* 127: 87-96.

79. **Cronin, J. T.**, K. Hyland* and W. G. Abrahamson. 2001. The pattern, rate, and range of within-patch movement of a stem-galling fly. *Ecological Entomology* 26: 16-24.

80. **Cronin, J. T.**, J. D. Reeve, R. Wilkens and P. Turchin. 2000. The pattern and range of dispersal of a checkered-beetle predator relative to its bark-beetle prey. *Oikos* 90: 127-138.

81. **Cronin, J. T.**, J. L. Hayes and P. Turchin. 2000. Evaluation of traps used to monitor southern pine beetle aerial populations and sex ratios. *Agricultural and Forest Entomology* 2: 69-76.

82. **Cronin, J. T.** and W. G. Abrahamson. 1999. Host-plant genotype and other herbivores influence goldenrod stem galler preference and performance. *Oecologia*: 121: 392-404.

83. **Cronin, J. T.**, P. Turchin, J. L. Hayes and C. A. Steiner. 1999. Area-wide efficacy of a localized forest pest management practice. *Environmental Entomology* 28: 496-504.

84. **Cronin, J. T.** and D. R. Strong. 1999. Dispersal-dependent oviposition and population dynamics of a host and parasitoid. *American Naturalist* 154: 23-36.

85. Turchin, P., R. Wilkens, **J. T. Cronin** and J. D. Reeve. 1998. An empirically-based model for understanding spatial pattern formation in a bark beetle system. Pp. 199-213 *in* "*Modelling Spatiotemporal Dynamics in Ecology*", J. Bascompte and R. V. Sole (Eds.). Academic Press, NY.

86. **Cronin, J. T.** and D. R. Strong. 1996. Genetics of oviposition success of a fairyfly parasitoid. *Heredity* 76: 43-54.

87. Rossi, A. M., J. D. Reeve and **J. T. Cronin**. 1994. The effects of plant induced egg mortality on the interspecific distribution of the oligophagous leafhopper *Carneocephala floridana*. *Oecologia* 100: 89-93.

88. Reeve, J. D., **J. T. Cronin** and D. R. Strong. 1994. Parasitism and generation cycles in a salt-marsh planthopper. *Journal of Animal Ecology* 63: 912-920.

89. Reeve, J. D., **J. T. Cronin** and D. R. Strong. 1994. Parasitoid aggregation and the stabilization of a salt-marsh host-parasitoid system. *Ecology* 75: 288-295.

90. **Cronin, J. T.** and D. R. Strong. 1993. Superparasitism and mutual interference in the fairyfly parasitoid *Anagrus delicatus*. *Ecological Entomology* 18: 293-302.

91. **Cronin, J. T.** and D. R. Strong. 1993. Parasitoid interactions and their contribution to the stabilization of Auchenorrhyncha populations. Pp. 400-428 *in* "*Planthoppers: Their Ecology and Management*", R. F. Denno & T. J. Perfect, Eds. Chapman & Hall, New York.

92. **Cronin, J. T.** and D. R. Strong. 1993. Substantially submaximal oviposition rates by a mymarid egg parasitoid in the laboratory and field. *Ecology* 74: 1813-1825.

93. **Cronin, J. T.** 1991. *Parasitoid foraging behavior and the stabilization of host-parasitoid populations*. Ph.D. dissertation, The Florida State University, Tallahassee, Florida.

94. **Cronin, J. T.** and D. R. Strong. 1990. Density-independent parasitism among host patches by *Anagrus delicatus* (Hymenoptera: Mymaridae): experimental manipulation of hosts. *Journal of Animal Ecology* 59: 1019-1026.

95. **Cronin, J. T.** and D. R. Strong. 1990. Biology of *Anagrus delicatus* (Hymenoptera:

Mymaridae), an egg parasitoid of *Prokelisia marginata* (Homoptera: Delphacidae). *Annals of the Entomological Society of America* 83: 846-854.

