

CURRICULUM VITAE - JENNIFER ANNE RUDGERS

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PROFESSIONAL POSITIONS

2021-*current* Regents' Professor, University of New Mexico
2018-*current* Director, Sevilleta Long-Term Ecological Research Program
2017-*current* Professor, Department of Biology, University of New Mexico, Albuquerque, NM
2012-2017 Associate Professor, Department of Biology, University of New Mexico, Albuquerque, NM
2011-2012 Associate Professor, Wiess Career Development Chair, Rice University, Houston, TX
2005-2011 James H. Godwin Assistant Professor, Rice University, Houston, TX
2002-2005 National Science Foundation Postdoctoral Fellowship in Microbial Biology, Indiana University, Bloomington, IN; *Postdoctoral advisor*: Keith Clay

EDUCATION AND TRAINING

2002 Ph.D. Population Biology. University of California, Davis, CA.
PhD advisors: Sharon Y. Strauss, Donald R. Strong
1996 B.S. Environmental Science. Denison University, Granville, OH. *Summa Cum Laude*

RESEARCH FUNDING

2021- \$307,495 National Science Foundation DEB 2105402 Collaborative Research:
2025 Understanding spatiotemporal dynamics of plant-soil feedbacks: Consequences for shrub-grass interactions in a dryland ecotone (Lead PI Chung)

2019- \$1,009,923 National Science Foundation DEB 1911451 *Quantifying the microbial
2023 contribution to community recovery from drought* (Lead PI Rudgers)

2019- \$489,000 National Science Foundation DEB 1856383 *LTREB: Community reordering
2023 alters ecosystem processes in desert grassland* (Lead PI Collins, Scott)

2018- \$6,432,997 National Science Foundation DEB 1655499, *LTREB: Sevilleta (SEV) Site:
2024 Climate Variability at Dryland Ecotones* (Lead PI Rudgers)

2018- \$482,500 National Science Foundation DEB 1754433, LTREB:
2023 *Collaborative Research: Host-microbe symbiosis through the lens of stochastic demography* (Lead PI Miller, T.E.X – UNM Award: \$178,630)

2016- \$1,522,132 National Science Foundation DEB COLLABORATIVE RESEARCH: Testing the
2020 fungal loop hypothesis for C and N cycling in dryland ecosystems (Darrouzet-Nardi, A.; Sinasabaugh, R. L.; Dettweiler-Robinson, E.; Rudgers, J.A. – UNM Award: \$730,297)

2015- \$1,089,147 National Science Foundation DEB 1456955, *COLLABORATIVE RESEARCH:
2021 Parsing the effects of host specificity and geography on plant-fungal symbioses under climate change* (Lead PI Rudgers – UNM award: \$406,134)

RESEARCH FUNDING

2014-2018	\$ 829,238	National Science Foundation DEB 1354972, <i>The potential for climate induced disruption of plant-microbe symbioses</i> (Lead PI Rudgers)
2017-2018	\$300,000	National Science Foundation DEB 1748133 <i>EAGER: Collaborative Research: Sevilleta LTER Environmental Variability at Dryland Ecotones</i> (Lead PI Rudgers – UNM Award: \$276,566)
2017-2018	\$50,854	National Science Foundation DEB 1722232 Research Opportunity Award supplement to 1456955 with Dr. Kelly Lyons, Trinity University
2015-2017	\$98,090	National Institute of Health COBRE: CETI Pilot Project Funding <i>How does climate change alter the activities of pathogens and symbionts to affect host health?</i> (Rudgers, J.A.; Kivlin, S.N.; Kazenel, M.R.)
2015-2018	\$3,920,000	National Science Foundation DEB 1440478, <i>LTER V: Long Term Pulse Dynamics in an Aridland Ecosystem</i> (Lead PI Pockman)
2012-2017	\$560,000	National Science Foundation DEB 1145588, <i>Ecological dynamics of vertically transmitted symbionts in hosts with complex life histories</i> (Lead PI Miller)
2010-2013	\$271,854	National Science Foundation DEB 0949719 <i>Linking microbial community composition to the ecological dominance of plants</i> (Lead PI, post-doc Valérie Huguet)
2012	\$7,508	REU supplement 1
2009-2013	\$370,985	National Science Foundation DEB 0918267 COLLABORATIVE RESEARCH: <i>Can microbial symbionts mediate effects of climate change on the functioning of an ecosystem engineer?</i> (with Sarah Emery)
2007-2009	\$20,000	National Geographic Society <i>Yellow crazy ant invasion of the Samoan Archipelago: Do novel mutualisms amplify the ecological impacts?</i> (with PI Ken Whitney, Amy Savage)
2006-2012	\$449,946	National Science Foundation DEB 0542781 <i>Do symbioses determine plant species abundances? How endophytic fungi may control rarity, dominance, and invasiveness of grasses</i>
2008	\$14,000	REU supplement 1
2009	\$ 7,475	REU supplement 2
2010	\$ 8,000	REU supplement 3
2006-	\$120,000	National Parks Ecological Research Post-Doctoral Fellowship (to post-2008 doc Sarah Emery)
2003-	\$100,000	National Science Foundation Postdoctoral Fellowship in Microbial Biology
1998-2001	\$66,000	Environmental Protection Agency Science to Achieve Results Fellowship
1997	\$ 4,000	National Science Foundation Graduate Research Trainee
1995	\$ 2,000	National Science Foundation REU Kansas State University/ Konza Prairie

GRANTS AND FELLOWSHIPS - INTERNAL

2019	\$10,000	UNM RAC Award <i>Climate Variability: An installation at the Seville LTER</i> (Lead PI: Catherine Harris, UNM Associate Professor of Landscape Architecture and Art & Ecology)
2008	\$40,000	Shell Center for Sustainability: <i>Genetic and environmental impacts on 2010 lignin accumulation</i> (with Janet Braam, Carrie Masiello, Bill Hockaday)
2007	\$10,000	Rice University Energy and Environmental Systems Institute Award:
2008		<i>Mechanisms of soil carbon sequestration: optimizing soil carbon interactions with minerals and fungi</i> (with Carrie Masiello)
2007	\$4,977	Rice University Brown Teaching Grant: <i>Enhancing lecture quality and comprehension with technology</i> (with Ken Whitney)
2006	\$4,957	Rice University Brown Teaching Grant 2006 <i>Learning beyond the classroom walls: applying a student-teacher collaborative approach to biology</i>
2006-2007	\$20,000	Rice University Institute of Biosciences and Bioengineering Hamill Innovation Award: <i>Isolating AM fungi as keystone regulators of carbon sequestration in dune ecosystems</i> (with Carrie Masiello, Sarah Emery)
2001-2002	\$17,000	University of California-Davis Dissertation Year Fellowship
1996-2002	\$21,000	University of California-Davis Competitive Intramural Research and Travel Awards (total)

RESEARCH FUNDING – PENDING

2021	\$299,998	US Geological Society <i>Can compost addition ameliorate drought effects on soil microbial and plant communities in dry rangelands?</i> Eva Stricker (lead PI)
2021	\$60,000	National Science Foundation <i>LTER Research Experience for Teachers</i>
2021	\$12,500,000	National Science Foundation Biological Integration Institute <i>BII: WATER - Water Availability Thresholds and Ecosystem Resilience</i> Dave Hanson (co-lead)
2021	\$1,569,563	National Institutes of Health <i>ESE Remed: Bioremediation by integrating plant-fungi symbiosis and natural minerals for uptake of metal mixtures</i> Jose Cerrato (lead PI)
2020	\$307,495	National Science Foundation <i>Collaborative Research: Understanding spatiotemporal dynamics of plant-soil feedbacks: Consequences for shrub-grass interactions in a dryland ecotone</i> Anny Chung (lead PI)

HONORS, AWARDS AND NOMINATIONS

Eminent Ecologist Award, 2014, W. K. Kellogg Biological Station
National Academies of Science, Course-based Undergraduate Research Institute, 2015
Phi Beta Kappa Teaching Prize Finalist - Rice University 2009, 2010
David and Lucile Packard Foundation Fellowship for Science and Engineering Nominee – Rice University

