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PROFES	SSIONAL	EXPERI	ENCE

2013 - present	Associate Professor (tenured)	Univ. of Wisconsin-Milwaukee
2007 - 2012	Assistant Professor	Univ. of Wisconsin-Milwaukee
2002 - 2006	Post-doctoral Fellow	Univ. of Missouri

#### EDUCATION

PhD , 2002	Univ. of Kansas	Ecology & Evolutionary Biology, Entomology
MS, 1996	Univ. of Costa Rica	Biology
BS, 1991	Univ. of Costa Rica	Biology

#### RESEARCH FUNDING

2013–2015. UWM Graduate School Research Committee Award (\$ 14,984) Miniaturization and behavioral capabilities

2011-2014. NSF Grant IOS-1120790 (\$ 530,000)

Testing the role of sexual selection by mate choice in promoting divergent local

## adaptation

(With KD Fowler-Finn)

2013. REU Supplement to NSF Grant IOS-1120790 (\$ 8,501)

2009-2011. NSF Grant IOS-0919962 (\$ 152,698)

Research Initiation Grant (RIG): Genotype  $\times$  environment interaction in mate preferences and signals

2010. REU Supplement to NSF Grant IOS-0919962 (\$ 5,900)

2003-2005. NSF Grant IBN 0318326. (\$ 514,728)

Collaborative research: The Role of Mating Signals in Sympatric Speciation: An Integration of Comparative and Experimental Approaches. (With RB Cocroft & RE Hunt)

## RESEARCH INTERESTS

• Sexual selection and mate choice

- Sources of diversity in mate preferences; social plasticity in communication
- Phenotypic plasticity and genotype × environment interaction

Cognitive ecology
 PUBLICATIONS IN REFEREED JOURNALS

2013	Bailey NW, Fowler-Finn KD, Rebar D & Rodríguez RL. 2013. Invited commentary: Green symphonies or wind in the willows? Testing acoustic communication in plants. <b>Behav Ecol</b> 24, 797-798	(46 )
	Fowler-Finn KD & Rodríguez RL. 2013. Repeatability of mate preference functions in <i>Enchenopa</i> treehoppers (Hemiptera: Membracidae). <b>Anim Behav</b> 85, 493-499	(45 )
	Gabor CR, Aspbury AS & Rodríguez RL. 2013. Geographic variation in behaviour: an introduction. <b>Evol. Ecol. Res.</b> (in press)	(44
	Rebar D & Rodríguez RL. 2013. Genetic variation in social influence on mate preferences. <b>Proc R Soc B.</b> 280, 20130803	)
	Rodríguez RL. 2013. Causes of variation in genotype $\times$ environment interaction (G×E). <b>Evol. Ecol. Res.</b> (in press)	(43 )
	Rodríguez RL, Boughman JW, Gray DA, Hebets EA, Höbel G & Symes LB. 2013. Diversification under sexual selection: the relative roles of mate preference strength and the degree of divergence in mate preferences. <b>Ecol Lett.</b> 16, 964–974	(42
	Rodríguez RL, Hallet, AC, Kilmer JT & Fowler-Finn KD. 2013. Curves as traits: genetic and environmental variation in mate preference functions. <b>J Evol Biol</b> 26, 434-442	(41 )
	Rodríguez RL, Kolodziej RC & Höbel G. 2013. Memory of prey larder size in golden orb-web spiders, <i>Nephila clavipes</i> (Araneae: Nephilidae). <b>Behaviour</b> (in press)	(40
	Rodríguez RL, Rebar D & Fowler-Finn KD. 2013. The evolution of social plasticity in mate preferences. <b>Anim Behav</b> 85, 1041-1047	,
	Safran RJ, Scordato ESC, Symes LB & Rodríguez RL & Mendelson TC. 2013. The relative contributions of sexual and natural selection in the evolution of reproductive isolation: a unified framework. <b>Trends Ecol Evol.</b> (provisional acceptance)	(39
		(38 )
		(37 )

