

## KEVIN T SHOEMAKER

Associate Professor, Department of Natural Resources & Environmental Science  
University of Nevada, Reno; 1664 N Virginia St, Reno NV; email: [kevinshoemaker@unr.edu](mailto:kevinshoemaker@unr.edu);  
office: Fleischmann Agriculture room 220E (lab: FA 235); ph: (775) 682-7449  
<http://naes.unr.edu/shoemaker>; <https://kevintshoemaker.net>; <https://github.com/kevintshoemaker>

---

### EDUCATION

SUNY-ESF*	Conservation Biology	Ph.D. (J.P. Gibbs, advisor)	2011
SUNY-ESF*	Conservation Biology	M.S. (J.P. Gibbs, advisor)	2007
Haverford College	Biology	B.S.	2000

\* State University of New York, College of Environmental Science and Forestry, Syracuse, NY

### EMPLOYMENT

July 2021 to present, Associate Professor, University of Nevada, Reno, Reno, NV

Nov 2015 to July 2021, Assistant Professor, University of Nevada, Reno, Reno, NV

Jan 2014 to Nov 2015, Senior Scientist, Applied Biomathematics, Inc., Setauket, NY (1/2 time)

June 2011 to Nov 2015, Post-doctoral Associate, Stony Brook University, Stony Brook, NY (1/2 time)

Postdoctoral advisor: H. Resit Akcakaya

June 2011 to Dec 2013, Research Ecologist, Applied Biomathematics, Inc., Setauket, NY (1/2 time)

May 2011 to Dec 2011, Post-doctoral Associate, SUNY-ESF, Syracuse, NY

Postdoctoral advisor: James P. Gibbs

### EXPERTISE

- Demographic simulation modeling (population-based and individual-based)
- Estimating abundance and life history parameters with capture-recapture data in R, MARK, and BUGS/Jags
- Bayesian inference using Markov Chain Monte Carlo (MCMC) in R and BUGS/Jags
- Machine learning methods for data exploration, visualizing relationships, and global sensitivity testing in R
- Scripting and app development using R/shiny, Java, Python, C#, and Pascal/Delphi
- Reproducible scientific workflows and integrated modeling in R and GitHub
- Spatial analysis and visualization using R, GRASS, QGIS, and ArcGIS
- Designing and executing field monitoring protocols for wild populations of reptiles, small mammals, insects and birds, including trapping and passive acoustic monitoring.

### TEACHING EXPERIENCE

- **NRES 470/670: Applied Population Ecology** (offered every Spring semester). I serve as primary instructor for this course in applied population modeling aimed at future conservation biologists and wildlife managers. Originally developed in 2016 (and continuously updated), this course emphasizes practical approaches to problem-solving in ecology, conservation, and wildlife management via creative application of population ecology theory using simulation models and statistics (<https://kevintshoemaker.github.io/NRES-470/>).
- **NRES 746: Advanced Analysis Methods for Natural Resources and Environmental Science** (offered every other Fall semester, odd years). I serve as primary instructor for this advanced

graduate-level course in model-based inference, maximum likelihood and Bayesian methods in R. This course focuses on using computational algorithms to infer ecological processes and relationships from observed data, and students emerge with the skills to write their own algorithms to solve complex data analysis problems (<https://kevintshoemaker.github.io/NRES-746/>).

- **NRES 710: Graduate Environmental Statistics** (offered every other Fall semester, even years). Starting in Fall 2020, I have served as primary instructor for a graduate level course designed to help graduate students achieve fundamental statistical competencies, including probability theory, correlation tests, ANOVA, regression, generalized linear models (GLM) and mixed-effects models. Students also gain proficiency in data visualization and analysis in R. Students emerge from this course understanding how and why statistical methods are fundamental to the generation of scientific knowledge (<https://kevintshoemaker.github.io/NRES-710/>).
- **GRAD 778: Elements of Research Computing** (workshop series offered every Fall semester). Every fall (starting in 2018), I lead a 2-day (7 hours per day) workshop to introduce graduate students and faculty to the widely-used programming language ‘R’ and provide hands-on experience using R to perform data exploration, visualization, and analysis (<https://kevintshoemaker.github.io/R-Bootcamp/>). This workshop is now offered for credit (GRAD 778) as one component of a series of similar research computing seminars offered throughout the semester.
- **EECB 703: Principles of Ecology, Evolution and Conservation Biology**. I served as primary instructor for this course in Fall 2017 and will occasionally rotate with other faculty in leading this course every few years. This course introduces incoming PhD students in the interdisciplinary EECB program (Ecology, Evolution and Conservation Biology) to the diverse disciplines that fall under the EECB umbrella, largely through a series of guest lectures from members of the EECB faculty at UNR (<https://kevintshoemaker.github.io/EECB-703/>).
- **Guest lectures**. Each year at UNR, I deliver multiple guest lectures in Conservation Biology (3 lectures per year covering population ecology and Population Viability Analysis [PVA]), Population Ecology (1-2 lectures per year), Wildlife Monitoring/Management (1-2 lectures per year), and other ad hoc topics in statistics, data science and modeling (0-2 lectures per year). The PVA mini-course I offer as part of NRES 421 is available here: [https://kevintshoemaker.github.io/NRES-470/PVA1\\_421.html](https://kevintshoemaker.github.io/NRES-470/PVA1_421.html)
- **‘Math/Bio Stats Chats’**. Starting in Spring 2016 and continuing to spring 2022, I co-facilitated (with Dr. Paul Hurtado of the Math/Stats department and Ken Nussear of the Geography department) a weekly one-hour quantitative help session for graduate students (Math-Bio “Stats Chats”: <https://kevintshoemaker.github.io/StatsChats/>). (NOTE: I am working with the new Research Data Services office to offer ‘Stats Chats’ regularly starting Spring 2023)
- In Spring 2015 I developed and led a two-day workshop in spatial data analysis for students in the Wildlife Medicine Program at Tufts University.
- In fall 2013 I co-led two 1-day seminars on methods in risk analysis at the annual meeting of the Society for Risk Analysis, 2013, Baltimore MD.
- In fall 2012 I led a two-day workshop on Population Viability Analysis for wildlife biologists at the New York State Department of Environmental Conservation (NYS-DEC).
- In spring 2012 I co-taught a seminar-style course (1 credit) on population viability analysis (PVA) at Stony Brook University.

- Prior to my appointment at UNR, I have delivered guest lectures in Conservation Biology, Population Ecology and Herpetology at SUNY-ESF, Stony Brook University, and University of Georgia.
- In spring 2010 (as a PhD candidate) I co-taught a seminar-style course (1 credit) at SUNY-ESF on using software tools for population biology (e.g., Program Presence, Program MARK).
- For three summers (2007-2009) I co-taught a field ecology course in which I introduced hundreds of undergraduate students to field methods in herpetology.
- For two years (2005-2006) I collaborated with high school science teachers in Syracuse, NY and surrounding areas to develop and deliver innovative hands-on lab exercises and learning activities and to mentor high school students conducting research projects as part of an NSF-funded GK-12 program at SUNY-ESF.

## MENTORSHIP

### *Graduate student and postdoctoral advising*

- I currently serve as primary advisor for one MS student (Joshua Vasquez, 2021 to present).
- I currently serve as **primary advisor for one doctoral candidate** (Danielle Miles) at University of Nevada, Reno (2015 to present). She has passed her comprehensive exams. In 2021, Danielle Miles received the Leslie Nossaman Award (for the top-scoring grant proposal) – Horned Lizard Conservation Society.
- I currently serve as **co-advisor for one doctoral candidate** (Miranda Crowell) at University of Nevada, Reno (2015 to present). Miranda passed her comprehensive exam in Spring 2019. In 2021, Miranda Crowell received Birney award from ASM (\$2k).
- I currently serve as co-advisor for a **post-doctoral associate**, Dr. Maksim Sergeyev at Colorado State University (*fall 2022 – present*).
- I served as (informal) co-advisor for a **post-doctoral associate**, Dr. Gabe Barrile at Colorado State University (*fall 2021 – fall 2022*).
- I served as **primary dissertation advisor for one PhD student** at University of Nevada, Reno: Margarete Walden (*graduated December 2022*).
- I served as **primary thesis advisor for two MS students** at University of Nevada, Reno: Nathan Cook (*graduated December 2018*) and Mia Goldman (*graduated May 2022*). In 2021, Mia Goldman received UNR's Dickenson Scholarship.
- I served as **primary mentor for a post-doctoral associate** at University of Nevada, Reno: Dr. Elizabeth Hunter (*Spring 2015 to Fall 2017*).

### *Graduate committees*

- Current committee assignments: 18 total UNR committees: 7 MS, 11 PhD
- I currently serve as **steering committee member for 11 doctoral students/candidates** at the University of Nevada, Reno (6 in EECB, 5 in NRES, and 1 in Earth Sciences and Engineering): Ally Coconis, Jerrod Merrell, Jordan Zabrecky, Seren Bagciliar, Julie Brockman, Taylor Brown, Nathan Jackson\*, Madeleine Lohman\*, Lauren Phillips\*, James Simmons, Jorge Valencia\*. [asterisks indicate Candidacy status as of January 2023]

- I currently serve as **steering committee member for seven Master's students** at the University of Nevada, Reno (NRES, EECB and Geography programs): James Golden, Jillian Schuyler, Morgan Byrne, Sage Ellis, Justice Best, Sean McCain, Morgan Long.
- I served as a **steering committee member for one Master's student** at Georgia Southern University: Nicole DeSha (2021).
- I served on the **steering committee for ten UNR PhD students who have since graduated**: Masoud Rostami (2022), Laura Cirillo (2022), Derek Friend (2022), Steve Hromada (2022), Valentina Alaasam (2022), Alison Agneray (2022), Adriana Parra (2021), Marcus Blum (2021), Phillip Street (2020), Thomas Riecke (2020)
- I served on the **steering committee for eight UNR Master's students who have since graduated**: Jerrod Merrell (2022), Bryant Nagelson (2021), Tyler Molter (2021), Corey Mitchell (2020), Ally Xiong (2020), Amy Robards (2019), Nathan Jackson (2018), Rose Petersky (2018).
- I served as a **steering committee member for one PhD candidate** at Fordham University (New York, USA): Suzanne Macey (2016).
- As a postdoctoral associate and PhD student, I helped to mentor and advise graduate students in the Akcakaya lab at Stony Brook University and SUNY-ESF.