96. **Cronin, J. T.** 1989. Inverse density-dependent parasitism of the evergreen bagworm (Lepidoptera: Psychidae). *Environmental Entomology* 18: 403-407.

97. **Cronin, J. T.** and D. E. Gill. 1989. The influence of host distribution, sex, and size on the level of parasitism by *Itoplectis conquisitor* (Say). *Ecological Entomology* 14: 159-172.

98. Deyrup, M., F., **J. T. Cronin**, and F. Kurczewski. 1988. *Allochares azureus*: an unusual wasp seeks unusual prey (Hymenoptera: Pompilidae; Arachnida: Filistatidae). *Psyche* 95: 265-281.

99. **Cronin, J. T.** and J. Travis. 1986. Size-limited predation on larval *Rana areolata* (Anura: Ranidae) by two species of backswimmer (Insecta: Hemiptera: Notonectidae). *Herpetologica* 42: 171-174.

Papers in Review or Preparation

100. Lee, H., R. Diaz and **J. T. Cronin**. In review. *Phragmites australis* dieback in the Mississippi River Delta: chemical profiles of healthy, dieback and dredge soils and impacts on plant biomass. For *Estuaries and Coasts*.

101. Lindsay, D. L., X. Guan, N. E. Harms, **J. T. Cronin**, L. A. Meyerson and R. F. Lance. In review. DNA markers for the in-field genetic discrimination of three *Phragmites australis* (Poaceae: Arundinoideae) subspecies. For *Applications in Plant Sciences*.

102. Meyerson, L. A., **J. T. Cronin,** M. Lučanová, C. Lambertini, J. G. Packer, J. Čuda, J. Wild, J. Pergl and P. Pyšek. In review. Some like it hot: small genomes are more prevalent under climate extremes. For *Journal of Biogeography*.

103. Acharya, A., S. Bandyopadhyay, J. T. Cronin, J. Goddard, A. Muthunayake and R. Shivaji. Manuscript. The diffusive Lotka-Volterra competition model in fragmented patches I: Coexistence. For *Journal of Mathematical Biology*.

104. Salgado-Maldanado, A. L., A. E. Glassmire, R. Diaz, M. J. Stout, C. Lambertini, P. Pyšek, L. A. Meyerson and **J. T. Cronin**. Manuscript. Metabolic profile of *Phragmites australis*. For *Nature Communications*.

105. **Cronin, J. T.** and J. D. Reeve. Manuscript. Development time and host-parasitoid stability: An experimental test. For *American Naturalist*.

106. Harman, R. R., J. Goddard II, R. Shivaji and **J. T. Cronin**. Manuscript. Movement

behavior of *Ischnodemus falicus* (Say) (Hemiptera: Blissidae) in fragmented salt-marsh habitats. For *Ecological Entomology*.

107. Meyerson, L. A., P. Pyšek, **J. T. Cronin** and J. Packer. In preparation. *Phragmites australis*, a model organism for plant invasions. Springer, NY.

108. Reeve, J. D., M. Xiao, X. Wang, D. Xu and **J. T. Cronin**. Manuscript. Parameter estimations for insect drift movement via boundary behavior. For *Journal of Theoretical Biology*.

Grants

* Total grant support: $8,526,646 (Cronin's portion: $3,750,638)
* Continuously funded by NSF since 1997 (10 grants): $3,765,704 (Cronin's portion $2,332,191)

2022 – 2025 NSF Mathematical Biology/Population and Community Ecology Grant. Collaborative research: Mathematical and Experimental Analysis of Competitive and Predator-Prey Models: Patches, Conditional Dispersal on Patches to Landscapes. $781,980. Pending. Principle investigator (Co-Is: Jerome Goddard, Auburn University and Ratnasingham Shivaji, University of North Carolina, Greensboro). Cronin's portion of funding: $357,708.

2021 – 2023 USDA-APHIS Grant. Integrating the Effects of environmental Stressors, Above and Belowground Interactions and Plant Genetics to Understand Roseau Cane Die-off and Restoration. $1,600,000. Principle Investigator (Co-I: Rodrigo Diaz, Vinson Doyle, Tracy Quirk, Xuelian Meng and Jonathan Richards). Cronin's portion of funding: $271,201.