Rebar D, Höbel G & Rodríguez RL. 2012. Vibrational playback by means of airborne stimuli. <b>J Exp Biol</b> 215, 3513–3518  Rodríguez RL. 2012. Grain of environment explains variation in strength of genotype × environment interaction. <b>J Evol Biol</b> 25, 1897–1901  Rodríguez RL, Haen C, Cocroft RB & Fowler-Finn KD. 2012. Males adjust signaling effort based on female mate-preference cues. <b>Behav Ecol</b> 23, 1218–1225  Rodríguez RL & Al-Wathiqui N. 2012. Causes of variation in sexual allometry: a case study with the mating signals and genitalia of <i>Enchenopa</i> treehoppers (Hemiptera: Membracidae). <b>Ethol Ecol &amp; Evol</b> 24, 187–197  Rodríguez RL & Al-Wathiqui N. 2012. Genotype × environment interaction in the allometry of traits in the body, genitalia, and signals of <i>Enchenopa</i> treehoppers (Hemiptera: Membracidae). <b>Biol J Linn Soc</b>	2012	Fowler-Finn KD & Rodríguez RL. 2012. Experience-mediated plasticity in mate preferences: mating assurance in a variable environment. <b>Evolution</b> 66, 459-468	(36 )
of airborne stimuli. <b>J Exp Biol</b> 215, 3513–3518  Rodríguez RL. 2012. Grain of environment explains variation in strength of genotype × environment interaction. <b>J Evol Biol</b> 25, 1897–1901  Rodríguez RL, Haen C, Cocroft RB & Fowler-Finn KD. 2012. Males adjust signaling effort based on female mate-preference cues. <b>Behav Ecol</b> 23, 1218–1225  Rodríguez RL & Al-Wathiqui N. 2012. Causes of variation in sexual allometry: a case study with the mating signals and genitalia of <i>Enchenopa</i> treehoppers (Hemiptera: Membracidae). <b>Ethol Ecol &amp; Evol</b> 24, 187–197  Rodríguez RL & Al-Wathiqui N. 2012. Genotype × environment interaction in the allometry of traits in the body, genitalia, and signals of <i>Enchenopa</i> treehoppers (Hemiptera: Membracidae). <b>Biol J Linn Soc</b>			(35
Rodríguez RL. 2012. Grain of environment explains variation in strength of genotype × environment interaction. <b>J Evol Biol</b> 25, 1897–1901  Rodríguez RL, Haen C, Cocroft RB & Fowler-Finn KD. 2012. Males adjust signaling effort based on female mate-preference cues. <b>Behav Ecol</b> 23, 1218–1225  Rodríguez RL & Al-Wathiqui N. 2012. Causes of variation in sexual allometry: a case study with the mating signals and genitalia of <i>Enchenopa</i> treehoppers (Hemiptera: Membracidae). <b>Ethol Ecol &amp; Evol</b> 24, 187–197  Rodríguez RL & Al-Wathiqui N. 2012. Genotype × environment interaction in the allometry of traits in the body, genitalia, and signals of <i>Enchenopa</i> treehoppers (Hemiptera: Membracidae). <b>Biol J Linn Soc</b>			/ (2.4
signaling effort based on female mate-preference cues. <b>Behav Ecol</b> 23, 1218–1225  Rodríguez RL & Al-Wathiqui N. 2012. Causes of variation in sexual allometry: a case study with the mating signals and genitalia of Enchenopa treehoppers (Hemiptera: Membracidae). <b>Ethol Ecol &amp; Evol</b> 24, 187–197  Rodríguez RL & Al-Wathiqui N. 2012. Genotype × environment interaction in the allometry of traits in the body, genitalia, and signals of Enchenopa treehoppers (Hemiptera: Membracidae). <b>Biol J Linn Soc</b>			)
allometry: a case study with the mating signals and genitalia of Enchenopa treehoppers (Hemiptera: Membracidae). Ethol Ecol & Evol 24, 187-197  Rodríguez RL & Al-Wathiqui N. 2012. Genotype × environment interaction in the allometry of traits in the body, genitalia, and signals of Enchenopa treehoppers (Hemiptera: Membracidae). Biol J Linn Soc		signaling effort based on female mate-preference cues. <b>Behav Ecol</b> 23,	(33 )
interaction in the allometry of traits in the body, genitalia, and signals of Enchenopa treehoppers (Hemiptera: Membracidae). <b>Biol J Linn Soc</b>		allometry: a case study with the mating signals and genitalia of Enchenopa treehoppers (Hemiptera: Membracidae). <b>Ethol Ecol &amp; Evol</b>	(32
		interaction in the allometry of traits in the body, genitalia, and signals of <i>Enchenopa</i> treehoppers (Hemiptera: Membracidae). <b>Biol J Linn Soc</b>	(31 ) (30

