MAYDIANNE CB ANDRADE

CURRICULUM VITAE

A. BIOGRAPHICAL INFORMATION

1. PERSONAL

Namai		Maudianna Chris	tina Dagumant Andra			
<u>Name:</u> <u>Citizen:</u>		Maydianne Christine Beaumont Andrade Canadian				
<u>CITIZETI</u>	<u>siip.</u>	Callaulali	Department of Biol	ogical Sciences		
			•	to at Scarborough (UTSC)		
			1265 Military Trail			
			•	gh ON M1C 1A4		
			416-287-7425			
			Research Homepage: www.utsc.utoronto.ca/labs/andrade			
		webpage: www.maydianne.com				
2. DEG	GREES					
Ph.D.	Neurob	biology & Behavior	2000	Cornell University		
•	Co-advisors: ST Emlen and PW Sherman					
•	• Thesis title: Male mating strategies in a cannibalistic spider.					
M.Sc.	Zoolog	у	1995	University of Toronto at Mississauga		
•	Superv	isor: D.T. Gwynne.				
•						
for female feeding and sexual selection for male sacrifice.						
B.Sc. (1 st class Honours)		1992	Simon Fraser University			
•	Superv	isor: B.D. Roitberg				
•						
	(Acryth	osiphon pisum).				
•	• Dean of Science Silver Medal awardee (awarded to one Science student in the top 5% of araduates)					

• Dean of Science Silver Medal awardee (awarded to one Science student in the top 5% of graduates)

EMPLOYMENT & RELATED POSITIONS (2000 TO PRESENT)

1 January 2021 – 31 March 2021. Special Advisor to the Dean on Inclusive Recruitment & Equity Education (UTSC). Responsible for oversight and implementation of the process for recommendations on the allocation of faculty positions for 2021/2022 cycle (including new, replacement, and diversity positions); and implementation of campuswide equity & inclusion education for faculty search committees. Responsible for some faculty recruitment activities, and partial onboarding and transitional tasks associated with incoming Vice Dean Faculty Affairs, Equity & Success.

1 January 2017 – 30 June 2020, extended: 1 July 2020 – 31 December 2020. Vice Dean Faculty Affairs & Equity, University of Toronto Scarborough (UTSC)/ title changed to Vice Dean Faculty Affairs, Equity & Success (1 July 2020).

• Major innovative accomplishments include: Creation and implementation of: a new Faculty Recruitment process, a program for hiring for Diversity & Excellence, augmentation and expansion of faculty orientation and cohort building, professional development, community-building and mentorship, Creating, acquiring funding for, and launching a University-wide online education tool regarding bias and inclusion.

July 1 2019 – December 31 2019. Acting Vice Principal Academic & Dean, UTSC

• Accomplishments include: Decanal Self study, leading design of restructuring & augmentation of the Dean's leadership team, Executive leadership role in new campus Strategic plan.

October 2018 – July 1 2019. Member, Board of Trustees, Royal Ontario Museum, Designate of the President of the University of Toronto (U of T)

December 2017 – present. Founder & Inaugural Chair, Toronto Initiative for Diversity and Excellence (TIDE), U of T

• Grassroots faculty service group engaged in data-centred, peer-to-peer education on inclusion 1 July 2011 - present: **Professor**, Department of Biological Sciences, UTSC

1 July 2006 – June 2011: Associate Professor (tenured), Department of Biological Sciences, UTSC

1 August 2001. Appointed to the **School of Graduate Studies**, Department of Ecology & Evolutionary Biology, U of T 1 July 2000 – 30 June 2006: **Assistant Professor**, Department of Life Sciences, UTSC

2004 – 2012: Special (Associate) Graduate Faculty Member, Department of Zoology, University of Guelph

2001 – 2006, 2010 to present: Research Associate, Royal Ontario Museum

4. ACADEMIC HONOURS & AWARDS (1992-PRESENT)

2020. Elected to the American Academy of Arts & Sciences (Honorary International Member, https://www.amacad.org/)
 2007 – 2013; 2013 - 2018. Canada Research Chair in Integrative Behavioural Ecology (Tier 2), awarded by the government of Canada (http://www.chairs-chaires.gc.ca/).

- 2016. Elected **Fellow of the Animal Behavior Society** (<u>http://www.animalbehaviorsociety.org/</u>). This is one of the two main international academic societies in my field of research. *Fellows are members who have engaged in research in animal behavior for at least ten years and who in the opinion of the elected officers and current Fellows of the society have made distinguished contributions to the field. Not more than 10% of the active membership shall be Fellows. (ABS handbook)*
- 2016. Awarded UTSC Principal's Research Award (in recognition of outstanding research achievements)

2015. **UTSC** Underground (student newspaper) '**Professors of the Year**' (one of four professors chosen from student nominations of UTSC "professors who have positively impacted students' lives, either in the classroom or in a broader setting...")

2000 – 2002; 2003 – 2006. **University Faculty Award**, Natural Sciences and Engineering Council of Canada. Value: \$40,000/year to the University of Toronto.

- 2003. **Outstanding New Investigator Award**, Animal Behavior Society (USA). "...recognizes an outstanding contribution in animal behavior by a new investigator."
- 2001 2006. **Premier's Research Excellence Award (PREA)**, Ontario Ministry of Energy, Science & Technology. Value: \$25,000/yr to underwrite salaries to trainees in my research group.
- 2001. Best faculty talk, Department of Zoology Colloquium, University of Toronto.
- 2000. **Pitelka Award for Research Excellence**, International Society for Behavioral Ecology. Awarded for the paper: Andrade, MCB, 1998. Female hunger can explain variation in cannibalistic behaviour despite male sacrifice in the Australian redback spider. **Behavioral Ecology** 9:33-42. This paper was judged by the editorial board to be the most outstanding contribution published in the journal by a young investigator in the previous 2 years.

1999. Clark Distinguished Teaching Award, College of Arts and Sciences, Cornell University.

- 1999. Whittaker Award, best oral paper in the annual Ecology & Evolutionary Biology Graduate Student Symposium, Cornell University.
- 1996. Honorable Mention, student paper competition, Arachnological Society of America annual meeting.
- 1995. Award for Academic Excellence, the Black Business and Professionals Association of Toronto.
- 1992. **Dean of Science's Convocation Silver Medal**. Awarded to one undergraduate in the top 5% of the graduating class across the Faculty of Science, Simon Fraser University.

OTHER HONOURS & AWARDS

2019. Awarded the **Ludwik and Estelle Jus Memorial Human Rights Prize**, 2019. University of Toronto Alumni Association (for my work on Bias & Inclusion education across the University). <u>https://alumni.utoronto.ca/events-and-programs/awards/awex/jus-memorial-prize</u>

2019. Named one of the 'Women worth Watching 2019' by Profiles in Diversity journal.

2014. Featured scientist from Canada: IANAS Committee on Women in Science publication on early and mid-career scientists, '*Woman Scientists in the Americas*'

2007. African Canadian Achievement Award for Excellence in Science (http://africancanadianachievementawards.com) 2007. Top 10 Finalist, Television Ontario's Best Lecturer Competition.

2006. Profile and interview on the American Association for the Advancement of Science's "Spotlight: African American Scientists" <u>http://www.scienceupdate.com/spotlights/african-american-scientists/</u>

2006. Named to **Macleans Magazine's 2006 Honour Roll**. 'Discoverers and Thinkers' category, July 1, 2006. 2005. Named as one of the 'Brilliant 10' by **Popular Science Magazine**, October issue. List features 10 of "...the most extraordinary, dynamic, innovative and promising young scientists in North America."

2002. **Time Magazine** (Canada), June issue. Featured in: "Canada: the next generation. ...some of the Canadians who define the new frontiers of science".

5. PROFESSIONAL AFFILIATIONS AND ACTIVITIES

PROFESSIONAL SERVICE ROLES:

Co-organizer, 'BlackInEnto' (Black in Entomology) Week (Feb. 22-26). https://www.blackinento.com/

<u>https://www.maydianne.com/blackinento</u>. Under the leadership of Dr. Jessica Ware (American Museum of Natural History), I co-organized a week of online events with the goal of profiling the work of Black Entomologists/Arachnologists, engaging others in their work, and increasing understanding of the challenges of racism for Black

Entomologists/Arachnologists, while building a community of support for Black students engaged in this work. My role included online engagement and website registration management; coordinating, moderating, hosting, and producing an online international webinar panel on Colonialism in Entomology (<u>https://youtu.be/3iBJdRQiMOs</u>),

Co-founder & Inaugural President: Canadian Black Scientists Network (https://www.blackscientists.ca/), July 2020 -

present. This community of Black Canadians in Science, Technologys, Engineering, Mathematics and Medicine (STEMM) was formed in June 2020 with the goal of connecting, making visible, mentoring and supporting Black Canadians in STEMM, while advocating for their equitable treatment. As President I have led development of online engagements, media campaigns, a membership drive, and engagement with tri-council granting agencies. I led the design of a proposal for a national meeting (Black Excellence in STEMM/ BE-STEMM) which to date has garnered \$112,000 in sponsorships (including from the CIHR President's fund, NRC Outreach grant, and several other Universities). Connections include an emerging partnership with Statistics Canada for disaggregated data collection, and conversations with leadership in NSERC, CIHR, and FRQNT.

Member, Inter-institutional Advisory Committee and **University of Toronto Planning Committee** for the *National Dialogues & Action* Conference on Inclusive Higher Education & Communities, October 2020. <u>https://www.utsc.utoronto.ca/nationaldialogues/</u>

• Key organizational role in creating the structure of this two-day, national, virtual conference on actions against Anti-Black racism. Attended by over 3000 faculty, staff, student and community members.

Founder & Co-Chair, Toronto Initiative for Diversity & Excellence (TIDE), 2016 - present. This University-wide, grassroots coalition of senior faculty members collaborate to deliver talks and workshops on Bias, Equity and Inclusion across all University of Toronto academic units (<u>https://www.toronto-tide.ca/</u>). TIDE mounts two sessions each year for tri-campus leaders and assessors through the Office of the Vice Provost Faculty & Academic Life, and also offers bespoke engagements with academic and some staff units on request. Engagement with these offerings has increased steadily over the past 5 years, with over 50 separate requests and consultations in 2019/2021. My role, together with my co-chair and senior staff administrator, includes development and creation of new educational materials for presenters, consultations with units requesting sessions, decisions with respect to who will lead sessions, and soliciting support from the central administration for our activities, as well as mapping out, together with my co-chair, the progressively developing goals of the group. In recognition of the value of this work as being central to the University's strategic plan,

the Provost has allocated a 0.6 FTE staff position to support our work (in response to my request, commencing May 2021).

Co-host, 54th Annual Meeting of the Animal Behavior Society, 2017. Lead local organizer for this conference. Held at UTSC from June 12 -17, 2017, attended by 750 registrants from 12 nations, this conference ran for 5 days with 6 concurrent talk sessions (over 300 talks), 200 posters and over 15 workshops and focal-topic round-table meetings.

- In conjunction with this event, I co-organized a one-day outreach event at which 30 volunteer scientists presented hands-on displays to >75 elementary school children visitors at 8 stations on the UTSC campus.
- I co-organized an academic symposium at the conference: "Behavioural Biodiversity: What can under-studied lineages tell us about Behavioural Ecology?"

Member, Diversity committee, Animal Behaviour Society (USA). 2014 - 2020

Program Officer, Executive Committee of the Animal Behavior Society (USA). 2009 – 2013. Nominated by the executive committee, elected by membership of this international society (February 2009). Duties include organizing academic program for annual conference, soliciting, judging and scheduling symposia, preparing conference program, managing budget for symposia and plenary speakers, and securing sites and outlining preliminary program for future meetings.

Councillor, Executive Committee of the International Society for Behavioral Ecology. 2008 – 2012. Nominated by executive committee, elected by membership of this international society (March 2008). Duties include judging student grant applications, serving on search committee for executive editor of the journal *Behavioral Ecology*, and contributions to decisions regarding policies and constitution of the society.

SERVICE FOR PEER-REVIEWED JOURNALS

Review Editorial Board, *Frontiers in Ecology and Evolution*, September 2014 – 2019. Editorial Advisory Board, *Canadian Journal of Zoology*. February 2014 – February 2017. Editorial Board (Associate Editor), *The American Naturalist*. July 2008 – January 2011. The Faculty of 1000. Commending July 1, 2021.

Additional requests: Editorial Board (Associate Editor), *Proceedings of the Royal Society, B* invited for January 2017 – 2020, deferred due to new Vice-Decanal role; Editorial Board (Associate Editor), *Evolution*, invited for January 2020, declined.

REVIEW ACTIVITY

Re

Reviewer for the following international journals:

The American Naturalist Annales Zoologici Fennici	Animal Behaviour Behaviour Behavioral Ecology and Sociobiology
Annales Zoologici Fennici	
	Behavioral Ecology and Sociobiology
Behavioural Processes	
Behavioral Ecology	Biological Journal of the Linnaean Society
Biological Reviews	Canadian Entomologist
Current Biology	Ethology
Evolution	Journal of Arachnology
Journal of Ethology	Journal of Evolutionary Biology
Journal of Insect Behaviour.	Nature
Naturwissenshaften	PloS One
PloS Biology	Proceedings of the Royal Society, B
Science	Proceedings of the National Academy of Sciences, USA
eviewer for the following granting agencies:	
Australian Research Council, Australia	Deutsche Forschungsgemeinschaft (German Research Foundation)
National Science Foundation, USA	Natural Sciences and Engineering Research Council of Canada
Natural Environment Research Council, UK	United States-Israel Bi-National Science Foundation
	Macquarie University fellowships program

Reviewer of the following Book/Textbook Chapters:

- Eberhard, WG & Huber, BA. Spider genitalia: precise maneouvers with a numb structure in a complex lock. The evolution of primary sexual characters in animals (working title). JL Leonard and A. Cordoba-Aguilar, eds. In preparation for Oxford University Press. (April 2008)
- Alcock, J. Development of Behaviour, Animal Behaviour: An Evolutionary Approach, 8th ed. (June 2008)
- Gwynne, DT, Chapter: Behavioural Ecology. In: Ecology: A Canadian Context. Publisher: Nelson Education Ltd.

MEMBER OF THE FOLLOWING PROFESSIONAL SOCIETIES:

- (1) Animal Behavior Society
- (2) Canadian Society for Ecology & Evolution (lifetime member)
- (3) International Society for Behavioral Ecology
- (4) Entomological Society of Canada

B. ACADEMIC HISTORY

6.A. RESEARCH ENDEAVOURS

The goal of my research is to understand how the reproductive behaviours of males and females evolve through the interaction of sexual and natural selection in variable ecological contexts, and how this shapes individual phenotypes, population-level characteristics, and ultimately, diversification. My work incorporates laboratory and field studies to examine mechanisms of sexual selection, and mechanisms and fitness effects of phenotypic and life history traits that affect mating success. My earlier insights regarding the evolution of self-sacrificial mating investment by males (terminal investment) and high mortality during mate searching have been used as a foundation to examine how the evolutionary ecology of mating is linked to mechanistic and ontogenetic traits of individuals, as well as how these relate to demography. One long term goal is to examine links among mating systems, plasticity, invasiveness, and divergence among populations distributed across wide geographical ranges.