2020 – 2022 USDA-APHIS Grant. Roseau Cane Die-off: Soil Chemistry, Above and Belowground Interactions and Long-Term Monitoring. $1,608,125. Principle Investigator (Co-I: Rodrigo Diaz, Vinson Doyle, Tracy Quirk and Xuelian Meng). Cronin's portion of funding: $366,112.

2019 – 2022 USDA-APHIS Grant. Roseau Cane Dieoff: Resistance to and tolerance of a Nonnative Scale Insect, Pest Management and Restoration of Marsh Grasses. $783,002, Principle Investigator (Co-I: Rodrigo Diaz, Rodrigo Valverde, J. Andy Nyman, Michael J. Stout and Hans T. Alborn). Cronin's portion of funding: $267,135.

2019 – 2022 NSF Mathematical Biology/Population and Community Ecology Grant. Collaborative research: Mathematical and Experimental Analysis of Competitive Ecological Models: Patches, Landscapes, and Conditional Dispersal on the Boundary (DMS-1853359). $670,000. Principle investigator (Co-Is: Jerome Goddard, Auburn University and Ratnasingham Shivaji, University of North Carolina, Greensboro). Cronin's portion of funding, $310,020.

2018 – 2021 USDA-APHIS Grant. The role of scale insects, soil chemistry and plant pathogens on roseau cane die-offs (APP-6585). $425,000. Principle investigator (Co-I: Rodrigo Diaz and Rodrigo Valverde). Cronin's portion of funding: $169,184.

2017 – 2019 Development of an integrated management program for control of the roseau cane scale. Louisiana Fish and Wildlife, Louisiana Forestry and Agriculture, Conservation Protection and Restoration Authority, and St. Bernard, Plaquemines and Jefferson Parishes. $300,000. Co-Principle Investigator (with Rodrigo Diaz and Blake Wilson).

2015 – 2018 NSF Mathematical Biology Grant. Collaborative Research: Mathematical and Experimental Analysis of Ecological Models: Patches, Landscapes and Conditional Dispersal on the Boundary (DMS-1516833). $594,840. Principle investigator (Co-Is: Jerome Goddard, Auburn University and Ratnasingham Shivaji, University of North Carolina, Greensboro). Cronin's portion of funding, $253,351.

2015 – 2016 NSF Doctoral Dissertation Improvement Grant. Drivers of plant invasions: The role of fungi, nutrient availability and competition among plants (DEB-1501775). Principle investigator (Co-I: Warwick P. Allen). $19,240.

2014 – 2015 NSF Catalyzing New International Collaborations. US-Denmark-Czech Republic-China planning visit to develop an integrative approach to understanding range expansion and invasiveness of plants under global change regimes (DEB 1419966). $19,273. Principle Investigator (Co-PI: Laura Meyerson). Cronin's portion of funding, $9,954.

2011 - 2015 NSF Ecological Studies Grant. Collaborative Research: Latitudinal variation in invasive plant-herbivore interactions and implications for invasion success (DEB-1050084). $704,000. Principle investigator (Co-PI: Laura Meyerson). Cronin's portion of funding, $327,000.

2010 - 2015 NSF Population & Community Ecology/Mathematical Biology Grant. Collaborative Research: Vulnerable host stages, development time and host-parasitoid stability – the first experimental test (DEB-1020867). $673,859. Principal investigator (Co-PIs: John Reeve, MingQing Xiao and Dashun Xu). Cronin's portion, $453,859 (includes two REU supplements).

2010 – 2011 Louisiana Department of Wildlife and Fisheries Research Award. Role of storm activities in the spread of an invasive plant, Phragmites australis, in the coastal marshes of Louisiana. $1,000 (Co-PI: Ganesh Bhattarai).