#### *Undergraduate training and research supervision*

- **Training and supervising field/lab technicians and undergraduate trainees:**
  - 2022: Katriel VanCleve (Fall)
  - 2021: Jason Wurtz (July-Aug); Meghan Dwyer (Oct-Dec), Jay Netzel (volunteer for bird identification and coyote project), Jaynee Hartland (volunteer for coyote project), James Golden (volunteer for pika camera traps and data analysis for conference presentation), Claudia Pighetti (student volunteer who leads coyote project, also volunteered in field for horned lizard work and has now found the most new pygmy short horned lizards official records of anyone in the state including NDOW), Colton Irons (volunteer for coyote project and pika camera trap photos), Auden Lacorazza (volunteer for coyote project), Kyle Panno (volunteer for coyote project), Toryn Walton (volunteer for spotted bat project), Jackson Tenney (volunteer for coyote project, paid technician for 2021 field season, leads spotted bat project, collected life history trait information from literature reviews on insect families, reptiles, small mammals, and bats), Kelsey Burrus (paid technician for 2021 field season, co-author on natural history note, submitted grant application for stable isotope work), Stephen Zipkin (volunteer for stable isotope lab work), Richard Goltart (volunteer for field work with pika, volunteer for bird identification and spotted bat project), Steve Hromada (graduate student volunteer from UNR herpetology club for pygmy short horned lizard field surveys)
  - My graduate students and I have supervised 25+ technicians including 15+ UNR undergraduate trainees as part of our research on the biodiversity responses to pinyon-juniper treatments (2017-present)
  - My graduate students and I have supervised 10+ technicians including 2 UNR undergraduate trainees as part of our research on critical habitat breadth for Gopher and Desert tortoises (2018-present)

- My graduate students and I have supervised 10+ technicians including 4 UNR undergraduate trainees as part of our research on pygmy rabbit population dynamics and habitat use (2016-present)
- As part of my dissertation research at SUNY-ESF (2008-2011) I trained and supervised 3 undergraduate assistants and one MS student in the field.
- As part of my Master's research at SUNY-ESF (2005-2007) I trained and supervised 2 undergraduate assistants and one MS student in the field.
- **Supervising undergraduate independent research**
  - In 2021, I supervised four student research projects for internship credits: Esther Guo (2 credits), Aaron Goetz (1 credit), Megan Schwartz (2 credits), and Robin Doolin (1 credit). I also helped two undergraduate students prepare research presentations and publications: Claudia Pighetti (expected to co-author 2 coyote papers) and Jackson Tenney (will co-author one small mammal activity paper and one paper on insect life history traits).
  - My graduate students and I have supervised 3 UNR undergraduate research projects as part of our research on the biodiversity responses to pinyon-juniper treatments (2017-present), including one recipient of a UNR Undergraduate Research Award (Richard Goltart).
  - I supervised one UNR undergraduate research project as part of my research on critical habitat breadth for Gopher and Desert tortoises (2018-present).

## SERVICE

### *Department/University*

- NRES Graduate Program Director (July 2022 to present). In this role, I work to recruit and retain students in the NRES MS and PhD programs (currently 22 students enrolled; 14 MS and 8 PhD), write offer letters, plan program events, work with faculty to ensure students are supported financially, help determine the awarding of department GTA lines each semester, coordinate with the graduate committee, revise the student handbook, monitor student progress, help manage conflicts, secure program funding, solicit student awards for internal funding, coordinate with faculty to ensure a rich graduate curriculum, and work with students to develop and maintain collegiality and productivity.
- Working with the UNR Graduate School, I periodically assist in facilitating conversations with faculty about mentoring graduate students through their "Mentoring Mentors" workshop series. I was trained as a facilitator of these discussions through the CIMER program in a 2-day training workshop in Summer 2016.
- I currently serve on the **NRES Graduate Program Committee** (2019 to present).
- I currently serve on the **EECB Curriculum Committee** (fall 2022 to present).
- I currently serve on the **EECB comprehensive examination committee** (2017-present), where I have helped to administer and grade the comprehensive exam for EECB.
- In Fall 2018, I **chaired a faculty search committee** charged with identifying top candidates for a tenure-track position in Quantitative Population Ecology (search was successful, and resulted in the hiring of Dr. Perry Williams).
- I served on the **EECB awards committee** (2017-spring 2022).

- I served on the **NRES Web Committee** (2020 to spring 2022).
- I served on the **NRES awards committee** (2016-2019), where I have helped to prepare nomination packets for deserving faculty and students and to select recipients for graduate student awards.
- In Spring 2017 I served on a tenure-track **faculty search committee** that successfully identified top candidates for a tenure-track position in Forest Science.
- Starting in Spring 2019 and continuing every Fall thereafter, lead 2-day (7 hours per day) **R workshops** ('R Bootcamp') that I designed to get graduate students and faculty started using R for data exploration, visualization, and analysis (<https://kevintshoemaker.github.io/R-Bootcamp/>). This has since transitioned into being a core component of a 1-3 credit course offering through the UNR Graduate School ("GRAD 778: *Elements of Research Computing*").

### *Professional*

- I currently serve on the **executive board for the Nevada Chapter of *The Wildlife Society***, where I have served as President (2019) and remain actively involved (currently as Representative to Western Section).
- I currently serve as **handling editor for the journal *Population Ecology***. My term began in fall 2014. In this capacity I handle ca. 5 manuscript submissions each year.
- I served as an informal advisor to USFWS and Mid-Atlantic Center for Herpetology and Conservation for developing management and monitoring plans for metapopulations of the bog turtle (*Glyptemys muhlenbergii*), an endangered freshwater turtle of the eastern United States (the primary focus of my doctoral research).
- In 2021, served on the North American Congress for Conservation Biology Organizing Committee (Scientific Program subcommittee for 2022 meeting in Reno, NV).
- In 2010 I served as a consulting biostatistician for regulators and industry consultants for the wind power industry in New York, assisting in the analysis of large data sets related to avian and bat fatalities at wind power facilities. This work has cast some doubt on the utility of pre-construction radar and avian acoustic surveys for predicting bird and bat fatalities at wind farms.
- In fall 2012 I taught a 2-day **Population Viability Analysis (PVA) workshop** for agency biologists at the New York State Department of Environmental Conservation (NYS-DEC).
- *Service as ad hoc peer reviewer*: Nature Climate Change, Conservation Biology, Conservation Genetics, Global Change Biology, Ecography, Population Ecology, Landscape Ecology, Northeastern Naturalist, Journal of Herpetology, Copeia, Journal of Wildlife Management, Canadian Journal of Zoology, Herpetologica, PLOS ONE, Biology Letters.
- *Professional society memberships*: Society for Conservation Biology, Ecological Society of America, The Wildlife Society.

### OTHER RELEVANT ACTIVITIES

- During my time working at Applied Biomathematics, I Co-developed a generic simulation model (RAMAS IRM) for assessing the rate of insect pest evolution to transgenic crops. This software is currently being used by industry and consultants to develop best management practices for optimizing crop durability. By providing a rigorous framework for exploring the effects of alternative agricultural practices, this software platform facilitates more effective communication among industry, regulators and academic ecologists.

## GRANTS AND FELLOWSHIPS

### *Submitted (awaiting response)*

- *Submitted, 2023* (co-PI). Ecology, demography and space use of pygmy rabbit (*Brachylagus idahoensis*) in Nevada: integrating habitat quality with population dynamics. Nevada Department of Wildlife. \$110,000.
- *Submitted, 2023* (co-PI). Homes on the range: large mammals as indicators of ecological and provisioning services on BLM lands in the Great Basin. Bureau of Land Management. \$2m
- *Submitted, 2023* (co-PI). Integrating functional variation in detoxification genes with demography of range edge populations to predict expansion into novel chemical landscapes. [PI- M. Matocq; co-PIs J. Forbey (Boise State University), W.B. Simison (California Academy of Sciences)]. National Science Foundation \$1,210,438 [revise for NSF DEB submission]

### *Successfully funded*

- PI, 2023. UNR Graduate School. DRIVE RAships. [approx. amount?]
- PI, 2022-2023. UNR Graduate School and College of Agriculture, Biotechnology and Natural Resources. Gradventure 2023 (supporting a graduate recruitment event for NRES program). \$7,600.
- Co-PI, 2022-2024. Demographics, movement patterns, and selection of resources by Rocky Mountain bighorn sheep translocated to North Dakota. North Dakota Game and Fish Department (PI: K. Stewart). \$439,287.
- PI, 2022. GBCESU: Occupancy Analysis in Support of: 'Monitoring American Pika in Protected Lava Landscapes. Subaward from Oregon State University (Matt Shinderman, PI). \$2,620.25.
- Co-PI, 2022. College of Agriculture, Biotechnology and Natural Resources. NRES Seminar and Graduate Program Funding. \$5k.
- PI, 2022-2023. Nevada Department of Wildlife - Wildlife Reserve Account Project Proposal - Spring Protection Effects on Non-Game Species. \$30,000.
- Co-PI, 2021-2022. RAPID: The role of disturbance in climate-driven hybrid zone dynamics. National Science Foundation. \$198,219. (PI: M. Matocq).
- PI, 2021-2023. Nevada Bureau of Land Management - GBCESU: American Pika (*Ochotona princeps*) Monitoring in the Black Rock Desert-High Rock Canyon National Conservation Area \$25,000.
- PI, 2021-2022. Nevada Department of Wildlife - Monitoring American Pika Occupancy and Population Pressures in Northwestern Nevada. \$40k.
- PI, 2021-2023. Nevada Department of Wildlife. 'Habitat mapping for mule deer and pronghorn in NV'. NDOW. \$59k
- Co-PI, 2021-2022. Nevada DRIVE Program, "DRIVE GRAs for the PhD in Natural Resources and Environmental Science (NRES)". Co-PIs: Greenberg, J.A., B. Sullivan, K. Shoemaker, K. Stewart, and P. Weisberg. \$50,000.
- PI, 2021-2022. "Monitoring bat activity, movement, and habitat selection in response to juniper removal treatments in the Vya region". Bureau of Land Management. \$61,192.
- Co-PI, 2020-2023. "Identification of Migration Corridors and Movement Patterns of American Pronghorn". USDA/NIFA (Hatch funds). \$135,200 (PI: K.M. Stewart, UNR)