2011	Al-Wathiqui N & Rodríguez RL. 2011. Allometric slopes not underestimated by OLS regression: a case study in <i>Enchenopa</i> treehoppers (Hemiptera: Membracidae). <b>Ann Ent Soc Am</b> 104, 562–566.	(29
	Hebets EA, Stafstrom JA, Rodríguez RL & Wilgers DJ. 2011. Enigmatic ornamentation eases male reliance on courtship performance for mating success. <b>Anim Behav</b> 81, 963–972.	(28 )
	Rodríguez RL & Al-Wathiqui N. 2011. Genotype $\times$ environment interaction is weaker in genitalia than in mating signals and body traits in <i>Enchenopa</i> treehoppers (Hemiptera: Membracidae). <b>Genetica</b> 139, 871–884.	(27 )
	Rodríguez RL & Gloudeman MD. 2011. Estimating the repeatability of memories of captured prey formed by <i>Frontinella communis</i> spiders (Araneae: Linyphiidae). <b>Anim Cogni</b> 14, 675–682.	(26 )
2010	Cocroft RB, Rodríguez RL & Hunt RE. 2010. Host shifts and signal divergence: mating signals covary with host use in a complex of specialized plant-feeding insects. <b>Biol J Linn Soc</b> 99, 60-72.	(25 )
2009	Eberhard WG, Rodríguez RL & Polihronakis M. 2009. Pitfalls in understanding the functional significance of genital allometry. <b>J Evol Biol</b> 22, 435–445.	(24 )
	Rodríguez RL. 2009. Trait duplication by means of sensory bias. <b>Behav Ecol</b> 20, 1376-1381	(23 )
2008	Rodríguez RL, Sullivan LM, Snyder RL & Cocroft RB. 2008. Host shifts and the beginning of signal divergence. <b>Evolution</b> 62, 12-20.	(22 )
2006	Rodríguez RL & Cocroft RB. 2006. Divergence in female duetting signals in the <i>Enchenopa binotata</i> species complex of treehoppers (Hemiptera: Membracidae). <b>Ethology</b> 112, 1231–1238.	(21
	Rodríguez RL, Ramaswamy K & Cocroft RB. 2006. Evidence that female preferences have shaped male signal evolution in a clade of specialized plant-feeding insects. <b>Proc R Soc B</b> 273, 2585-2593.	(20
2005	Cocroft RB & Rodríguez RL. 2005. The behavioral ecology of insect vibrational communication. <b>BioScience</b> 55, 323–334.	(19 )
	Rodríguez RL, Schul J, Cocroft RB & Greenfield MD. 2005. The contribution of tympanic transmission to fine temporal signal evaluation in an ultrasonic moth. <b>J Exp Biol</b> 208, 4159–4165.	(18 )

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2004	Greenfield MD & Rodríguez RL. 2004. Genotype-environment interaction and the reliability of mating signals. <b>Anim Behav</b> 68, 1461-1468.	(17 )
	Rodríguez RL & Greenfield MD. 2004. Behavioural context regulates dual function of ultrasonic hearing in lesser waxmoths: bat avoidance and pair formation. <b>Phys Ent</b> 29, 159–168.	(16 )
	Rodríguez RL & Snedden WA. 2004. On the functional design of receiver bias and mate choice. <b>Anim Behav</b> 68, 427–432.	(15
	Rodríguez RL, Sullivan LE & Cocroft RB. 2004. Vibrational communication and reproductive isolation in the <i>Enchenopa binotata</i> species complex of treehoppers (Hemiptera: Membracidae). <b>Evolution</b> 58,	)
	571-578.	(14 )

2003	Rodríguez RL & Greenfield MD. 2003. Genetic variance and phenotypic plasticity in a component of female mate choice in an ultrasonic moth. <b>Evolution</b> 57, 1304–1313.	(13 )
2000	Rodríguez RL. 2000. On the fore legs of seed bugs (Heteroptera: Lygaeidae): aggression and allometric scaling in <i>Scolopostethus affinis</i> Schilling. <b>J Kansas Ent Soc</b> 73, 6–10.	(12 )
	Rodríguez RL & Gamboa E. 2000. Memory of captured prey in three web spiders (Araneae: Araneidae, Linyphiidae, Tetragnathidae). <b>Anim Cogni</b> 3, 91-97	(11
1999	Eberhard WG, Huber BA & Rodríguez RL. 1999. Don't forget the biology: a reply to Green. <b>Evolution</b> 53, 1624-1627.	(10 )
	Rodríguez RL. 1999. Male and female mating behavior in two <i>Ozophora</i> bugs (Heteroptera: Lygaeidae). <b>J Kansas Ent Soc</b> 72, 137-148.	(9)
	Rodríguez RL. 1999. Spermatophore transfer and ejection in the beetle <i>Pseudoxychila tarsalis</i> (Coleoptera: Cicindelidae). <b>J Kansas Ent Soc</b> 72, 1-9. (4)	(8)
1998	Eberhard WG, Huber BA, Rodríguez RL, Salas I, Briceño RD & Rodríguez V. 1998. One size fits all? Relationships between the size and degree of variation in genitalia and other body parts in twenty species of insects and spiders. <b>Evolution</b> 52, 415-431.	(7)
	Rodríguez RL. 1998. Copulation, fighting behavior and life cycle of <i>Neopamera bilobata</i> (Heteroptera: Lygaeidae). <b>Rev Biol Trop</b> 46, 837-840.	(6)
	Rodríguez RL. 1998. Mating behavior of two <i>Pseudoxychila</i> beetles (Coleoptera: Cicindelidae). <b>Can Ent</b> 130, 735-750.	(5)
	Rodríguez RL. 1998. Possible female choice during copulation in Ozophora baranowskii (Heteroptera: Lygaeidae): female behavior,	(4)
1997	multiple copulations, and sperm transfer. <b>J Insect Behav</b> 11, 725-741. Rodríguez RL. 1997. Notes on the natural history of two <i>Ozophora</i> bugs (Heteroptera: Lygaeidae) in Costa Rica. <b>J Kansas Ent Soc</b> 70, 203-206.	(3)
1995	Rodríguez RL. 1995. Male courtship behaviour in <i>Phaleria gracilipes</i> (Coleoptera: Tenebrionidae). <b>Entomologists' Monthly Magazine</b> 131, 41-45.	(2)
1994	Rodríguez RL & Eberhard WG. 1994. Male courtship before and during copulation in two species of <i>Xyonysius</i> bugs (Hemiptera, Lygaeidae). <b>J Kansas Ent Soc</b> 67, 37-45.	(1)