2006 - 2007 Center for Invasive Plant Management Grant. Landscape-level impact of invasive smooth brome on a native prairie plant, *Spartina pectinata*, and native

invertebrates. $5,000. Principal Investigator.

2005 - 2010 NSF Ecological Studies Grant. Collaborative Research: Linking dispersal to landscape-level dynamics of a predator and prey (DEB-0515764). $406,000 Principal investigator (Co-PI: John Reeve). Cronin's portion, $280,275 (includes three REU Supplements).

2005 - 2006 LSU Faculty Research Grant. Plant resistance to and tolerance of herbivory: a landscape-level approach. $10,000. Principal Investigator. Funding period: 1 July, 2005 to 30 June, 2006.

2002 - 2006 NSF Ecological Studies Grant. Landscape heterogeneity, patch connectivity, and host-parasitoid population dynamics (DEB-0211359). $369,558 (Includes three REU Supplements). Principal Investigator.

2000 - 2001 UND, Faculty Research Seed Grant. Habitat fragmentation, edge effects and insect population dynamics. $29,815. Principal Investigator.

1999 - 2003 NSF Ecological Studies Grant. Inter-patch movement, oviposition behavior and host-parasitoid population dynamics (DEB-9973789). $242,934 (Includes one REU Supplement). Principal investigator.

1998 - 2000 NSF and ND EPSCoR Infrastructure Improvement Program Grant. Host-parasitoid behavioral response to a patchy environment: consequences for population dynamics. $16,000. Principal Investigator.

1997 - 1999 NSF Systematics and Population Biology Grant (Research in Undergraduate Institutions). Natural-enemy response to herbivore host-race formation: Specialization to host-plant complexes (DEB-9710109). Co-Principal investigator (PI: Warren G. Abrahamson). $50,000.

1995 - 1998 NSF Ecological Studies Grant. Testing reaction-diffusion theory: spatial dynamics in a bark beetle-predator system (DEB-9509237). Postdoctoral Associate & contributing author (PIs: Peter Turchin and John D. Reeve). $270,000.

1992 NSF International Programs Grant. The quantitative genetics of parasitoid/host/host plant interactions: significance for biological control. Co-Principal investigator (PIs: Robert F. Denno and Dale G. Bottrell). $30,740. Funding offered, but declined.

Awards and Honors

LSU Distinguished Faculty Award, 2020
George C. Kent Professor of Biological Sciences, 2017-present.
LSU Alumni Association Faculty Excellence Award, 2009, $1000.

LSU Faculty Travel Grant, 2004, $1000.
LSU Council on Research Summer Stipend Program, 2002, $5000.
North Dakota EPSCoR Travel Award, 2000, $3000.
Senate Scholarly Activities Committee Travel Award, 2000, $685.
Summer Professorship, University of North Dakota, 1999, $5400.

Membership in Professional Organizations
The Society of American Naturalists, The Ecological Society of America, The International Association for Ecology, The Society for the Study of Evolution, The Entomological Society of America.

Seminars
During the past 5 years, 31 presentations were given: 18 at national meetings and 1 at international meetings. Fourteen were invited presentations.
** Undergraduate student contributor*

2022 (Jan.). Roseau cane scale: Research progress made in the last four years. Fourth Annual Roseau Cane Die-off Research Summit, LSU AgCenter, Hilltop Arboretum. Invited presentation. Roseau cane scale: Research progress made in the last four years. Rodrigo Diaz (senior author), Leslie Aviles, James T. Cronin, Ian Knight, Matthew Berry, Joshua Snook and Tanner Sparks.

2022 (Jan.). The chemical landscape of *Phragmites australis*. Fourth Annual Roseau Cane Die-off Research Summit, LSU AgCenter, Hilltop Arboretum. Invited presentation. Glassmire, Andrea (senior author), Alex Gaffke, Ana Salgado, Rodrigo Diaz, Michael Stout, Herie Lee and James T. Cronin.