HONORS, AWARDS AND NOMINATIONS

Alan T. Waterman Award Nominee – Rice University
Distinguished Faculty Associate Award (Lovett College) – Rice University
Allen G. Marr Prize for Best Dissertation – University of California at Davis
Botanical Society of America – Young Botanist Award
Phi Beta Kappa – Denison University
Sigma Xi – Denison University
Distinguished Leadership Award – Denison University

PUBLICATIONS

Google Scholar H-index: **45**, i10 Index: **96**, Sum of Times Cited: **7,381**

NOTATION: *Undergraduate student **Graduate student

PUBLISHED/IN PRESS/ACCEPTED

- (136) Maron, J. L., D. C. Lightfoot, M. A. Rodriguez-Cabal, S. L. Collins, and J. A. Rudgers. (in press) Long-term impacts of rodent exclusion on desert plant communities. **Ecological Monographs**
- (135) Lynn, J.S.** T. E. X. Miller, J. A. Rudgers (accepted pending revision) Mammalian herbivores restrict the altitudinal range limits of alpine plants. **Ecology Letters** 24: 1930– 1942. doi: 10.1111/ele.13829
- (134) Rudgers, J. A., S. Fox, A. Porras-Alfaro, J. Herrera, C. Reazin, D. R. Kent*, L. Souza, Y. A. Chung**, A. Jumpponen (2021) Biogeography of root-associated fungi in foundation grasses of North American Plains **Journal of Biogeography** Online Early. doi: 10.1111/jbi.14260
- (133) Cárdenas, P. A., E. Christensen, S. K. M. Ernest, D. Lightfoot, R. L. Schooley, P. Stapp, J. A. Rudgers 2021. Declines in rodent abundance and diversity track regional climate variability in North American drylands. **Global Change Biology** doi: 10.1111/gcb.15672
- (132) Hou, E., M. E. Litvak, J. A. Rudgers, L. Jiang, S. L. Collins, W. T. Pockman, D. Hui, S. Niu, and Y. Luo. 2021. Increasing precipitation variability enhances primary production in arid ecosystems. **Global Change Biology** doi: 10.1111/gcb.15801.
- (131) DeVore, C. L., E. El Hayek, T. Busch, B. Long, P. Owen-Smith, M. Mann**, J. A. Rudgers, A. Mehdi Ali, T. Howard, M. Spilde, A. Brearley, C. Ducheneaux, J. M. Cerrato. (in press) Root fungi alter arsenic uptake in hydroponically grown *Schizachyrium scoparium* (little bluestem) **ACS Earth & Space Chemistry**
- (130) Zinnert, J. C., Nippert, J. B., Rudgers, J. A., Pennings, S. C., Gonzalez, G., Alber, M., ... Young, D. R. (2021). State changes: insights from the U.S. Long Term Ecological Research Network. **Ecosphere** 12: e03433 doi: 10.1002/ecs2.3433
- (129) Steinberg**, K. A., Eichhorst, K. D., & Rudgers, J. A. (2021). Flood regime alters the abiotic correlates of riparian vegetation. **Applied Vegetation Science** doi: 10.1111/avsc.12572
- (128) Lagueux*, D., A. Jumpponen, A. Porras-Alfaro, J. Herrera, Y. A. Chung**, L. E. Baur, M. D. Smith, A. K. Knapp, S. L. Collins, and J. A. Rudgers (2021). Experimental drought alters the fungal rhizobiomes of grasses across North American grasslands. **Journal of Ecology** 109:776-792 doi: 10.1111/1365-2745.13505

- (127) Lyons, K.G., M. Mann**, M. Lenihan, O. Roybal, K. Carroll, K. Reynoso, S. Kivlin, D. L. Taylor, J. A. Rudgers (2021) Culturable root endophyte communities shaped by both warming and plant host identity in the Rocky Mountains, USA **Fungal Ecology** 49:101002 doi: 10.1016/j.funeco.2020.101002
- (126) Donald, M., T. Bohner, T.; K. Kolis, A. Shadow, J. A. Rudgers, T. E. X. Miller (2021) Context-dependent variability in the population prevalence and individual fitness effects of plant-fungal symbiosis. **Journal of Ecology** 109: 847-859 doi: 10.1111/1365-2745.13510
- (125) Hou, E. J. A. Rudgers, S. L. Collins, M. E. Litvak, C. S. White, D. I. Moore, Y. Luo (2020) Sensitivity of soil organic matter to climate and fire in a desert grassland **Biogeochemistry Special Issue: Multi-scale controls on soil organic matter**. doi: 10.1007/s10533-020-00713-3
- (124) Rudgers, J. A., M. Afkhami, L. Bell-Dereske, Y. A. Chung, K. Crawford, S. N. Kivlin, M. Mann, and M. Nunez. (2020) Climate disruption of plant-microbe interactions. **Annual Review of Ecology, Evolution and Systematics** 51: 561-586. doi: 10.1146/annurev-ecolsys-011720-090819
- (123) Herrera, J., R. E. Haskew-Layton, M. Narayanan, A. Porrás-Alfaro, A. Jumpponen, Y. A. Chung**, J. A. Rudgers (2020) Improving instructional “fitness” requires change. **BioScience** 70: 1027-1035 doi: 10.1093/biosci/biaa111
- (122) Gundel, P. E., P. Sun*, N. D. Charlton, C. A. Young, T. E. X. Miller, J. A. Rudgers. (2020) Simulated folivory increases vertical transmission of fungal endophytes that deter herbivores and alter tolerance to herbivory in *Poa autumnalis*. **Annals of Botany** 125:981–991. doi: 10.1093/aob/mcaa021
- (121) Steinberg**, K. A., Eichhorst, K. D., & Rudgers, J. A. (2020). Riparian plant species differ in sensitivity to both the mean and variance in groundwater stores. **Journal of Plant Ecology** 13: 621-632 doi: 10.1093/jpe/rtaa049
- (120) Stricker**, E., Stricker, E., G. Crain, J. A. Rudgers, R. L. Sinsabaugh, V. M. C. Fernandes, C. Nelson, A. Girard-Silva, F. Garcia-Pichel, J. Belnap, and A. Darrouzet-Nardi. (2021). What could explain $\delta^{13}\text{C}$ signatures in biocrust cyanobacteria of drylands? **Microbial Ecology** 81:134–145. doi: 10.1007/s00248-020-01536-3
- (119) Kent, D. R., Lynn, J. S., Pennings, S. C., Souza, L. A., Smith, M. D., & Rudgers, J. A. (2020). Weak latitudinal gradients in insect herbivory for dominant rangeland grasses of North America. **Ecology and Evolution**. 10: 6385– 6394. doi: 10.1002/ece3.6374
- (118) Collins, S. L., Chung, Y. A., Baur, L. E., Hallmark, A. J., Ohlert, T. J., & Rudgers, J. A. (2020). Press–pulse interactions and long-term community dynamics in a Chihuahuan Desert grassland. **Journal of Vegetation Science**. doi: 10.1111/jvs.12881
- (117) Kazenel**, M. R., K. W. Wright, J. Bettinelli, T. L. Griswold, K. D. Whitney, and J. A. Rudgers. (2020). Predicting changes in bee assemblages following state transitions in North American drylands. **Scientific Reports**. 10:708. doi: 10.1038/s41598-020-57553-2
- (116) Lynn**, J.S., D. A. Duarte*, and J. A. Rudgers. (2019) Soil microbes that may accompany climate warming increase alpine plant production. **Oecologia**. doi: 10.1007/s00442-019-04518-6
Highlighted Student Research
- (115) David, A. S., L. P. Bell-Dereske**, S. M. Emery, B. McCormick*, E. W. Seabloom, J.A. Rudgers (2019) Testing for loss of *Epichloë* and non-epichloid symbionts under altered rainfall regimes. **American Journal of Botany** 106:1-9. doi: 10.1002/ajb2.1340

