

CURRICULUM VITAE**DARREN REBAR****Current Address**

Department of Biological Sciences
 Emporia State University
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Professional appointments

Aug 2017 – present **Assistant Professor of Biology**, Emporia State University

Oct 2015 – July 2017 **Postdoctoral Research Associate**, University of Cambridge
 Advisor: Rebecca M Kilner

Jan 2014 – Oct 2015 **Fondation Fyssen Postdoctoral Fellow**, IRBI
 Advisor: Michael D Greenfield

Education

2009 – 2013 **Ph.D., University of Wisconsin-Milwaukee**
 Program: Ecology, Evolution, and Behavior
 Advisor: Rafael L Rodríguez

2006 – 2009 **MS, University of California, Riverside**
 Program: Evolution, Ecology, and Organismal Biology
 Advisor: Marlene Zuk

1998 – 2002 **BA, Oberlin College**
 Major: Biology, Minor: Chemistry

Publications**Peer-reviewed journals** (* denotes equal contribution; underline denotes mentored student co-author)

2022 **Rebar D**, Bishop C, Hallett AC. Anthropogenic light and noise affect the life histories of female *Gryllus veletis* field crickets. *Behavioral Ecology* 33: 731-739.

Rebar D, Halliwell C, Kemp R, Kilner RM. Experimental evolution of a more restrained clutch size when filial cannibalism is prevented in burying beetles *Nicrophorus vespilloides*. *Ecology and Evolution* 12: e8829.

Roberton B, **Rebar D**. Timing of prescribed burns impacts plant diversity but not investment in pollinator recruitment in a tallgrass prairie. *Ecosphere* 13: e3914.

2021 Duarte A*, **Rebar D***, Hallett AC, Jarrett BJM, Kilner RM. Evolutionary change in the construction of the nursery environment when parents are prevented from caring for their young directly. *Proc Natl Acad Sci* 118: e2102450118.

- Eckols T, Robertson B, Clark B, **Rebar D**. Exploring the potential role of ants as pollinators in a tallgrass prairie following varied prescribed burns. *Transactions of the Kansas Academy of Science* 123: 155-164.
- Visser B, Alborn HT, Rondeaux S, Haillot M, Hance T, **Rebar D**, Riederer JM, Tiso S, van Eldijk TJB, Weissing FJ, Nieberding CM. Phenotypic plasticity explains apparent reverse evolution of fat synthesis in parasitic wasps. *Scientific Reports* 11: 1-13.
- 2020** **Rebar D***, Bailey NW*, Jarrett BJM, Kilner RM. An evolutionary switch from sibling rivalry to sibling competition, caused by a sustained loss of parental care. *Proc Natl Acad Sci* 117: 2544-2550.
- 2019** **Rebar D**, Barbosa F, Greenfield MD. Female reproductive plasticity to the social environment and its impact on male reproductive success. *Behav Ecol Sociobiol* 73: 48.
- 2018** Jarrett BJM, Evans E, Haynes W, Leaf M, **Rebar D**, Duarte A, Schrader M, Kilner RM. A sustained change in the supply of parental care causes adaptive evolution of offspring morphology. *Nature Communications* 9: 3987.
- Jarrett BJM*, **Rebar D***, Haynes HB, Leaf MR, Halliwell C, Kemp R, Kilner RM. Adaptive evolution of synchronous egg-hatching in compensation for the loss of parental care. *Proc R Soc B*: 20181452. (* denotes equal contribution)
- Barbosa F, **Rebar D**, Greenfield MD. When do trade-offs occur? The roles of energy constraints and trait flexibility in bushcricket populations. *J Evol Biol* 31: 287-301.
- 2017** Schrader M, Jarrett BJM, **Rebar D**, Kilner RM. Adaptation to a novel family environment involves both apparent and cryptic phenotypic changes. *Proc R Soc B* 284: 20171295.
- Kilmer JT, Fowler-Finn KD, Gray DA, Höbel G, **Rebar D**, Reichert M, Rodríguez RL. Describing mate preference functions and other function-valued traits. *J Evol Biol* 30: 1658-1673.
- Jarrett BJM, Schrader M, **Rebar D**, Houslay TM, Kilner RM. Cooperative interactions within the family enhance the capacity for evolutionary change in body size. *Nature Ecol Evol* 1: 0178.
- Rebar D**, Greenfield MD. When do acoustic cues matter? Perceived competition and reproductive plasticity over lifespan in a bushcricket. *Anim Behav* 128: 41-49.
- 2016** Barbosa F, **Rebar D**, Greenfield MD. Female preference functions drive inter-population divergence in male signalling: call diversity in the bushcricket *Ephippiger diurnus*. *J Evol Biol*. 29: 2219-2228.
- Rebar D**, Rodríguez RL. Males adjust their signalling behaviour according to experience of male signals and male-female signal duets. *J Evol Biol* 29: 766-776.
- Rebar D**, Barbosa F, Greenfield MD. Acoustic experience influences male and female pre- and postcopulatory behavior in a bushcricket. *Behav Ecol* 27: 434-443.
- Barbosa F, **Rebar D**, Greenfield MD. Reproduction and immunity trade-offs constrain mating signals and nuptial gift size in a bushcricket. *Behav Ecol* 27: 109-117.