2022 (Jan.). Metabolomic diversity of *Phragmites australis*. Fourth Annual Roseau Cane Die-off Research Summit, LSU AgCenter, Hilltop Arboretum. Invited presentation. Salgado-Maldonado, Ana (senior author), Andrea Glassmire, Rodrigo Diaz, Michael Stout, Carla Lambertini, Petr Pyšek, Laura A. Meyerson and James T. Cronin.

2022 (Jan.). Restoration of *Phragmites australis* dieback in the Lower Mississippi River Delta: lessons and future directions for restoration. Fourth Annual Roseau Cane Die-off Research Summit, LSU AgCenter, Hilltop Arboretum. Invited presentation. Lee, Herie (senior author), Rodrigo Diaz, Andy Nyman, Quin Kinler, Ian Knight, Joseph Johnston, Madeline Gill and James T. Cronin.

2021 (Nov.). How rhizome size influences *Phragmites australis* growth and tolerance to the roseau cane scale *Nipponaclerda biwakoensis*. Entomological Society of America, Annual Conference, Denver, CO. Josh Snook (senior author), James T. Cronin and Rodrigo Diaz.

2021 (Feb.). Climatic stressors and global genome size variation in native and invasive populations of a cosmopolitan plant. German Centre for Integrative Biodiversity

Research (iDiv) Annual Conference. Invited virtual presentation. Laura Meyerson (senior author), James T. Cronin and Petr Pyšek.

2021 (Jan.). Aboveground-belowground interactions and dieback of roseau cane. Third Annual Roseau Cane Die-off Research Summit, LSU AgCenter. Invited presentation.

2021 (Jan.). *Phragmites australis* dieback in the MRD: Chemical Profiles of healthy and dieback soils and impacts on plant biomass. Third Annual Roseau Cane Die-off Research Summit, LSU AgCenter. Invited presentation. Herie Lee (senior author) and James T. Cronin.

2021 (Jan.). The unknown of *Phragmites* metabolites. Third Annual Roseau Cane Die-off Research Summit, LSU AgCenter. Invited presentation. Ana Salgado-Maldonado (senior author) and James T. Cronin.

2021 (Jan.). Population dynamics of roseau cane, scales and plant communities at the Mississippi River Delta. Third Annual Roseau Cane Die-off Research Summit, LSU AgCenter. Invited presentation. Rodrigo Diaz (senior author), Ian Knight, Matthew Berry, Andy Nyman and James T. Cronin.

2020 (July). Population ecology and the importance of dispersal. Invited Presentation. Mathematical Ecology Virtual Workshop (co-host).

2019 (Dec.). Multiple stressors affecting roseau die-back. Second Annual Roseau Cane Die-off Research Summit, LSU AgCenter. Invited presentation.

2019 (Nov.). Understanding host plant resistance to the roseau cane scale: Quantification of lipids, phenolics and silica of *Phragmites australis* varieties. Entomological Society of America National Conference. Leslie Aviles Lopez (senior author), Ian Knight, James T. Cronin, Mike Stout and Rodrigo Diaz.

2019 (May). Susceptibility of *Phragmites australis* haplotypes to the invasive roseau cane scale, *Nipponaclerda biwakoensis*, in Coastal Louisiana. Society of Wetland Scientists Annual Meeting, Baltimore Maryland. Leslie Aviles Lopez (senior author), Rodrigo Diaz, Ian Knight and James T. Cronin.

2019 (Mar.). Elucidating the role of roseau cane scale in the *Phragmites australis* die-offs in the Mississippi River Delta: varietal response to biotic and abiotic stressors. Southeastern Branch Meeting, Entomological Society of America. Ian Knight (senior author), James T. Cronin, Madeline Gill, John Nyman, Blake Wilson and Rodrigo Diaz.

2019 (Mar.). Survival and population growth of roseau cane scale on *Phragmites* varieties and selected grass species. Southeastern Branch Meeting, Entomological Society of America. Leslie Aviles Lopez (senior author), Rodrigo Diaz, Ian Knight and James T. Cronin.