The main study species in my research group are widow spiders (genus *Latrodectus*), a group of 30 species distributed world-wide, which vary significantly in male mating systems, ecology, invasiveness, and demography. Male self-sacrifice behaviour in some *Latrodectus* species ensures male mating opportunities are constrained, and allows one to make strong predictions from theory about plasticity and evolutionary change in male behavioural, life history, morphological and ontogenetic traits related to reproduction. Due to extreme female-biased size dimorphism, the outcomes of mating interactions are generally closely aligned with the reproductive interests of females, rather than males. This makes studies of fitness effects of female tactics and inter-sexual conflict particularly tractable. In aid of planned comparative analyses, major current efforts involve constructing a robust molecular phylogeny for the genus, and amassing data sets on behaviour, life history, physiology, and sensory biology of representative species and populations across different clades throughout the biogeographic regions across which the genus is distributed. Most recently, studies have expanded to include invasive spiders in the related genus *Steatoda* ('false widow spiders') as an additional support for comparative work, and to ensure the availability of ongoing laboratory experimental models during pandemic-related restrictions on collection of *Latrodectus* spiders.

6B. RESEARCH AWARDS

Principal applicant/investigator(s) in bold, Andrade-group trainees underlined.

Applicants	Title & Funding Source	Amount	Year awarded (duration)
Sentenská, L; Andrade, MCB; Uhl, G	Immature mating as a novel tactic of an invasive widow spider (Marie Skłodowska-Curie Post-doctoral fellowship)	\$16,000/yr (research funds), plus salary to L. Sentenská	February 2020 - 2022
Mowery, MM; Lubin, Y; Mason, AC; Andrade, MCB	Understanding invasive potential in brown widow spiders. (Mitacs Globalink Research Award)	\$6,000	Sept – December 2018
Andrade, MCB	Examining links between behaviour, plasticity and diversification under environmental heterogeneity using broadly distributed spider species (NSERC Discovery Grant)	\$33,000/year	May 2017 – April 2022
Castilho, L; Andrade, MCB; Macedo, R	Emerging Leaders in the Americas Scholarship for visiting international graduate students. (Government of Canada International Scholarships)	CD \$7,200	January 2014 – April 2014
Andrade, MCB	Canada Research Chair in Integrative Behavioral Ecology (Tier 2 renewal)	CD 100,000/yr	May 2013 – April 2018
Andrade, MCB	The role of mating systems in plasticity & divergence across variable environments (NSERC Discovery Grant)	CD 41,000.00/yr	May 2012 – April 2017
MacGowan, P., Erb, S. Ito, Y. & Andrade, MCB	Exploring Drugs of abuse and transgenerational phenotypes (UTSC Research Competitiveness fund)	CD 13,600	2012 (OTO)
B. Treanor , R. Harrison, M. Andrade	Biological Irradiator (NSERC Research Tools & Instruments, Category 1)	CD \$14,2059	2012 (OTO)
Baruffaldi, L & Andrade, MCB	Sectorial Commission of Scientific Research (Uruguay) (visiting studentship)	CD \$5,500	January – April 2010 (OTO)
Andrade, MCB	Canada Research Chair in Integrative Behavioural Ecology (Tier 2, Canada Research Chairs Program)	\$100,000/yr	2007-2013 (1 year extension)
Andrade, MCB	Title: Integrative Behaviour & Neuroscience Research & Rearing Facility Leaders' Opportunity Fund (Canadian Foundation for Innovation, Ontario Research Fund)	\$460,000	Awarded 2007 (OTO)
Andrade, MCB	Influence of mating system and variable selection on adaptive variation within and across species of black widow spiders (<i>NSERC</i>)*	\$29,450/yr	2007-2012
Andrade, MCB	Untangling effects of choice, behavioural syndromes & conflict on mating system evolution using black widow spiders (<i>NSERC</i>) [†]	24,000/yr	2003-2006
Andrade, MCB	Sexual selection's holy grail: Identifying physiological bases of quality and honest signalling in black widow spiders. (Connaught, New Staff Matching Grant)	\$17,933	2002-2003 (OTO)
Andrade, MCB	Sexual selection and mating strategies in black widow spiders (NSERC University Faculty Award)	\$40,000/yr	2000 – 2006
Andrade, MCB	Sexual selection and mating strategies in black widow spiders (NSERC Discovery Grant) [‡]	\$23,600/yr	2000 - 2004
Andrade, MCB	Automatic Start-up Grant (Connaught Fund, University of Toronto)	\$10,000	2000 (OTO)
Andrade, MCB	Premier's Research Excellence Award (PREA, Government of Ontario)	\$20,000/yr	2001 – 2006
Andrade, MCB	Assessment of auditory transduction and vibrational signalling using laser vibrometry (NSERC Equipment Grant)	\$65,000	2001 (OTO)
Andrade, MCB	Multi-level analysis of mating system evolution in cannibalistic black widow spiders (New Opportunities Grant. Canadian Foundation for Innovation & Ontario Innovation Trust)	\$139,996	2000-2002

Applicants	Title & Funding Source	Amount	Year awarded (duration)
Andrade, MCB	Olin Graduate Fellowship (Cornell University)	US\$22,000/yr	1997-2000
Andrade, MCB	Benefit of repeated mating in redback spiders (Student Research Grant, Animal Behavior Society).	US\$1,000	1998-1999
Andrade, MCB Costs of self-sacrifice in cannibalistic redback (Doctoral Dissertation Improvement Grant, N		US \$14,000	1996-1998
Andrade, MCB	Is finding females risky for male redback spiders? (Research Travel Grant, Olin Foundation, Cornell University)	US\$750	1997
Andrade, MCB The Cost of Sexual Cannibalism for Male Redback Spiders: Is Every Copulation Equally Valuable? (President's Council of Cornell Women Research Grant)		U\$\$500	1997
Andrade, MCB	ndrade, MCB Assessing risks of mate search in wandering male spiders (Grant-in-Aid of Research, Sigma Xi, USA)		1996
Andrade, MCB	Marion and Percy A. Leon Graduate Fellowship, Cornell University	US\$1,000/yr	1995 & 1996.
Andrade, MCB	NSERC 1967 Science and Technology Graduate Scholarship	\$21,000/yr	1992 – 1994 & 1995 – 1997

C. SCHOLARLY AND PROFESSIONAL WORK

7. REFEREED PUBLICATIONS

For multi-authored contributions: Andrade and trainees are bolded with <u>graduate students or post-doctoral fellows</u> underlined,*undergraduates starred, and the *senior author(s) in italics*. In my field, the senior author is most commonly the last author. Up-to-date citation information can be accessed via <u>Google Scholar</u> or <u>ORCID</u> (orcid.org/0000-0002-2931-5378)

7A. REFEREED ARTICLES PUBLISHED (CAREER TOTAL PEER-REVIEWED: 60)

- 1. <u>L Baruffaldi</u>, *MCB Andrade*. 2021. Female control of a novel form of cannibalism during copulation in a South American widow spider. *Behavioural Processes*, 188: 104406.
 - Popular press coverage of this paper: New Scientist. https://www.newscientist.com/article/2276085-female-black-widow-spidermates-with-and-eats-multiple-males/
- LB Castilho, MCB Andrade, RH Macedo. 2021. Males mate indiscriminately in the tropical jumping spider Hasarius adansoni (Audouin, 1826). Ethology 127 (1), 83-90
- 3. <u>Scott, CE</u>, McCann, S, *Andrade, MCB*. 2020. Black widows as plastic wallflowers: female choosiness increases with indicators of high mate availability in a natural population. *Scientific Reports*. 10 (1), 1-9.
- 4. <u>LB Castilho</u>, *MCB Andrade*, RH Macedo. 2020. Testing the differential cost assumption of the handicap hypothesis with a tropical jumping spider, *Behaviour*. DOI: 10.1163/1568539X-bja10008
- 5. <u>L Baruffaldi</u>, *MCB Andrade*. 2020. Immature mating as a tactic of polygynous male western widow spiders. *The Science of Nature 107* (1), 1-4.
- 6. <u>LB Castilho</u>, *RH Macedo*, *MCB Andrade*. 2020. Individual preference functions exist without overall preference in a tropical jumping spider. *Animal Behaviour* 160, 43-51.
- A Elbassiouny, P DiSordi, S Guay, A Hamilton, S King, J Brown, P Molnar, MCB Andrade, CDRiggs, I Stehlik, A Ashok. 2020. The Whole Is Greater than the Sum of the Parts: A Research Poster Project Provides an Integrative Framework for Learning across Foundation Courses in Biology. Bioscene: Journal of College Biology Teaching 46 (1), 27-35

- 8. <u>L Baruffaldi</u>, <u>H Siddiqui</u>*, <u>A Thambiappah</u>*, *MCB Andrade*. 2019. Male responses suggest both evolutionary conservation and rapid change in chemical cues of female widow spiders. *Animal Behaviour* 157, 61-68
- <u>CE Scott</u>, S McCann, *MCB Andrade*. 2019. Male black widows parasitize mate-searching effort of rivals to find females faster. *Proceedings of the Royal Society B* 286 (1908), 20191470
 - Selected media coverage: U of T News, The New York Times.
- **10.** Simkovic, V, **Andrade, MCB.** 2019. Seasonal variation in sexual behaviour and web aggregation in a little-known long-jawed spider (*Tetragnatha straminea*). *Journal of Arachnology*.
- <u>Castillho, LB</u>, Andrade, MCB, Macedo, RH. 2018. Mating and egg-laying behavior of Hasarius adansoni (Araneae: Salticidae) and the influence of sexual selection. Journal of Arachnology 46(3), 398-403. https://doiorg.myaccess.library.utoronto.ca/10.1636/JoA-S-16-091.1
- 12. Fischer, M Ayasse, *MCB Andrade*. 2017. Natural Compounds as Spider Repellents: Fact or Myth? *Journal of Economic Entomology* 111 (1), 314-318. https://doi.org/10.1093/jee/tox339
- <u>Baruffaldi, L</u> & Andrade, MCB. 2017. Neutral fitness outcomes contradict inferences of sexual 'coercion' derived from male's damaging mating tactic in a widow spider. *Scientific Reports* 7, Article number: 17322 .doi:10.1038/s41598-017-17524-6
- 14. <u>Rosenthal, MF</u>, Gertler, M, Hamilton, AD, **Prasad, S**^{*} and **Andrade, MCB**. 2017. Taxonomic bias in animal behaviour publications. *Animal Behaviour*. 127:83-89. doi.org/10.1016/j.anbehav.2017.02.017
 - Also see invited (non-refereed) commentary: Rosenthal, MF & Andrade, MCB. 2017. <u>Opinion:</u> <u>Address Taxonomic Skew</u>. The Scientist. July/August 2017.
- 15. <u>Biaggio, MD</u>, <u>Sandomirsky, I</u>, *Lubin, Y*, Harari, AR and *Andrade MCB*. 2016. Copulation with immature females increases male fitness in cannibalistic widow spiders. *Biology Letters*, 12 20160516; <u>DOI: 10.1098/rsbl.2016.0516</u>.
 - Popular press features include <u>Science News</u>, <u>The Guardian</u>, National Geographic, The Smithsonian, Popular Science, USA Today
 - <u>Altmetric Attention Score</u> = 322 (top 5% of all Altmetric-scored research outputs)
- **16.** <u>Baruffaldi, L</u> & *Andrade, MCB*. 2015. Contact pheromones mediate male preference in black widow spiders: avoidance of hungry sexual cannibals? *Animal Behaviour*. 102: 25-32.
 - Featured on BBC Earth. (http://www.bbc.com/earth/story/20150213-male-black-widows-spotcannibals)
- **17.** DeLuca, PA, <u>Stoltz, JA</u>, Andrade, MCB, *Mason, AC*. 2015. Metabolic efficiency in courtship favors males with intermediate mass in the Australian redback spider, *Latrodectus hasselti*. *Journal of Insect Physiology*.72: 35-42. doi: http://dx.doi.org/10.1016/j.jinsphys.2014.11.004.
- **18.** Elias, DO, Sivalinghem, S, Mason, AC, **Andrade, MCB**, *Kasumovic, MM*. 2014. Mate-guarding courtship behaviour: tactics in a changing world. *Animal Behaviour* 97: 24-33. DOI: 10.1016/j.anbehav.2014.08.007
- Modanu, M, Li, L DX*, Said, H*, Rathitharan, N*, Andrade, MCB. 2014. Sibling cannibalism in a web-building spider: Effects of density and shared environment. *Behavioural Processes*. 106:12-16. DOI: 10.1016/j.beproc.2014.03.011
- <u>MacLeod, EC</u> & Andrade, MCB. 2014. Strong, convergent male mate choice along two preference axes in field populations of black widow spiders. Animal Behaviour. 89, 163-169. DOI 10.1016/j.anbehav.2013.12.023
 - Featured by Nature as a 'Research highlight' (<u>http://www.nature.com/nature/journal/v506/n7488/full/506269a.html</u>)
 - Featured on Quirks & Quarks (CBC Radio) in interview with former PhD student (and current post-doc) EC MacLeod (April 19, 2014,
 - http://www.cbc.ca/player/Radio/Quirks+and+Quarks/Full+Episodes/ID/2450005034/).
 - Featured on the University of Toronto homepage: http://news.utoronto.ca/picky-male-black-widowspiders-prefer-well-fed-virgins
- Modanu, M, Michalik, P & Andrade, MCB. 2013. Mating system does not predict permanent sperm depletion in black widow spiders. Evolution & Development, 15(3): 205-212.