- 2015 **Rebar D**, Rodríguez RL. Insect mating signal and mate preference phenotypes covary among host plant genotypes. *Evolution* 69: 602-610.
- 2014 **Rebar D**, Rodríguez RL. Genetic variation in host plants contributes to variation in the mate preferences of a plant-feeding insect. *Amer Nat* 184: 489-499.
- Rebar D**, Rodríguez RL. Trees to treehoppers: genetic variation in host plants contributes to variation in the mating signals of a plant-feeding insect. *Ecol Lett* 17: 203-210.
- 2013 **Rebar D**, Rodríguez RL. Genetic variation in social influence on mate preferences. *Proc R Soc B* 280: 20130803.
- Rodríguez RL, **Rebar D**, Fowler-Finn KD. The evolution and evolutionary consequences of social plasticity in mate preferences. *Anim Behav* 85: 1041-1047.
- Bailey NW, Fowler-Finn KD, **Rebar D**, Rodriguez RL. Green Symphonies or wind in the willows? Testing acoustic communication in plants. *Behav Ecol* 24: 797-798.
- 2012 **Rebar D**, Höbel G, Rodríguez RL. Vibrational playback by means of airborne stimuli. *J Exp Biol* 215: 3513-3518.
- 2011 **Rebar D**, Zuk M, Bailey NW. Mating experience in field crickets modifies pre- and postcopulatory female choice in parallel. *Behav Ecol* 22: 303-309.
- 2009 **Rebar D**, Bailey NW, Zuk M. Courtship song's role during female mate choice in the field cricket *Teleogryllus oceanicus*. *Behav Ecol* 20: 1307-1314.
- 2008 Zuk M, **Rebar D**, Scott SP. Courtship song is more variable than calling song in the field cricket *Teleogryllus oceanicus*. *Anim Behav* 76: 1065-1071.

Book chapters

- 2019 Rodríguez RL, **Rebar D**, Bailey NW. Indirect genetic effects. In: Choe JC (Ed.), *Encyclopedia of Animal Behaviour 2nd Edition* 2: 49-55.

Science popularization

- Rebar D**. 2010. Why shout when she's standing right here? *Metaleptea: The Newsletter of the Orthopterists' Society* 30 (2): 7-8.

Grants and awards

- 2022 Research improvement grant, ESU \$1500
- 2021 Research improvement grant, ESU \$1500
- 2020 Faculty research assistance grant, ESU \$1500
FRCC graduate research assistantship award, ESU \$8446
PI: ESURP undergraduate research project, ESU \$6500
- 2019 FRCC graduate research assistantship award, ESU \$9547
Research improvement grant, ESU \$1151
Kathrine K White faculty incentive grant, ESU \$1505
- 2018 Research improvement grant, ESU \$1234
Co-PI: ESURP undergraduate research project, ESU \$6500
Co-PI: Research improvement grant, ESU \$1500

2017	Co-PI: Kathrine K White faculty incentive grant, ESU \$700
2017 – 2020	FRS-FNRS Postdoctoral Fellowship, Université Catholique de Louvain, Belgium, €150,000; declined
2015 – 2017	POE Postdoctoral Fellowship, U. Nebraska-Lincoln, \$90,000; declined
2014 – 2015	Fondation Fyssen Postdoctoral Fellowship, €50,000
2012 – 2013	Dissertation Fellowship, UW-Milwaukee, \$16,500
2011 – 2012	Distinguished Graduate Student Fellowship, UW-Milwaukee, \$14,000
2010 – 2013	UW-Milwaukee Ruth Walker grant-in-aid award; awarded 4 times for a total of \$4,500 UW-Milwaukee James D. Anthony award; awarded 3 times for a total of \$600
2010	SSE Rosemary Grant Graduate Student Research Award, \$2500
2009 – 2013	Chancellor's graduate student award, UW-Milwaukee, awarded 8 times for a total of \$16,000
2009	UC Riverside GSA travel grant, \$300
2008 – 2009	Teaching Assistant fellowship, UC Riverside, \$25,000
2008	Orthopterists' Society research grant, \$800
2006 – 2007	Chancellor's distinguished fellowship, UC Riverside, \$13,000

Invited talks (*) and conference contributions (talk unless noted otherwise)