2018 (Dec.). Multiple stressors affecting Roseau die-back and implications for restoration. First Annual Roseau Cane Die-off Research Summit, LSU AgCenter. Invited presentation.

2018 (Sept.). Lineage overwhelms environmental conditions in determining rhizosphere bacterial community structure in a cosmopolitan invasive plant. Neobiota International Conference on Biological Invasions, Dublin, Ireland. Submitted talk with Laura A. Meyerson (senior author), Jennifer Bowen, Warwick J. Allen, Klára Pyšková, José Hierro, Deigo Villarreal, Jan Čuda and Petr Pyšek.

2018 (Aug.). Does genome size influence stress tolerance of invasive and native plants? Ecological Society of America, National Conference, New Orleans, LA. Submitted presentation with Laura A. Meyerson, Cao-Tri Tran* and Sara Wigginton.

2018 (Aug.). Dispersal-competition-fitness tradeoffs within an expanding range. Ecological Society of America, National Conference, New Orleans, LA. Submitted poster with Rachel R. Harman (senior author).

2018 (Aug). Effects of patch matrix and individual movement response on population persistence at the patch-level. Ecological Society of America, National Conference, New Orleans, LA. Submitted presentation with Jerome Goddard II (senior author) and Ratnasingham Shivaji.

2018 (Aug). Effects of interaction-mediated dispersal on the coexistence of populations. Ecological Society of America, National Conference, New Orleans, LA. Submitted presentation with Emily Cosgrove* (senior author), Eddie L. Lindsey*, Jerome Goddard II and Ratnasingham Shivaji.

2017 (Aug.). Plant lineage determines rhizosphere microbial structure and activity in a cosmopolitan species at a continental scale. Ecological Society of America, National Conference, Portland, Oregon. Submitted talk with Laura A. Meyerson (senior author), Patrick Kearns*, Jarrett E. K. Byrnes*, Sara Wigginton, Warwick J. Allen, Jennifer Yu and Jennifer Bowen.

2017 (Aug). Biological control at a range margin: Patterns of abundance and interannual variability. Ecological Society of America, National Conference, Portland, Oregon. Submitted poster with Nathan Harms (senior author).

2017 (Aug). The importance of negative and nonlinear density-emigration relationships. Ecological Society of America, National Conference, Portland, Oregon. Submitted poster with Rachel Harman (senior author), Jerome Goddard and Ratnasingham Shivaji.

2017 (Jun.). Roseau cane and herbivory on the Delta. Mississippi Delta Roseau Cane Scale Meeting. Louisiana Department of Wildlife and Fisheries, Venice, LA. Invited presentation.

2016 (Aug.). Invulnerable host stages, development time and host-parasitoid stability: An experimental test. Ecological Society of America, National Conference, Ft. Lauderdale, FL. Submitted poster with John Reeve, Dashun Xu, and MingQing Xiao.

2016 (Aug.). Geographic variation in plant-fungi interactions and community structure: implications for invasion success. Ecological Society of America, National Conference, Ft. Lauderdale, FL. Submitted talk with Warwick Allen (senior author), Laura Meyerson

2016 (June). An introduction to ecology and the importance of dispersal. Invited Presentation. Mathematical Ecology Workshop, University of North Carolina, Greensboro, NC.

2015 (Oct.). The biogeography of a plant invasion: plant-herbivore interactions. Invited presentation. University of Houston, Houston, TX.

2015 (July). The biogeography of *Phragmites australis* – herbivore interactions. Shandong University, Jinan, China. Invited talk with Laura Meyerson, Ganesh Bhattarai, and Warwick Allen.

2015 (July). Genotype and latitudinal variation in *Phragmites australis* tolerance to herbivory. Shandong University, Jinan, China. Invited talk with Jordan Croy* (senior author), Laura A Meyerson and Warwick Allen.

2015 (May). *Phragmites australis* invasion in North America: Impacts of hurricanes and herbivory. Florida Exotic Pest Plant Council Annual Symposium, Safety Harbor, FL. Invited talk with Ganesh Bhattarai (senior author), Laura Meyerson and Warwick Allen.