- Stoltz, J. A., M. C. B. Andrade, and M. M. Kasumovic. 2012. Plasticity in metabolic rates reinforces morphological plasticity in response to social cues of sexual selection. *Journal of Insect Physiology*. 58: 985-990
- **23.** Kasumovic M.M., **Andrade, M.C.B**., Mason and A.C., *Elias, D.O*. 2011. The relative importance of RHP and resource quality in contests with ownership asymmetries. *Behavioral Ecology*.22:39-45.
- Sivalinghem, S*; Kasumovic, MM; Mason, AC, Andrade, MCB; Elias, DO. 2010. Vibratory communication in the jumping spider Phidippus clarus: Polyandry and male mating success. Behavioral Ecology. 21 (6): 1308– 1314.
- 25. Elias, DO, Sivalinghem, S*, Mason, AC, Andrade, MCB & Kasumovic, MM. 2010. Vibratory communication in the jumping spider *Phidippus clarus:* Substrate-borne courtship signals are important for male mating success. *Ethology*. 116:990-998.
- <u>Stoltz, JA, Hanna, R* & Andrade, MCB</u>. 2010. Longevity cost of remaining unmated under dietary restriction. Functional Ecology. 24 (6), 1270-1280
- 27. JC Johnson, Kitchen, K & Andrade, MCB. 2010. Family affects sibling cannibalism in the Black Widow Spider, Latrodectus hesperus. Ethology. 116: 770–777.
- 28. Elias, DO, Botero, CA, Andrade, MCB, Mason, AC & Kasumovic, MM. 2010. High resource valuation fuels "desperado" fighting tactics in female jumping spiders. *Behavioral Ecology*. 21(4):868-875
- 29. Jerhot, E., <u>Stoltz, J.A</u>., *Andrade, M.C.B*. & *Schulz, S*. 2010. Acylated Serine Derivatives: A Unique Class of Arthropod Pheromones of the Australian Redback Spider, *Latrodectus hasselti*. *Angewandte Chemie*, 49(11): 2037-2040. (IF: 10.879)

• Featured in 'Chemical & Engineering News' (http://pubs.acs.org/cen/news/88/i07/8807news4.html)

- Kasumovic M.M., Elias, D.O., Sivalinghem, S*, Mason, A.C, Andrade, M.C.B. 2010. Examination of prior contest experience and the retention of winner and loser effects. *Behavioral Ecology*. 21(2):404-409 (doi:10.1093/beheco/arp204). (IF: 3.224)
- **31.** <u>Stoltz, J.A.</u> & *Andrade, M.C.B.* 2010. Female's courtship threshold allows intruding males to mate with reduced effort. *Proceedings of the Royal Society of London, Series B*, 277:585-592. (IF: 4.248).
 - Cover photo feature
 - Featured as a 'Research Highlight' in Nature. 2009. 461: 1177
- <u>Kasumovic, MM</u>, Brooks, RC & Andrade, MCB. 2009. Condition but not dietary restriction prolongs life in a semelparous capital breeder. *Biology Letters*. 5:636-638 (IF: 3.000)
- Kasumovic MM, Elias DO, Punzalan D, Andrade MCB, Mason AC. 2009. Experience affects the outcome of agonistic contests without affecting the selective advantage of size. Animal Behaviour. 77:1533–1538 (IF: 2.282)
- Stoltz, J.A., Elias, D.O. & Andrade, M.C.B. 2009. Male courtship effort determines female response to competing rivals in redback spiders. Animal Behaviour. 77:79-85.
- Kasumovic, MM, Bruce, MJ, Herberstein, ME & Andrade, MCB. 2009. Evidence for developmental plasticity in response to demographic variation in nature. *Ecology*. 90: 2287-2296.
- 36. <u>Kasumovic, MM</u> & Andrade, MCB. 2009. A change in competitive context reverses sexual selection on male size. J. Evolutionary Biology. 22: 324-333. 10.1111/j.1420-9101.2008.01648.x
- Mahmoudi, N<u>*, Modanu, M, Brandt, Y</u> and Andrade, MCB. 2008. Subtle pedipalp dimorphism: a reliable method for sexing juvenile spiders. Journal of Arachnology. 36: 513-517.
- 38. <u>Kasumovic</u>, MM, Bruce, MJ, Andrade MCB, & Herberstein, ME. 2008. Spatial and temporal demographic variation drives within-season fluctuations in sexual selection. Evolution 62: 2316-2325.
- Elias, D.O., <u>Kasumovic, M.M.</u>, Punzalan, D., Andrade, M.C.B. Mason, A.C. 2008. Male assessment during aggressive contests in jumping spiders. *Animal Behaviour*. 76: 901-910.
- Perampaladas, K*, <u>Stoltz, JA</u> and Andrade MCB. 2008. Mated redback spider females re-advertise receptivity months after mating. *Ethology*. Volume 114:589 – 598.
- Stoltz, J.A., Elias, D.O. & Andrade, M.C.B. 2008. Females reward courtship by competing males in a cannibalistic spider. Behavioral Ecology and Sociobiology, 62:689-697.

- <u>Stoltz, J.A.</u>, McNeil, J. & Andrade, M.C.B. 2007. Males assess chemical signals to discriminate just mated females from virgins in redback spiders. Animal Behaviour, 74:1669-1674.
- Brandt, Y & Andrade, MCB. 2007. What is the matter with the gravity hypothesis? Functional Ecology. 21. 1182-1183. (counter-rebuttal)
- 44. <u>Brandt, Y</u> & Andrade, MCB. 2007. Testing the gravity hypothesis of sexual size dimorphism: Are small males faster climbers? Functional Ecology. 21(2): 379-385.
- 45. <u>Kasumovic, MM</u>, Bruce, MJ, Herberstein, ME & Andrade, MCB. 2006. Risky mate search and mate preference in the golden orb-web spider (Nephila plumipes). Behavioral Ecology. 18: 189-195.
 - Top-cited paper in the Journal for 2007 (see
 - http://www.behavecol.com/pages/journal/citations.html)
- Kasumovic, MM & Andrade, MCB. 2006. Male development tracks rapidly shifting sexual versus natural selection pressures. Current Biology. 16:R242-R243.
- Snow, LSE, Abdel-Mesih, A* & Andrade, MCB. 2006. Broken Copulatory Organs are Low-Cost Adaptations to Sperm Competition in Redback Spiders. Ethology 112: 379-389.
- Andrade, MCB & <u>Kasumovic, MM</u>. 2005. Terminal Investment Strategies and Male Mate choice: Extreme Tests of Bateman. Integrative & Comparative Biology 45: 838-847.
 - Cover photo feature
- Andrade, MCB, Gu, L* & <u>Stoltz, JA</u>. 2005. Novel male trait prolongs survival in suicidal mating. *Biology Letters* 1(3): 276-279.
- **50.** <u>Snow LSE</u> & Andrade MCB. 2005. Multiple sperm storage organs facilitate female control of paternity. *Proceedings of the Royal Society, Series B* 272: 1139 – 1144.
 - Cover photo feature
 - Featured in a *Current Biology* "Gage MJG 2005. *Current Biology*. 15: R630-R632.
- Kasumovic, MM & Andrade, MCB. 2004. Discrimination of airborne pheromones by mate-searching black widow males: species- and population-specific responses. Canadian Journal of Zoology 82: 1027-1034.
- <u>Snow, LSE</u> & Andrade, MCB. 2004. Pattern of sperm transfer in redback spiders: implications for sperm competition and male sacrifice. *Behavioral Ecology* 15(5): 785-792.
 - Cover photo feature
- **53.** <u>Laird, G</u>, *Gwynne, DT* and *Andrade, MCB*. 2004. Extreme repeated mating as a counter-adaptation to sexual conflict? *Proceedings of the Royal Society B (Suppl) 271: S402-404.*
- **54.** Andrade, MCB. 2003. Risky mate search and male self-sacrifice in redback spiders. *Behavioral Ecology* 14: 531-538.
- Andrade, MCB & Banta, EM.* 2002. Value of male remating and functional sterility in redback spiders. Animal Behaviour 63: 857-870.
- **56.** Andrade, MCB & Mason, AC. 2000. Male condition, female choice, and extreme variation in repeated mating in a scaly cricket, *Ornebius aperta* (Orthoptera: Gryllidae: Mogoplistinae). J Insect Behaviour 13: 483-497.
- Andrade, MCB. 1998. Female hunger can explain variation in cannibalistic behaviour despite male sacrifice in the Australian redback spider. *Behavioural Ecology* 9:33-42.
- 58. Andrade, MCB. 1996. Sexual selection for male sacrifice in the Australian redback spider. Science 240:70-72.
- Brown, WD, Wideman, J, Andrade, MCB, Mason, AC, & Gwynne, DT. 1996. Female choice for the songs of larger males in the black-horned tree cricket, *Oecanthus nigricornis* (Orthoptera: Gryllidae: Oecanthinae). *Evolution* 50:2400-2411.
- **60.** Andrade, MCB & Roitberg, BD. 1995. Rapid response to intra-clonal selection in the pea aphid (Acyrthosiphon pisum). Evolutionary Ecology 9:397-410.

7B. REVIEWS & BOOK CHAPTERS (5)

- Andrade, MCB. 2019. Sexual selection & social context: Web-building spiders as emerging models for adaptive plasticity. *In Advances in the Study of Behavior*, Vol 50, Naguib, Podos, W. Simmons, Barrett, Healy & Zuk (Eds.). Academic Press. 78 pages. [invited chapter, peer reviewed]
 - Cover photo feature.
- <u>Scott ,CE</u>, Anderson, AG, Andrade, MCB. 2018. A review of the mechanisms and functional roles of male silk use in spider courtship and mating. The Journal of Arachnology 46 (2), 173-207. https://doiorg.myaccess.library.utoronto.ca/10.1636/JoA-S-17-093.1
 - Invited, refereed review
- **3.** *Andrade, MCB* & <u>MacLeod, EM</u>. 2015. Potential for Cryptic Female Choice in black widows (genus *Latrodectus*): Mechanisms & social context. *In Cryptic Female choice in Arthropods: Patterns, Mechanisms & Prospects,* Peretti, AV & Aisenberg, A, (Eds). Springer International Publishing. [invited book chapter, peer reviewed]
- 4. Schneider, J and Andrade, MCB. 2011. Chapter 7: Mating Behaviour & Sexual selection. In: Spider Behaviour: Flexibility and Versatility (ed Herberstein, M.E.). Cambridge University Press. ISBN-13: 9780521749275. [invited book chapter, peer reviewed]
- Elias, DO, Andrade, MCB, Kasumovic, MM. 2011. Dynamic Population Structure and the Evolution of Spider Mating Systems. In: Advances in Insect Physiology, Vol. 41 (ed Jérôme Casas), Burlington: Academic Press, 2011, p. 65-114. [invited review, peer reviewed].

8. NON-REFEREED PUBLICATIONS (6)

- 1. MF Rosenthal, MCB Andrade. 2017. Widening the Web. SCIENTIST 31 (7-8), 22-23.
- Andrade, MCB, Blagoev, G, Hubley, B, Mason, T. Spring 2012. Reprinted, Spring 2014, 2018. (Invertebrate biodiversity working group). *Spiders of Toronto*, City of Toronto Biodiversity booklet series. (authors listed in alphabetical order). Volunteer outreach effort, this guide is available free to the public at city of Toronto libraries and online (This series has been the recipient of the OALA award for Service to the Environment). See <u>https://www.toronto.ca/explore-enjoy/parks-gardens-beaches/ravines-natural-parklands/biodiversity-in-thecity-2/
 </u>
- 3. Andrade MCB & <u>Stoltz, JA</u>. 2010. Glowing sperm illuminate post-copulatory sexual selection in Drosophila. Bulletin of the Entomological Society of Canada, September 2010. Invited review.
- 4. Andrade MCB. 2003. Terminal investment strategies and male mate choice: Extreme tests of Bateman. Integr Comp Biol. 43:833. (Abstract)
- 5. *Mason, AC* & Andrade, MCB. 2002. Review of: A spider's world: Senses and Behavior (FG Barth). *ISBE Newsletter* 14(2): 9 10.
- 6. Sharp, JC & Andrade, M. 1994. Investigations of behaviour in the pea aphid, Acyrthosiphon pisum. pp. 335-345, in Tested Studies for Laboratory Teaching, Volume 15 (C.A. Goldman, Editor). Proceedings of the 15th Workshop/Conference of the Association for Biology Laboratory Education (ABLE).

9.A MANUSCRIPTS IN REVIEW & IN REVISION (2)

- 1. <u>Mowery, MA</u>, Lubin, Y, Harari, A, Mason, AM, *Andrade, MCB*. Increased size and dispersal propensity across independent invasion fronts in brown widow spiders. *Accepted by Animal Behavior*.
- 2. <u>Mowery, MA</u>, Vink, C, Mason, AC & Andrade, MCB. Behavioural, morphological, and life history shifts during invasive spread. *Revision under consideration: Biological Invasions*.
- 3. <u>Mowery, MA</u>, *<u>Pakirathan, R</u>, Kasumovic, MM, Mason, AC & *Andrade, MCB*. Individual variation in behaviour and physiology affects fitness despite diet-dependent plasticity. **Submitted** to *Integrative & Comparative Biology*.

9B MANUSCRIPTS IN PROGRESS (SUBMISSION ANTICIPATED WITHIN 4 MONTHS)

1. <u>N Singh</u>, <u>FEG Beaudry</u>, <u>C Condy</u>, LS Miles, *BC Verelli, MCB Andrade*. Genetic differentiation of group-living populations of the Western black widow. Invited for peer-reviewed special issue of Frontiers in Ecology & Evolution.

 <u>C Condy</u>, *MCB Andrade*, JA Miller, *NR Lovejoy*. Untangling the Web: 'Wreck of the *hesperus*': Cryptic Lineages Discovered within Western Black Widow Spider Populations (*Latrodectus hesperus*) using mitochondrial and nuclear DNA.
 L Baruffaldi, *MCB Andrade*. Monogyny, not polygyny, associated with lower courtship investment across five black

widow species: standardized data collection contradicts inferences from the literature

4. <u>L Sentenská</u>, <u>C Scott</u>, P Mouginot, *MCB Andrade*. Risky business: Males choose more receptive adults over safer subadults in a cannibalistic spider

5. *MCB Andrade*, <u>L Baruffaldi</u>, <u>L Sentenská</u>. The Evolution of Mating Systems in Spiders, Annual Review of Ecology, Evolution and Systematics, Vol. 53. Invited peer reviewed paper.

6. MCB Andrade, **A Baskaran***, <u>MD Biaggio, M Modanu</u>. Juvenile experience with male cues triggers plastic expression of cryptic choice mechanisms in redback spiders.

