

# Jacob E. Lucero, Ph.D

Assistant Professor  
Department of Rangeland, Wildlife and Fisheries Management  
Texas A&M University

## GENERAL INTERESTS

Community, population, and restoration ecology; global change, conservation, and evolutionary biology; biogeography

## SPECIFIC INTERESTS

Community assembly; species interactions; biological invasions; ecological restoration; natural resource management; quantitative synthesis; ecology and evolution of plant defenses; ecology and conservation of changing dryland, grassland, forest, and montane ecosystems

## ACADEMIC POSITIONS

2022 – present      Assistant Professor  
Texas A&M University (TAMU)  
2020 – 2022      Restoration Ecology Postdoctoral Scholar  
New Mexico State University (NMSU); supervisor: **Dr. Akasha M. Faist**  
2018 – 2020      Visiting Postdoctoral Research Fellow  
York University (YU); supervisor: **Dr. Christopher J. Lortie**  
2017 – 2018      Postdoctoral Research Associate  
University of Montana (UM); supervisor: **Dr. Ragan M. Callaway**

## PUBLICATIONS

*In press* [16]      Callaway RM, Hierro J, Lortie CJ, **Lucero JE**. The EICA is dead? Long live the EICA! *Ecology Letters*. Accepted manuscript available upon request.

2022 [15]      **Lucero JE**, Faist AM, Lortie CJ, Callaway RM. Risk of facilitated invasion depends upon invader identity, not environmental severity, along an aridity gradient. *Frontiers in Ecology and Evolution* 10: 886690. doi.org/10.3389/fevo.2022.886690.

2021 [14]      **Lucero JE**, Callaway RM, Faist AM, Lortie CJ. An unfortunate alliance: native shrubs increase the abundance, performance, and apparent impacts of *Bromus tectorum* across a regional aridity gradient. *Basic and Applied Ecology* 57: 41-53. doi.org/10.1016/j.baae.2021.09.001

2021 [13]      Lortie CJ, Filazzola A, Brown C, **Lucero JE**, Zuliani M, Ghazian N, Haas S, Owen M, Butterfield HS, Nix E, Westphal M. Facilitation enables plant invasions and indirect negative interactions. *Oikos* 130: 1056-1061. doi.org/10.1111/oik.08443

2021 [12]      Lortie CJ, Filazzola A, Owen M, Ghazian N, Zuliani M, Haas S, Seifan M, Braun J, Miguel F, **Lucero JE**. Too much of a good thing: shrub benefactors are less important in higher diversity arid ecosystems. *Journal of Ecology* 109: 2047-2053. doi.org/10.1111/1365-2745.13596