2015 (May). The biogeography of *Phragmites australis* – herbivore interactions. Society for Wetland Scientists Annual Meeting, Providence, RI. Invited talk with Laura Meyerson, Ganesh Bhattarai, and Warwick Allen.

2015 (May). *Phragmites australis* - intraspecific variability in gas exchange over a global gradient. Society for Wetland Scientists Annual Meeting, Providence, RI. Invited talk with Franziska Eller (senior author), X. Guo, W. Guo, H. Skálová, G. Bhattarai, R. Wang, M. Dong, S. Ye, T. J. Mozdzer, L. A. Meyerson, P. Pyšek and H. Brix.

2015 (May). Does karyological diversity play a role in *Phragmites* biogeography? Society for Wetland Scientists Annual Meeting, Providence, RI. Invited talk with Laura A. Meyerson (senior author), H. Skálová, J. Suda, P. Pyšek and H. Brix.

2015 (May). Geographical variation in the strength of apparent competition between native and invasive genotypes of *Phragmites australis*. Society for Wetland Scientists Annual Meeting, Providence, RI. Invited talk with Ganesh Bhattarai (senior author).

2015 (May). Drivers of plant invasions: Plant-fungi interactions. Society for Wetland Scientists Annual Meeting, Providence, RI. Invited talk with Warwick Allen (senior author), Laura

A Meyerson and Meredith Blackwell.

2015 (May). Genotype and latitudinal variation in *Phragmites australis* tolerance to herbivory. Society for Wetland Scientists Annual Meeting, Providence, RI. Submitted talk with Jordan Croy* (senior author), Laura A Meyerson and Warwick Allen.

2015 (Mar.). The biogeography of a plant invasion: plant-herbivore interactions. Invited presentation. Netherlands Institute of Ecology, Wageningen, The Netherlands.

Books, Journal Articles, and Grant Proposals Reviewed

AgreenSkills proposals; American Midland Naturalist; *American Naturalist; Annals of the Entomological Society of America*; *Applied Forestry and Entomology*; *Basic & Applied Ecology; Behavioural Ecology; BioControl; Biological Conservation, Science & Technology; Canadian Entomologist; Current Opinion in Insect Science*; Chapman and Hall; *Ecology; Ecology Letters; Ecological Entomology; Ecological Monographs; Entomologia Experimentalis et Applicata*; *Environmental Entomology; Evolution;* Florida Game & Fresh Water Fish Commission Nongame Wildlife Program; *Journal of Animal Ecology; Journal of Entomological Science; Oecologia; PLoS One*; National Science Foundation DEB & REU; *Proceedings of the Royal Society of London, Series B-Biological Sciences*; *Quarterly Review of Biology*; Ralph E. Powe Junior Faculty Enhancement Award, *Science*; Saunders College Publishers (Biology 5th edition; Solomon et al.), French National Institute for Agricultural Research AgreenSkills Fellowship Program.

Departmental/University Service

Professorship committee (2021-)
Search committee member, Ecology laboratory coordinator (2021)
College Policy Committee, member (2020-2022)
Reviewer – LSU Discover Undergraduate Research Grant Proposals (2018)
Graduate Admissions Committee (2013-)
Chair, Ecologist search committee (2014-15)
Academic showcase for top high-school prospects, tour guide (2010)
Representative for Systematics, Evolution and Ecology Division (2003-2005; Fall 2008; 2010-2012)
Executive Committee, Member (2003-2005; Fall 2008; 2010-2012)
Advisor for high-school students participating in spring testing (2001, 2003, 2005, 2007, 2009, 2011, 2013, 2015, 2017).
Chair, Schexnayder Botany Distinguished Scientist Fund (2009-2015)
Member, LBRN Selection Committee (2010)
Member, Policy committee, Basic Sciences (2008-2010)
Search committee member, Ecology laboratory coordinator (2008)
Ad-hoc SEE committee on curriculum reform (2007)
Communication across the Curriculum studio oversight committee, Member (2007-2008)
Communications across the Curriculum 3-day workshop, Participant (2007)