10. CONFERENCE CONTRIBUTIONS

CONTRIBUTED TALKS & POSTERS (2014- present in detail [55]; >200 career total)

(supervised trainees underlined, undergraduates starred*, first author is presenter unless otherwise noted, contributions are talks unless noted^p)

2019-2020

- 1. <u>N Singh</u>, FEG Beaudry, <u>C Condy</u>, LS Miles, *BC Verelli*, *MCB Andrade*. Behavioural and genomic differentiation in a transitionally social widow spider. Animal Behavior virtual conference
- **<u>1. Mowery, MA</u>**, Harari, A, Lubin, Y, *Andrade, MCB*. Behaviour and life history shifts across brown widow spider invasion fronts. 19-23 January 2020. Talk, African Arachnology Society, Bela-Bela, South Africa.
- 2. <u>Mowery, MA</u>. Harari, A, Lubin, Y, *Andrade, MCB*. Invasion in the light of evolution: an integrative approach using two widespread widow spider species. 31 December 2019. Invited talk, Hebrew University of Jerusalem, Israel.
- 3. <u>Mowery, MA</u>. Harari, A, Lubin, Y, *Andrade, MCB*. Dispersal and fecundity in invasive brown widow spiders. 11-12 December 2019. Israel Society for Evolutionary Biology. Tel Aviv, Israel.
- 4. <u>Mowery, MA</u>. Harari, A, Lubin, Y, *Andrade, MCB*. Invasion in the light of evolution: an integrative approach using two widespread widow spider species. 3 December 2019. Invited talk, Mitrani Department of Desert Ecology, Ben-Gurion University of the Negev, Israel.
- 5. <u>Mowery, MA</u>, Lubin, Y, Mason, AC, *Andrade, MCB*. 23-27 July 2019. Dispersal and life history at the invasion front. Talk, Behaviour. Chicago, USA.
- Scott C, McCann S & Andrade MCB. Sexual selection in western black widow spiders: the role of chemical signals and social information. (Talk) Joint meeting of the Entomological Society of Canada and the Canadian Society for Ecology and Evolution. 18-21 Aug. 2019. *Talk in the Graduate Student Showcase (inclusion by competition)
- 7. <u>Scott C</u>, Anderson A & **Andrade MCB**. Spider silk and sex: from mating threads to veils and gift-wrap. (Talk) XXI International Congress of Arachnology, Christchurch, New Zealand. 10-15 Feb. 2019. *Invited symposium talk: Sexual Strategies and Reproductive Morphology in Arachnids

2018

Joint meeting of the Entomological Society of America and the Entomological Society of Canada, Vancouver, BC, Nov 11-14, 2018

- 8. Andrade, MCB. Widows as windows on Evolutionary Ecology. Invited symposium talk
- **9.** <u>Scott, SE</u>, McCann, S & Andrade, MCB. You take the high road and I'll take the silk road: Male widow spiders follow draglines of rivals to find females faster

- McCann, S, <u>Scott, SE</u> & Andrade, MCB. Evil candy stripers: Diverse predation tactics of the introduced theridiid spider *Enoplognatha ovata*.
- 17th International Behavioral Ecology Congress, Minneapolis, MN, 11-16 Aug. 2018.
 - 11. Andrade, MCB & Stoltz, JA. Natural remating intervals alter sperm use and costs of polyandry.
 - 12. <u>Mowery, MA</u>, Dorison, AC*, Andrade, MCB. Cool cannibals: behavioural and fecundity advantages of invasive spiders
 - 13. <u>Scott C,</u> McCann S & Andrade MCB. You take the high road and I'll take the silk road: scrambling male widow spiders find females faster by following silk trails of rivals.
 - 14. <u>Singh, N</u> & *Andrade, MCB*. Kissing Cousins: Population Density Predicts Effects of Kinship on Mating Outcomes in Widow Spider Populations.
 - 15. ^{*P}Luo, Z*, <u>Mowery, MA</u>, Andrade, MCB. Invasive spiders shift climatic niche and increase tolerance to human disturbance.</sup>
 - 16. <u>Scott C</u>, McCann S & Andrade MCB. The amazing race: how male black widows find females faster. Toronto Entomologists' Association Student Symposium, Toronto, ON, 24 March 2018.

2017

54th Annual Meeting of the Animal Behaviour Society, University of Toronto Scarborough, June 2017

- 17. <u>Baruffaldi, L. & Andrade, MCB.</u> Why do males spend so much time courting?]
- 18. <u>Fry, S</u> & <u>Andrade, MCB</u>. Abiotic cues linked to adaptive male development in male western black widow spiders. Competitor: Allee symposium for top PhD thesis paper (competitive admission)
- 19. McCann, S<u>, Scott, C, Baruffaldi, L. & Andrade, MCB</u>. Immature mating of *Latrodectus* in the lab and field: implications for sexual selection research.
- 20. Mower, M, Pakirathan, R, Mason, AC & Andrade, MCB. Internal state and behavioural variation in the redback spider.
- 21. <u>Scott, C,</u> McCann, S & **Andrade, MCB.** Finding females in a sensory storm: How do male western widows localize mates?
- 22. <u>Taylor, L.*, Mowery, M., Rosenthal, M</u>. **Andrade, MCB**. Jack-of-all-Trades, Guarder on none? Does guarding require trade-offs with sperm counts in jumping spiders?
- 23. Rosenthal, M, Gertler, M, Hamilton, A & Andrade MCB. Taxonomic skew in research: defining the issue
- 24. ^PDano, S*, David, A*, Javaid, N* & Srikanthan, D*, Yee, A*, Singh, N, Scott, C & Andrade, MCB. Eaten out of house and & home? Effects of cohabiting offspring on fitness of female widow spiders
- **25.** ^PDorison, A*, Joshua, M*, Mowery, M & Andrade, MCB. Behavioural & Developmental responses of invasive Japanese redback spiders to new temperature challenges. Winner: Honourable Mention in Undergaduate poster competition.
- 26. <u>PRajmohan, A*, Baruffaldi, L. & Andrade, MCB. Heterospecific matings in widow spiders: Do males use different sperm allocation strategies? Winner: Honourable Mention in Undergaduate poster competition.</u>
- 27. PRosenthal, M, Taylor, L,* Mason, AC & Andrade, MCB. Examining fitness effects of signals across contexts in a mate-guarding jumping spider.

2016

- Scott C, McCann S & Andrade MCB. The mating dynamics of western black widows: new insights from field observations. Annual General meeting of the Entomological Society of Ontario, Sault Ste. Marie, ON, 14–16 Oct. 2016.
- 53rd Annual Meeting of the Animal Behaviour Society, University of Missouri. Columbia Missouri. July 2016.
 - 29. <u>Rosenthal, M</u>, Prasad, S, Gertler, M, Hamilton, A, Andrade, MCB. Taxonomic representation in Animal Behaviour: tracking research biases & trends
 - **30.** <u>Castilho L</u>, **Macedo R**, **Andrade MCB**. Feeding regimen affects offspring quality to adverse conditions in a tropical jumping spider.
- 20th International Congress of Arachnology, Golden, Colorado July 2-9, 2016.

- 31. <u>Baruffaldi, L, Condy, C, Lovejoy</u>, N, **Andrade, MCB**. Phylogenetic pattern of sex pheromone discrimination in widow spiders
- 32. <u>Condy, C</u>, Miller, JA, Garb, JE, Andrade, MCB, **Lovejoy, NR**. Untangling evolutionary relationships of widow spiders (*Latrodectus*, Theridiidae, Araneae): Latrodectus phylogeny revisited
- 33. Fisher, AS, Ayasse, M, Andrade, MCB. Volatile chemical communication in female Latrodectus sp
- 34. Fisher, AS, Ayasse, M, Andrade, MCB. Fact or myth: Do natural substances repel invasive spiders? (POSTER)
- 35. Foellmer, M, Modanu, M, Mondoux, C, Andrade, MCB. Male mating success, locomotory performance, and metabolic rate in *Argiope aurantia*
- 36. <u>Scott C, McCann, S, Baruffaldi, L</u> and **Andrade MCB**. New directions in *Latrodectus* sexual selection research inspired by recent field and laboratory observations.

Ontario Ethology, Ecology and Evolutionary Biology Colloquium, University of Toronto, May 5-7, 2016

- 37. <u>Pakirathan R*, Mowery M</u>, Andrade MCB.The Effects of Sibling Cannibalism in Australian Redback Spiders (*Latrodectus hasselti*).
- 38. <u>Alvares, D*, Javeed, I*, Thaveswaran, K*, Singh, N</u>*, Andrade, MCB. Effects of Temperature, Boldness, and Aggression on Dispersal Propensity of Redback Spiderlings (Poster)
- 39. *<u>Rajmohan, A, *Baruffaldi, L.</u>, Andrade, MCB. Heterospecific matings in black widow spiders: Do males use different sperm allocation strategies depending on their mating partner?
- 40. Entomological Society of Ontario, 153rd Annual meeting, Sault Ste. Marie, Canada, October14-16
- 41. McCann S, <u>Scott CE</u>, **Andrade MCB**. Alien (spider) invaders: *Enoplognatha ovata* wreak havoc on a coastal arthropod community
- 42. <u>Scott CE</u>, McCann S, Andrade MCB. The mating dynamics of western black widows: new insights from field observations.

2015.

52nd annual meeting of the Animal Behaviour Society, Anchorage, Alaska

- 43. <u>Barrufaldi, L</u>. Invited talk (following competition among graduating PhD students), Allee symposium and competition: Species-specific responses of male widow spiders to sex pheromones are the exception, not the rule.
- 44. Fry, S & Andrade, MCB. Does size matter? Effect of variable male size on mate searching in western black widow spiders.
- 45. Mowery, M, Mason, AC & Andrade, MCB. Metabolic rate tied to syndromes in a sit-and-wait predator.
- 46. ^PMcPhee, M, Andrade, MCB & Mason, AC. All talk but no walk: Mate guarding success independent of female preference in a jumping spider.

Ontario Ecology, Ethology and Evolution Colloquium, 2015 York University

47. ^PPakirathan, R*, Mowery, M and Andrade, MCB. Triggers of sibling cannibalism in 'widow' spiderlings.

2014

Ontario Ecology, Ethology & Evolution Colloquium, 2014. University of Guelph, May 8-10, 2014

- **48.** <u>Nithianandan, H*, Rathitharan, G*, Rajkumar, K*, Condy, C.</u> *Andrade, MCB*. An evaluation of DNA extraction methods for Western black widows across developmental stages: minimizing cost and effort.
- **49.** <u>Siddiqui, H*, Baruffaldi, L</u>, and *Andrade, MCB*. Chemical confusion: Sex pheromones trigger mistaken identity by male widow spiders.

51st Annual Meeting of the Animal Behaviour Society, Princeton University, Princeton, USA, July 2014

50. Andrade, MCB, <u>Baruffaldi, L</u>, Sandomirsky, I, <u>Biaggio, MD</u>, Harrari, A, Lubin, Y. Male copulation with juveniles: does it occur in nature and is it widespread? 51st Annual meeting of the Animal Behaviour Society.

30th Annual Meeting of the International Society of Chemical Ecology, 8 – 12 July 2014

51. <u>Baruffaldi, L</u>. and **Andrade, MCB.** Are male responses to chemicals associated with females' silk related to different hybridization histories in black widow spiders? *Travel Scholarship Award symposium*.

15th International Behavioural Ecology Congress, New York, NY, 31 July – 5 August 2014.

52. <u>Baruffaldi, L</u> and *Andrade, MCB*. Males mating with sub-adults is neutral to female fitness and may be widespread in invertebrates

Canadian Society for Ecology & Evolution and Canadian Society of Zoologists, joint meeting, Montreal, PQ, May 2014

- 53. <u>^PCondy, CE</u>, *Lovejoy, N*, Miller, J, Garb, J & **Andrade, MCB**. Untangling evolutionary relationships of black widow spiders using nuclear and mitochondrial genes.
- 54. ^PFry, SE, & Andrade, MCB. Male phenotype tracks competitive context in western black widow spiders (*Latrodectus hesperus*).

11. INVITED LECTURES

EQUITY & DIVERSITY PRESENTATIONS (60+):

I have delivered presentations, workshops, and provided resources on addressing bias and supporting inclusion to a wide range of audiences (e.g., 'Unconscious bias & challenges to fair assessment'; 'Inclusive practices in faculty recruitment'; 'Unconscious bias in the classroom: Cautions for conscientious educators') Each talk is tailored to the group to which I am speaking (inclusion of different examples and best practice relevant to the unit). I have also delivered talks & workshops on mitigating effects of Unconscious bias in academic decision-making.

External to the University of Toronto (5 engagements since May 2020)

- 1. Talk. University of Ottawa Faculty of Medicine Symposium. Racism, Bias & Challenges to Inclusion. April 2021
- 2. Talk & Panel. UBC Vancouver. Where are all the Black people: Under-representation in the Academy. April 2021
- 3. Talk & Panel. UBC Okanagan. Science & systemic racism series. Perspectives of Black scientists. March 2021
- 4. Talk & Workshop. Humber College (progressive series of engagement). Feb 2020, Oct 2020, Feb 2021.
- 5. Talk. London & Middlesex Local Immigration Partnership (LMLIP). March 12, 2020. Talk. Ontario Ecology, Ethology & Evolution Colloquium, 2019
- 6. Talk. Centennial College, Illuminate: Women's empowerment network. June 2019
- 7. Talk. Durham College professional development day for faculty & staff, 2018
- 8. Talk & Workshop. University of Northern British Columbia, faculty, students, and administrators from across campus. November 2017
- 9. Talk and Discussion. Cornell University. staff, faculty, graduate students in Departments of Ecology & Evolutionary Biology, Neurobiology & Behaviour, and Materials Science, April 2017
- 10. Talk & Discussion. Duke University. Graduate Student's Women in Science group. April 2016
- 11. Keynote address. COWALY Gender workshop, University of Toronto. Keynote speaker: *Gender Bias in Science: Manifestations, Effects & Countermeasures*, July 2015
- 12. Main panelist: Panel on the status of Women in Science & Technology. Canadian Science Policy Centre. April 2013. http://sciencepolicy.ca/women-in-science-technology-panel.
- 13. Invited workshop: Ursula Franklin High School, Black history month symposium. *Unconscious bias and how to fix it(?)*. 2010.

Internal: University of Toronto (engagement with 9 units, 14 sessions since May 1 2020)

- 1. Talks & workshops: the500: Feb 4 and 13, 2020, October 21 2020, Feb 23 2021
- 2. Talks & Workshops: IITS, UTSC; August 2020 (part 1); March 2021 (part 2)
- 3. Talk: Forensic Psychiatry: August 2020
- 4. Talk & workshop: Dalla Lana School of Public Health. February 2021 (2 sessions)
- 5. Talk & workshop: Waypoint Centre for Mental health care. January 2021
- 6. Talk. Biology August 2020.
- 7. Talk & facilitated discussion. Psychology (UTSC) September 2020
- 8. Talk: Feb. 2020. Grand rounds, Odette Cancer Research Centre (Sunnybrook). Feb 2020
- 9. Talk & Workshop: Departments of Laboratory Medicine & Pathobiology and Medical Biophysics, University of Toronto, July 2019 (faculty), May 2020 (trainees)
- 10. Talk: Institute for the History and Philosophy of Science & Technology. Dec 2019.