- (114) Kazenel**, M. R., S. N. Kivlin, D. L. Taylor, J. S. Lynn, and J. A. Rudgers (2019) Altitudinal gradients fail to predict fungal symbiont responses to warming. **Ecology**, e02740. doi: 10.1002/ecy.2740
- (113) Lynn**, J. S., M. R. Kazenel**, S. N. Kivlin, and J. A. Rudgers (2019) Context-dependent biotic interactions predict plant abundance across altitudinal environmental gradients **Ecography** doi: 10.1111/ecog.04421
- (112) Kivlin, S. N., M. R. Kazenel**, J. S. Lynn**, D. L. Taylor, J. A. Rudgers (2019) Plant identity influences foliar fungal symbionts more than elevation in the Colorado Rocky Mountains. **Microbial Ecology** 78:688-698. doi: 10.1007/s00248-019-01336-4.
- (111) Kivlin, S. N. and J. A. Rudgers (2019) Direct and indirect influences of warming on leaf endophytic fungi: A physiological and compositional approach. **Ecosystem Consequences of Soil Warming**. Academic Press. pp: 125-140.
- (109) Chung**, Y. A., B. *Thornton, E. Dettweiler-Robinson**, and J. A. Rudgers. (2019) Soil surface disturbance alters cyanobacterial biocrusts and soil properties in dry grassland and shrubland ecosystems. **Plant and Soil** 441:147. doi: 10.1007/s11104-019-04102-0
- (108) Chung**, Y. A., S. L. Collins, and J. A. Rudgers. (2019) Connecting plant-soil feedbacks to long term plant community stability in a Chihuahuan Desert grassland. **Ecology** May 7:e02756. doi: 10.1002/ecy.2756
- (107) Whitney, K. D., J. Mudge, D. O. Natvig, A. Sundararajan, W. T. Pockman, J. Bell, S. L. Collins, J. A. Rudgers. (2019) Experimental drought reduces genetic diversity in the grassland foundation species *Bouteloua eriopoda* **Oecologia** 189: 1107-1120. doi: 10.1007/s00442-019-04371-7
- (106) Buckley*, H., C. A. Young, N. D. Charlton, W. Q. Hendricks*, B. Haley, P. Nagabhyru, J. A. Rudgers (2019) Leaf endophytes mediate fertilizer effects on plant yield and traits in northern oat grass (*Trisetum spicatum*). **Plant and Soil** 434: 425–440
- (105) Sneck, M. E., J. A. Rudgers, C. A. Young, T. E. X. Miller (2019) Does host outcrossing disrupt compatibility with heritable symbionts? **Oikos** 128: 892–903
- (104) Chung**, Y. A., A. Jumpponen, and J. A. Rudgers. (2018) Divergence in diversity and composition of root-associated fungi between greenhouse and field studies in a semiarid grassland. **Microbial Ecology** 78: 122-135.
- (103) Rudgers, J. A., E. Dettweiler-Robinson**, J. Belnap, L. E. Green, R. L. Sinsabaugh, K. E. Young, C. E. Cort, A. Darrouzet-Nardi. (2018) Are fungal networks key to dryland primary production? **American Journal of Botany** 105: 1783-1787.
- (102) Lynn**, J. S., S. Canfield*, R. R. Conover, J. Keene, and J. A. Rudgers. 2018. Pocket gopher (*Thomomys talpoides*) soil disturbance peaks at mid-elevation and is associated with air temperature, forb cover, and plant diversity. **Arctic Antarctic and Alpine Research** 50.
- (101) Cavazos, B. R., T. F. Bohner, M. L. Donald, M. E. Sneck, A. Shadow, M. Omacini, J. A. Rudgers, and T. E. X. Miller (2018) Testing the roles of vertical transmission and drought stress in the prevalence of heritable fungal endophytes in annual grass populations. **New Phytologist** 219:1075-1084. doi-org.libproxy.unm.edu/10.1111/nph.15215
- (100) Dettweiler-Robinson**, E., R. L. Sinsabaugh, and J. A. Rudgers. 2018. Biocrusts benefit from plant removal. **American Journal of Botany** 105:1-9.

- (99) *Carlton L., N. C. Duncritts*, Y. A. Chung**, and J. A. Rudgers (2018) Plant-microbe interactions as a cause of ring formation in *Bouteloua gracilis*. **Journal of Arid Environments** 152:1-5.
- (98) Rudgers, J. A., Y. A. Chung**, G. E. Maurer, D. I. Moore, E. H. Muldavin, M. E. Litvak, and S. L. Collins (2018) Climate sensitivity functions and net primary production: A framework for incorporating climate mean and variability. **Ecology** 3:576-582 10.1002/ecy.2136
- (97) Kalosa-Kenyon*, E., L. C. Slaughter, J. A. Rudgers, and R. L. McCulley (2018) Asexual *Epichloë* endophytes do not consistently alter arbuscular mycorrhizal fungi colonization in three grasses. **American Midland Naturalist** 179:157-165
- (96) Fernandes, V. M. C., N. M. Machado de Lima, D. Roush, J. A. Rudgers, S. L. Collins, and F. Garcia-Pichel (2018) Exposure to predicted precipitation patterns decreases population size and alters community structure of cyanobacteria in biological soil crusts from the Chihuahuan Desert. **Environmental Microbiology** 20: 259–269. doi:10.1111/1462-2920.13983
- (95) Jumpponen A., J. Herrera, A. Porras-Alfaro, J. A. Rudgers (2017) Biogeography of root-associated endophytes (Chapter 10). **Ecological Studies** 230:195-222.
- (94) Adams*, A. E., M. R. Kazenel**, and J. A. Rudgers (2017) Does a foliar endophyte improve plant fitness under flooding? **Plant Ecology** 218:711-723.
- (93) Bell-Dereske**, L., C. Takacs-Vesbach, S. N. Kivlin, S. M. Emery, and J. A. Rudgers (2017) Leaf endophytic fungus interacts with precipitation to alter belowground microbial communities in primary successional dunes. **FEMS Microbiology Ecology** 93. doi-org.libproxy.unm.edu/10.1093/femsec/fix036
- (92) Chung**, Y. A., R. L. Sinsabaugh, C. R. Kuske, S. C. Reed, and J. A. Rudgers (2017) Spatial variation in edaphic characteristics is a stronger control than nitrogen inputs in regulating soil microbial effects on a desert grass. **Journal of Arid Environments** 142:59-65.
- (91) Gundel, P. E., J. A. Rudgers, and K. D. Whitney (2017) Vertically transmitted symbionts as mechanisms of transgenerational effects. **American Journal of Botany** 104:787-792.
- (90) Kivlin, S. N., J. S. Lynn**, M. R. Kazenel**, K. K. Beals, and J. A. Rudgers (2017) Biogeography of plant-associated fungal symbionts in mountain ecosystems: A meta-analysis. **Diversity and Distributions** 23:1067-1077.
- (89) Sneek, M. E., J. A. Rudgers, C. A. Young, and T. E. X. Miller (2017) Variation in the prevalence and transmission of heritable symbionts across host populations in heterogeneous environments. **Microbial Ecology** 74:640-653.
- (88) Bell-Dereske**, L., X. Gao, C. A. Masiello, R. L. Sinsabaugh, S. M. Emery, and J. A. Rudgers (2016) Plant-fungal symbiosis affects litter decomposition during primary succession. **Oikos**. 126: 801-811. doi: 10.1111/oik.03648
- (87) Barrios-Garcia, M. N., M. A. Rodriguez-Cabal, J. A. Rudgers, and G. M. Crutsinger (2016) Soil fertilization does not alter plant architectural effects on arthropod communities. **Journal of Plant Ecology** 10: 800-807. doi: 10.1093/jpe/rtw087
- (86) Bibian, A., J. A. Rudgers, and T. E. X. Miller (2016) The role of host demographic storage in the ecological dynamics of heritable symbionts. **American Naturalist** 188: 446-459.