Systematics, Ecology & Evolution Division Seminar Committee, Chair (2007-2018)
Coordinator, graduate seminar, BIOL 7921 (2007-2018)
Chair search coordinating committee, Member (2006)
Ad-hoc SEE committee on departmental autonomy, Chair (2006)
Communications committee, Member (2006-2008)
Biological Sciences Workload Committee, Member (2005-2007)
Department of Biological Sciences Seminar Committee, Chair (2005-2006)
Mentoring committees for: Dr. Jiaqi Tan (chair), Dr. Erik Aschehoug (chair), Dr. Richard Stevens (chair), Dr. Bryan Carstens (member), Dr. Joomyeong Kim (member), Dr. Bret Elderd (member), Dr. Prasanta Chakrabarty (member), Dr. Christopher Austin (member)
Course & Curriculum Committee, Member (2004-2011)
Faculty Search Committees: Microbial physiology (Member, 2003), Landscape ecology (Chair, 2004), Quantitative genetics (Member, 2005), Evolutionary genetics (Member, 2006), Quantitative ecology (Member, 2007), Marine biology (Member, 2013), Population/Community Ecologist (Member, 2017)
Chair, Landscape Ecology search committee, LSU (2004)
Director of Graduate Studies, Dept. of Biology, UND (1999-2000)
Head, Ecology and Evolution Program, Dept. of Biology, UND (1999-2000)

Professional Service

Co-organized and co-led a Mathematical Ecology Virtual Workshop for 20 participants (July, 2020).
Organized and led a Mathematical Ecology workshop at LSU for 6 participants (March, 2017)
Co-organized and co-led a Mathematical Ecology Workshop at the University of North Carolina (Greensboro) for 50 participants (June, 2016).
Organized and led a Mathematical Ecology workshop at LSU for 12 participants (February, 2016)
NSF Panel Member: Population and Community Ecology (Spring, 2017)
NSF Panel Member: Population and Community Ecology (Spring, 2016)
Subject matter editor, *Journals of the Ecological Society of America* (2003-present)
Co-organized a 48-talk symposium on Phragmites australis, for the Society for Wetland Scientist's meeting in Providence, RI (April, 2015)
NSF Panel Member, Evolutionary and Population Ecology (Spring, 2007, 2011)
Subject matter editor, Ecosphere (2010-2012)
Consultant, HydroGeoLogic, Inc. (2010)
Panelist, Strategic Environmental Research and Development Program (SERDP), Ecology and Management of Source-Sink Populations (2010)
Presider, Annual meeting of the Ecological Society of America, Milwaukee, WI (2008)
Reviewer of Tenure & Promotion application, Wright State University (2008), Southern Illinois University (2009), Oklahoma State University (2013), University of Denver (2015), Virginia Commonwealth University (2016)
Member, Faculty of 1000, Population Ecology (2006-2008)
Editorial board member, *Oecologia* (1999-2005)
NSF Panel Member: REU Site Program (2004)

Service to Community

Participant, Bug Talk: *Phragmites* dieback in the Mississippi River Delta Podcast (June 23, 2021)

Advisor for the National Resource Conservation Service in Baton Rouge and Governor's Committee on Coastal Marsh Die Off (2017 -)

Co-creator of a webinar on the scale insect outbreak in the Mississippi River Delta (http://tcs.lsuagcenter.net/tcs/?id=F571382A-6EB8-4840-9EB5-856DA3819EB7) (2017)

Scientific advisor, Dogwood Alliance (advocacy group for the protection and sustainability of southern forests). (2015)

Organizer and participant in a service learning project on invasive species at Bluebonnet Swamp (as part of BIOL 4254) (2008 - 2017)

Consultant, HydroGeoLogic, Inc. (2010)

Career day, Wellington Elementary School (FL), (2003, 2005, 2006)