- Co-PI, 2020-2024. “Ecology, demography and space use of pygmy rabbit (*Brachylagus idahoensis*) in Nevada: integrating habitat quality with population dynamics”. Nevada Department of Wildlife, Bureau of Land Management. \$366,846. (PI: M.D. Matocq, UNR)
- Key Personnel, 2020-2023. “Population dynamics of endangered freshwater turtles—from long-term monitoring to tangible conservation actions”. Hong Kong Research Grants Council (RGC). \$127k (Primary institution: Lingnan University, Hong Kong, PI: SUNG Yik Hei)
- Supervisor, 2020. “Undergraduate Research Award: Understanding avian species interactions using automated acoustic technology”. University of Nevada, Reno. \$1,800 [awarded to Richard Gølgart, an undergraduate mentee in the Shoemaker lab]
- Co-PI, 2019-2020. “Monitoring Habitat Use of Northern Great Basin Bat Communities”. Nevada Department of Wildlife (in partnership with BLM). \$20,000 [award administered through NDOW]
- PI, 2020. “Desert Tortoise Mating Opportunities on the Boulder City Conservation Easement”. Clark County, NV. \$15,798.20. (supplement to existing award)
- PI, 2020-2021. “Nesting study of Mojave desert tortoise (*Gopherus agassizii*) at the Boulder City Conservation Easement, Clark County, NV”. Clark County. \$92,298.
- Co-PI, 2020-2023. “Understanding how to manage prairie dog population dynamics in the context of plague, climate, and livestock production”. USDA-AFRI. \$496,000 [UNR component: \$14,218. KTS will co-advise a postdoc at Colorado State University as part of this award] (PI: A.D. Davidson, Colorado State University)
- PI, 2018-2021. “Critical habitat breadth for *Gopherus* tortoises: a new paradigm for managing threatened and endangered species in a non-stationary world”. Department of Defense (SERDP program). \$899k.
- PI, 2017-2021. “Assessing the wildlife community response to pinyon and juniper removal in the Vya region”. Bureau of Land Management (Cedarville, CA). \$70k.
- PI, 2017-2018. “Movements, breeding propensity, and effects based on use of geolocators attached to three species of ducks in Nevada”. Nevada Waterfowl Association. \$45k.
- PI, 2017. “Population Modeling to Support Giant Tortoise Restoration on Pinta, Santa Fe, and Española Islands, Galápagos”. Galapagos Conservancy. \$5k.
- Co-PI, 2015-2020. “Ecology of pygmy rabbit (*Brachylagus idahoensis*) in Nevada: integrating habitat quality, demography, and landscape connectivity”. Nevada Department of Wildlife, Bureau of Land Management, USFWS, Greater Hart-Sheldon Fund. \$640,000. (PI: M.D. Matocq, UNR)
- PI, 2016-2021. “Measuring the regional impacts of pinyon and juniper removal on insect, bat, and reptile communities”. GBLCC. \$199,587.82.
- PI, 2016-2019. “Assessing the regional response of avian and small mammal sagebrush communities to pinyon and juniper removal”. WAFWA. \$61,235.71.
- PI, 2016. “Population Modeling to Support Giant Tortoise Restoration to Pinta and Floreana Islands, Galapagos”. Galapagos Conservancy. \$5k.
- PI, 2014-2016. "Effect of Human Population on Land Use and Species Viability: Methodology and Software". USDA SBIR grant #2014-02598. \$450,000.
- Co-PI, 2012-2014. "Restoring critical habitat, mitigating multiple threats in Bergen Swamp". USFWS Great Lakes Research Initiative grant. \$128,064. (PI: D. Leopold, SUNY-ESF)



### *Declined proposals*

- *Submitted, 2022* (co-PI). ORCC: Integrating functional variation in detoxification genes with demography of range edge populations to predict expansion into novel chemical landscapes. [PI- M. Matocq; co-PIs J. Forbey (Boise State University), W.B. Simison (California Academy of Sciences)]. National Science Foundation \$1,210,438
- *Submitted, 2022* (co-PI). Collaborative Proposal: Predicting host evolution of resistance to introduced disease in dynamic metapopulation. National Science Foundation (NSF-EDGE). PI: Loren Cassin Sackett, University of Louisiana). \$352,256. [Funded, but UNR portion was declined]
- *Submitted, 2022* (co-PI). RUI: Ecological and demographic consequences of climate change-driven phenological shifts along a latitudinal gradient. National Science Foundation (BIO-DEB). UNR portion \$55,859 (total ~\$2m).
- *Submitted, 2021* (PI). Nevada Bureau of Land Management - GBCESU: Measuring and Mitigating the Threat of Plague in Faunal Communities at Talus Sites in the Northwestern Great Basin. \$100,000.
- *Submitted, 2021* (PI). Bureau of Land Management Black Rock Field Office - Pika Plague Research - Black Rock Range. \$66,000.
- *Submitted, 2021* (PI). Bureau of Land Management Black Rock Field Office - Shrew Conservation - Black Rock Range. \$66,000.
- *Submitted, 2021* (co-PI). Wildlife Acoustics (student submission) - Triangulation of Coyote Packs in Sheldon National Antelope Refuge. \$5,000.
- *Submitted, Fall 2020* (co-PI). “Climate change as a ‘threat multiplier’ for wild populations: a multi-species investigation using massively replicated, continent-wide avifaunal time series”. 749. Strategic Environmental Research and Development Program (SERDP), US Department of Defense.
- *Submitted, 2020* (PI). “Measuring and Mitigating the Threat of Plague in Faunal Communities at Talus Sites in the Northwestern Great Basin”. Bureau of Land Management. \$164,636.
- *Submitted, 2021*. Western North American Naturalist (Co-author on submission by technician Kelsey Burrus) - Understanding Diet Shifts in Response to Pinyon-Juniper Removals Using Stable Isotope Analysis of Small Mammal Museum Specimens. \$2,000.
- *Submitted, 2021*. Western North American Naturalist (Co-author on submission by student Richard Golangt) - Comparing Detection Probabilities for Great Basin Breeding Birds Using Passive Acoustic Recorders. \$2,000.
- *Submitted, 2021*. Western North American Naturalist - Assessing the Conservation Status and Habitat Associations of Pygmy Short-horned Lizards (*Phrynosoma douglasii*) in Northwestern Nevada. \$2,000.
- *Submitted, March 2020* (PI). “Passive Monitoring of Avian Communities for Indiana's Grasslands for Gamebirds and Songbirds Initiative”. Indiana Division of Fish and Wildlife. \$269,991.92.
- *Submitted, 2019* (co-PI). “Predicting host evolution of resistance to introduced disease in dynamic metapopulations”. NSF (DEB, EP cluster). \$1.99m [UNR component: \$200k] [declined, 2019]
- *Submitted, 2017* (co-PI). “Collaborative Research: Predicting evolution of resistance to introduced disease and its effects on landscape-level transmission in dynamic metapopulations”. NSF (EEID program). \$2.99m [UNR component: \$300k] [declined, 2018]

- *Submitted*, 2017 (PI). “Preliminary Proposal: Predicting host evolution of resistance to introduced disease in dynamic metapopulations”. NSF (EP cluster) pre-proposal. [Full proposal invited 2017] [declined, 2018]
- *Submitted*, 2016 (PI). “Integrating ecological theory into continental-scale projection models of species abundance and distribution, using songbirds as a model system”. NSF MacroSystems proposal. \$233,719.89. [declined, 2017]

#### *Other*

- I helped to draft several grant applications as a postdoctoral associate, including a 5-year NSF-RCN grant which supported much of my postdoctoral work at Stony Brook University (2011-2015)
- I drafted a proposal to the New York State Biodiversity Research Institute (2006), which was funded and supported my master's research at SUNY-ESF (PI: James P. Gibbs).

#### JOURNAL ARTICLES

##### *In Preparation*

- Crowell, M.M., Matocq, M.D., Dilts, T., Shoemaker, K.T. *In prep.* Turnover in pygmy rabbit (*Brachylagus idahoensis*) site and burrow activity in the Great Basin. *Conservation Biology*.
- Crowell, M.M., Byer, N.W., Shoemaker, K.T., and Matocq, M.D. *In prep.* Fine-scale relatedness structure within populations of pygmy rabbits (*Brachylagus idahoensis*) across the Great Basin. *Molecular Ecology*.
- Crowell, M.M., Matocq, M.D., Shoemaker, K.T. *In prep.* Environmental drivers of population and burrow density in a mammalian sagebrush obligate, the pygmy rabbit (*Brachylagus idahoensis*). *Journal of Animal Ecology*.
- Hunter, E.A., Walden, M.A., Shoemaker, K.T. *In prep.* Sensitivity of gopher tortoise population vital rates to climatic gradients. *Biological Conservation*.
- Reich, H., Osterhout, M., Vasquez, J., Stewart, K.M., and Shoemaker, Kevin T. *In prep.* Late frosts exacerbate human-bear conflict in northern Nevada. *Ecology and Evolution*.
- Borokini, I.T., Shoemaker, K.T., Weisberg, P.J., Peacock, M.M. *In prep.* Geographical and inter-annual patterns of seed viability in the threatened cold desert perennial *Ivesia webberi* A. Gray, and the prospect of non-destructive seed testing methods. *Plant Ecology*.
- Shoemaker, K.T., Hunter, E.A., Walden, M.A., Nussear, K.E., Esque, T.C. *In prep.* Spatio-temporal drivers of Mojave Desert Tortoise demography and movements. *Ecography*.
- Cook, N.A., Nicolai, C.A., Shoemaker, K.T. *In prep.* Monitoring waterfowl breeding activities with geolocators: a case study with Wood Ducks (*Aix sponsa*) in northern Nevada. *Journal of Animal Ecology*.
- Borokini, I.T., Shoemaker, K.T., Weisberg, P.J., Peacock, M.M. *In prep.* Geographical and inter-annual patterns of seed viability in the threatened cold desert perennial *Ivesia webberi* A. Gray, and the prospect of non-destructive seed testing methods. *Plant Ecology*.

Nagelson, P.B., York, R.A., Shoemaker, K.T., Foster, D.E., Stephens, S.L., and Bisbing, S.M.  
Regeneration of fire-adapted species in the Sierra Nevada contingent upon repeated fuel  
treatments and available soil moisture. *Ecological Applications*.

Hegg, S., Shoemaker, K.T., Weisberg, P.W., Sedinger, J., Matocq, M.D. *In prep.* Soil, vegetation, and  
interspecific competition determines density distribution of a sand-dune endemic heteromyid, the  
Pale Kangaroo Mouse (*Microdipodops pallidus*). *Journal of Mammalogy*.

Walden, M.A., Devan-Song, A., Drake, K.K., Esque, T.C., Nussear, K.E., Hunter, E.H, Shoemaker, K.T.  
*In prep.* Faster somatic growth may contribute to climate change resilience for a terrestrial  
vertebrate ectotherm. (ready to submit)

#### *Submitted*

Matocq, M.D., Hunter, E.A., Murphy, P.J. and Shoemaker, K.T. *In prep.* Reproductive success and  
assortative mating at a woodrat hybrid zone. *Evolution*.

Walden, M.A., Loope, K.J., Hunter, E.A., Divers, S.J., Comolli, J.R., Esque, T.C., and Shoemaker, K.T.  
*Submitted.* Testosterone identifies hatchling sex for Mojave desert tortoises (*Gopherus agassizii*).  
*Scientific Reports*.

Osterhout, M.J., Blum, M.E., Wakeling, B.F., Schroeder, C.A., Shoemaker, K.T., Brockman, J.C., and  
Stewart, K.M. *Submitted.* Effects of large-scale gold mining on habitat use and selection by a  
resident population of American Pronghorn. *Biological Conservation*.

#### *Resubmitted*

#### *Accepted/In Press*

Gustin, M.S., Dunham-Cheatham, S.M., Choma, N., Shoemaker, K.T., and Allen, N. *In Press.*  
Determining sources of reactive mercury compounds in Reno, Nevada, USA. *Frontiers in*  
*Environmental Chemistry*. DOI: 10.3389/fenvc.2023.1202957

Dyck, M., Shoemaker, K.T., Dennison, C., and Popescu, V. *Accepted.* Simulated effects of roadkill and  
harvest on the viability of a recovering bobcat population. *Journal of Wildlife Management*.