- (85) Chung**, Y. A., and J. A. Rudgers (2016) Plant–soil feedbacks promote negative frequency dependence in the coexistence of two aridland grasses. **Proceedings of the Royal Society of London B: Biological Sciences** 283: 10.1098/rspb.2016.0608r
- (84) Rudgers, J. A., R. A. Fletcher, R. A., E. Olivas*, C. A. Young, N. D. Charlton, D. Pearson, J. L. Maron (2016) Long-term ungulate exclusion reduces fungal symbiont frequency within *Festuca campestris* in native grasslands. **Oecologia** 181: 1151-1161.
- (83) Sinsabaugh, R. L., J. Belnap, J. A. Rudgers, C. R. Kuske, N. Martinez*, and D. Sandquist (2015) Soil microbial responses to nitrogen addition in arid ecosystems. **Frontiers in Microbiology** 6: 819. doi: 10.3389/fmicb.2015.00819
- (82) Kazenel**, M. R., C. Debban*, L. Ranelli*, W. Hendricks*, Y. A. Chung**, T. Pendergast, N. D. Charlton, C. A. Young, J. A. Rudgers (2015) A mutualistic endophyte alters the niche dimensions of its host plant. **AoB Plants**. 7: plv005 doi: 10.1093/aobpla/plv005
- (81) Chung**, Y. A., T. E. X. Miller, and J. A. Rudgers (2015) Fungal symbionts maintain a rare host plant population but demographic advantage drives the dominance of a common host. **Journal of Ecology** 103: 967-977
- (80) Ranelli*, L. B., W. Q. Hendricks*, J. S. Lynn**, S. N. Kivlin, J. A. Rudgers (2015) Biotic and abiotic predictors of fungal symbiont distributions in grasses of the Colorado Rockies. **Diversity and Distributions** 21: 962-976. doi: 10.1111/ddi.12310..
- (79) Rudgers, J.A., L. Bell-Dereske**, K. M. Crawford**, S.M. Emery (2015) Fungal symbiont effects on dune plant diversity depend on precipitation **Journal of Ecology** 103: 219–230 DOI: 10.1111/1365-2745.12338
- (78) Emery, S. M., L. Bell-Dereske**, and J. A. Rudgers (2015) Fungal symbiosis and precipitation alter traits and dune building by the ecosystem engineer, *Ammophila breviligulata*. **Ecology** 96:927–935 doi: 10.1890/14-1121.1.
- (77) Collins, S.L., J. Belnap, N.B. Grimm, J.A. Rudgers, C. N. Dahm, P. D’Odorico, M. Litvak, D.O. Natvig, D.C. Peters, W.T. Pockman, R.L. Sinsabaugh, and B.O. Wolf (2014) A multi---scale, hierarchical model of pulse dynamics in aridland ecosystems. **Annual Review of Ecology, Evolution, and Systematics** 45:397-419. doi: 10.1146/annurev-ecolsys-120213-091650
- (76) Russell, J. A., N. Dubilier, N. and J. A. Rudgers (2014) Nature's microbiome: introduction. **Molecular Ecology** 23: SI 1225-1237
- (75) Emery, S. M. and J. A. Rudgers (2014) Biotic and abiotic predictors of ecosystem engineering traits of the dune builder *Ammophila breviligulata* **Ecosphere** 5: art87
- (74) Chamberlain**, S. A., J. L. Bronstein, J. A. Rudgers (2014) How context dependent are species interactions? **Ecology Letters** 17: 881-890 doi: 10.1111/ele.12279
- (73) Rudgers, J.A. S. N. Kivlin, K. D. Whitney, M. V. Price, N. M. Waser, and J. Harte (2014) Responses of high-altitude graminoids and soil fungi to 20 years of experimental warming. **Ecology** 95: 1918-1928
- (72) Miller, T.E.X. and J. A. Rudgers (2014) Niche differentiation in the dynamics of host-symbiont interactions: Symbiont prevalence as a coexistence problem. **American Naturalist** 183: 506-518
- (71) Afkhami**, M. E., J. A. Rudgers and J. J. Stachowicz (2014) Multiple mutualist effects: Conflict and synergy in multispecies mutualisms. **Ecology** 95: 833-844

- (70) Crutsinger, G. M., M. A. Rodriguez-Cabal, A. B. Roddy, K. G. Peay, J. L. Bastow, A. G. Kidder, T. E. Dawson, P. V.A. Fine, and J. A. Rudgers (2014) Genetic variation within a dominant shrub structures green and brown food webs and ecosystem processes. **Ecology** 95: 387-398
- (69) Chamberlain**, S.A., K. D. Whitney, J. A. Rudgers (2013) Proximity to agriculture alters abundance and community composition of wild sunflower mutualists and antagonists. **Ecosphere** 4: UNSP 96
- (68) Masiello, C., Y. Chen, X. Gao, S. Liu, H-Y. Cheng, M. Bennett, J. A. Rudgers, D. Wagner, K. Zygourakis, and J. Silberg (2013) Biochar and microbial signaling: Production conditions determine effects on microbial communication. **Environmental Science & Technology** 47: 11496-11503
- (67) Emery, S. M. and J. A. Rudgers (2013) Impacts of simulated climate change and fungal symbionts on survival and growth of a foundation species in sand dunes. **Oecologia** 173: 1601-1612
- (66) Kivlin, S. N., S. M. Emery, and J. A. Rudgers (2013) Fungal symbionts alter plant responses to global change. **American Journal of Botany** 100: 1445-1457
- (65) Crutsinger, G. M., B. E. Carter, and J. A. Rudgers (2013) Soil nutrients trump genetic effects on understory plant communities. **Oecologia** 173: 1531-1538
- (64) **Crawford, K. M. and J. A. Rudgers (2013) Genetic diversity within a dominant plant species outweighs plant species diversity in structuring an arthropod community. **Ecology** 94: 1025–1035
- (63) **Savage, A. M. and J. A. Rudgers (2013) Non-additive benefit or cost? Disentangling the indirect effects that occur when plants bearing extrafloral nectaries and honeydew-producing insects share exotic ant mutualists. **Annals of Botany** 111: 1295-1307
- (62) *Yule, K. M., T. E. X. Miller, and J. A. Rudgers (2013) Costs, benefits, and loss of vertically transmitted symbionts affect host population dynamics. **Oikos** 10: 1512–1520
- (61) *LeCroy, C., C.A.Masiello, J.A.Rudgers, W.C. Hockaday, J.J. Silberg (2013) Nitrogen, biochar, and mycorrhizae: Alteration of the symbiosis and oxidation of the char surface. **Soil Biology and Biochemistry** 58: 248–254.
- (60) *Gorischek, A. M., M. E. Afkhami, E. K. Seifert, J. A. Rudgers (2013) Fungal symbionts as manipulators of plant reproductive biology. **American Naturalist** 181: 562-570
- (59) **Crawford, K. M. and J. A. Rudgers (2012) Plant species diversity and genetic diversity within a dominant species interactively affect plant community biomass **Journal of Ecology** 100: 512–1521 DOI: 10.1111/j.1365-2745.2012.02016.x **featured as Editor's Choice:**
<http://jecologyblog.wordpress.com/2012/10/23/editors-choice-1006/>
- (58) Emery, S.M. and J. A. Rudgers (2012) Impact of competition and mycorrhizal fungi on growth of *Centaurea stoebe*, an invasive plant of sand dunes. **American Midland Naturalist** 167:213-222
- (57) **Maitner, B. S., J. A. Rudgers, A. E. Dunham, K. D. Whitney (2012) Patterns of bird invasion are consistent with environmental filtering. **Ecography** 35: 614-623
- (56) Rudgers, J. A., T.E.X. Miller, S. M. Ziegler, and K. D. Craven (2012) There are many ways to be a mutualist: vertically transmitted symbiont reduces host survival but increases population growth. **Ecology** 93: 565-574

