

## Curriculum Vitae: Dr. Isobel Booksmythe

School of Biological Sciences, Monash University  
17 Innovation walk  
Victoria 8300, Australia

Email: isobel.booksmythe@monash.edu  
Website: isobelbooksmythe.weebly.com

## Academic appointments

- 2017-2020 Australian Research Council DECRA Fellow, Monash University
- 2014-2017 Postdoc with Prof. Hanna Kokko, University of Zurich
- 2014 Visiting fellow, Research School of Biology, Australian National University (Host: Prof. Michael Jennions)
- 2012-2014 Postdoc with Prof. Göran Arnqvist, Uppsala University

## Education

- 2012 PhD, The Australian National University  
Evolution, Ecology and Genetics, Research School of Biology  
Thesis title: *Competition, conflict and cooperation: social interactions within and between species*  
Supervisors: Associate Professor Patricia Backwell, Professor Michael Jennions
- 2008 Bachelor of Science with Honours, The Australian National University  
Evolution and Ecology Major  
Thesis topic: *Cost-benefit trade-offs in female mate choice in a fiddler crab*  
Supervisor: Associate Professor Patricia Backwell

## Publications

- 28. Svensson EI, Goedert D, Gómez-Llano M, Spagopolou F, Nava-Bolaños A, **Booksmythe I**. 2018. Sex differences in local adaptation: what can we learn from reciprocal transplant experiments? *Philosophical Transactions of the Royal Society of London Series B* **373**: 20170420. (DOI: 10.1098/rstb.2017.0420)
- 27. Gerber N, **Booksmythe I**, Kokko H. 2018. Sex allocation theory for facultatively sexual organisms inhabiting seasonal environments: the importance of bet-hedging. *The American Naturalist* **192**: 155-170. (DOI: 10.1086/697727)
- 26. **Booksmythe I**, Gerber N, Ebert D, Kokko H. 2018. *Daphnia* females adjust sex allocation in response to current sex ratio and density. *Ecology Letters* **21**:629-637. (DOI: 10.1111/ele.12929)
- 25. Gerber N, Kokko H, Ebert D, **Booksmythe I**. 2018. *Daphnia* invest in sexual reproduction when its relative costs are reduced. *Proceedings of the Royal Society of London Series B* **285**:20172176. (DOI: 10.1098/prsb.2017.2176)
- 24. **Booksmythe I**, Rundle HD, Arnqvist, G. 2017. Sexual dimorphism in epicuticular compounds despite similar sexual selection in sex role reversed seed beetles. *Journal of Evolutionary Biology* **30**:2005-2016. (DOI: 10.1111/jeb.13171)