- 2020 [11] Callaway RM, **Lucero JE**. Soil biota and non-native plant invasions. Ch. 3 (pp. 45-67) in eds. A Travaset, DM Richardson. *Plant invasions: The role of biotic interactions*. CABI International, Wallingford, UK. doi.org/10.1079/9781789242171.0003
- 2020 [10] Pik D\*, **Lucero JE**, Braun J, Lortie CJ. Light intensity and seed density differentially affect the establishment, survival, and biomass of an exotic invader and three species of native competitors. *Community Ecology* 21: 259-272. doi.org/10.1007/s42974-020-00027-2
- 2020 [9] **Lucero JE**, Arab NM, Meyer ST, Pal RW, Fletcher R, Nagy DU, Callaway RM, Weisser WW. Escape from natural enemies depends on the enemies, the invader, and competition. *Ecology and Evolution* 10: 10818-10828. doi.org/10.1002/ece3.6737
- 2020 [8] **Lucero JE**, Seifan M, Callaway RM, Lortie CJ. Positive associations with native shrubs are intense and important for an exotic invader but not the native annual community across an aridity gradient. *Diversity and Distributions* 26: 1177-1197. doi.org/10.1111/ddi.13111
- 2019 [7] **Lucero JE**, Schaffner U, Asadi G, Bagheri A, Rajabov T, Callaway RM. Enemy release from the effects of generalist granivores can facilitate *Bromus tectorum* invasion in the Great Basin Desert. *Ecology and Evolution* 9: 8490-8499. doi.org/10.1002/ece3.5314
- 2019 [6] **Lucero JE**, Noble T, Haas S, Westphal M, Butterfield S, Lortie CJ. The dark side of facilitation: native shrubs facilitate exotic annuals more strongly than native annuals. *NeoBiota* 44: 75-93. doi.org/10.3897/neobiota.44.33771
- 2018 [5] **Lucero JE**. Do seeds from invasive bromes experience less granivory than seeds from native congeners in the Great Basin Desert? *Plant Ecology* 219: 1053-1061. doi.org/10.1007/s11258-018-0858-7
- 2018 [4] **Lucero JE**, Callaway RM. Native granivores reduce the establishment of native grasses but not invasive *Bromus tectorum*. *Biological Invasions* 20: 3491-3497. doi.org/10.1007/s10530-018-1789-x
- 2018 [3] **Lucero JE**, Callaway RM. Granivory from native rodents and competition from an exotic invader strongly and equally limit the establishment of native grasses. *Oecologia* 186: 1043-1053. doi.org/10.1007/s00442-018-4085-7
- 2015 [2] **Lucero JE**, McMillan BR, Allen PS. Increased primary production from an exotic invader does not subsidize native rodents. *PLoS ONE* 10: e0131564. doi.org/10.1371/journal.pone.0131564
- 2012 [1] **Lucero JE**, Payne J\*, McMillan BR. The valve method of decanting seeds from a flotation solution. *Seed Technology* 34: 217-226. www.jstor.org/stable/23433400

#### **SUCCESSFUL GRANT PROPOSALS AND AWARDS (Total: \$786,050)**

- 2021 [9] **Lucero JE\***, Weyl P, Schaffner U, Faist AM. **USDA-ARFI**. A biogeographic contrast of factors influencing invasive species abundance and management in native vs. non-native ranges. NMSU (\$650,000)

- \*Principal Investigator
- 2018 [8] **Lucero JE\***. **York Science Fellowship**. Understanding the causes and consequences of biological invasions in stressful environments. YU (\$120,000)
- \*Principal writer
- 2016 [7] **Lucero JE\***, Callaway RM. **Montana IoE Graduate Enhancement Award**. Do novel chemical weapons release *Bromus tectorum* from granivory in its non-native range? UM (\$4,800)
- \*Principal writer
- 2016 [6] **Lucero JE\***, Callaway RM. **Drollinger-Dial Travel Award**. Invasive *Bromus tectorum* experiences enemy release from the effects of an important guild of generalist herbivores. UM (\$500); \*Principal writer
- 2015 [5] **Lucero JE\***, Callaway RM. **Theodore Roosevelt Memorial Grant**. Does apparent competition *really* affect exotic plant invasions? UM (\$1,300); \*Principal writer
- 2015 [4] **Lucero JE\***, Callaway RM. **Drollinger-Dial Research Award**. Apparent competition and exotic plant invasions: a return to fundamental theory. UM (\$1,000) \*Principal writer
- 2014 [3] **Lucero JE\***, Callaway RM. **Drollinger-Dial Research Award**. A biogeographic test of the enemy release hypothesis with respect to *generalists*. UM (\$2,500) \*Principal writer
- 2013 [2] **Lucero JE\***, Callaway RM. **Montana IoE Graduate Enhancement Award**. Are local community filters blind to the biogeographic origins of species? UM (\$950); \*Principal writer
- 2012 [1] **Lucero JE\***, Callaway RM. **Montana IoE Graduate Enhancement Award**. A biogeographic approach to understanding North America's most "significant" plant invasion. UM (\$5,000); \*Principal writer

#### **TEACHING EXPERIENCE (PRIMARY INSTRUCTOR)**

- 2018 Wildlife Habitat Conservation and Management (WILD 370), UM  
4-credit undergraduate course with a lab
- 2013, 2014, 2016 Special Topics in Ecology and Evolution (BIOB 594), UM  
1-credit graduate course