- 11. Talk: Institute for the History & Philosophy of Science, 5 December 2019.
- 12. Talk: Department of Economics, Fall 2018
- 13. Talk & Workshop: Department of Anthropology, Fall 2018 (St. George)
- 14. Talk : Department of Psychology Search committee members, Fall 2018
- 15. Talk and Workshop: Unconscious bias and challenges to fair assessment: Vice Provost's training session for Assessors on search committees and Academic Administrators leading searches (June 2016, June 2017)
- 16. Talk and Workshop: Unconscious bias and challenges to fair assessment: Vice Provost's workshop for new Academic Administrators (2017, 2018, 2019, 2020)
- 17. Presentations to search committees for new Chairs at the University of Toronto Scarborough: Department of Philosophy, Department of Biological Sciences, Department of Psychology, Department of Arts, Culture & Media, Interdisciplinary Centre for Health and Society, Department of Management (2017, 2018)
- 18. Presentation: Health & Safety and Athletics & Recreation Retreat (UTSC, May 2017)
- 19. Presentation: Campus Safety & Security Retreat (UTSC, April 2017)
- 20. Presentation: Department of Anthropology/Health search committee, February 2017
- 21. Presentation & Discussion: Faculty of Kinesiology & Physical Education (University of Toronto St. George), December 2016
- 22. Presentation to a general audience (faculty, staff and students, UTSC October 2016). This talk was recorded at the request of the Provost, and posted to the <u>Dean's website</u> and <u>Office of the Vice Provost website on Diversity</u> along with resources for units seeking training in unconscious bias.
- 23. Presentation to the meeting of the Principals, Deans, Associate Deans and Chairs (from across University of Toronto), invited by the office of the Provost to speak to this group, September 2016
- 24. Presentation: University Professor's nomination committee (at the request of the Provost), April 2016
- 25. Discussion Facilitator, University of Toronto, Provostial workshop on Unconscious Bias (WISELI), August 2016
- 26. Presentation to senior academic leadership search committee (at the request of the Provost), 2016

ACADEMIC RESEARCH PRESENTATIONS:

NAMED SEMINARS, PLENARY OR KEYNOTE ADDRESSES (5 since May 2020)

Here I include invitations to give major talks as evidence of impact, but note those that were declined due to health, child rearing, schedule conflicts or for political reasons (e.g., opposition to American travel-ban).

- 1. Andrade, MCB. Office of the Privy Council 'Lunch & Learn' in honour of International Women's day. 2021
- 2. Andrade, MCB. University of Washington. <u>Tommy Edmondson Endowed Lecture</u>. April 2021
- 3. Andrade MCB. Black Excellence in STEM & Health Symposium. March 2021 Keynote speaker.
- 4. Andrade, MCB. Carleton University Discovery Lecture. Joint Science/Journalism lecture. March 2021.
- 5. Andrade, MCB. Darwin Festival, February 2021, *Founders memorial Lecture*. Salem State University.
- 6. Andrade, MCB. Ecology Live August 2020. https://www.youtube.com/watch?v=Zs-dKcdrOYU
- 7. Andrade, MCB. November 2017. 'Inspiring Women Among Us', University of Northern British Columbia.
- 8. Andrade, MCB. April 10, 2017. Richard B Root Graduate student seminar, Cornell University Department of Ecology & Evolutionary Biology
- 9. Andrade, MCB. 2016. Ontario Ecology, Ethology & Evolution Colloquium. Keynote speaker: The private lives of black widows: How behaviour links ecology & evolution.
- 10. Andrade, MCB. Invited Keynote address: Uruguayan Regional Animal Behaviour Meeting, Montevideo, Uruguay. March 2013 (declined for health reasons).
- 11. Claflin University, Keynote address, Undergraduate Research symposium, Orangeburg, SC, USA. March 2012.
- 12. Plenary talk. 26th European Congress of Arachnology, Ben Gurion University, Sede Boger, Israel (Sept 2011)
- **13.** Darwin Keynote speaker, Indiana State University. *Sexual selection and adaptive plasticity: extreme mating favours extreme tactics for doomed male black widows.* Terre Haute, IN, 26 April 2010.
- 14. Helen Battle Memorial Seminar in Biology, University of Western Ontario. 2010.

- 15. Plenary talk. Annual meeting the Entomological Society of Canada. Ottawa, Ontario. October 19, 2008.
- Plenary talk invitation (declined due to scheduling conflict). 24th European Congress of Arachnology. Bern, Switzerland, 25-29 August 2008.
- 17. **Plenary talk**. XXX International Ethological Conference. Halifax, Nova Scotia. 15-23 August 2007 (400+ attendees).
- 18. James P. Holland Memorial Lecture. Between a Rock and a Hard Place: Evolution of Self-Sacrificial Male Mating *Strategies*. Indiana University. Bloomington, Indiana. 11 Oct 2004.
- 19. Plenary talk: Ontario Ecology & Ethology Colloquium. University of Toronto at Mississauga. Mississauga, Ontario, Canada. 11 May 2004.
- 20. Women in Science: Distinguished Visitors Program. University of New South Wales. Sydney, Australia. 6 Sept 2004.
 - Research Lecture: Constraints and Novel Solutions in a Self-Sacrificial Mating Strategy
 - Workshop panelist: *Retaining women in the Science Pipeline* & guest teaching lecturer: *Male mate choice*

INVITED DEPARTMENTAL SEMINARS & SYMPOSIUM TALKS (44)

- 1. McMaster Department of Biology Departmental seminar. 5 March 2020.
- *2.* **U of T Senior Alumi Lecture Series**. *Everything I need to know about Evolution, I learned from a cannibalistic spider*. 25 October, 2017.
- 3. **Senior College**, *Untangling the widow spider's web: plasticity and mating behaviour*. University of Toronto. January 25, 2017.
- 4. Department of Biology, Duke University (27 April 2016)
- 5. Department of Biological Sciences, University of Massachusetts, Lowell (5 April 2016)
 - This talk was part of the NSF-funded 50/50 Lecture series whose goal is to ...bring notable scientists to campus to give a lecture in a special format. Half of the speaker's time will be allotted to his/her technical, educational and research interests, and the other half will be devoted to his/her career path, detailing, for example, challenges overcome or the influence of mentors. (see https://www.uml.edu/Research/ADVANCE/Lecture-Series.aspx)
- 6. Dept. Ecology, Evolution and Behavior, University of Minnesota (24 Sept 2014)
- 7. Dept Biology, Carleton University (7 March 2014)
- 8. Dept Biology, Sir Wilfrid Laurier University (17 January 2014)
- 9. Dept Biology, Trent University (18 October 2013)
- 10. *ABS Presidential Symposium: 50 years since Hamilton*, invited speaker, 50th annual meeting of the Animal Behaviour Society, Boulder Colorado, USA. 28 July 1 Aug 2013
- 11. Dept Psychology, Hunter College, CUNY (March 7 2012)
- 12. Dept Biology, Rutgers University (March 6 2012)
- 13. Boston University, Department of Biology Seminar Series. (March 28 2011).
- 14. University of Massachusetts Amherst, Seminar series in Organismic & Evolutionary Biology (3 Dec 2010).
- 15. Department of Neurobiology & Behavior, Cornell University (7 October 2010)
- 16. Biology Senior Project Symposium, Allegheny College, Meadville, OH. 28 April 2010.
- 17. Darwin Series, Department of Animal Behaviour Research Group. University of Chicago, Chicago, IL. 4 October 2009.
- 18. Dept Biology. Queen's College of City University of New York, Flushing, NY .11 Nov 2009.
- 19. Dept Ecology & Evolutionary Biology, Princeton University. 26 February 2009
- 20. Symposium talk invitation (declined due to scheduling conflict). Symposium on the Evolution of Sex & Recombination: In Theory & In Practice, Iowa City, June 16-19, 2008.

- 21. **Symposium talk invitation** (declined due to scheduling conflict). Topic: *Pathways to Novelty & Diversity: The causes & consequences of polyphenism.* Animal Behaviour Society Meeting August 2008.
- 22. Dept Ecology & Evolutionary Biology, UCLA, 12 November 2008.
- 23. Dept Biology, University of Western Ontario, 14 March 2008.
- 24. Dept Entomology, UC Riverside, 13 November 2008.
- 25. Dept Entomology Seminar Series, Rutgers University, 9 March 2007.
- 26. Dept Ecology & Evolutionary Biology, University of Kansas, Lawrence, Kansas. Nov 2006.
- 27. Dept Biology Colloquium Series, Akron University. Akron, Ohio, USA. 14 September 2006.
 - a. Dept Biology Seminar Series, Indiana University. Bloomington, Indiana, USA. 31 Jan 2006.
- 28. **Symposium talk** invitation (declined due to scheduling conflict). Topic: *Biology & Diversity of Arachnids*. Entomological Society of Canada Annual Meeting. Canmore, Alberta. 2-5 November 2006.
- 29. Symposium talk Topic: *Bateman's principles: Is it time for a re-evaluation?* Society for Integrative and Comparative Biology Annual meeting. New Orleans, Louisiana, USA. 6 Jan 2004.
- 30. Dept Biology Seminar Series, University of Nevada at Reno. Reno, Nevada, USA. 17 Nov 2005.
- 31. Dept Biology & Marine Biology Seminar Series, Dalhousie University. Halifax, Nova Scotia, Canada. 25 Sept 2003.
- 32. Dept Biology Seminar Series, Simon Fraser University. Burnaby, British Columbia, Canada. 13 Nov 2003.
- **33.** Symposium talk. Topic: *Evolution of sexual and social behaviour*. Society for the Advancement of Chicanos and Native Americans in Science, National Conference. Phoenix, Arizona, USA. 29 Sept 2001.
- 34. Dept Biology seminar series, Brock University. St. Catherines, Ontario, Canada. 22 Mar 2001.
- 35. Evolution seminar series. McMaster University. Hamilton, Ontario, Canada. 12 Feb 2001.
- 36. Dept. Zoology seminar series. University of Guelph. Guelph, Ontario, Canada. 18 Jan 2001.
- 37. 'Evolunch' seminar series. University of Toronto (St. George Campus). Toronto, Ontario, Canada. 17 Jan 2001.
- 38. Dept. Biology seminar series. University of Toronto at Mississauga, Mississauga, Ontario, Canada. 6 Oct 2000.
- 39. 'Entomaniax' (undergraduate entomology club) seminar series. Cornell University. Ithaca, New York, USA. April 1999.
- 40. Wildlife Biology Club (undergraduate club) meeting. Cornell University. Ithaca, New York, USA. April 1998.
- 41. Department of Entomology seminar series, New York State Agricultural Experimental Station, Cornell University. Geneva, New York, USA. March 1998.
- 42. Entomological Study Group of Western Australia. King's Park, Perth, WA, Australia. February 1997.
- 43. Dept. Biology Seminar Series, University of Western Australia. Perth, WA, Australia. January 1997.
- **44.** Evolution and Ecology Seminar Series. Queens University. October 1996.

12. TEACHING & RESEARCH SUPERVISION

12A. UNDERGRADUATE COURSES TAUGHT

I developed the syllabus and all lectures and assignments for the following lecture courses, for which I have sole responsibility Starred* courses were novel courses I proposed which were approved by the departmental curriculum committee then governance. At UTSC, course levels are indicated by letters (A-1st year through D-4th year).

<u>1. BIOB51</u>. Evolutionary Biology. Second-year core-course (~400 to 600 students per year)

Years taught: 2000-2002; 2004-2007; 2008-2014; 2015 - present

Term work has included: (1) A poster project. Student groups create posters to answer questions or outline current debates in evolution. Students use primary literature sources. The project is developed in several steps over the year then presented online or orally at a poster-session accessible to all members of the campus community or (2) An 'exam question' assignment. Students must write a (10-15 mark) short-answer question and answer key, (3) online quizzes and worksheets based on assigned documentary videos, video-shorts, and problem sets.

Average student evaluation, Fall 2018

4.6/5 "The instructor created an environment that was conducive to my learning"

4.3/5 "The course provided me with a deeper understanding of the subject matter"

<u>2. BIOA01.</u> Life on Earth: Unifying Principles. First-year core-course (~1100 students per year) Years taught: 2014, 2015

I contributed 12 lectures, a multiple-choice exam, and online learning tools and assignments in a 1-month module on Evolutionary Biology.

Average student evaluation, Fall 2015

4.5/5 "The instructor created an environment that was conducive to my learning"

4.0/5 "The course provided me with a deeper understanding of the subject matter"

3. *<u>BIOC54</u>. Animal Behaviour. Third-year elective course (~ 150 students per year). Years taught: 2002, 2004-2007, 2009, 2011

Term work includes: (1) In-class writing assignments, (2) Bi-weekly written discussions of primary literature papers, (3) Hypothesis-generation assignment and/or (4) Research paper developed in several steps over the semester (including data collection and peer review of first draft).

Average student evaluation, Spring 2011:

5.93 /7 (question: "Overall, performs well as a university professor").

4. NRO C90. Supervised study in Neuroscience (with AC Mason). **Student**: Saiera Alam. Title: Vibrational Communication in Spiders. Spring 2001.

5. *BIOD53. Special topics in Behavioural Ecology. Fourth year elective course (~8 – 15 students/year).

Years taught: 2008, 2010, 2012, 2015

Term work includes a research proposal, annotated bibliography, oral presentation, peer review, in-class discussion and problem solving. In 2015 I added a 3-class laboratory exercise for which students collaborate to devise predictions, complete an observational lab exercise on mating behaviour of live spiders, then write up their results in a truncated (common methods omitted) research paper.

All exam questions require written answers and the final exam is an open-book/open internet essay exam. Lectures are tailored to topics of student interest and based heavily on the primary literature.

Average student evaluation, Spring 2015:

5/5 "The instructor created an environment that was conducive to my learning"

4.9/5 "The course provided me with a deeper understanding of the subject matter"

6. <u>*BIOD55</u>. Experimental Animal Behaviour. Fourth year elective lab course, ~10 students/year.

A hands-on course emphasizing the logic, creative thinking, and careful methodology required to conduct rigorous research on animal behaviour from an evolutionary perspective. Students devise and run behavioural experiments, primarily using invertebrate models. I created this course to bolster 4th year offerings in hands-on organismal biology and to support development of practical skills in experimental animal behaviour. To date, this course has been taught twice by personnel from my research group (senior PhD student, Post-doctoral fellows) under my mentorship.

12.B. GRADUATE COURSES TAUGHT

1. EEB1456: Bias in STEM: History, Data and Progress. Developed in Feb-April 2021 in collaboration with Prof. Nicole Mideo, this graduate module (7 weeks) will be offered for the first time this summer (May -June). Evaluations will include seminars by students, and a collaborative knowledge translation project to provide education to peers and faculty on bias in STEM.