#### *Published*

Goldman, M.R., Shinderman, M., Jeffress, M.R., Rodhouse, T.J., and Shoemaker, K.T. 2023. Integrating  
multiple sign types to improve occupancy estimation for inconspicuous species. *Ecology and*  
*Evolution*. DOI: 10.1002/ece3.10019

Dilts, T.E., Zeller, K.A., Cushman, S.A., Larrucea, E.S., Crowell, M.M., Byer, N.W., Shoemaker, K.T.,  
Matocq, M.D. 2023. Pygmy rabbit habitat network reveals threats and opportunities for  
management and conservation. *Landscape Ecology*. DOI: 10.1007/s10980-023-01672-4.

Crowell, M.M., LaHue, N., Heath, E., Shoemaker, K.T., and Matocq, M.D. 2023. Detection of Rabbit  
Hemorrhagic Disease Virus 2 in the Pygmy Rabbit (*Brachylagus idahoensis*) in Nevada, USA.  
*Journal of Wildlife Diseases*. DOI: 10.7589/JWD-D-22-00067.

- Dilts, T.E., Blum, M., Shoemaker, K.T., Weisberg, P.J., Stewart, K. 2023. Topographic ruggedness indices in ecology: past, present and future. *Landscape Ecology*. DOI: 10.1007/s10980-023-01646-6.
- Blum, M.E., Stewart, K.M., Shoemaker, K.T., Wakeling, B., Dilts, T.E., Bennett, J.R., Cox, M., Sullivan, B.W., Bleich, V. 2023. Changes in selection of resources with reproductive state in a montane ungulate. *Movement Ecology* 11:20. DOI: 10.1186/s40462-023-00378-1
- Barrile, G.M., Augustine, D.J., Porensky, L.M., Duchardt, C.J., Shoemaker, K.T., Hartway, C.R., Derner, J.D., Hunter, E.A., and Davidson, A.D. 2023. A big data–model integration approach for predicting epizootics and population recovery in a keystone species. *Ecological Applications*. <https://doi.org/10.1002/eap.2827>
- Blum, M.E., Stewart, K.M., Cox, M., Shoemaker, K.T., Bennett, J. R., Sullivan, B. W., Wakeling, B.F., and Bleich, V.C. 2023. Variation in diet of desert bighorn sheep around parturition: tradeoffs associated with parturition. *Frontiers in Ecology and Evolution* 10, 1293. DOI: 10.3389/fevo.2022.1071771
- Loope, K.J., Rostal, D.C., Walden, M.A., Shoemaker, K.T., and Hunter, E.A. 2022. A comparison of non-surgical methods for sexing young gopher tortoises (*Gopherus polyphemus*). *PeerJ* 10:e13599 <http://doi.org/10.7717/peerj.13599>
- Walden, M. A., Jania, R., Kinney, M. E., Devan-Song, A., Drake, K. K., Esque, T. C., and Shoemaker, K. T. (2022). Computed tomography for measuring body fat reserves in the threatened Mojave Desert Tortoise (*Gopherus agassizii*). *Journal of Zoo and Wildlife Medicine*, 54: 412-423. DOI: 10.1638/2020-0168.
- Reynolds, D.S., Shoemaker, K.T., von Oettingen, S., Nager, S., Veilleaux, J.P. and Moosman, P. 2021. Integrating Multiple Survey Techniques to Document a Shifting Bat Community in the Wake of White-nose Syndrome. *Journal of Fish and Wildlife Management*. DOI: 10.3996/JFWM-20-043
- Byer, N.W., Dilts, T.E., Larrucea, E.S., Crowell, M.M., Shoemaker, K.T., Weisberg, P.J., Matocq, M.D. 2021. Holocene-era landscape conditions affect genetic connectivity in a sagebrush obligate species, the pygmy rabbit (*Brachylagus idahoensis*). *Landscape Ecology*. DOI: 10.1007/s10980-021-01328-1
- Byer, N.W., Holding, M.L., Crowell, M.M., Pierson, T.W., Dilts, T.E., Shoemaker, K.T., and Matocq, M.D. 2021. Adaptive divergence despite low effective population size in a peripherally isolated population of the pygmy rabbit, *Brachylagus idahoensis*. *Molecular Ecology*. DOI: 10.1111/mec.16040
- Fordham, D.A., Brown, S.C., Akcakaya, H.R., Brook, B.W., Haythorne, S., Manica, A., Shoemaker, K.T., Austin, J.J., Blonder, B., Rahbek, C., Nogues-Bravo, D. 2021. Process-explicit models reveal pathway to extinction for woolly mammoth using pattern-oriented validation. *Ecology Letters*. DOI: 10.1111/ele.13911.
- Cook, N.A., Nicolai, C.A., Shoemaker, K.T. 2021. Movements and staging locations of Canvasback (*Aythya valisineria*) in the Pacific Flyway. *Journal of Fish and Wildlife Management*. DOI: 10.1111/JFWM-20-032

- Mitchell, C.I., Shoemaker, K.T., Esque, T.C., Vandergast, A.G., Hromada, S.J., Dutcher, K.E., Heaton, J.S., and Nussear, K.E. 2021. Integrating telemetry data at several scales with spatial capture-recapture to improve density estimates for a rare and elusive reptile. *Ecosphere*. DOI: 10.1002/ecs2.3689.
- Hughey, L.F., Shoemaker, K.T., Stewart, K.M., McCauley, D.J., Cushman, J.H. 2021. Effects of human-altered landscapes on a reintroduced native ungulate: patterns of resource selection at the rangeland-wildland interface. *Biological Conservation* 257: 109086. DOI: 10.1016/j.biocon.2021.109086.
- Mitchell, C.I., Friend, D.A., Phillips, L.T., Hunter, E.A., Lovich, J.E., Agha, M., Puffer, S.R., Cummings, K.L., Medica, P.A., Esque, T.C., Nussear, K.E., Shoemaker, K.T. 2021. “Unscrambling” the drivers of egg production in the Mojave desert tortoise: Climate and individual attributes predict reproductive output. *Endangered Species Research*. DOI: 10.3354/esr01103
- Matthews, S., Mellin, C., Pratchett, M. Shoemaker, K.T. 2020. COTSMoD: A spatially explicit metacommunity model for the management of Crown-of-thorns starfish and coral recovery. *Advances in Marine Biology* 87:259-290. Academic Press. DOI: 10.1016/bs.amb.2020.09.001
- Macey, S.K., Vaidya, P.B., Chiu, C., Clark, J.A., and Shoemaker, K.T. 2020. Evidence for Nest-Site Fidelity but not Natal Homing in Bog Turtles (*Glyptemys muhlenbergii*). *Journal of Herpetology*. DOI: 10.1670/19-073
- Crowell, M.M., Matocq, M.D., Shoemaker, K.T. 2020. Ideal trapping conditions for increased trap success of pygmy rabbits (*Brachylagus idahoensis*) across the Great Basin. *Journal of Mammalogy*. DOI: 10.1093/jmammal/gyaa114
- Simmons, J.B., Campbell, T., Jerde, C.L., Chandra, S., Cowan, W., Hogan, Z., Saenz, J., Shoemaker, K.T. 2020. Population dynamics of threatened Lahontan cutthroat trout in Summit Lake. *Scientific Reports*. DOI: 10.1038/s41598-020-65992-0
- Heffelfinger, L.J., Stewart, K.M., Shoemaker, K.T., Darby, N.W., and Bleich, V.C. 2020. Balancing Current and Future Reproductive Investment: Variation in Resource Selection During Stages of Reproduction in a Long-Lived Herbivore. *Frontiers in Ecology and Evolution*. DOI: 10.3389/fevo.2020.00163
- Bleich, V.C., Blum, M.E., Holl, S.A., Shoemaker, K.T., Sustaita, D. 2019. Habitat selection by bighorn sheep in a mesic ecosystem: the San Rafael Mountains, California, USA. *California Fish and Game* 105:205-224.
- Wakeling, B.F., Van Dellen, A, Shoemaker, K.T., Gritts, M., Tull, J.C., and Stewart, K.M. 2019. The Nature of Diversity: diversity builds resiliency – in the wild and in the workplace – but it isn’t easy. *The Wildlife Professional* 13(6):46-49.
- Hunter, E.A., Gibbs, J.P., Cayot, L.J, Tapia, W., Quinzin, M.C., Miller, J.C., Caccone, A., and Shoemaker, K.T. 2020. Seeking compromise across competing goals in conservation translocations: The case of the “extinct” Floreana Island Galapagos giant tortoise. *Journal of Applied Ecology*. DOI: 10.1111/1365-2664.13516.
- Keehn, J. E., Shoemaker, K. T., & Feldman, C. R. 2019. Population-level effects of wind farms on a desert lizard. *The Journal of Wildlife Management*, 83:145-157. DOI: 10.1002/jwmg.21565

- Hall, D.B., Shoemaker, K.T., and Greger, P.D. 2019. Western red-tailed skink (*Plestiodon gilberti rubricaudatus*) distribution and habitat use in southern Nevada, USA. *Herpetological Conservation and Biology* 14:455–469.
- Sullivan, B.W., Nifong, R.L., Nasto, M.K., Alvarez-Clare, S., Dencker, C., Soper, F.M., Shoemaker, K.T., Ishida, F.Y. Zaragoza-Castells, J., Davidson, E.A., Cleveland, C.C. 2019. Biogeochemical recuperation of lowland tropical forest during succession. *Ecology*. DOI: 10.1002/ecy.2641
- Petersky, R., Calvin, W., Shoemaker, K.T., Weisberg, P. and Harpold, A. 2019. The sensitivity of snow ephemerality to warming climate across an arid to montane vegetation gradient. *Ecohydrology* 12: e2060. DOI: 10.1002/eco.2060
- Shoemaker, K.T., Heffelfinger, L.J., Jackson, N.J., Blum, M.E., Wasley, T., and Stewart, K.M. 2018. A machine-learning approach for extending classical wildlife resource selection analyses. *Ecology and Evolution* 8:3556-3569. DOI: 10.1002/ece3.3936
- Davidson, A.D., Hunter, E.A., Erz, J., Lightfoot, D.C., McCarthy, A.M., Mueller, J.K., and Shoemaker, K.T. 2018. Reintroducing a keystone burrowing rodent to restore an arid North American grassland: challenges and successes. *Restoration Ecology* 26:909-920. DOI: 10.1111/rec.12671
- Hunter, E.A., Murphy, P.J., Matocq, M.D., and Shoemaker, K.T. 2017. Differential effects of climate on survival rates drive hybrid zone dynamics and changes in species range limits. *Current Biology* 27:3898-3903. DOI: 10.1016/j.cub.2017.11.029
- Davidson, A.D., Shoemaker, K.T., Weinstein, B., Costa, G., Brooks, T., Ceballos, G., Rondinini, C. Radeloff, V., and Graham, C. 2017. Geography of current and future global mammal extinction risk. *PLOS-ONE* 12(11), e0186934. DOI: 10.1371/journal.pone.0186934
- Che-Castaldo, C., Jenouvrier, S., Youngflesh, C., Shoemaker, K.T., Humphries, G., Lynch, H.J. 2017. Pan-Antarctic analysis reveals the importance of stochastic forcing for Adélie penguins: How noisy is too noisy for adaptive management? *Nature Communications* 8(1), 832.
- Reynolds, D. S., Shoemaker, K. T., von Oettingen, S., Najjar, S. 2017. High Rates of Winter Activity and Arousals in Two New England Bat Species: Implications for a Reduced White-nose Syndrome Impact? *The Northeastern Naturalist* 24(sp7), B188-B208. DOI: 10.1656/045.024.s720
- Hileman, E. T., King, R. B., Adamski, J. M., Anton, T. G., Bailey, R. L., Baker, S. J., Johnson, B.D., Johnson, G., Kiel, B.D., Kingsbury, B.A., Kowalski, M.J., Shoemaker, K.T., Lee, Y.M., Lentini, A.M., & Campa III, H. 2017. Climatic and geographic predictors of life history variation in Eastern Massasauga (*Sistrurus catenatus*): A range-wide synthesis. *PloS ONE* 12(2), e0172011. DOI: 10.1371/journal.pone.0172011
- Johnson, B.D., Gibbs, J.P., Bell, T. A., & Shoemaker, K. T. 2016. Manipulation of basking sites for endangered eastern massasauga rattlesnakes. *The Journal of Wildlife Management* 80: 803-811. DOI: 10.1002/jwmg.21079.
- Johnson, B.D., Gibbs, J.P., Shoemaker, K.T., & Cohen, J. B. 2016. Demography of a Small and Isolated Population of Eastern Massasauga Rattlesnakes (*Sistrurus catenatus*) Threatened by Vegetative Succession. *Journal of Herpetology* 50: 534-540. DOI: 10.1670/121.