23. Song Z, Liu Y, **Booksmythe I**, Ding C. 2017. Effects of individual-based preferences for color-banded mates on sex allocation in zebra finches. *Behavioral Ecology* **28**:1228-1235. (DOI: 10.1093/beheco/ax069)
22. Buechel SD, **Booksmythe I**, Kotrschal A, Jennions MD, Kolm N. 2016. Artificial selection on male genitalia length alters female brain size. *Proceedings of the Royal Society of London Series B* **283**:20161796. (DOI: 10.1098/rspb.2016.1796)
21. Harts AMF, **Booksmythe I**, Jennions MD. 2016. Mate guarding and frequent copulation in birds: a meta-analysis of their relationship to paternity and male phenotype. *Evolution* **70**:2789-2808. (DOI: 10.1111/evo.13081)
20. Fritzsche K, **Booksmythe I**, Arnqvist G. 2016. Sex ratio bias leads to the evolution of sex role reversal in honey locust beetles. *Current Biology* **26**:2522-2526. (DOI: 10.1016/j.cub.2016.07.018)
19. Hayes CL, Callander S, **Booksmythe I**, Backwell PRY, Jennions MD. 2016. Mate choice and the operational sex ratio: an experimental test with robotic crabs. *Journal of Evolutionary Biology* **29**:1455-1461. (DOI: 10.1111/jeb.12884)
18. **Booksmythe I**, Head ML, Keogh JS, Jennions MD. 2016. The fitness consequences of artificial selection on relative male genital size. *Nature Communications* **7**:11597. (DOI: 10.1038/ncomms11597)
17. **Booksmythe I**, Mautz B, Davis J, Nakagawa S, Jennions MD. 2017. Facultative adjustment of the offspring sex ratio and male attractiveness: a systematic review and meta-analysis. *Biological Reviews* **92**:108-134. (DOI: 10.1111/brv.12220) First published online 2015.
16. Kokko H, **Booksmythe I**, Jennions MD. 2014. Mate-sampling costs and sexy sons. *Journal of Evolutionary Biology* **28**:259-266. (DOI: 10.1111/jeb.12532)
15. **Booksmythe I**, Fritzsche K, Arnqvist G. 2014. Sperm competition generates evolution of increased paternal investment in a sex role-reversed seed beetle. *Journal of Evolutionary Biology* **27**:2841-2849 (DOI: 10.1111/jeb.12549)
14. Fritzsche K, **Booksmythe I**. 2013. Measuring sexual selection on females and males. *Current Zoology* **59**:558-563
13. Hayes CL, **Booksmythe I**, Jennions MD, Backwell PRY. 2013. Does male reproductive effort increase with age? Courtship in fiddler crabs. *Biology Letters* 20121078 (DOI: 10.1098/rsbl.2012.1078)
12. **Booksmythe I**, Backwell PRY, Jennions MD. 2013. Competitor size, male mating success and mate choice in eastern mosquitofish (*Gambusia holbrooki*). *Animal Behaviour* **85**:371-375 (DOI: 10.1016/j.anbehav.2012.11.009)
11. **Booksmythe I**, Schwanz LE, Kokko H. 2013. The complex interplay of sex allocation and sexual selection. *Evolution* **67**:673-678 (DOI: 10.1111/evo.120003)
10. Kokko H, **Booksmythe I**, Jennions MD. 2013. Causality and sex roles: prejudice against patterns? A reply to Ah-King. *Trends in Ecology and Evolution* **28**:2-4 (DOI: 10.1016/j.tree.2012.08.008)
9. **Booksmythe I**, Hayes C, Jennions MD, Backwell PRY. 2011. The effects of neighbor familiarity and size on cooperative defense of fiddler crab territories. *Behavioral Ecology* **23**:285-289 (DOI: 10.1093/beheco/arr184)

8. **Booksmythe I**, Jennions MD, Backwell PRY. 2011. Male fiddler crabs prefer conspecific females during simultaneous, but not sequential, mate choice. *Animal Behaviour* **81**:775-778 (DOI:10.1016/j.anbehav.2011.01.009)
7. **Booksmythe I**, Kokko H, Jennions MD. 2010. Sexual selection: the weevils of inbreeding. *Current Biology* **20**:R672-R673
6. **Booksmythe I**, Jennions MD, Backwell PRY. 2010. Interspecific assistance: fiddler crabs help heterospecific neighbours in territory defence. *Biology Letters* **6**:748-750
5. Milner RNC, **Booksmythe I**, Jennions MD, Backwell PRY. 2010. The battle of the sexes? Territory acquisition and defence in male and female fiddler crabs. *Animal Behaviour* **79**:735-738
4. **Booksmythe I**, Jennions MD, Backwell PRY. 2010. Investigating the 'dear enemy' phenomenon in the territory defence of the fiddler crab, *Uca mjoebergi*. *Animal Behaviour* **79**:419-423
3. **Booksmythe I**, Milner RNC, Jennions MD, Backwell PRY. 2010. How do weaponless male fiddler crabs avoid aggression? *Behavioral Ecology and Sociobiology* **64**:485-491
2. **Booksmythe I**, Detto T, Backwell PRY. 2008. Female fiddler crabs settle for less: the travel costs of mate choice. *Animal Behaviour* **76**:1775-1781
1. **Booksmythe I**, Detto T, Backwell PRY. 2008. A field guide to the fiddler crabs of East Point Reserve, Darwin, Northern Territory. *Northern Territory Naturalist* **20**:26-33