2. ZOO1002. Independent reading course. I provide an initial reading list in some area of interest determined in conferences with the student. We develop a thesis together, I then guide reading and interpretation in weekly to biweekly meetings. Students give two oral presentations and produce a review paper (including several marked drafts) by the end of the course. **Students**: LSE Snow & G Laird (2001-2002); MD Biaggio (2004-2005); JA Stoltz & MM Kasumovic (2005-2006).

3. EEB1100. Faculty Research Course. Core course in Ecology & Evolutionary Biology graduate program. My contribution involves one lecture and one discussion section based on assigned papers, and marking student commentaries on these papers. I was asked to teach a module for the second year in a row in 2010 because of positive student evaluations in the previous year. This year I have secured funding from the office of the Vice Dean, Graduate Studies (UTSC) for a shuttle bus so that one of my classes will be held at UTSC.

4. *EEB 1470. Special Topics in Behaviour: Integrative Biology of Behaviour. I am one of 4 instructors for this course, offered every other year. I designed and proposed this course together with one faculty colleague. My module of the course includes an introductory lecture, guiding students in oral presentations based on papers I assign, and guiding their work on a research proposal. I have designed two additional evaluations for this course, including a 'talk self-reflection option' and 'real-time peer review'. I have been the lead instructor and coordinator for this course 4 years out of the 5 years it has been taught. This includes creating a homepage for the course, creating rubrics for all assignments, arranging for video recording of student talks to facilitate talk delivery self-reflection, coordinating feedback and assigning marks as well as final grades.

5. EEB 1456. Bias in STEM: History, Data and Progress. Co-instructors: M. Andrade, N. Mideo

This is a new course that will be taught for the first time in summer 2021. In this course we discuss the historical legacy of bias and exclusion in science, recent data that quantifies the scale of the problems and/or the science behind them, and finally evidence-based strategies to overcome these issues. I worked with my co-instructor to design this course and assignments.

12.C. RESEARCH SUPERVISION

Summary. Prof Andrade has recruited 14 outstanding graduate students since 2001, 8 of whom have held major scholarships (7 NSERC, 1 OGS, 1 Trillium) including three who have held highly-competitive advanced fellowships (NSERC Alexander Graham Bell/ CGS fellowships). She has graduated five MSc students (two of these co-supervised) and five PhD students, and is currently supervising or co-supervising 5 PhD students. Two of her students have won prizes for their talks at national and regional conferences, two of her graduate students have won major University of Toronto research awards, and two of her PhD students have secured major post-doctoral fellowships. Her first PhD student (Kasumovic) is now an award-winning research and lecturer at University of New South Wales.

Prof Andrade has supervised 3 post-doctoral fellows, one of these ongoing. One of these (Johnson) held a highlycompetitive NSF International Post-doctoral Research fellowship in her lab, and is now an Associate Professor at Arizona State University West.

MSC STUDENTS

COMPLETED:

- (1) McPhee, Megan (BSc UBC). Co-supervised with AC Mason (UTSC). Alternative mating tactics and quality in jumping spiders.
 - September 2013 to July 2015 (graduated)
 - NSERC Canada Graduate Scholarship (CGSM) holder
- (2) Modanu, Marija (BSc Alberta). Adaptive sex ratio modification and sexual selection in cannibalistic spiders
 - July 2007 to 2009 (graduated)

- NSERC Canada Graduate Scholarship (CGSM) holder
 - Accomplishment: Winner of competitive University of Toronto entrance fellowship, published 3 papers from her work in my lab (2 as first author). Currently a PhD student with an NSERC CGSD at Cornell University
- (3) Snow, Lindsay SE (BSc Guelph). Post-copulatory sexual selection in the Australian redback spider (Latrodectus hasselti Thorell).
 - Sept 2001 November 2003 (graduated)
 - NSERC Graduate scholarship holder
 - Accomplishment: Three publications from her thesis, two of which were cover photo features.
 - **Current position:** Formerly Assistant director for children's science programs at the Royal Ontario Museum (now on maternity leave)
- (4) Biaggio, Maria D (BSc Bryn Mawr). Effect of experience on mating strategies of male and female redback spiders (Latrodectus hasselti Thorell)
 - Sept 2004 Dec 2006 (graduated)
 - International student, supported by my Premier's Research Excellence Award
 - Accomplishments:
 - *i.* 2nd place (conference-wide) for outstanding talk at the 26th Annual Midwest Ecology & Evolution Conference, 2006
 - *ii.* Popular science article in *Science News* (26 Aug, 2006) based on her talk at the 43rd Annual Meeting of the Animal Behaviour Society (Snowbird, Utah).
 - iii. One paper published and one in preparation from her thesis
 - **Current position:** Conservation Manager, Wellington Zoo Trust, New Zealand.
- (5) Glenn-Worrall, Gillian. (BSc Queens). *Repeat and multiple mating in an Australian scaly cricket, Ornebius aperta (Orthoptera: Mogoplistidae).* Co-supervised.
 - Sept 2001 December 2003
 - NSERC Graduate scholarship holder
 - Accomplishments: Publication in *Biology Letters*
 - Current position: Formerly a Program Assistant, Canadian Foundation for Innovation (now on maternity leave)

PHD STUDENTS

CURRENT:

- (6) Laini Taylor (BSc, UofT). EEB Graduate entrance fellowship winner. Topic: *Linking mating system plasticity and invasive potential using spider models.*
 - Sept 2020 to present
- (7) Nishant Singh (BSc, U Pittsburg). Trillium graduate award holder (University of Toronto). Topic: Understanding the early stages of social behaviour using black widow spiders
 - Sept 2015 present
- (8) Charmaine Condy (MSc, Toronto). Co-supervised with N Lovejoy (UTSC). *Molecular phylogenetics and genetic evolution of widow spiders (Genus Latrodectus)*
 - Sept 2012 –present (currently on leave)
- (9) Sheena Fry (MSc, Memorial). Causes and consequences of phenotypic variation in males.
 - Sept 2011 present (currently on leave)

COMPLETED

- (1) Catherine Scott (BSc, SFU), NSERC Canada Graduate Scholarship holder (CGSD). Topic: Mate searching and choosiness are shaped by spatial structure & social information in western black widows
 - Sept 2015 December 2019
 - Accomplishments: Published 2 first-authored papers and 1 review from thesis, with 2 others in preparation, currently a post-doctoral fellow at Acadia University
 - (2) Monica Mowery (BSc, Tufts). Co-supervised with AC Mason (UTSC). *Invasion in the Light of Evolution: An Integrative Approach Using Two Widespread Widow Spider Species*
 - Sept 2014 November 2019
 - Accomplishments: 2 papers submitted and 1 in revision from thesis, winner of a Zuckerman Post-doctoral fellowship, currently at Ben Gurion University of the Negev.
- (3) Leonardo Castilho. Universidad de Brasilia. Co-supervised with R Macedo. Honest signaling and female choice in a multimodal jumping spider. Sept 2014 to 2017.
- (4) Luciana Baruffaldi (BSc, MSc, Montevideo). Function and evolution of chemical signals in widow spiders.
 - May 2011 October 2015
 - Accomplishments: Published 2 first authored papers and has 2 others in preparation from thesis work, numerous conference talks, 4 conference travel grants and a student research grant from the Animal behaviour society.
 - Currently a post-doctoral researcher in my lab and my lab director
- (5) Emily MacLeod (BSc Guelph). New insights in the evolutionary maintenance of male mate choice behaviour using the western black widow, Latrodectus hesperus
 - Sept 2007 to Jan 2013
 - Accomplishment: Winner of competitive University of Toronto entrance fellowship and NSERC Canada
 Graduate Scholarship holder
 - Currently a research associate at the Michner Institute (University Health Network)
- (6) Kasumovic, Michael M. (MSc Queens). *Effects of developmental plasticity and antagonistic selection on phenotypic variation in spiders*.
 - Sept 2002 to October 2007.
 - NSERC Graduate scholarship holder
 - Accomplishments:
 - i. 9 publications arising directly from work associated with his thesis, including papers in *Current Biology, Evolution*, and *Ecology*.
 - ii. Numerous popular science articles
 - iii. Winner, President's award for best talk in session, Annual meeting of the Entomological Society of Canada. 2-5 November 2005.
 - iv. Winner, Principal's Graduate Student Award, UTSC
 - V. Winner, Ramsay Wright Award, Department of Zoology (tri-campus award for most accomplished PhD student)
 - vi. NSERC post-doctoral fellowship holder
 - vii.Australian Research Council post-doctoral fellowship and research funding award holder
 - Winner, American Society of Naturalists Young Investigator Prize, 2011
 - **Current Position.** Senior Lecturer, University of New South Wales
 - (7) Stoltz, Jeffrey A. (MSc Western Ontario). *Mechanisms, maintenance and function of female reproductive strategies in spiders.*
 - Sept 2005 to 2010

- NSERC Graduate scholarship holder
- Accomplishment:
 - i. 9 publications arising directly from work associated with his thesis, including papers in *Proceedings of the Royal Society, B, Functional Ecology and Biology Letters,* with several others in preparation.
 - ii. Winner of Cas Linsday award for best EEB talk at CSZ 2009 conference
 - iii. Winner of NSERC post-doctoral fellowship
 - iv. 2x winner of Graduate Student research award, UTSC (cross-campus award)
- **Current Position.** After completing his NSERC Post-doctoral fellowship at the University of Exeter at Cornwall (lab of Dr. Tom Tregenza), Jeff took up a position in banking.

RESEARCH ASSOCIATE

1. Luciana Baruffaldi (PhD UToronto, MSc Uruguay). Topics: Adaptive developmental plasticity and sexual selection; Diversification of pheromone function. Luciana is also my Lab Director, in which capacity I have trained her to oversee general lab operations and support supervision of graduate student research. January 2016-present.

POST-DOCTORAL FELLOWS

Current:

- Lenka Sentenská (PhD Masaryk, Czeck Republic). Marie-Curie Post-doctoral Fellow. Primary (EU host) advisor: G. Uhl (Griefswald), I act as visiting host advisor (2020 – 2022). Topic: Immature mating as a novel tactic of an invasive widow spider.
- Past:
- Felix Beaudry (PhD UToronto). May July 2020. Genomics of population differentiation in L. hesperus. Short term, part-time post-doctoral position bridged the gap between his PhD and full-time post-doc appointment. His expertise in bioinformatics and population genetics was leveraged to support training of PhD candidate Nishant Singh and development of collaborative work aligning with this expertise. Currently a post-doctoral fellow at the University of Rochester.
- Malcolm Rosenthal. (BSc Oberlin, PhD Nebraska). Topics: Context-dependent signaling and mating success in spiders, Taxonomic biases in the literature. Sept 2015 – Dec 2016. Currently a post-doctoral fellow at University of California Berkeley
- 4. **Brandt, JM.** (i) *Allometry, sexual dimorphism and locomotor performance in spiders,* and (ii) *Physiological ecology of aggressive signaling.* Sept 2004 October 2006. Supported by my Premier's Research Excellence Award. Dr. Brandt took up several teaching positions after leaving my lab.

5. **Johnson, J Chadwick.** *Behavioural syndromes in cannibalistic black widow spiders*. Sept 2003 – July 2005. NSF international Post-doctoral Research Fellow in my lab. Currently an Associate Professor, Arizona State University West.

RECENT SUPERVISORY & EXAMINING COMMITTEE MEMBERSHIP

Supervisory Committees (2017-present, [career = 21]

- 1. Breanna Jordan (MSc, Columbia University, NYC)
- 2. Samara de Andrade (PhD, Miller [Architecture, Landscape & Design {Forestry}])
- 3. Senthurran Sivalinghem (PhD, Mason [UTSC]).
- 4. Allan Edelsparre (PhD, Sokolowski/Fitzpatrick [UTSC])
- 5. AJ Masson (PhD, Mason [UTSC])
- 6. Terrence Chang (PhD, Mason [UTSC])
- 7. Paul Bzonek (PhD, Mandrak)

- 8. Erich Eberts (PhD, Welch)
- 9. Sankirthana Sathiyakumar (PhD, Richards)
- 10. Courtney Leermakers (MSc, Mandrak)

Examining Committees (Appraisals & Final thesis exams), 2017-present

Examining committee member: 10 exams [career: 25] MSc exam chair: 4 [career: 12] PhD exam chair: 4 [career: 11]

12. D. OTHER TEACHING

UNDERGRADUATE RESEARCH SUPERVISION

Summary. Prof Andrade has supervised >55 full-year independent undergraduate research projects (equivalent to an Honour's thesis), 7 NSERC Undergraduate Student Research Award holders, and 68 additional research-course students since taking up her faculty position at UTSC in 2000. Research contributions of ten undergraduates have warranted authorship on refereed publications (Prasad, Rathitharan, Li, Said, Perampaladas, Sivalinghem, Mahmoudi, Stoltz, Abdel-Mesih, Gu, Dorison), and several undergraduates have attended local (Stoltz [while an undergraduate], Perampaladas, Mahmoudi, Kottapalli, Stemberger, Rathitharan, Nithianandan, Pakirathan, Safar), national (Perampaladas, Mahmoudi, Stemberger) or international (Gu, Dorison, Rathitharan) conferences to present their work (see Research contributions and Conference contributions sections).

SUPERVISION OF RESEARCH ASSISTANTS

Summary. Prof Andrade has supervised over 150 undergraduate laboratory assistants since 2000. Each year, she supervises 10- 15 undergraduates (work-study and volunteer) in her lab, in addition to employing one part-time undergraduate research assistant. Assistants rear laboratory populations of spiders and their insect prey. Students are given the option of attending weekly discussion group meetings, and those with the ability and talent also contribute to research projects after training in animal husbandry and data collection. The Andrade lab group also includes high school coop students (1 or 2 each term during the school year). The current lab complement is available here: http://www.utsc.utoronto.ca/labs/andrade/lab-personnel-2/

Undergraduate assistants supervised in the 2017/2018 academic year are provided as an example:

	, , , ,
Ridda Ahmed	Mohamad Sohawan
Lynn Bui	Dilakshan Srikanthan
Alexandra Dorison	Sajeevan Sujanthan
Michael Joshua	Vignesh Sukhu
Yousef Safar (work-study)	Ahiraa Supeinthiran
Justin Andrew (work-study)	Arthishia Shanmuganthan (work-study)
Luke David	Ishara Wikejoon
Ravin Dyal	Amanda Yee
Allison Rupnaraine	Karen Zaki

E. ADMINISTRATIVE SERVICE

13. A. WITHIN THE UNIVERSITY OF TORONTO

SUMMARY: SPECIAL ADVISOR TO THE DEAN, INCLUSIVE RECRUITMENT & EQUITY EDUCATION

1 January 2021 – 31 March 2021. Responsible for oversight and implementation of the process for recommendations on the allocation of faculty positions for 2021/2022 cycle (including new, replacement, and diversity positions). This involved refining and implementing the second year of the Faculty Complement Committee (FCC) process (see below) and adding a second process for considering replacement and Dean's discretion positions, the FCC -RD (FCC-Replacement and Discretionary position) process. In this role, I also continued work to build capacity for the implementation of campus-wide equity & inclusion education for faculty (Unconscious bias online modules), securing funding from tri-campus partners for their development (FAS, FASE, UTM). I was responsible for some faculty recruitment oversight, and partial onboarding and transitional tasks associated with incoming interim Vice Dean Faculty Affairs, Equity & Success.