- (55) **Chamberlain, S. C., M. A. Gardener, and J. A. Rudgers (2012) How do plants balance multiple mutualists? Correlations among traits for attracting protective bodyguards and pollinators in cotton (*Gossypium*). **Evolutionary Ecology** 26: 65-77
- (54) Gundel, P. E., J. A. Rudgers, C. M. Ghersa (2011) Incorporating the process of vertical transmission into understanding of host-symbiont dynamics **Oikos** 120: 1121-1128
- (53) *Yule, K. M., J. B. Woolley, J. A. Rudgers (2011) Water availability alters the tri-trophic consequences of a plant-fungal symbiosis. **Arthropod - Plant Interactions** 5: 19-27
- (52) *Craig, S., S. Kannadan*, S. L. Flory, E. K. Seifert, K. D. Whitney, J. A. Rudgers (2011) Endophyte symbiosis increases resistance of the native grass *Poa alsodes* to invasion by the non-native grass *Microstegium vimineum*. **Symbiosis** 53: 17-28
- (51) *Baskett, C. A., S. M. Emery, and J. A. Rudgers (2011) Pollinator visits to threatened species are restored following invasive plant removal. **International Journal of Plant Sciences** 172: 411-422
- (50) Emery, S.M. and J. A. Rudgers (2011) Beach restoration efforts influenced by plant variety, soil inoculum, and site effects. **Journal of Coastal Research** 27: 636-644
- (49) Ghimire, S. R., J. A. Rudgers, N. D. Charlton, C. Young, and K. D. Craven (2011) Prevalence of an intra-specific *Neotyphodium* hybrid in natural populations of Stout Wood Reed (*Cinna arundinacea* L.) from eastern North America. **Mycologia** 103: 74-84
- (48) **Davitt, A. J., M. Stansberry*, and J. A. Rudgers (2010) Do the costs and benefits of fungal endophyte symbiosis vary with light availability? **New Phytologist** 188: 824-834
- (47) **Savage, A. M., S. D. Johnson*, K. D. Whitney, and J. A. Rudgers (2011) Do invasive ants respond more strongly to carbohydrate availability than co-occurring non-invasive ants? A test along an active *Anoplolepis gracilipes* invasion front. **Austral Ecology** 36: 310-319
- (46) *Simao, M. C. M., S. L. Flory, and J. A. Rudgers (2010) Experimental plant invasion reduces arthropod abundance and richness across multiple trophic levels. **Oikos** 119: 1553-1562
- (45) **Davitt, A. J., C. Chen*, and J. A. Rudgers (2011) Understanding context-dependency in plant-microbe symbiosis: the influence of abiotic and biotic contexts on host fitness and the rate of symbiont transmission **Environmental and Experimental Botany** 71: 137-145
- (44) Huguet, V. and J. A. Rudgers (2010) Covariation of soil bacterial composition with plant rarity. **Applied and Environmental Microbiology** 76: 7665-7667
- (43) **Crawford, K. M., J. M. Land*, and J. A. Rudgers (2010) Fungal endophytes of native grasses decrease insect herbivore preference and performance. **Oecologia** 164: 431-444
- (42) Rudgers, J. A., A. J. Davitt**, K. Clay, P. Gundel, and M. Omacini (2010). Searching for evidence against the mutualistic nature of hereditary symbiosis: A comment on Faeth (2009). **American Naturalist** 76: 99-103
- (41) Rudgers, J. A., S. Fischer*, and K. Clay (2010) Managing plant symbioses: Fungal endophyte genotype alters plant community composition. **Journal of Applied Ecology** 47: 468-477
- (40) Rudgers, J. A., A. M. Savage**, and M. A. Rúa (2010) Geographic variation in a facultative mutualism: consequences for local arthropod composition and diversity. **Oecologia** 163: 985-996

- (39) Crutsinger, G. M. S. Y. Strauss, and J. A. Rudgers (2010) Genetic variation within a dominant shrub species determines plant invasion resistance in a coastal dune ecosystem. **Ecology** 91: 1237-1243
- (38) Emery, S.M. and J. A. Rudgers (2010) Ecological assessment of dune restorations in the Great Lakes region. **Restoration Ecology** 18: 184–194
- (37) Emery, S.M., D. Thompson*, and J. A. Rudgers (2010) Variation in endophyte symbiosis, herbivory and drought tolerance of *Ammophila breviligulata* populations in the Great Lakes Region. **American Midland Naturalist** 163: 186-196
- (36) Whitney, K. D. and J. A. Rudgers (2009) Constraints on plant signals and rewards to multiple mutualists? **Plant Signaling and Behavior** 4: 1-4
- (35) **Afkhami, M. A. and J. A. Rudgers (2009) Endophyte-mediated resistance to herbivores depends on herbivore identity in the wild grass, *Festuca subverticillata*. **Environmental Entomology** 38: 1086-1095
- (34) **Savage, A. M., J. A. Rudgers, and K. D. Whitney (2009) Elevated dominance of extrafloral nectary-bearing plants is associated with increased abundances of an invasive ant and reduced native ant richness. **Diversity and Distributions** 15: 751-761
- (33) Rudgers, J. A., M. E. Afkhami**, M. A. Rua, A. J. Davitt**, S. Hammer, and V. M. Huguet (2009) A fungus among us: Broad patterns of endophyte distribution in the grasses. **Ecology** 90: 1531-1539
- (32) Rudgers, J. A. and S. Orr* (2009) Non-native grass alters growth of native tree species via leaf and soil microbes. **Journal of Ecology** 97: 247-255
- (31) Rudgers, J. A. and A. L. Swafford* (2009) Benefits of a fungal endophyte in *Elymus virginicus* decline under drought stress. **Basic and Applied Ecology** 10: 43-51
- (30) **Afkhami, M. E. and J. A. Rudgers (2008) Symbiosis lost: Imperfect vertical transmission of fungal endophytes in grasses. **American Naturalist** 172: 405-416
- (29) Rudgers, J. A., and K. Clay (2008) An invasive plant-fungal mutualism reduces arthropod diversity. **Ecology Letters** 11: 831-840
- (28) *Johnson, S. D., K. C. Horn*, A. M. Savage**, S. Windhager, M. T. Simmons, and J. A. Rudgers (2008) Timing of prescribed burns affects abundance and composition of arthropods in the Texas Hill Country. **Southwestern Naturalist** 53: 137-145
- (27) *Kannadan, S. and J. A. Rudgers (2008) Endophyte symbiosis benefits a rare grass under low water availability. **Functional Ecology** 22: 706-713
- (26) *Mack, K. and J. A. Rudgers (2008) Balancing multiple mutualists: asymmetric interactions among plants, arbuscular mycorrhizal fungi, and fungal endophytes. **Oikos** 117: 310-320
- (25) Rudgers, J. A., and K. Clay (2007) Endophyte symbiosis with tall fescue: How strong are the impacts on communities and ecosystems? **Fungal Biology Reviews** 21: 107-124
- (24) Rudgers, J. A., J. Holah, S. P. Orr*, and K. Clay (2007) Forest succession suppressed by an introduced plant-fungal symbiosis. **Ecology** 88: 18-25
- (23) Flory, S. L., J. A. Rudgers, and K. Clay (2007) Experimental light treatments affect invasion success and the impact of *Microstegium vimineum* on the resident community. **Natural Areas Journal** 27: 124-132