- Ryu, H.Y., Shoemaker, K.T., Kneip, E., Pidgeon, A.M., Heglund, P.J., Bateman, B.L., ... & Akçakaya, H.R. 2016. Developing population models with data from marked individuals. *Biological Conservation* **197**:190-199. DOI: 10.1016/j.biocon.2016.02.031
- Stanton, J.C., Shoemaker, K.T., Pearson, R.G., & Akçakaya, H.R. 2015. Warning Times for Species Extinctions Due To Climate Change. *Global Change Biology* **21**:1066-1077. DOI: 10.1111/gcb.12721.
- Shoemaker, K.T. & Akçakaya, H.R. 2015. Inferring the nature of anthropogenic threats from long-term abundance records. *Conservation Biology* **29**:238–249. DOI: 10.1111/cobi.12353.
- Gibbs, J.P., Shoemaker, K.T., Hunter, E.A., Cayot, L., & Tapia, W. 2014. Giant Tortoise Reintroduction to Española Island, Galapagos: Demographic Outcomes and Ecosystem Implications. *PLoS ONE*. [DOI: 10.1371/journal.pone.0110742]
- Penone, C., Davidson, A.D., Shoemaker, K.T., Graham, C. Di Marco, M. Rondinini, C. Hedges, B., & Costa, G.C. 2014. Imputation of missing data in life-history traits datasets: which approach performs the best? *Methods in Ecology and Evolution*. **5**:961–970. DOI:10.1111/2041-210X.12232
- Fordham, D.A., Shoemaker, K.T., Schumaker, N.H., Akçakaya, H.R., Clisby, N., & Brook, B.W. 2014. How interactions between animal movement and landscape processes modify local range dynamics and extinction risk. *Biology Letters* **10**:20140198. DOI:10.1098/rsbl.2014.0198
- Davidson, A. D., Friggens, M.T., Shoemaker, K.T., Hayes, C. L., Erz, J., Duran, R. 2014. Population Dynamics of Reintroduced Gunnison’s Prairie Dogs in the Southern Portion of their Range. *Journal of Wildlife Management* **78**:429-439. DOI:10.1002/jwmg.681
- Shoemaker, K.T., Breisch, A.R., Jaycox, J.W., & Gibbs, J.P. 2014. Disambiguating the Minimum Viable Population Concept: Response to Reed and McCoy. *Conservation Biology* **28**:871-873.
- Pearson, R.G., Stanton, J.C., Shoemaker, K.T., Aiello-Lammens, M.E., Ersts, P.J., Horning, N., Fordham, D.A., Raxworthy, C.J., Ryu, H.Y., McNees, J., & Akçakaya, H.R. 2014. Life history and spatial traits predict extinction risk due to climate change. *Nature Climate Change* **4**:217–221. DOI:10.7917/D7WD3XH5
- Shoemaker, K.T., Lacy, R.C., Verant, M.L., Brook, B.W., Livieri, T.M., Miller, P.S., Fordham, D.A., & Akçakaya, H.R. 2014. Effects of prey metapopulation structure on the viability of black-footed ferrets in plague-impacted landscapes: a metamodelling approach. *Journal of Applied Ecology* **51**: 735-745. DOI:10.1111/1365-2664.12223
- Chan, H-K, Shoemaker, K.T. & Karraker, N.E. 2014. Demography of *Quasipaa* frogs in China reveals high vulnerability to widespread harvest pressure. *Biological Conservation* **170**:3-9. DOI:10.1016/j.biocon.2013.12.014
- Shoemaker, K.T., A.R. Breisch, J. Jaycox, and J.P. Gibbs. 2013. Re-examining the minimum viable population concept for long-lived species. *Conservation Biology* **27**:542-551. DOI:10.1111/cobi.12028

- Shoemaker, K.T., and J.P. Gibbs. 2013. Genetic Connectivity Among Populations of the Threatened Bog Turtle (*Glyptemys mühlenbergii*) and the Need for a Regional Approach to Turtle Conservation. *Copeia* **2013**:324-331. DOI:10.1643/OT-12-022
- Shoemaker, K.T., and J.P. Gibbs. 2010. Evaluating basking-habitat deficiency in the threatened eastern massasauga rattlesnake. *Journal of Wildlife Management* **74**:504-513. DOI:10.2193/2008-519
- Schlaepfer, M.A., W.D. Helenbrook, K.B. Searing, and K.T. Shoemaker. 2009. Assisted colonization: evaluating contrasting management actions (and values) in the face of uncertainty. *Trends in Ecology and Evolution* **24**:471-472. DOI:10.1016/j.tree.2009.05.008

#### BOOK CHAPTERS:

- Shoemaker, K.T., G. Johnson and K.A. Prior. 2009. Habitat manipulation as a viable conservation strategy. Pp. 221–243 in (S.J. Mullin and R.J. Seigel, eds.) *Snakes: Applied Ecology and Conservation*. Cornell Univ. Press.

#### BOOK REVIEWS:

- Shoemaker, K.T. 2018. Current Trends in Wildlife Research (Mateo, R., Arroyo, B., Garcia, J.T., editors). *The Quarterly Review of Biology* **93**: 145.
- Shoemaker, K.T. 2013. Design and Analysis of Long-Term Ecological Monitoring Studies (R.A. Gitzen et al., editors). *The Quarterly Review of Biology* **88**: 334.

#### NATURAL HISTORY NOTES

- Miles, D., Burrus, K., & K.T. Shoemaker. 2021. Distinct white facial fur patterns of deer mouse, *Peromyscus maniculatus*, populations in northern Nevada. *Northwestern Naturalist*. DOI: 10.1898/1051-1733-102.3.254.
- Miles, D.C., Burrus, K.R., Burrus, M., and K.T. Shoemaker. *In prep*. Foot Drumming in Pinyon Mice, *Peromyscus truei*. *Western North American Naturalist*.
- Miles, D.C., Burrus, K., and K.T. Shoemaker. *Accepted*. First Records of the Dusky-Footed Woodrat, *Neotoma fuscipes*, in Northern Nevada. *Northwestern Naturalist*.
- Miles, D.C., Danser, C., and K.T. Shoemaker. 2020. Tail bifurcation in *Plestiodon skiltonianus*. *Herpetology Notes*. <https://www.biotaxa.org/hn/article/viewFile/57502/60850>
- Miles, D.C., Burrus, K.R., and K.T. Shoemaker. 2020. First records of California Kangaroo Rats, *Dipodomys californicus*, in Nevada," *Northwestern Naturalist* 101(1), 61-63. DOI:10.1898/1051-1733-101.1.61

#### REPORTS:

- Averill-Murray, R.C., Esque, T.C., Allison, L.J., Bassett, S., Carter, S.K., Dutcher, K.E., Hromada, S.J., Nussear, K.E., and Shoemaker, K., 2021, Connectivity of Mojave Desert tortoise populations—Management implications for maintaining a viable recovery network: U.S. Geological Survey Open-File Report 2021–1033, 23 p., <https://doi.org/10.3133/ofr20211033>.



- Shoemaker, K.T. 2020. Critical habitat breadth for *Gopherus* tortoises: a new paradigm for managing threatened and endangered species in a non-stationary world. Interim Report, January 2020. Project RC18-1103. 54 pp.
- Matocq, M.D., Shoemaker, K.T., Crowell, M., Dilts, T., Weisberg, P. Ecology and demography of pygmy rabbit (*Brachylagus idahoensis*) in Nevada: integrating habitat quality, demography and landscape connectivity. Final report to BLM. February 2020. 110 pp.
- Friedenberg, N.A. and Shoemaker, K.T. 2013. Population-Level Impacts of Wind Energy Development on Golden Eagles (*Aquila chrysaetos*). Electric Power Research Authority (EPRI) publication #3002004770.
- Shoemaker, K.T., J. Stanton, J. Ray, and N.A. Friedenberg. 2013. Assessing Population-level Risks of Wind Power Development for the Indiana Bat (*Myotis sodalis*). Electric Power Research Authority (EPRI). 95 pp.
- Friedenberg, N.A. and Shoemaker, K.T. 2012. Ecological risks associated with wind and solar power. Electric Power Research Authority (EPRI). 69 pp.
- Friedenberg, N.A. and Shoemaker, K.T. 2013. Golden Eagle Nesting Habitat in the Contiguous Western United States. Electric Power Research Authority (EPRI) publication #3002002401.
- Shoemaker, K.T., A.T. Krofta and J.P. Gibbs. 2007. Management recommendations for the eastern massasauga rattlesnake at Cicero Swamp Wildlife Management Area based on recent surveys. Unpublished report prepared for the New York State Department of Environmental Conservation, Albany, NY. 13 pp.
- Shoemaker, K.T., A.T. Krofta and J.P. Gibbs. 2006. Is Management Intervention Necessary for the Conservation of the Massasauga Rattlesnake at Cicero Swamp? A Report Based on a 2-year Ecological Study. Unpublished report prepared for the New York State Department of Environmental Conservation, Albany, NY. 39 pp.

#### THESES/DISSERTATIONS

- Shoemaker, K.T. 2011. Demography and population genetics of the bog turtle (*Glyptemys muhlenbergii*): implications for regional conservation planning in New York State. Dissertation, State University of New York College of Environmental Science and Forestry, Syracuse, NY. May 2011. 221 pp.
- Shoemaker, K.T. 2007. Habitat manipulation as a viable strategy for the conservation of the massasauga rattlesnake in New York State. Master's Thesis, State University of New York College of Environmental Science and Forestry, Syracuse, NY. May 2007.