SUMMARY: VICE DEAN FACULTY AFFAIRS, EQUITY & SUCCESS (JAN 1, 2017 TO DEC 31, 2020)

Responsibilities include:

- **Faculty searches**. Responsibilities included: development of yearly recruitment & replacement plan for the campus (16 academic units), approving short lists, reviewing requests to hire, approving and consulting on LOO's, meeting with (some) candidates, overseeing appointment of Decanal assessors and training assessors, ensuring compliance with policy and procedures.
- Tenure, Continuing status & Promotion Dossiers (Sessional lecturers, teaching stream and tenure-stream faculty). High-level review for completeness, close review of statement of evidence, statement of reasons, external letters to support counsel for Chairs.
- Truth & Reconciliation Commission of Canada (TRC) response commitments and Indigenous faculty recruitment. Worked with the Dean, Indigenous Advisors, and the Associate Director of Indigenous Initiatives to create and launch a program for Indigenous recruitment and cultural competency education at UTSC. Coordinated 7 faculty searches over three years, and Chaired the search committee for one of these. Four of these searches were successful.
- **Dean's assessors (Search Committees) Training Module.** I created a modular training resource online that provided information on policy and practice to Decanal Assessors on search committees and career review committees.
- Academic Unit change: I oversaw and led changes in faculty appointments associated with the creation of a new academic unit (EDU-B), then guided the applications for, and approvals through governance of two new academic Departments at UTSC (Centre for French and Linguistics became the Department of Language Studies; Interdisciplinary Centre for Health & Society became the Department of Health & Society).
- Provide Counsel to Chairs & Directors, ensure compliance with policy and enable aspirational change. Provide local authority on academic career progression, recruitment and through retirement.

Policy/Procedure achievements include:

In collaboration with Lesley Lewis and Clare Hasenkampf, I led efforts to revise the UTSC Guidelines for the Assessment of Effective Teaching to ensure consistency with new University policy on promotion to Professor

Teaching Stream. This was a widely consultative process with iterative feedback from the Office of the VPFAL, which commenced in Fall 2017. The revised guidelines were approved through Governance in February 2018.

Faculty Complement Committee Process. I designed, developed, and launched a new, transparent process for adjudicating requests for new faculty positions that engaged all academic unit Chairs across the campus. This process also centered principles of Inclusive excellence in all proposals. This was a substantive change from the previous process which occurred primarily within the Dean's office. This new process enabled (and required) engagement with campus-wide strategic priorities as well as unit-specific needs an aspirations.

New Initiatives:

- Indigenous Research Ethics Training Grant. A new funding program for faculty, post-docs and graduate students from UTSC which supports attendance at symposia/workshops/classes focused on the ethics of community-based research or teaching.
- **Mentorship Initiatives Fund Grant**. Grants support grass-roots initiatives of UTSC Faculty or Librarians aimed at supporting career development through mentorship.
- **Professional/Pedagogical Development Support Fund (PPF)** for Teaching Stream Faculty at UTSC. Yearly award to support expenses related to Professional/Pedagogical development activities.
- **Pedagogical/Professional Development Grant (PPG)** for Teaching Stream Faculty at UTSC. Can be used to supplement the PPF if needed, competitive award.
- **MEAD (Mentoring Excellence & Diversity @ UTSC) Steering group.** Created this multidisciplinary group of faculty and librarians from UTSC who devise and implement strategic approaches to career and personal development of their colleagues at UTSC through effective mentorship.
 - Initial work in 2017 included:
 - Campus-wide meeting of all ranks and streams. Workshop and facilitated discussion seeking input on gaps in on-campus mentorship for faculty & librarians
 - 3 working groups struck in summer 2017 based on faculty input, these devised recommendations for the following areas identified as showing mentorship deficits:
 - Cross-campus mentorship initiatives
 - Mentorship for Associate Professors & Associate Professors, Teaching Stream
 - Mentorship for under-represented groups & women
 - New initiatives to be launched in 2019/2019 which have been approved and budget confirmed:
 - Senior mentorship fellows
 - Faculty Development fellows
- **Chair's Mentorship groups.** Small groups of 3 to 5 Chairs/Directors, meetings facilitated by my office once or twice per term.
- **Equity Matters Seminar Series** (Fall 2018 Launch). Goal is broad education on equity-related topics. Faculty, staff, graduate and undergraduate students are invited to these seminars, one each term. Attendance and interest are strong across 4 years of programming, and this is now a standing seminar series mounted by the Office of the Dean.
- **Unconscious Bias Online education resource** (summer 2020 launch). Using material I developed and vetted through years of presentations, and with creative input and support from the Faculty Development Administrator (Eileen Egan-Lee), I oversaw creation of animated online modules to support Faculty and staff education, now mounted through two online learning management systems (one faculty-facing, one staff-facing) at the University of Toronto.

TIDE (Toronto Initiative for Diversity and Excellence) I founded this group and am currently serving as

inaugural Chair. *TIDE is a group of faculty members who have come together to undergo training, facilitate talks and workshops, and provide input to the Vice-Provost, Faculty & Academic Life on issues related to faculty diversity.* (<u>http://www.faculty.utoronto.ca/resources/enhancing-diversity</u>)</u>

- Supported by the office of the Vice Provost, Faculty & Academic Life
- I assisted in recruiting ~25 faculty members from across the tri-campus who were willing to become presenters and facilitators for unconscious bias talks and workshops.
- I trained all members of TIDE and provided online resources to allow them to make their own presentations, I continue to update these resources
- Divisional representatives of TIDE are working with Deans to facilitate Unconscious bias education across U of T as part of the Provost's support for increase faculty diversity.

Workshops

Career/ Professional Development Workshops (tenure and teaching stream)

• Coordinated these workshops and invitations to UTSC faculty. Attended multiple workshops to support presentations by the VPFAL office, provided UTSC context.

New Faculty Orientation (Aug 2017-2020)

- This three-day new faculty orientation is held at UTSC and is attended by the majority of new faculty. I created 3 full days of programming for teaching and tenure stream faculty (including afternoon break-out sessions tailored to each stream). I lead this effort in collaboration with the Centre for Teaching & Learning.
- Follow-up is a 'One year later' lunch and information gathering session.
- In 2020 we successful transformed this into a 4 day online orientation

CAD Retreat (Sept 2017, 2018)

I devise the schedule for this retreat, invite some speakers, and facilitate round-table discussions.
 Focal topics have included: The role of the Chair, Accommodations and AccessAbility, Change Management, Managing staff.

Indigenous Cultural Acumen and Academic Life (2017, 2018)

• With the support of the Faculty Affairs administrator, I oversee logistics and invitations/advertising for these sessions, which are run by the Campus Indigenous advisor

SUMMARY: ACTING VICE PRINCIPAL ACADEMIC & DEAN (SEPT 1, 2010 - DEC 31, 2019)

I oversaw all aspects of the UTSC academic portfolio while the Dean was on a 6 month leave. This included the work of 19 academic units across scholarly fields in Humanities, Social Sciences, Sciences and Management. In addition to the broad work of this office, my accomplishments during this 6-month term included:

- **Decanal Self-study**. To support a provostial-implemented external review of the Dean's portfolio, I oversaw the completion of a comprehensive self study document.
- **Decanal portfolio restructuring**. To increase capacity in step with the increased size and complexity of UTSC, I consulted on, developed, and oversaw approvals for a new Decanal structure, which increased

the number of Vice Deans in the portfolio, and rationalized reporting relationships, including new dual reports to increase connections between executive portfolios.

- **UTSC Strategic Plan**. In a process led by the Vice President and Principal, I engaged in the final stages of writing, refining, and submitting to governance the new Strategic Plan for UTSC.
- Searches for 6 academic leaders (Director, 2 Chairs, 3 Vice Deans). Two of these processes were successfully completed under my leadership.

RECENT UNIVERSITY SERVICE: 2010-PRESENT

- Convocation speaker, University of Toronto virtual convocation ceremony, summer 2020
- 2018 to present. Member, Principal's Anti-Black racism round-table, UTSC
- 2018 to present. Member, Sexual Violence & Assault Prevention Committee, UTSC
- 1 January 2019 to present. Member, AcessAbility Faculty Advisor Group, UTSCs
- 1 January 2017 30 June 2020. Vice Dean Faculty Affairs & Equity, University of Toronto Scarborough (UTSC)
- June 2016 to present- Member, Black Faculty working group (University of Toronto)Faculty Awards Working group. Worked with multi-disciplinary group to devise recommendations for UTSC's Research Advisory Board for internal award adjudication.
- Search committee: Senior Advisor, Equity & Diversity, UTSC. October 2017
- Welcoming remarks: 'Walk with Excellence'. Honouring graduating students from several local high schools. May 2017
- Faculty lead partner & Keynote speaker 'Sparking Science through Mentorship': EcoSpark & Dunbarton High School's Girls' mentorship conference (<u>https://www.ecospark.ca/blog/pub:25/Sparking-Science-through-Mentorship</u>), September 2017
- Member: Search committee for Graduate Chair of the Department of Physical & Environmental Science
- Member: Indigenous Working Group, UTSC (February 2017 to present)
- Member: Research Advisory Board Working group on Faculty awards (UTSC, April 2017 to present)
- Member: Black Faculty Working Group, and Faculty recruitment sub-group, University of Toronto, (Fall 2016present)
- Equity & Diversity mini-review. One of two faculty members asked to review the current structure of the tricampus equity offices. This effort involved confidential meetings with over 10 different groups (>30 individuals). This review was commissioned by Angela Hildyard (VP HR & Equity) and we submitted our confidential report to her office. March-May 2016.
- Executive Committee, Department of Biological Sciences, UTSC. 2009 2012, 2014 to December 2016
- Promotions Committee, Department of Biological Sciences, UTSC, 2011 to present
- PTR Committee, Department of Biological Sciences, UTSC, 2015, 2016
- Member, Search Committee for Terrestrial Ecologist, Fall & Winter 2016
- Member: Search committee for the Vice Principal and Dean, UTSC (Winter 2016)
- Co-founder, MEaD UTSC (Mentoring Excellence and Diversity @ UTSC). This grassroots group is aimed at
 providing mentorship opportunities and education about barriers to career progress for early and mid-career
 faculty in the sciences. Together with Myrna Simpson (DPES), we secured funding from the Office of the VP –
 Research for the first meeting of this group in December 2014. One outcome of our successful first meeting is a
 new initiative in the Dean's office to analyze past student evaluations, PTR and hiring pools and practices with
 respect to equity to provide benchmark data not currently available. Funding for a second meeting has been
 secured from the office of the Dean, and this is being planned for September 2016.

- Speaker: CTL educator-exchange workshop. Designing and Giving Lectures that Engage Students
- Convocation speaker, School of graduate studies, June 2015
- Vice-Chair, Academic Policies & Programs, University of Toronto (2014- present)
- Member: Academic Policies and Programs Agenda Committee (2014 present)
- Member: Academic Board, University of Toronto (2009 present)
- Editorial Advisory Board & creation committee, UTSC Commons Magazine (2010 2015)
- Member: Search Committee for the Vice President of the University of Toronto and Principal of the University of Toronto Scarborough. Summer 2014 to Fall 2014
- Member: Search Committee for President of the University of Toronto (June 2012 through March 2013)
- Member: Search Committee for Principal and Vice-President, University of Toronto Scarborough (spring 2012)
- 'Academic offerings' talk and discussion on teaching Evolutionary Biology. 6 May 2013. Presented to high school biology teachers as part of a PA-day enrichment session organized by UTSC.
- Member, University of Toronto Tribunal (Academic Board), 2010 2012
- Member, University of Toronto Academic Appeals committee (Academic Board), 2010 2012.
- Presentation & panel member, Workshop on promotion to professor.
 Fall 2012(UTSC), fall 2011 (St. George)
- New Faculty orientation talk (UTSC), Fall 2009, 2010, 2011, 2012
- Green Path Program sample lecture. Summer 2009, 2010, 2011, 2013
- Biological Sciences search committee: Conservation Biology (2011)
- Organizer & Web-master: Organismal Biology Discussion Group, UTSC, 6 member labs, (<u>http://www.utsc.utoronto.ca/~mandrade/organismal.html</u>), fall 2010 to 2013.

UNDERGRADUATE ADMINISTRATION:

- Program Supervisor: Conservation & biodiversity and Integrative Biology Undergraduate programs. 2015 2016.
- Chair of Task Force on design of a new program in Ecology & Evolution & first Program Supervisor for this program (approved but then phased out)—Biodiversity, Ecology & Evolution (BEE) Undergraduate program. 2009 - 2012
 - I chaired the committee that proposed and secured approval for a specialist program in this area, I was then proposed a major in the same area (approval in progress). As part of this role, I secured funding for, and organized 'BEE Café' events to stir student interest in this new program.
- Program Supervisor, Conservation Biology Undergraduate Program. 2009 2011.
- High school recruitment. I have initiated a new program of recruitment efforts in local high schools in coordination with UTSC recruitment officers. Other participation in recruitment events includes:
 - High school guidance counselor information session, talk, April 2010
 - Woburn collegiate Science club, talk, May 2010 (up to 4 other similar talks are planned for fall 2010)
 - BEEs program introduction to University of Toronto recruiters, talk, Sept. 2010
 - BEE recruitment tactic overview, Deans' Recruitment Advisory Council, talk, Sept 2010
 - BEE recruitment & information video short (http://www.utsc.utoronto.ca/~info/videos/new_program2010.html)

GRADUATE ADMINISTRATION:

- Department of Ecology & Evolutionary Biology Graduate Coordinator, 2010 2012.
 I worked with the Associate Chair, Graduate Affairs on oversight of the tri-campus graduate program. *Ex officio* member of:
 - Member, Graduate Admissions Committee (EEB)
 - Member, Graduate Affairs Committee (EEB)

TENURE, CONTINUING STATUS OR PROMOTION REVIEW COMMITTEES:

- J. Ratcliffe (tenure review, Chair, Reading sub-committee), Fall 2017; Promotion review Fall 2020
- P. McGowan (tenure review, chair, research sub-committee) Fall 2015
- J. Weir, (tenure review, chair, research sub-committee) Fall 2015
- K. Welch (tenure committee), Fall 2014
- I. Stehlik (Continuing status, chair, teaching sub-committee), 2012
- J. Nash (tenure committee), Fall 2012
- M. Aarts (tenure committee), Fall 2012
- A. Agrawal (tenure, Member, Research review sub-committee). Fall 2009

THREE YEAR (INTERIM) REVIEW COMMITTEES:

- J. Weir, Fall 2012 (chair, teaching sub-committee)
- MJ Fitzpatrick. Fall 2010. (chair, research reading sub-committee).
- K Persaud (senior lecturer promotion, Chair, Teaching review sub-committee).
- S. Gazzarini 3 year review. Member, Research review sub-committee.Fall 2008.