- (22) Rudgers, J. A. and K. D. Whitney (2006) Interactions between insect herbivores and a plant architectural dimorphism. **Journal of Ecology** 94: 1249-1260
- (21) Tintjer, T. and J. A. Rudgers (2006) Grass-herbivore interactions altered by strains of a native endophyte. **New Phytologist** 170: 513-521
- (20) *Finkes, L. K., A. B. Cady, J. C. Mulroy, K. Clay, and J. A. Rudgers (2006) Plant-fungus mutualism affects spider composition in successional fields. **Ecology Letters** 9: 347-356
- (19) *Orr, S. P., J. A. Rudgers, and K. Clay (2005) Invasive plants can inhibit native tree seedlings: testing potential allelopathic mechanisms. **Plant Ecology** 181: 153-165
- (18) Clay, K., J. Holah, and J. A. Rudgers (2005) Herbivores cause a rapid increase in hereditary symbiosis and alter plant community composition. **Proceedings of the National Academy of Sciences** 102: 12465-12470
- (17) *Lemons, A., K. Clay, and J. A. Rudgers (2005) Connecting plant microbial interactions above- and belowground: an endophytic fungus affects decomposition. **Oecologia** 145: 595-604
- (16) Rudgers, J. A., W. B. Mattingly, and J. M. Koslow (2005) Mutualistic fungus promotes plant invasion into diverse communities. **Oecologia** 144: 463-471
- (15) Rudgers, J. A. and S. Y. Strauss (2004) A selection mosaic in the facultative mutualism between ants and wild cotton. **Proceedings of the Royal Society of London: Biological Sciences** 271: 2481-2488
- (14) Rudgers, J. A. (2004) Enemies of herbivores can shape plant traits: selection in a facultative ant-plant mutualism. **Ecology** 85: 192-205
- (13) Rudgers, J. A. and M. C. Gardener (2004) Extrafloral nectar as a resource mediating multi-species interactions in communities. **Ecology** 86: 1495-1502
- (12) Rudgers, J. A., J. M. Koslow, and K. Clay (2004) Endophytic fungi alter relationships between diversity and ecosystem properties. **Ecology Letters** 7: 42-51
- (11) Rudgers, J. A., S. Y. Strauss, and J. F. Wendel (2004) Trade-offs among anti-herbivore resistance traits: insights from Gossypieae (Malvaceae). **American Journal of Botany** 91: 871-880
- (10) Rudgers, J. A., and J. D. Hoeksema (2003) Inter-annual variation in above- and belowground herbivory on a native, annual legume. **Plant Ecology** 169: 105-120
- (9) Rudgers, J. A., J. G. Hodgen*, and J. W. White* (2003) Behavioral mechanisms underlie plant defense in an ant-plant mutualism. **Oecologia** 135: 51-59
- (8) Rudgers, J. A. and J. L. Maron (2003) Facilitation between coastal dune shrubs: a non-nitrogen-fixing shrub facilitates establishment of a nitrogen fixer. **Oikos** 102: 75-84
- (7) Strauss, S. Y., J. A. Rudgers, J. A. Lau and R. E. Irwin (2002) Direct and ecological costs of resistance to herbivory. **Trends in Ecology and Evolution** 17: 278-285
- (6) Agrawal, A. A., J. A. Rudgers, L. W. Botsford, D. Cutler, J. B. Gorin, C. J. Lundquist, B. W. Spitzer, and A. L. Swann (2000) Benefits and constraints on plant defense against herbivores: Spines influence the legitimate and illegitimate flower visitors of yellow star thistle, *Centaurea solstitialis* L. (Asteraceae). **Southwestern Naturalist** 45: 1-5

PUBLICATIONS

BOOK CHAPTERS

- (5) Rudgers, J. A. and K. Clay (2013) Microbial mutualists and biodiversity in ecosystems. In: T. Ogushi, O. Schmitz, and R. D.Holt (eds.) **Ecology and Evolution of Trait-Mediated Indirect Interactions: Linking Evolution, Community, and Ecosystem** Cambridge University Press.
- (4) Clay, K., J. A. Rudgers and A. Shelton. (2010) Tall Fescue, Endophyte Infection and Vegetation Change: A 10-Year Experiment In: **Proceedings of the 7th International Symposium on Fungal Endophyte of Grasses**.
- (3) Rudgers, J. A. and K. Clay (2007) Community and Ecosystem Consequences of Endophyte Symbiosis with Tall Fescue. In: A.J. Popay and E.R. Thom (eds.) Proceedings of the 6th International Symposium on Fungal Endophytes of Grasses. **Grassland Research and Practice Series No. 13**, New Zealand Grassland Association, Dunedin, New Zealand.
- (2) Clay, K., K. Reinhart, J. A. Rudgers, T. Tintjer, J. Koslow, and S. L. Flory (2008) Red queen communities. In: V. Eviner, F. Keesing and R. Ostfeld, (eds.) **Ecology of Infectious Diseases: Interactions between diseases and ecosystems**. Princeton University Press, Princeton. pp. 145-178.
- (1) Rudgers, J. A. and K. Clay (2005) Fungal endophytes in terrestrial communities and ecosystems. In: J. Dighton, J. F. White, Jr., and P. Oudemans (eds.) **The Fungal Community: Its Organization and Role in the Ecosystem**. Third Edition. CRC Press, Boca Raton, pp. 423-442.

IN PROGRESS/IN REVIEW

ALTERED RAINFALL PULSE REGIMES RE-STRUCTURE MICROBIAL COMMUNITIES
Vanessa M. C. Fernandes, Jennifer A. Rudgers, Scott L. Collins and Ferran Garcia-Pichel

GRASSLAND PLANT COMMUNITIES DIFFER IN SENSITIVITY TO MULTI-YEAR DROUGHT
Lauren Baur, Jeff Carroll, John Dietrich, Jesse Gray, Ava Hoffman, Melissa Johnston, Kate Wilkins, Jennifer Rudgers, Scott L. Collins, Alan K. Knapp, Melinda D. Smith

SOIL DISTURBANCE REDUCED CYANOBACTERIAL COMMUNITY SIZE AND DIVERSITY AND ALTERED NITROGEN DYNAMICS IN A DESERT GRASSLAND
Rose Adelizzi, Elizabeth O'Brien, Eva Stricker, Michael Mann, Vanessa Fernandes, Mikaela Hoellrich, Anthony Darrouzet-Nardi, Jennifer A. Rudgers

LONG-TERM IMPACTS OF RODENT EXCLUSION ON DESERT PLANT COMMUNITIES
John L. Maron, David C. Lightfoot, Mariano A. Rodriguez-Cabal, Scott L. Collins, and Jennifer A. Rudgers

RAPID TRANSLOCATION OF NITROGEN SHOWS NO EVIDENCE OF NUTRIENT NICHE PARTITIONING IN DRYLAND PLANTS
Catherine E. Cort, Eva Stricker, Grace M. Crain, Jennifer A. Rudgers, Anthony Darrouzet-Nardi

PRESS HIGHLIGHTS

Featured article in Forbes 7/24/2019

<https://www.forbes.com/sites/linhanhcat/2019/07/24/longest-running-warming-experiment/#1a4178be76cb>

Featured article in Mountain Town News 8/15/2019

PRESS HIGHLIGHTS

Best, A. (2019). Power plug pulled on world's longest experiment about effects of warming. Mountain Town News. <http://mountaintownnews.net>

Lincoln, T. (2010) Applied Ecology: Grass and the X factor. **Nature** 464: 172.

Editor's choice (2012) **Journal of Ecology** <http://jecologyblog.wordpress.com/2012/10/23/editors-choice-1006/>

Science News article on this Gorischek et al. (2013): Pennisi, E. (March 2013) available at <http://news.sciencemag.org/sciencenow/2013/03/fungus-get-off-my-lawn.html>

Featured on Faculty of 1000 Biology Rudgers and Strauss (2004), Rudgers et al. (2005) *Oecologia*

TEACHING

Instructor University of New Mexico	Ecology, Ecology lab
Instructor University of New Mexico	Ecology and Evolution
Instructor University of New Mexico	Honors Writing in Biology
Instructor University of New Mexico	Advanced Statistics: Analysis of Long-Term Data
Instructor Rice University	Insect Biology
Instructor Rice University	Environmental Sustainability
Instructor Rice University	EEB Graduate Core Course
Instructor Rice University	Topics in Ecology
Instructor Rice University	Topics in Biodiversity
Instructor Indiana University	Field and Laboratory Ecology
Instructor University of California-Davis	Women and Biology

PROFESSIONAL SOCIETIES

American Society of Naturalists
Botanical Society of America
Ecological Society of America
Entomological Society of America
International Symbiosis Society
Southwestern Society of Naturalists

INVITED TALKS

Baylor College of Medicine, 2009
Dartmouth College, Department of Biology, 2004
Cornell University, Ecology and Evolutionary Biology, 2004
Haskell Indian Nations University, Department of Biology, 2005
Illinois Natural History Survey, 2004
Indiana University, Plant-Interactions Group, 2002
Iowa State University, Dept. Ecology, Evolution and Organismal Biology, 2007
Louisiana State University, Systematics, Ecology and Evolution, 2010 (declined)
Noble Foundation, 2011
Northern Arizona University, Department of Biology, 2013
Penn State University, Department of Biology, 2009
Rice University, Department of Ecology and Evolutionary Biology, 2004
Rutgers University, Department of Ecology and Evolution, 2009
Sam Houston State University, Department of Biology, 2007
Susquehanna University, Department of Biology, 2003

INVITED TALKS

Syracuse University, Department of Biology, 2006
Texas A&M, Department of Plant Pathology and Microbiology, 2006
Texas A&M, Department of Ecosystem Science and Management, 2006
Texas A&M, Department of Entomology, 2008
Trinity University, Department of Biology, 2005
University of Akron, Department of Biology, 2004
University of Georgia, Institute of Ecology, 2004
University of Hawaii – Manoa, 2021
University of Houston, Department of Biology, 2008
University of Maine, 2020
University of Massachusetts-Amherst, Department of Entomology, 2004
University of Miami, Department of Biology, 2008
University of Missouri-Columbia, Department of Biological Sciences, 2004
University of Montana, 2010
University of New Mexico, 2012
University of Pittsburgh, Department of Biology, 2003
University of Tennessee, Ecology and Evolutionary Biology, 2005
University of Toronto, Department of Botany, 2003
University of Toronto, Department of Ecology & Evolutionary Biology, 2011
Wright State University, Department of Biology, 2004

INVITED SYMPOSIA

Symposium Speaker. Rudgers, J.A. Mutualism Symposium. Indiana University, February 19, 2021.