#### PROFESSIONAL PRESENTATIONS AND INVITED TALKS

(presenter denoted with asterisk)

*Invited seminars and keynotes*

[ADD: SERDP IPR, April 2023]

- Shoemaker, K.T.\*. An augmented workflow for wildlife habitat modeling using machine learning. Invited presentation for “Fuzzy Boundaries” symposium on machine learning at The Wildlife Society annual meeting. Nov. 2022. Spokane, WA.
- Hunter, E.A.\*, and K.T. Shoemaker. Critical habitat Breadth for Gopherus Tortoises: A New Paradigm for Managing Threatened and Endangered Species in a Non-Stationary World. Invited presentation for SERDP Scientific Advisory Board (in-progress review). April 2022.
- Shoemaker, K.T.\*. Modeling the environmental drivers of population dynamics for desert and gopher tortoises in North America. Invited presentation for SERDP annual symposium. Nov. 2021. Virtual.
- Hunter, E.A.\*, and K.T. Shoemaker. Critical habitat Breadth for Gopherus Tortoises: A New Paradigm for Managing Threatened and Endangered Species in a Non-Stationary World. Invited presentation for SERDP Scientific Advisory Board (in-progress review). April 2021.
- Hunter, E.A.\*, and K.T. Shoemaker. Critical habitat Breadth for Gopherus Tortoises: A New Paradigm for Managing Threatened and Endangered Species in a Non-Stationary World. Invited presentation for SERDP Scientific Advisory Board (in-progress review). April 2020.
- Shoemaker, K.T.\* “Simulation models for wildlife conservation”. Invited seminar at Lingnan University and Hong Kong University, Hong Kong. November 2019.
- Shoemaker, K.T.\* “Population modeling for conservation: case studies with bog turtles, Galapagos tortoises and prairie dogs”. Invited seminar at Humboldt State University. Arcata, CA. October 2016.
- Shoemaker, K.T.\* et al., "Modeling the recovery of the black-footed ferret in a linked predator-prey-disease system". Invited talk for the seminar series at Warnell School of Forestry and Natural Resources, University of Georgia, Athens, GA, October 2014.
- Shoemaker, K.T.\* et al., "Mitigating the demographic impacts of roads on long-lived organisms". Invited talk for 2014 Wildlife Mitigation Strategy workshop in Peterborough, ON, organized by the Ontario Ministry of Transportation. May 2014.
- Shoemaker, K.T.\* et al. "Assessing the conservation value of small gopher tortoise populations: lessons from a bog turtle metapopulation in New York". Keynote address for the annual meeting of the Gopher Tortoise Council, Ponte Vedra, FL, Nov. 2013.
- Shoemaker, K.T.\* "When is a small turtle population worth protecting". Invited talk for seminar series at University of Rhode Island, September 2013.
- Shoemaker, K.T.\* “Modeling black-footed ferret recovery in a dynamic disease-driven system”. Invited seminar, University of Adelaide, Adelaide, Australia. December 2012.
- Shoemaker, K.T.\* "Scaling up bog turtle conservation in New York". Invited talk for seminar series at Paul Smiths college April 2011.

### *Oral presentations*

- Hunter, E.A., Loope, K.J., Shoemaker, K.T. Indirect effects of climate change on habitat management drive population declines in Gopher Tortoises. Annual meeting of The Wildlife Society. November 2023.
- [Davidson, A., Barrile, G., Shoemaker, K.T. Modeling plague in prairie dog populations. American Grasslands Conference. Details...summer 2023]
- Hromada, S, Nussear, K. Collins, A., Shoemaker, K.T. 2023. Climatic Drivers of Mojave Desert Tortoise Survival. Contributed talk at Ecological Society of America Annual Meeting. July 2023.
- Adkins, C., K.T. Shoemaker, M.D. Matocq. Environmental correlates of changes in genomic composition across a small mammal hybrid zone. Contributed talk at American Society of Mammalogists (ASM) Annual Meeting, Anchorage, AK. July 2023.
- Coconis, A.C., K.E. Nussear, K.T. Shoemaker, B.T. Hamilton, M.D. Matocq. Discerning drivers of distribution in *Neotoma lepida* and *Neotoma cinerea* in the Great Basin. Contributed talk at American Society of Mammalogists (ASM) Annual Meeting, Anchorage, AK. July 2023.
- Crowell, M., M. Matocq, Dilts, T., Shoemaker, K.T. Fantastic pygmy rabbits and where to find them: long-distance exploratory behavior and barriers to movement. Fantastic pygmy rabbits and where to find them: long-distance exploratory behavior and barriers to movement
- Vasquez, J.\* , Shoemaker, K.T., Stewart, K., Schroeder, C. Seasonal and regional differences in mule deer resource selection across northern Nevada. Contributed talk at The Wildlife Society Annual Meeting, Spokane, WA, November 2022.
- Jackson, N.\* , Stewart, K.M., Shoemaker., K.T., Clark, D., Wisdom, M. and Rowland, M. Shifting patterns of space use by sympatric herbivores: resource selection response to changing densities of interspecific competitors. Contributed talk at The Wildlife Society Annual Meeting, Spokane, WA, November 2022.
- Walden, M.\* , Shoemaker, K.T., Loope, K., Hunter, E., Divers, S., Esque, T. Innate Testosterone Identifies Sex of Hatchling Mojave Desert Tortoises (*Gopherus agassizii*). Contributed talk at the annual meeting of the Desert Tortoise Council, Feb. 2022 (virtual meeting).
- Goldman, M.\* , Shoemaker, K.T. Improving occupancy estimation for inconspicuous species using multiple sign types: a case study of American pika. Contributed talk at the annual meeting of the American Society of Mammalogists. Tucson AZ, June 2022.
- Crowell, M.\* , Shoemaker, K.T. Fantastic pygmy rabbits and where to find them: investigating long distance movements with GPS collars. Contributed talk at the annual meeting of the American Society of Mammalogists. Tucson AZ, June 2022.
- Jackson, N\*., Shoemaker., K.T., Stewart, K. Variation in resource selection by a large herbivore: effects of reproductive status and interspecific competition. Contributed talk at the annual meeting of the American Society of Mammalogists. Tucson AZ, June 2022.
- Osterhout, M., Shoemaker, K.T., Stewart, K. Selection of resources by pronghorn near large-scale disturbance. Contributed talk at the annual meeting of the American Society of Mammalogists. Tucson AZ, June 2022.

- Dyck, M., Dennison, C., Shoemaker, K.T., Popescu, V. Population viability analysis of Ohio's recovering bobcats. Contributed talk at the annual meeting of the American Society of Mammalogists. Tucson AZ, June 2022.
- Barrile, G.\*, Shoemaker, K.T., Augustine, D., Duchart, C., Hartway, C., Porensky, L., Davidson, A. Modeling Colony Growth and Plague Epizootics in Black-Tailed Prairie Dogs Across Eleven National Grasslands. Contributed talk at NACCB 2022, Reno, NV, July 2022.
- Dilts, T.\*, Zeller, K., Cushman, S., Crowell, M., Larrucea, E., Matocq, M. Pygmy Rabbit Habitat Network Reveals Threats and Opportunities for Management and Conservation. Contributed talk at NACCB 2022, Reno, NV, July 2022.
- Shoemaker, K.T.\*, Walden, M., Hunter, E.A., Nussear, K.E., Esque, T.C., Drake, K.K., and Averill-Murray, R. Modeling the range-wide environmental drivers of population dynamics for desert tortoises using long-term capture-recapture data. Contributed talk at NACCB 2022, Reno, NV, July 2022.
- Miles, D.\*, Shoemaker, K.T., Tenney, J., Burrus, K. Understanding Diet Shifts in Response to Pinyon-Juniper Removals Using Stable Isotope Analysis of Small Mammal Museum Specimens. Contributed talk at NACCB 2022, Reno, NV, July 2022.
- Burrus, K.\*, Miles, D., Shoemaker, K.T., Tenney, J. Improving Spotted Bat (*Euderma maculatum*) Detection Through Auditory Surveys and Increased Citizen Science Engagement in Nevada. Speed talk at NACCB 2022, Reno, NV, July 2022.
- Hunter, E.A.\*, K.J. Loope, J.N. DeSha, M.J. Aresco, D.C. Rostal, B.B. Rothermel, L.L. Smith, and K.T. Shoemaker. 2022. Natural variation and plasticity in response to climate change in gopher tortoise nest-site selection, nest thermal environment, and hatching success. North American Congress for Conservation Biology annual meeting, Reno, Nevada.
- Miles, D.M.\* and K.T. Shoemaker. Assessing the top-down and bottom-up drivers of community diversity across sagebrush and conifer habitats in the northern Great Basin. Society for Range Management symposium: Applying Long Term Monitoring Data to Rangeland Science: Perspectives from Early-Career Rangeland Scientists (virtual session). Jan 2022.
- Jackson, N.\*, Shoemaker, K.T., Stewart, K. Variation in resource selection by mule deer: effects of reproductive status and interspecific competition. The Western Section of The Wildlife Society Annual Meeting. Reno, Nevada. Feb 2022.
- Pighetti, C.\*, Shoemaker, K.T., and D.M. Miles. Mapping Coyote Habitat Use in Altered Landscapes of the Northern Great Basin. The Western Section of The Wildlife Society Annual Meeting. Reno, Nevada. Feb 2022.
- Tenney, J.\*, Shoemaker, K.T. and D.M. Miles. Modeling Plasticity in Rodent Responses to the Lunar Cycle Following Habitat Modification. The Western Section of The Wildlife Society Annual Meeting - Reno, Nevada. Feb 2022.
- Tenney, J.\*, Shoemaker, K.T. and D.M. Miles. Spotted Bat (*Euderma maculatum*) Acoustic Survey Training and Citizen Science Data. Nevada Bat Working Group Annual Meeting. (virtual meeting). Feb 2022.