FACULTY MENTEES:

I Stehlik (2010 to 2017), J. Nash (2010 to 2017); J. Weir (May 2014 to 2017); P. Molnar (January 2015 to 2017)

I ceased these formal mentorship activities to avoid conflicts-of-interest in my role as Vice Dean.

PAST SERVICE (PRIOR TO 2010)

- Dean's Assessor. Faculty search committee, Dept. Anthropology (UTSC). Fall 2009 Spring 2010.
- Chair, PhD examining committee:
 - Department of Medical Genetics & Microbiology, University of Toronto. Sept 7, 2007.
 - Department of Health Policy, Management and Evaluation, University of Toronto. 2005.
- Mix and Mingle event with new students in Biological Sciences, departmental representative Sept 2004, 2005, 2007, 2009, 2010
- New faculty orientation speaker (TLS): Field tested tips for recruiting graduate students. October 2009, August 2010.
- **Composing draft Governance document** for the new Department of Biological Sciences, UTSC (with C. Hasenkampf), Summer 2007.
- Green Path Program (UTSC) reception attendee and guest lecturer, June 2007, 2009, 2010.
- **Executive Committee,** Department of Ecology & Evolutionary Biology, University of Toronto. 2006 2007.
- Advisory Committee to the President, Search for a new Vice-President and Principal of UTSC. Sept. Dec 2006
- Academic Committee, UTSC. Biology representative, UTSC. 2006 2008.
- Selection Committee member, John Youson Entrance Award, UTSC. 2006.
- Selection Committee member, CK Govind memorial award, UTSC. 2004, 2005, 2007, 2008.
- UTSC-mandated representative: Board of Directors, N'sheemaehn child care centre (on- campus, not-for-profit organization. Appointed by UTSC CAO and the Office of the President, University of Toronto)
 - 2008 2009. President, Board of Directors
 - 2005 2008. Director of Communications & Privacy; Personnel committee member.
 - 2004 2005. Secretary of Board & Chair of the Personnel committee.
- Website development committee, Biological Sciences, UTSC (2007).
- Planning and Budget Committee, UTSC, Life Sciences representative, 2000 2002; 2005 2006.
- Faculty Search Committees, UTSC:
 - Evolution & Biogeography 2009
 - Neuroscience, 2007
 - Genomics & Population Genetics, 2005/2006
 - Biodiversity & Conservation Biology, 2004
 - Plant Developmental Biology, UTSC, 2003
 - Wildlife & Conservation Biology, UTSC, 2001.
- Keynote speaker, 'Getting started' (undergraduate orientation event). 2006, 2009, 2010.
- Undergraduate career guidance talk: "How to become a professor", organized by the Association of Chemistry & Biology Students, UTSC. Spring 2005, Fall 2005,fall 2006.
- Closing address speaker, UTSC Undergraduate Honours & Awards Night. 2004.
- **Featured** in University of Toronto recruitment brochure and 'Edge' magazine. 2002, 2004, 2006.
- **Keynote speaker**, *Take our daughters and sons to work* annual event. I also organized and ran a lab tour/activity session for children as part of this event. UTSC, 2003.
- Invited panellist on the University-wide new faculty orientation workshop on research start-up strategies. University of Toronto, 2003.
- Organizational committee member and judge, Department of Zoology Research Colloquium. University of Toronto, 2003
- **Coordination and drafting of growth plan document**, Ecology/Evolution/Organismal Biology group, UTSC, 2002.
- Keynote speaker, Take our daughters to work annual event, St George campus, University of Toronto, 2002.
- Web-Master, Integrative Behaviour & Neuroscience Group, UTSC. 2001 2006.

- Co-founder, Integrative Behaviour & Neuroscience Group (<u>www.utsc.utoronto.ca/ibn</u>), UTSC. 2001.
- New Science Building Committee member, Life Sciences representative, UTSC, 2001-2002.
- **Participation in political lobbying activities** coordinated by the office of the Vice President, Research and International Relations, University of Toronto (2001, 2002):
 - (i) I was one of 3 faculty who attended an editorial board meeting at the Toronto Star newspaper. Our purpose was to make clear the positive impact of provincial funding on research innovation. An editorial published following our meeting reversed the former, anti-innovation-funding position of the editorial board.
 - (ii) I was one of 15 faculty who attended a dinner meeting with the then-Ontario Minister of Finance. Our purpose was to convince him of the importance of provincial funding for research innovation.
- Science Wing security task force, Life Sciences representative, UTSC, 2001.
- **Undergraduate recruitment presenter**, Life sciences representative, UTSC Open House. 2001.

13. B. OUTSIDE THE UNIVERSITY OF TORONTO

EXTERNAL REVIEWER (TENURE & PROMOTION):

- (1) Jonathan Pruitt (tenure review), UC Santa Barbara, September 2016
- (2) Greg Holwell (equivalent to tenure review), University of Aukland, September 2016
- (3) Eileen Hebets (promotion to Professor), U Nebraska, October 2014
- (4) William Eberhard (professional accomplishments review), Smithsonian Tropical Research Institute, summer 2014
- (5) Damian Elias (tenure review), University of Toronto, Berkeley, January 2014.
- (6) Mariella Herberstein (promotion to Full Professor), Macquarie University, Australia. January 2013
- (7) Anne Hedrick, (promotion to Adjunct Full Professor), University of California, Davis. October 2012
- (8) Marie Danielson-Francois (tenure review), University of Michigan, Dearborn. September 2012.
- (9) Vikram Iyengar (Tenure review), Villanova University, November 2009.

OTHER:

- Local Organizing Committee: Plenary symposium organizer. Canadian Society of Zoologists annual meeting, 2009
- Conference submission judge: Refereed abstracts submitted for consideration as oral presentations at 12th Biennial Congress of the International Society for Behavioural Ecology, April 15, 2008 (approx. 2/3 of applicants were invited to give talks)
- Local Organizing Committee. Canadian Society for Ecology & Evolution, 1st General Meeting, University of Toronto, 17-20 May 2007.
- **External Examiner**, MSc Thesis (ER Fairn, *Sexual selection in the whirligig beetle Dineutus nigrior Roberts (Coleoptera:Gryinidae)*, May 2007. Laurentian University
- **External Examiner**, PhD dissertation (G Holwell, *Mating behaviour & genital morphology in Ciulfina praying mantids*). May 2006. Macquarie University (Sydney, Australia).

Science outreach.

• Talk: Brodie club, University of Toronto, Nov 2006.

- Invited Plenary address. Award ceremony for elementary & high school students in York region schools, Association of Educators of Black Students. May 2007Talk: Toronto Field Naturalists Talk Series. 10 Sept. 2006.
- Science and Invertebrate Biology presentations to preschool, kindergarten & 6th grade students, 2006.
- 'On being a professor'. Talk to gifted high-school students, Vancouver School Board, June 2006.
- Published interview, part of a series on non-traditional careers for women, *Chatelaine magazine*, July 2006.
- *Science Update* feature on black scientists (American Association for the Advancement of Science, <u>http://www.scienceupdate.com/newsite/spotlights/africanamerican.php</u>).
- Talk: Toronto Entomologist's Association, Sept 2003.
- 'Treehouse talk' series. May 3, 2013. Everything I need to know about evolution, I learned from a cannibalistic spider. Toronto public library. I was one of 3 speakers from disparate areas giving a brief, data-free talk that included some experiential component to engage the audience, and participating in a broad discussion with the other speakers and audience after the talks. http://treehousegroup.org/treehouse-talks/
- Radio Interview. May 15, 2013. Colin McEnroe Show, WNPR, Connecticut Public Radio. Interview about sexual cannibalism and evolutionary biology.
- Science Rendezvous. May 2013, 2014, 2015. Toronto Zoo. I gave a number of interactive presentations about black widow spiders over the course of about an hour, contributed ideas for the hands-on component of the display, and organized graduate students to continue the display for most of the remainder of the day.
- National Geographic online: 'News Watch' interview. 14 February 2014. 'Dangerous dating: 4 Animals that take love to the extreme' <u>http://newswatch.nationalgeographic.com/2014/02/14/mating-sex-animals-science-black-widows-valentines-day/</u>
- High school co-op placement supervisor. In partnership with Dunbarton High School, I have agreed to provide one-term co-op placements for high school students (1 or 2 per term).
 I have supervised 5 such students since 2012.
 - Thave supervised 5 such students since 2012.
- SciTech evening seminar series talk and display. Durham School Board, April 2015
- Take your sons and daughters to work (several years)
- Science scavenger hunt award outreach activity—elementary school presentation May 2015
- Live skype Q&A with university and high school students (8 in the past 5 years).
- o Feature in 'Owl' Magazine, October 2015
- Judge. Animal Behavior Diversity Fund Grant Applications. 2003.
 - **Presenter**. Animal Behaviour Public Education Night. 39th Annual meeting of the Animal Behavior Society. Bloomington, Indiana. 2002.

F. OTHER RELEVANT INFORMATION

RESEARCH DELAYS

1. Maternity leaves: October 2002 through September 2003 & November 2007 through June 2008

2. A serious health issue decreased my productivity in 2011 and 2012, culminating in a leave from 29 January – 8 March 2013 during which I was incapacitated and unable to work.

OTHER EVIDENCE OF IMPACT

 On-air host of an episode of **The Nature of Things**, October 2019. 'First Animals'. https://www.firstanimalsfilm.com/
 Lead arachnologist featured in an episode of **The Nature of things**, August 2017. 'The great wild indoors' http://www.cbc.ca/natureofthings/episodes/the-great-wild-indoors

3. Textbook features: 'Meet the Scientist', interview/research feature in Herron et al. Introductory Biology, Canadian Edition. Pearson.

4. PBS NOVA (PBS) ScienceNow, program aimed at engaging young people in science (see

http://www.pbs.org/wgbh/nova/sciencenow/) featured a profile of my work, and was aired repeatedly between July 2009 and March 2010.

5. Podcast host & co-creator: The New Normal with Maydianne Andrade (April 2020 to present). Co-production with producer Lisa Lightbourn of University of Toronto Communications. <u>https://www.youtube.com/playlist?list=PLIW-cysxDXK7PCYp1xjSwnlVQqE2dXbY-</u>

OTHER POPULAR SCIENCE COVERAGE OF MY RESEARCH INCLUDES:

Extensive media coverage of publications includes:

- Australian Broadcasting Corporation The Science Show , March 20, 2010. "Redback spiders" with Robyn Williams
- Canadian Broadcast Corporation Quirks and Quarks, November 7, 2009. "Cheatin and Eatin" with Bob McDonald.
- Discovery Channel News Friday News Feedbag, October 31, 2009. (podcast available at
- The Globe and Mail, October 23, 2009. "Eat him, he's too fast" by Michael Kersterton.
- Nature news , October 21, 2009. "Lazy male spiders avoid dinner date" by Elie Dolgin.
- Discovery Channel News, October 21, 2009. "Deadly spider demands long courtship, or else" by Jennifer Viegas. (video:
- Australian Broadcasting Corporation , October 21, 2009. "Male redbacks' risky foreplay ritual" by Annabel McGilvray

Popular Science books:

Judson, O. 2002. *Dr. Tatiana's Sex Advice to all Creation.* Zimmer, C. 2001. *Evolution: Triumph of an Idea*.

Radio Interviews include:

Quirks and Quarks (CBC, Canada, 2010 [http://www.cbc.ca/quirks/episode/2010/11/], 2005, 2004, 1997).

Science Update (AAAS, Jan 16, 2006, http://www.scienceupdate.com/index.cfm)

'Up all night' (BBC, UK, 2004)

Science news (ABC, Australia, 1997, 2004)

Pulse of the Planet (USA, 2000, http://www.pulseplanet.com/feat archive/Jan00/)

Science Magazine (BBC, UK, 1997)

Television interviews/documentaries include:

Profiled on **Nova ScienceNow**, 2009: http://www.pbs.org/wgbh/nova/nature/profile-andrade.html Radio Canada International interview on women in science, 2010 (http://www.rcinet.ca/english/column/the-link-s-

top-stories/15-57 2011-03-07-getting-homeless-off-the-street-key-to-a-better-future/)

'Planet Q' (Discovery Channel, Canada, 2006)

'Dr. Tatiana's Sex Advice to all Creation' Nature Documentary. (WagTV, UK, 2005)

'The daily planet', (Discovery Channel, Canada, December 2005; 2000)

"Girlz TV". Arachnology. Aired on YouthTV (Canada, July 2004)

'Small spiders get the girl'. (CTV news, April 2002).

The Sciences (USA, Sept/Oct. 1999) Ottawa Citizen (Canada, 23 Jan 1996) Scientific American (USA, Oct 1995) Discover Magazine (USA, Nov 1995) The Globe and Mail (Canada, Dec 1995)

"The Science of Spiderman" (Discovery Channel Canada, 2002) "Ultimate guide: spiders" Nature Documentary. (Discovery channel, USA, first aired: 2001) "The triumph of life: The mating game", award-winning Nature Documentary (PBS, USA, first aired: 2001) Webpage features include: Interviewed in 'Women in Science' video produced by the Canadian Foundation for Innovation, 2011, (http://innovationcanada.ca/en/articles/women-and-science) National Geographic News (http://news.nationalgeographic.com/news) Sexual Prime Peaks When Males "Smell" Mates, Spider Study Shows (16 June 2006). News in Science (ABC, Australia, http://www.abc.net.au/science/news/), Redback spiders sniff air then mature (11 April 2006) and Redback spiders picky about sperm (26 June 2005). News in Science: 12 May 2004. (ABC, Australia). Virile cricket is world's top sex machine. (www.abc.net.au/science/articles/2004/05/12/1106630.htm) News@Nature.com (Nature, UK) Female spiders exploit double-barrelled sperm storage (23 May 2005) and Eightlegged antics (19 July 2001). ScienceNow, www.sciencenow.sciencemag.org (Science, AAAS) Back for more (6 September 2005). Print Media Articles include: New York Times (Science Times, Sept 5 2006; 9 Jan. 1996) The Toronto Star (Sept 2006, Dec 2005) Science News (USA, Aug 2006, Nov 1999) Nature Australia (1997, 2005) Sydney Morning Herald (2004) Focus (Germany, Sept 2000)

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