Symposium Speaker. Rudgers, J.A.*, et al. Capacity of root endophytes to buffer dominant grass species against heat and drought. Ecological Society of America Annual Meeting, New Orleans, LA, 2018.

Symposium Speaker. Rudgers, J. A. (2013) Mycological Society of America (MSA)

Symposium Speaker. Rudgers, J. A. (2010) Grass-endophyte symbioses alter plant-herbivore-natural enemy interactions. Organized Oral Section #5618 – The Role of Microorganisms in the Ecology and Evolution of Tri-Trophic Interactions. Ecological Society of America (1-6 August 2010) Pittsburgh, PA.

Symposium Speaker. Rudgers, J. A. (2010) Small fungi with big impacts: Plant protection mutualisms in complex communities. The Gordon Research Conference in Plant-Insect Interactions. 23 February, Galveston, TX.

Keynote Presentation. Joint meeting of the Mycological Society of America (MSA) and the International Symposium on Fungal Endophytes of Grasses (ISFEG) 2010 – June 28 – July 1, 2010, Lexington, KY (declined).

Plenary Speaker, "Rising Star" in Ecology. Sixth Annual Department of Ecology and Evolutionary Biology Colloquium at The University of Toronto. April, 2011, Toronto, ON (upcoming)

Plenary Speaker, "Rising Star" in Ecology. Fifth Annual Department of Ecology and Evolutionary Biology Colloquium at The University of Toronto. Each year, three speakers give plenary lectures. The colloquium is highlighted by the Atwood Lecture, which is given by an outstanding senior scientist who is selected by the graduate students. Two rising stars, one ecologist and one evolutionary biologist, are the other two plenary lecturers. April 8-11, 2010, Toronto, ON (declined)

INVITED SYMPOSIA

Symposium Speaker, Harvard University, Evolution of Plant Mutualism Symposium (7-9 May 2009), Cambridge, MA.

Symposium Speaker. Rudgers, J. A. (2009) Small fungi with big impacts: community and ecosystem-level consequences of grass-endophyte symbioses. The International Symbiosis Society, 6th Annual Congress (9-15 August 2009) Madison, WI.

Symposium Speaker. Rudgers, J. A. (2007) Small mutualists with big impacts: community and ecosystem-level consequences of pair-wise mutualisms between fungal endophytes and grasses. Symposium 18 – Yin and Yang: The combined influences of positive and negative interactions in ecological communities. Ecological Society of America (5-10 August 2007) San Jose, CA.

PROFESSIONAL SERVICE

Associate Editor – *Oikos* (2008 - 2012)

Board of Advisors – *New Phytologist* (2012 - present)

Board of Trustees – The Rocky Mountain Biological Laboratory

Board of Directors – Bosque Ecosystem Monitoring Program (2020 – present)

Secretary – International Symbiosis Society (2009 - 2012)

Manuscripts Reviewed total > 140

Acta Oecologia, American Journal of Botany, American Midland Naturalist, American Naturalist, Annals of Botany, Australian Journal of Botany, Behavioral Ecology, Biochemical Systematics and Ecology, Biological Conservation, Biological Invasions, Ecology, Ecology Letters, Ecoscience, Entomologia Experimentalis et Applicata, Evolution, Functional Ecology, Global Change Biology, Grass and Forage Science, Journal of Applied Entomology, Journal of Chemical Ecology, Journal of Ecology, Journal of Ethology, Journal of Tropical Ecology, Microbial Ecology, Mycologia, Naturwissenschaften, New Phytologist, Oecologia, Oikos, Plant and Soil, Plant Ecology, Proceedings of the Royal Society of London Series B, Restoration Ecology, Symbiosis, Trends in Ecology & Evolution

The Nature Conservancy Invasive Plant Species Assessment Working Group

External Grant Review

DOE National Institute for Climatic Change Research (NICCR)

National Geographic Society

National Science Foundation, Ecological Biology Cluster External Reviewer

National Science Foundation, Ecological Biology Cluster Panelist

National Science Foundation, Ecological Biology Cluster Pre-proposal Panelist

National Science Foundation Doctoral Dissertation Improvement, Ecological Biology Cluster

National Science Foundation Population and Evolutionary Processes, DEB (2008)

National Science Foundation, Plant Genome Research External Reviewer

National Science Foundation, Microbial Interactions and Processes External Reviewer

National Science Foundation, CREST External Reviewer

National Science Foundation HBCU-RISE External Reviewer

University of Massachusetts HATCH Grant

USDA – NIFA Plant-Microbe Interactions, Panelist

William Paterson University's College of Science and Health (small grant reviewer)

Book Review Oxford University Press

COMMUNITY OUTREACH AND SERVICE

Bosque Ecosystem Monitoring Program, Board of Directors
Rice Community Gardens, Director
Lovett College Associate, Rice University
Hermann Park Conservancy, Houston, Texas
Urban Harvest, Houston, Texas
Science Day for the Academy of Classical Education
Rice University Community Garden
International Baccalaureate High School Biology Teachers Workshop (annual workshop leader)
Advanced Placement High School Biology Teachers Workshop (annual workshop leader)

GRADUATE STUDENT ADVISEES: PHD

Cassie Miller (PhD 2019- ongoing)

Shaun Ziegler (PhD 2018 – ongoing)

Mariah Patton (PhD 2018- ongoing, co-advised with Scott Collins)

Melanie Kazenel (PhD 2017- ongoing, co-advised with Ken Whitney)

Michael Mann (PhD 2017- ongoing, co-advised with Lee Taylor)

Josh Lynn (PhD 2013 – 2019) **King of the hill? How biotic interactions affect biogeographical pattern and species responses to climate change.** *Currently:* Postdoctoral Researcher University of Bergen.

Eva Robinson (PhD 2012 – 2016) **Plant-biocrust interactions mediated by the fungal loop.** *Currently:* Research Assistant Professor University of New Mexico.

Anny Chung (PhD 2011 - 2017) **Plant-microbial interactions are strong determinants of plant population and community dynamics.** Postdoctoral Research, Utah State University with Peter Adler. *Currently:* Assistant Professor University of Georgia.

Lukas Dereske (PhD 2010 - 2016) **Shifts in the relative importance of competition and mutualism for communities and ecosystems.** *Currently:* Postdoctoral Researcher, Michigan State University with Sarah Evans.

Scott Chamberlain (PhD – co-advised with Dr. Kenneth Whitney 2008 - 2012) *Currently:* CEO/Founder **ROpen Science.**

Amy Savage (PhD – co-advised with Dr. Kenneth Whitney 2005 - 2011) **Anoplolepis gracilipes invasion of the Samoan Archipelago: Can mutualisms with native species amplify ecological consequences?** *Currently:* Assistant Professor Rutgers University - Camden.

Kerri Crawford (PhD – 2006 - 2011) **The consequences of plant species diversity and genetic diversity for populations, communities, and ecosystems** *currently* - Tyson Research Fellow, Washington University, National Science Foundation Postdoctoral Fellowship - Intersections of Biology and Math and Physical Sciences. *Currently:* Assistant Professor University of Houston.

GRADUATE STUDENT ADVISEES: MS/MA

Purbendra Yogi (MS 2019 – ongoing)

Keara Bixby (MS 2019 – ongoing)

Kelly Steinberg (MS – completed May 2019) **Riparian vegetation in the face of environmental variability** *Currently* – Education Director, New Mexico State University.