- Miles, D.M.\* and K.T. Shoemaker. Monitoring Pygmy Short-horned Lizards (*Phrynosoma douglasii*) in Northwestern Nevada. Horned Lizard Conservation Society Conference. Postponed to 2022 due to COVID-19.
- Hunter, E.A.\* , K.J. Loope, D.C. Rostal, and K.T. Shoemaker. “Climate variability influences aspects of gopher tortoise fecundity.” Virginia Chapter of The Wildlife Society, virtual. March 2021
- Hegg, S.\* , Shoemaker, K.T., Matocq, M., Sedinger, J., Weisberg, P. A rare desert mouse’s perspective; illuminating demographics and microhabitat preferences of the pale kangaroo mouse. American Society of Mammalogists Annual Meeting (virtual). June 2021.
- Dyck, M.\* , Shoemaker, K.T., Dennison, C., Popescu, V. Assessing population viability and susceptibility to harvest of Ohio’s recovering bobcats (*Lynx rufus*). American Society of Mammalogists Annual Meeting (virtual). June 2021.
- Mitchell, C. I.\* , Friend, D.A., Phillips, L., Hunter, E., ...Esque, T.C., Nussear, K.E., and Shoemaker, K.T. “Unscrambling” the Drivers of Egg Production in Agassiz’s Desert Tortoise: Climate and Individual Attributes Predict Reproductive Output. Desert Tortoise Council Symposium (virtual). Feb. 2021.
- Miles, D.M.\* and K.T. Shoemaker. Multiyear Bat Community Monitoring in Northern Nevada. Western Bat Working Group Biennial Conference (virtual). Summer 2021.
- Golgart, R.\* , Shoemaker, K.T. and D.M. Miles. Effects of Conifer Removal on Birds of the Great Basin. The Western Section of The Wildlife Society Annual Meeting (virtual). Feb 2021.
- Pighetti, C.\* , Shoemaker, K.T., and D.M. Miles. Improved techniques for mapping coyote packs using passive acoustic recorders. The Western Section of The Wildlife Society Annual Meeting (virtual). Feb 2021.
- Golden, J.\* , Shoemaker, K.T., and D.M. Miles. Pilot Study of Winter Activity of American Pika in Talus Habitat of Nevada. The Western Section of The Wildlife Society Annual Meeting (virtual). Feb 2021.
- M.M Crowell, N.W. Byer, K.T. Shoemaker, and M.D. Matocq. Down the rabbit hole: habitat correlated of population density and relatedness in a semi-fossorial mammal. Elmer C. Birney Award, ASM Virtual Conference. Summer 2021.
- N.W. Byer, M.L. Holding, M.M. Crowell, T.W. Pierson, T.E. Dilts, E.S. Larrucea, K.T. Shoemaker, and M.D. Matocq. Maintenance of adaptive divergence despite limited gene flow and low effective population size in the pygmy rabbit, *Brachylagus idahoensis*. ASM Virtual Conference 2021.
- N.W. Byer, M.L. Holding, M.M. Crowell, T.W. Pierson, T.E. Dilts, E.S. Larrucea, K.T. Shoemaker, and M.D. Matocq. Maintenance of adaptive divergence despite limited gene flow and low effective population size in the pygmy rabbit, *Brachylagus idahoensis*. IALE, Virtual Conference 2021.
- Popescu, V.D., M. Dyck; K.T. Shoemaker; M. Back; R. Brown; M. Kenyon; C. Dennison. Implications of Road Mortality for the Population Viability of Recovering Bobcats in Ohio. Annual meeting of The Wildlife Society (virtual). September 2020.

- Shoemaker, K.T.\*, Walden, M., Esque, T., Nussear, K., Hunter, E.A. “Climatic and environmental sensitivities of Mojave Desert Tortoise demographic rates: New insights from old data”. Ecological Society of America. Aug 2020.
- Shoemaker, K.T.\*, Hunter, E.A., Gibbs, J.P. “Balancing competing objectives in re-establishing an 'extinct' giant tortoise population on Floreana Island, Galapagos”. North American Conference for Conservation Biology. July, 2020.
- Miles, D.M. and K.T. Shoemaker. Measuring Parasite Load and Small Mammal Diversity After Pinyon and Juniper Removal. North American Conference for Conservation Biology. July, 2020.
- Shoemaker, K.T.\*, M.A. Walden, E.A. Hunter, T.C. Esque, and K. Nussear. Invited Symposium Paper. February 23 2020. Modeling Habitat for Mojave Desert Tortoises in a Non-Stationary World. Annual Meeting of the Desert Tortoise Council, Las Vegas, NV.
- DeSha, J.N., K.J. Loope, M.J. Aresco, K.T. Shoemaker, and Elizabeth A. Hunter. Plasticity in gopher tortoise nesting behaviors and fecundity in a translocated population. Contributed oral presentation at the annual meeting of The Wildlife Society (virtual). September 2020.
- Shoemaker, K.T.\*, Walden, M., Hunter, E., Esque, T., Nussear, K. “Modeling Habitat for Mojave Desert Tortoises in a Non-Stationary World”. Invited paper for the Desert Tortoise Management Oversight Group, October 29, 2019.
- Shoemaker, K.T.\*, Walden, M.A., Hunter, E.A., Esque, T., Nussear, K. “Rangewide Environmental Sensitivities of Mojave Desert Tortoise Demographic Rates: New Insights from Old Data”. Contributed paper, AFS/TWS Joint National Meeting, Reno NV, Oct. 2019.
- Miles, D.\*, Shoemaker, K.T. “Acoustic Indices for Monitoring Avian Biodiversity in Sagebrush and Pinyon-Juniper Habitats”. Contributed paper, AFS/TWS Joint National Meeting, Reno NV, Oct. 2019.
- Dilts, T.\*, Zeller, K., Cushman, S., Weisberg, P., Larrucea, E., Crowell, M., Shoemaker, K., Matocq, M. “Multi-Scale and Replicate Landscape Habitat Modeling of Pygmy Rabbit Habitat in the Great Basin, U.S.A.”. Contributed paper, AFS/TWS Joint National Meeting, Reno NV, Oct. 2019.
- Jackson, N.\*, Stewart, K., Shoemaker, K.T., Clark, D., Wisdom, M. “Relationship between Mule Deer Reproduction and Resource Selection: Quid Pro Quo”. Contributed paper, AFS/TWS Joint National Meeting, Reno NV, Oct. 2019.
- Matocq, M.\*, Dilts, T., Larrucea, E., Weisberg, P., Crowell, M., Shoemaker, K. “Landscape Genetics of the Pygmy Rabbit (*Brachylagus idahoensis*) across the Sagebrush Sea of the Great Basin.” Contributed paper, AFS/TWS Joint National Meeting, Reno NV, Oct. 2019.
- Crowell, M.\*, Matocq, M., Shoemaker, K.T. “Estimating Densities of a Patchily Distributed, Sagebrush Specialist across the Great Basin.” Contributed paper, AFS/TWS Joint National Meeting, Reno NV, Oct. 2019.
- Mitchell, C.\*, Esque, T., Vandergast, A., Heaton, J., Dutcher, K., Hromada, S., Shoemaker, K.T., Nussear, K. “Integrating Telemetry and Mark-Recapture Methods to Estimate Density for the Mojave Desert Tortoise”. Joint Meeting of Ichthyologists and Herpetologists, Snowbird UT, July 2019.

- Shoemaker, K.T.\* “Critical Habitat Breadth for *Gopherus* Tortoises: A New Paradigm for Managing Threatened and Endangered Species in a Non-Stationary World”. Invited talk for In Progress Review, SERDP science advisory board, April 2019.
- Jackson, N.J.\*, Stewart, K.M., Shoemaker, K.T., Clark, D.A., Wisdom, M.J. “Relationship between mule deer reproduction and resource selection: quid pro quo.” The Wildlife Society, Western Section, Feb 2019.
- Crowell, M.M.\*, Matocq, M.D., Shoemaker, K.T. “Temporal and spatial density estimates of pygmy rabbit populations across the great basin.” The Wildlife Society, Western Section, Feb 2019.
- Goldman, M.\*, Miles, D.M, Shoemaker, K.T. “Could insect diversity and abundance be the missing link to understanding reptile presence across sagebrush and pinyon in Northern Great Basin habitat?”. The Wildlife Society, Nevada Chapter, Jan 2019.
- Blum, M.\*, Shoemaker, K.T., Bleich, V., Stewart, K. “Resource selection in female desert bighorn sheep: tradeoffs associated with reproduction”. The Wildlife Society, Nevada Chapter, Jan 2019.
- Crowell, M., Matocq, M., Shoemaker, K.T.\* “Estimating densities of pygmy rabbits in the Great Basin”. The Wildlife Society, Nevada Chapter, Jan 2019.
- Miles, D.\*, Shoemaker, K.T., Forister, M., Feldman, C., Hamilton, B., VanGunst, J. “Measuring the regional impacts of pinyon and juniper removal on bat and small mammal communities in the Norther Great Basin”. The Wildlife Society, Nevada Chapter, Jan 2019.
- Crowell, M.M.\*, Shoemaker, K.T., Matocq, M. “Best of the BUN-ch: recaptured rabbits provide essential information for estimating population densities and individual movement”. The Wildlife Society, Nevada Chapter, Feb 2018.
- Cook, N.\*, Nicolai, C., Shoemaker, K.T. “Movements and staging locations of canvasback in the Pacific Flyway”. The Wildlife Society, Nevada Chapter, Feb 2018.
- Miles, D.\*, Shoemaker, K.T. “Measuring the regional impacts of pinyon and juniper removal on non-target faunal communities”. The Wildlife Society, Nevada Chapter, Feb 2018.
- Shoemaker, K.T.\* , Walden, M.A., and Hunter, E.A. “Assessing critical habitat breadth for *Gopherus* tortoises”. The Wildlife Society, Nevada Chapter, Feb 2018.
- Crowell, M.M.\*, Shoemaker, K.T., Matocq, M. “Been there, trapped that! Trap success of pygmy rabbits in the Great Basin.” The Wildlife Society, Western Section, Feb 2018.
- Shoemaker, K.T.\* , Stewart, K., Blum, M., Heffelfinger, L., Wasley, T., and Jackson, N. “Integrating machine-learning with classical wildlife resource selection analyses.” The Wildlife Society, Western Section, Feb 2018.
- Hunter, E.A.\* , Matocq, M., Murphy, P. and Shoemaker, K.T. “Differential effects of climate on survival rates drive hybrid zone movement”. The Wildlife Society, Western Section, Feb 2018.
- Cook, N.A.\* , Nicolai, C.A., and Shoemaker, K.T. “Movements and staging locations of canvasback (*Aythya valisineria*) in the pacific flyway.” Poster, The Wildlife Society, Western Section, Feb 2018.