2013 Rodríguez RL & Barbosa F. 2013. Mutual behavioural adjusment between the sexes in vibrational duetting. IN: Vibrational communication in arthropods. Springer. (RB Cocroft, M Gogala, A Wessel, eds.) (In press)

2008 Cocroft RB, Rodríguez RL & Hunt RE. 2008. Host shifts, the evolution of communication and speciation in the *Enchenopa binotata* complex of treehoppers. IN: Specialization, speciation, and radiation: the evolutionary biology of herbivorous insects. Univ. of California Press. (K Tilmon, ed.), p. 88–100

### **TEACHING**

#### Courses developed and taught at UWM (2007 - present):

BIO SCI 310: General Ecology (lecture and lab)

BIO SCI 532: Behavioral Ecology

BIO SCI 670:

Senior Seminar: Sex, size &

gender roles

BIO SCI 929: Grad Seminar, Behavioral Biology, Speciation

#### ACADEMIC ADVISING

## Post-doctoral advising:

Dr. Flavia Barbosa (2012) (PhD, Univ. of Missouri)

Dr. Kasey D. Fowler-Finn (2009 -present) (PhD, Univ. of Nebraska,

### Lincoln)

## Graduate student advising:

Joseph T. Kilmer (PhD student, 2011 -present)

Darren Rebar (PhD student, 2009 -present) (MS, UC Riverside)

## Participation on thesis and dissertation committees:

Ignacio Escalante (Univ. of Costa Rica, MS 2013)

Tegan Gaetano (UWM Anthropology, MS 2012)

Ambi Henschen (UWM, PhD student, 2012-present)

Diana Kim (UWM, MS 2012)

Angela Ortenblad (UWM, MS 2011)

Emilia Triana (Univ. of Costa Rica, MS student, 2011 -present)

Jason Vizelka (UWM, PhD student, 2012-present)

## Undergraduate research mentoring:

(\* indicates student coauthor on 1 scientific paper)

Mishal Al-Wathiqui

Nooria Al-Wathiqui \*\*\*\*

Theodore Bach

Michael Burger

Daniel Cruz

Keith Glenna

Matt Gloudeman \*

Christina Haen \*

Allysa Hallett \*

Brett Heim

Leah Klatt

Owen Miller

Owen Stefaniak Laura M. Sullivan (Univ. of Missouri) \* Emilia Triana Velinka Vulic Jason Wulff

## **AWARDS AND FELLOWSHIPS**

Bobby C. Pass Student's Choice Speaker Award For Inspiring Scientific Creativity of Graduate Students, Univ. of Kentucky, 2010

Student Research Grant, Sigma Xi, 2001

Hungerford Travel Awards, Univ. of Kansas, 1999-2000

Exxon Fellowship, Smithsonian Tropical Research Institute, 1992 PARTICIPATION IN WORKING GROUPS

Invited participation in NESCent (National Evolutionary Synthesis Center) working group, *Toward a unified theory of decision–making in animals* funded by NSF, hosted by Duke University) (2013–2015)

Invited participation in NESCent (National Evolutionary Synthesis Center) working group, *An integrative evolutionary approach to examine sexual selection as a mechanism of speciation* (funded by NSF, hosted by Duke University) (2009–2011)

### MEMBERSHIP IN PROFESSIONAL SOCIETIES

American Association for the Advancement of Science Animal Behavior Society European Society for Evolutionary Biology Kansas Entomological Society Society for the Study of Evolution