Michelle Afkhami (MA - completed August 2007: **Symbiosis Lost: Imperfect vertical transmission of fungal endophytes in grasses**) PhD student, University of California-Davis
Postdoctoral fellow, University of Toronto. *Currently* – Assistant Professor, University of Miami

Andrew J. Davitt (MA - completed April 2010: **Mechanisms underlying the costs and benefits in grass-fungal endophyte symbioses**). Washington University School of Law

UNM BIOLOGY UNDERGRADUATE HONORS THESES

Taylor Portman (2021)

Laura Martinez (2021)

Lennox Johnston (2020)

Amanda Anderson (2020)

Devon Lagueux (2019)

Lagueux*, D., A. Jumponnen, A. Porras-Alfaro, J. Herrera, Y. A. Chung**, L. E. Baur, M. D. Smith, A. K. Knapp, S. L. Collins, and J. A. Rudgers (2021). Experimental drought alters the fungal rhizobiomes of grasses across North American grasslands. **Journal of Ecology** 109:776-792 doi: 10.1111/1365-2745.13505

Danielle Duarte (2018)

Lynn**, J.S., D. A. Duarte*, and J. A. Rudgers. (2019) Soil microbes that may accompany climate warming increase alpine plant production. **Oecologia**. doi: 10.1007/s00442-019-04518-6 *Highlighted Student Research*

Lance Carleton (2017)

Carlton L., N. C. Duncritts, Y. A. Chung**, and J. A. Rudgers (2018) Plant-microbe interactions as a cause of ring formation in *Bouteloua gracilis*. **Journal of Arid Environments** 152:1-5.

Eliza Gagliano (2017)

Dylan Kent (2016)

Kent, D. R., Lynn, J. S., Pennings, S. C., Souza, L. A., Smith, M. D., & Rudgers, J. A. (2020). Weak latitudinal gradients in insect herbivory for dominant rangeland grasses of North America. **Ecology and Evolution**. 10: 6385– 6394. doi: 10.1002/ece3.6374

Ashley Frost (2016)

Amy Adams (2015)

Adams*, A. E., M. R. Kazenel**, and J. A. Rudgers (2017) Does a foliar endophyte improve plant fitness under flooding? **Plant Ecology** 218:711-723.

POST-DOCTORAL ASSOCIATES

Vanessa Fernandez (co-wrote National Science Foundation DEB 1911451, Quantifying the microbial contribution to community recovery from drought)
Current

Stephanie Kivlin (co-wrote National Science Foundation DEB 1354972, The potential for climate induced disruption of plant-microbe symbioses)
Currently – Assistant Professor, University of Kentucky

Sarah Emery – National Parks Ecological Research Fellow, *Do microbial mutualists alter invasibility of sand dune communities?*, \$120,000
Currently - Associate Professor, University of Louisville

Valérie Huguet – Linking microbial community composition to the ecological dominance of plants.
Currently – mom of two in Houston, Texas.

AWARDS RECEIVED BY MY STUDENTS

Fulbright Scholar Program

Alex Gorischek (2010) Theoretical Biology in Hungary with Eörs Szathmáry at Collegium Budapest ‘Conflict of Propagation as an Alternative Schema of Natural Selection’

National Science Foundation – Dissertation Improvement Grant

Eva Dettweiler-Robinson
Anny Chung
Josh Lynn
Kerri Crawford

National Science Foundation – East Asia and Pacific Summer Institute

Amy Savage (2010)

National Science Foundation – Graduate Research Fellowship

Kerri Crawford (2007-2010)
Michelle Afkhami (2007-2010)
A.J. Davitt (2008 – honorable mention)
Carina Baskett (2010-2013)
Kelsey Yule (2012-2015)
Lukas Bell-Dereske (2010 – honorable mention)
Lukas Bell-Dereske (2011-2013)
Josh Lynn (2014 – honorable mention)
Melanie Kazenel (2014 – honorable mention)
Maria Carolina Simao (2013-2016)
Mariah Patton (2020-2023)
Cassandra Miller (2021-2024)
Laura Martinez (2021-2024)

National Science Foundation Small Grant Award

Anny Chung DEB-1655522 (\$150,000)

AWARDS RECEIVED BY MY STUDENTS

Others

- American Philosophical Society Lewis and Clark Fund*
Josh Lynn (\$5000)
- American Women in Science*
Kerri Crawford (2010, \$500)
- Barry M. Goldwater Scholarship*
Carina Baskett (2008, \$15,000)
- Botanical Society of America Graduate Student Research Award*
Josh Lynn (\$500)
- Ecological Society of America Forrest Shreve Award*
Anny Chung (\$1000)
- Ecological Society of America Student Travel Award*
Anny Chung (\$1475)
- Garden Club of America – Fellowship in Ecological Restoration*
Kerri Crawford (2007, \$8,000)
- Garden Club of America – Mary T. Carothers Summer Environmental Studies Scholarship*
Carina Baskett (2007, \$2000)
- Garden Club of America – Desert Studies Award*
Anny Chung (\$4000)
- Houston Rodeo Scholarship*
Michelle Afkhami (2006-2007, full tuition)
- Howard Hughes Medical Institute Capstone Undergraduate Research Award*
Alisha Lemons (2004)
Sam Orr (2003)
- Jean Langenheim Award Graduate Student Scholarship, Rocky Mountain Biological Laboratory*
Josh Lynn (\$6000)
- National Park Service George Melendez Wright Climate Change Fellowship*
Lukas Bell-Dereske (\$19,965)
- Partners of the Americas ILTER Meeting travel grant*
Anny Chung (\$1000)
Eva Dettweiler-Robinson (\$1000)
- Prairie Biotic Research, Inc. Small Grants Program*
Scott Chamberlain (2010, \$900)
- Program in Interdisciplinary Biological and Biomedical Sciences (PIBBS) Fellowship*
Eva Dettweiler-Robinson (\$25,000)
- Redwood Creek Preservation Award*
Kerri Crawford (2007, \$3000)
- Rice University – Associate Mellon Mays Fellow*
Carina Baskett (\$7000)
- Rice University – Presidential Fellowship*
Kerri Crawford (2006-2011)
- Rice University – Dept. of Ecology and Evolutionary Biology Awards*
Sonia Kannadan (*Julian Huxley Award* 2008)
Carolina Simao (*Clark Reed Award* 2009)
Carina Baskett (*Julian Huxley Award* 2010)
- Rice University – Lodieska Stockbridge Vaughn Fellowship*
Scott Chamberlain (2010-2011)
- Rice University – Harcombe Fellowship*
Anny Chug (\$5000)
- Rice University – Wagoner Foreign Study Scholarship*
Carina Baskett (2010)
- Rice University – Worden Fellowship*
Anny Chung (2011-2012)

AWARDS RECEIVED BY MY STUDENTS

Others

Rice University – Undergraduate Research Symposium

John Land (second place)
Sonia Kannadan (first place)

Sigma-Xi Grants-in-Aid of Research

Amy Savage (2007, \$400)
Anny Chung (\$1000)

Society of Wetland Scientists Student Research Grant

Lukas Bell-Dereske (\$988)

Thomas J. Watson Fellowship Program (www.watsonfellowship.org)

Carina Baskett (2010) Exploring and Sharing Nature and Culture through Bilingual Podcasting:
Ecuador, Chile, Panama, Spain

UNM Biology competitive research grants

Anny Chung (total \$2800)

UNM Lynn Hertel Award

Eva Dettweiler-Robinson (\$1500)

UNM Grove Scholarship

Eva Dettweiler-Robinson (\$2000)
Josh Lynn (\$2700)
Josh Lynn (\$2250)
Josh Lynn (\$1000)

UNM Harry Wayne Springfield Scholarship

Josh Lynn (\$2000)
Eva Dettweiler-Robinson (\$2500)

UNM Graduate and Professional Students Association Travel Grant

Anny Chung (\$1000)
Anny Chung (\$450)

Western Ag Innovations Graduate Student Research Award

Josh Lynn (\$1440)
Mariah Patton (\$1500)