† presented by student co-author

2021	†Northern Plains Biological Symposium: Fargo, ND *Pittsburg State University Biology Seminar: Pittsburg, KS
2020	†Ecological Society of America annual conference: virtual †Kansas Natural Resources Conference: Manhattan, KS
2018	International Society of Behavioral Ecology: Minneapolis, MN
2017	Symposium co-organizer and speaker, Behaviour: Estoril, Portugal
2016	*Biodiversity Research Center, University of Louvain: Louvain-la-Neuve, Belgium Dept of Zoology Behavioural Ecology seminar series: Cambridge, United Kingdom
2015	Institut de Recherche sur la Biologie de l'Insecte (IRBI): Tours, France
2014	Ecology and Behaviour: Montpellier, France
2013	*Institut de Recherche sur la Biologie de l'Insecte (IRBI): Tours, France Royal Entomological Society: St. Andrews, United Kingdom
2012	Animal Behavior Society: Albuquerque, NM (poster)
2011	*Integrative Behavior Group, UW-Madison: Madison, WI
2010	Animal Behavior Society: Williamsburg, VA
2009	Dept of Evolution, Ecology, and Organismal Biology Gradfest: Riverside, CA Society for Integrative & Comparative Biology: Boston, MA (poster)

Non-conference talks († presented by student co-author)

2020	Club of Little Gardens: Kalamazoo, MI †Capitol Graduate Research Summit: Topeka, KS
2019	†ESU Research and Creativity Day: Emporia, KS

Teaching and mentoring

Teaching

Lecture/lab courses (in alphabetical order) taught at Emporia State University

Animal Behavior
Animal Communication

Ecology
 Entomology lecture and lab
 Forensic Entomology
 Graduate research seminar
 Introductory Biology
 Invertebrate zoology lecture and lab
 Research Design and Analysis

Discussion group leader/coordinator

Ecology and Behavior, Emporia State University
 Behavioral ecology, University of Cambridge
 Evolution and behavior: Genes and individuals, University of Cambridge

Teaching Assistant

2013 Introductory Biology, laboratory sections, UW-Milwaukee
 2010 General Ecology, laboratory sections, UW-Milwaukee
 2009 Introductory Biology, laboratory sections, UW-Milwaukee
 2008 Evolutionary Biology, discussion sections, UC Riverside
 2007 Introductory Evolution and Ecology, laboratory sections, UC Riverside

Other Teaching Experiences

2004 – 2005 Teaching associate for 6-8th grade students, Citizen Schools, Boston, MA.
 2002 – 2003 Instructor and Head Tech, Desert Sun Science Center, Idyllwild, CA.
 2001 – 2002 Experimental College (EXCO) Instructor, Oberlin College, Oberlin, OH.

Mentoring

Graduate students

Thesis

2018 – 2021 Bethany Robertson: Effects of variation in seasonal burns on plant communities, pollinator recruitment, and reproductive success

Projects

2021 – 2022 Tingyuan Xuan: Immune function trade-offs when developing in anthropogenic light and noise
 2017 – 2020 Daniel Kennedy: Consequences of anthropogenic noise and light on the mating behaviors of female field crickets

Undergraduate students

2022 – present Elizabeth Murdock: How anthropogenic noise and light disrupt male rhythmicity
 2021 Corey Bishop: Consequences of developing in anthropogenic noise and light on field crickets, ESU
 2020 – 2021 Tucker Eckols: Exploring the potential role of ants as pollinators in a tallgrass prairie following varied prescribed burns, ESU
 2019 – 2020 Tyler Balsters: Survey of arthropod communities on industrial hemp, ESU
 2018 – 2019 Joseph LaForge: Pollinator recruitment and native plant success in tallgrass prairies following seasonal burns, ESU
 2016 – 2017 Rachel Kemp and Chay Halliwell: The evolution of clutch size, U Cambridge
 2014 – 2015 Supervised three undergraduate research interns, IRBI
 2014 Supervised a first-year master's project: Female preference functions and discrimination in *Achroia grisella*, IRBI
 2010 – 2012 Graduate Mentor for Undergraduate research in Biology and Mathematics (UBM) program, UW-Milwaukee

2008 – 2009 Mentor Teaching Assistant for TA Development Program, UC Riverside.

Professional service

Reviewing

- 2008 –** Referee for 10 international peer-reviewed journals: *Animal Behaviour*, *Behavioral Ecology*, *Biological Journal of the Linnean Society*, *Biology Letters*, *Ecology and Evolution*, *Ethology*, *Evolution*, *Global Change Biology*, *Journal of Insect Behavior*, *Proceedings of the Royal Society: Biological Sciences*
- 2010 – present** Serve on the editorial board for the journal *Evolution: Education and Outreach*

Other Service

- 2010 – 2011** Fundraiser, Graduate Organization of Biological Sciences, UW-Milwaukee
- 2008 – 2009** President, Biology Graduate Student Association, UC Riverside
Graduate Student Recruitment Committee, UC Riverside

Professional memberships

Animal Behaviour Society
Association for the Study of Animal Behaviour
International Society of Behavioral Ecology
Kansas Entomological Society
Society for the Study of Evolution