- Dilts, T.E.\*, Crowell, M., Matocq, M., Shoemaker, K.T., Larrucea, E., Weisberg, P. "Habitat selection by pygmy rabbit at regional and landscape scales". The Wildlife Society, Western Section, Feb 2018.
- Davidson, A.D., Erz, J., Hunter, E.A., Shoemaker, K.T.\*, "Fecundity limits initial success of reintroduced Gunnison's prairie dogs in an arid grassland ecosystem". The Wildlife Society, Western Section, Feb 2017.
- Crowell, M.M.\*, Dilts, T.E., Weisberg, P., Shoemaker, K.T., Matocq, M. "I'd trap that: Trap success and initial population estimates of pygmy rabbits in the Great Basin". The Wildlife Society, Western Section, Feb 2017.
- Dilts, T.E.\*, Crowell, M., Matocq, M., Shoemaker, K.T., Weisberg, P. "Habitat selection by pygmy rabbit at regional and landscape scales". The Wildlife Society, Western Section, Feb 2017.
- Miles, D.C.\*, Shoemaker, K.T. "Measuring the regional impacts of pinyon and juniper removal on insect, bat, and reptile communities". The Wildlife Society, Western Section, Feb 2017.
- Shoemaker, K.T.\*, Sackett, L., Davidson, A.D., Rocke, T., Busch, J. "Modeling genetic adaptation to sylvatic plague in black-tailed prairie dog metapopulations". The Wildlife Society, Western Section, Feb 2017.
- Shoemaker, K.T.\*, Davidson, A.D., Hunter, E.A. "Predicting plague outbreaks in black-tailed prairie dog colonies". Ecological Society of America. Portland, OR, Aug 2017.
- Hunter, E.A., Shoemaker, K.T.\*, et al. "Differential effects of climate on survival rates drive woodrat hybrid zone dynamics". Ecological Society of America. Portland, OR, Aug 2017.
- Shoemaker, K.T.\* "Regional Impacts of Pinyon and Juniper Removal on Insect, Bat, and Reptile Communities". Summer Field Tour - Restoring and Conserving Great Basin Ecosystems. Austin, NV. July 2017.
- Shoemaker, K.T.\*, et al. "Linking individual-based and population-based models for process-based inference of extinction risk". North American Conference for Conservation Biology. Madison, WI. July, 2016.
- Shoemaker, K.T.\*, et al. "Assessing the impact of wind power on the threatened Indiana bat (*Myotis sodalis*)". Invited talk for retirement celebration for Lev Ginzburg. Stony Brook, NY. Dec. 2015.
- Shoemaker, K.T.\* et al., "Improving regional abundance dynamics and range-shift forecasts by coupling individual-based dispersal models with matrix-based population projections." At the Ecological Society of America 99th Annual Meeting, Sacramento, CA, Thu., Aug. 14, 2014.
- Shoemaker, K.T.\* et al. "Can the IUCN Red List provide sufficient advance warning of extinction under climate change?" North American Congress for Conservation Biology. Missoula, MT. Monday, 14 July, 2014.
- Shoemaker, K.T.\* et al. "Mixing good data with bad: How to do it and when you should not". At the Society for Risk Analysis annual meeting. Baltimore, MD. 8 December 2013.



- Shoemaker, K.T.\* et al. "Modeling the recovery of the black-footed ferret in a linked predator-prey-disease system". At the International Congress for Conservation Biology. Baltimore, MD, 22 July 2013.
- Friedenberg, N.A. and Shoemaker, K.T.\*. "RAMAS IRM: Software for risk-based durability assessment". At the Entomological Society of America Annual Meeting, Knoxville TN. Nov 2012.
- Shoemaker, K.T.\* et al. "Assessing Population-level Risks of Wind Power Development for the Indiana bat (*Myotis sodalis*)". At the Electric Power Research Institute (EPRI) annual meeting, Nashville TN. Oct 2012.
- Shoemaker, K.T.\* and H.R. Akcakaya. "Inferring the nature of anthropogenic threats from long term abundance records". At the Ecological Society of America 97th Annual Meeting, Portland, OR. Aug 2012.
- Friedenberg, N.A., and Shoemaker, K.T.\* "Wildlife risk assessment for new wind and solar facilities". At the Electric Power Research Institute (EPRI) annual meeting, Boston MA, Sep 2011.
- Shoemaker, K.T.\* "Monitoring and restoring bog turtle metapopulations in NY". Invited presentation for USFWS, New York Ecological Services Field Office, Cortland, New York, NY. April 27, 2011.
- Shoemaker, K.T.\* Assessing the status of massasauga rattlesnakes (*Sistrurus c. catenatus*) in New York State. Paper presented at the Northeast Natural History Conference. Albany, NY. April 17–18, 2008.
- Shoemaker, K.T.\* and J.P. Gibbs. Assessing the case for thermal limitation in a threatened population of massasauga rattlesnakes at Cicero Swamp, New York. Paper presented at the Snakes of the Northeast. Amherst, MA. Dec. 30, 2007.
- Shoemaker, K.T.\* Conservation of the Eastern Massasauga Rattlesnake in New York State. Keynote address delivered at the annual meeting of the Bergen Swamp Preservation Society. Bergen, NY. Oct. 26, 2007.
- Shoemaker, K.T.\* The Eastern Massasauga Rattlesnake: a New York State Conservation Priority. Invited presentation for the Seneca Park Zoo (SPZ) Conservation Committee. Rochester, NY. Oct. 11, 2007.
- Shoemaker, K.T.\* and J.P. Gibbs. Assessing the case for thermal limitation in a threatened population of massasauga rattlesnakes at Cicero Swamp, New York. Paper presented at the Joint Meeting of Ichthyologists and Herpetologists (JMIH). St. Louis, MO. July 11, 2007.

#### PUBLIC TALKS

- Miles, D.M. and Shoemaker, K.T. 2021. "Avian Acoustic Monitoring in the Northern Great Basin". Plumas Audubon Chapter – Quincy, CA (Guest Research Talk).  
<https://www.youtube.com/watch?v=m3odkPZjnUs&t=3189s>

#### POSTER PRESENTATIONS

(presenter denoted with asterisk)

- Shoemaker, K.T. E.A. Hunter, K.E. Nussear, M.A. Walden. Critical habitat breadth for *Gopherus* tortoises. Poster presented at SERDP Symposium (virtual). November, 2022.
- Vasquez, J.\*, Schroeder, C., Stewart, K., Shoemaker, K.T. Characterizing and mapping habitat for mule deer in Nevada. The Western Section of The Wildlife Society Annual Meeting. Reno, Nevada. Feb 2022.
- Adkins, C.\*, Byer, N., Hunter, E., Shoemaker, K.T., Matocq, M. Decadal change in the distribution and genomic composition of a woodrat hybrid zone. Poster presented at the annual meeting of the American Society of Mammalogists. Tucson AZ, June 2022.
- Loope, K., DeSha, N., Aresco, M., Shoemaker, K.T., Hunter, E.A. Reproductive Integration Of Gopher Tortoises In A Translocated Population With Multiple Source Populations. Poster presented at NACCB 2022, Reno NV, July 2022.
- Tenney, J., Shoemaker, K.T. and D.M. Miles. 2022. Monitoring Pygmy Short-horned Lizards (*Phrynosoma douglasii*) in Northwestern Nevada. The Western Section of The Wildlife Society Annual Meeting. Reno, Nevada.
- Dyck, M., R. Brown, M. Kenyon, K.T. Shoemaker, and V. D. Popescu. Assessing the viability of Ohio's recovering bobcat (*Lynx rufus*) population. Poster presented at Ohio Wildlife Conference, Jan 21, 2021.
- Shoemaker, K.T. E.A. Hunter, K.E. Nussear, M.A. Walden. Critical habitat breadth for *Gopherus* tortoises. Poster presented at SERDP Symposium (virtual). November, 2021.
- Shoemaker, K.T. E.A. Hunter, K.E. Nussear, M.A. Walden. Critical habitat breadth for *Gopherus* tortoises. Poster presented at SERDP Symposium (virtual). December 3, 2020.
- Loope, K.J. N. DeSha, B.B. Rothermel, L.L. Smith, D.C. Rostal, K.T. Shoemaker, and E.A. Hunter. Nest site, nest temperature, and hatching outcomes across an environmental gradient in the gopher tortoise (*Gopherus polyphemus*). Poster presented at the annual meeting of The Wildlife Society (virtual). September 2020.
- Crowell, M.M., K.T. Shoemaker, and M.D. Matocq. Sagebrush chemistry and nutrition may contribute to observed pygmy rabbit population fluctuations and colony movement. Poster presented at "Genomes Underlying Toxin Tolerance" EPSCOR workshop, August 2020.
- Loope, K.J.\*, D.C. Rostal, H. Baker, M.A. Walden, K.T. Shoemaker, and E.A. Hunter. Non-invasive methods for sexing hatchling gopher tortoises (*Gopherus polyphemus*). Poster presented at Annual meeting of The Wildlife Society, Reno, NV. Sept 30, 2019.
- DeSha, J.N.\*, K.J. Loope, M.J. Aresco, K.T. Shoemaker, and E.A. Hunter. Can gopher tortoise nesting behavior compensate for the effects of climate change? Poster presented at Annual meeting of the Gopher Tortoise Council, Gulf Shores, AL. Nov 16, 2019.
- Loope, K.J.\*, D.C. Rostal, H. Baker, M.A. Walden, K.T. Shoemaker, and E.A. Hunter. Non-invasive methods for sexing hatchling gopher tortoises (*Gopherus polyphemus*). Poster presented at Annual meeting of the Gopher Tortoise Council, Gulf Shores, AL. Nov 16, 2019.
- Hunter, E.A.\*, K.T. Shoemaker, and D.C. Rostal. Effects of climatic variation on gopher tortoise populations. Poster presented at Georgia Climate Conference, Atlanta, GA. Nov 8, 2019.

Miles, D.M.\* Shoemaker, K.T. “Measuring the regional impacts of pinyon and juniper removal on bat and small mammal communities in the northern great basin”. Poster presented at The Wildlife Society, Western Section, Feb 2019.

McCarty, K.\*, Hunter, E.A., Walden, M., Shoemaker, K.T. Modeling as a Tool to Guide Head-Starting, Translocation and Monitoring Decisions for the Mojave Desert Tortoise. Poster presented at Desert Tortoise Council, Las Vegas, NV, Feb. 2018

Shoemaker, K.T.\* , Miles, D.M., Hamilton, B., Forister, M., Feldman, C. “Regional Impacts of Pinyon and Juniper Removal on Non-target Faunal Communities”. Poster presented at Great Basin Consortium, Sagebrush Science Initiative. Feb. 2017.

Shoemaker, K.T.\* “Modeling plague resistance in prairie dog populations”. Poster presented at The Wildlife Society, Western Section, Reno, NV 2017.

Shoemaker, K.T.\* , “Regional Impacts of Pinyon and Juniper Removal on Non-target Faunal Communities”. Poster presented at Great Basin Consortium. Reno, NV. February 2017.

Shoemaker, K.T.\* and J.P. Gibbs. Are small turtle populations worth protecting? Insights from Population Viability Analysis. Poster presented at the Student Conference on Conservation Science. New York, NY. Nov. 3-9, 2010.

Shoemaker, K.T.\* and J.P. Gibbs. Demography of a viable bog turtle metapopulation in New York. Poster presented at the Turtle Survival Alliance meeting. Orlando, FL. Aug. 16-19, 2010.

Shoemaker, K.T.\* , G. Johnson, and J.P. Gibbs. Relating habitat structure, thermal quality, and massasauga habitat use in Central New York: implications for management. Poster displayed at the Spotlight on Student Research and Outreach. SUNY-ESF, Syracuse, NY. Apr. 19, 2006

Shoemaker, K.T.\* and J.P. Gibbs. Relating habitat structure and operative temperatures in massasauga habitat in central New York: implications for management. Poster displayed at the Third International Conference and Workshop on the Conservation of the Massasauga Rattlesnake, Toronto Zoo, Toronto, ON. Oct. 12-14, 2005.

#### AWARDS

- 2021: Nominated for Tibbitts Award for excellence in teaching. [finalist- spring 2022] [not awarded]
- 2019 Outstanding Teacher of the Year, College of Agriculture, Biotechnology and Natural Resources, University of Nevada, Reno
- 2019 Jenkins Award for Graduate Teaching and Mentorship, Program in Ecology, Evolution, and Environmental Science (voted on and awarded by PhD students in the EECB program)