## Teaching

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| 2018      | Guest lecturer, 3rd year Animal Behaviour, School of Biological Sciences, Monash University (course coordinator Ass. Prof. Bob Wong)  |
| 2016      | Contributing lecturer, 3 <sup>rd</sup> year Biology of Reproduction Bio361, Department of Evolutionary Biology and Environmental Studies, University of Zurich (course coordinator Prof. Wolf Blanckenhorn) |
| 2016      | Lecturer, Masters course in Scientific Writing Bio338, Department of Evolutionary Biology and Environmental Studies, University of Zurich (course coordinator Dr. Josh van Buskirk)                         |
| 2016      | Guest lecturer, 3 <sup>rd</sup> year Research Methods, University of Neuchatel (course coordinators Dr. Dominique Roche/Prof. Redoun Bshary)  |
| 2012      | Guest lecturer, 3rd year Evolutionary and Behavioural Ecology, Research School of Biology, ANU (Course coordinator Ass. Prof. Rob Magrath)  |
| 2012      | Course demonstrator, 3rd year Field Studies in Behavioural Ecology, Research School of Biology, ANU (Course coordinator Ass. Prof. Rob Magrath)   |
| 2009-2012 | Course demonstrator, 2nd year Population Ecology, Research School of Biology, ANU (Course coordinator Ass. Prof. David Gordon)  |
| 2008-2011 | Course demonstrator, 2nd year Marine Biology, Research School of Biology, ANU (Course coordinator Ass. Prof. Patricia Backwell)   |

## Casual employment/work experience

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| 2012 | Technical research officer with Prof. Michael Jennions, Australian National University |
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- 2011            Laboratory assistant, Dr. Martin Edvardsson, ANU
- 2008-2011    Assistant laboratory technician, Dr. Michael Jennions, ANU
- 2007            Laboratory technician, Dr. Mike Double, ANU
- 2007            Volunteer field assistant, Dr. Stuart Cooney, ANU

**Professional service**

- 2018            School postdoc representative, School of Biological Sciences, Monash University
- 2017-18        Coordinator, Evolutionary Genetics journal club, School of Biological Sciences, Monash University
- 2018            Board of reviewing editors, Journal of Evolutionary Biology

I am an ad hoc reviewer for the journals *Proceedings of the Royal Society Series B*, *eLife*, *Nature Communications*, *Evolution*, *Functional Ecology*, *Biology Letters*, *Philosophical Transactions of the Royal Society Series B*, *Behavioral Ecology*, *Animal Behaviour*, *Behavioral Ecology & Sociobiology*, *Ethology*, *Behavior*, *Behavioural Processes*, *Journal of Ethology*.

My reviewing history since 2017 is available at Publons:  
<https://publons.com/author/1211972/isobel-booksmythe#profile>

**Grants, Scholarships and Awards**

- 2016            Australian Research Council 'Discovery Early Career Researcher Award' (AUD \$372000 / 3 years)
- 2013            Uppsala University Stiftelsen för Zoologiska Forskning research grant (SEK17500)
- 2013            XIV Congress of the European Society for Evolutionary Biology: Poster competition, 2<sup>nd</sup> prize (€250)
- 2012            Uppsala University Stiftelsen för Zoologiska Forskning research grant (SEK15000)
- 2011            ANU Office of the Vice Chancellor Student Travel Grant (AUD\$1500)
- 2010            Animal Behavior Society Student Research Grant (US\$859)
- 2010            Australian Society for the Study of Animal Behaviour student grant (AUD\$500)
- 2009            Ecological Society of Australia Student Research Award (AUD\$1000)
- 2009            Australian Geographic Society (AUD\$750)
- 2009            ANU Office of the Vice Chancellor Fieldwork grant (AUD\$1600)
- 2008            ANU Fieldwork Funding initiative (AUD\$3000)

**Talks, posters presented**

- 2017            Oral presentation. Australasian Evolution Society meeting, Hobart, Australia.
- 2017            Invited speaker. Division of Ecology and Evolution, Research School of Biology, Australian National University.

- 2017 Oral presentation. European Society for Evolutionary Biology meeting, Groningen, The Netherlands. 'When to make males: predicting sex and sex ratios in *Daphnia*.'
- 2017 Invited speaker. ESEB Special Topics Network 'Linking local adaptation with the evolution of sex differences', Lund, Sweden. 'Introductory overview of meta-analysis techniques.'
- 2017 Invited symposium speaker. Behaviour2017 meeting, Estoril, Portugal. 'Mate competition and mating system evolution.'
- 2017 Invited speaker. Department of Biological and Environmental Sciences, Stirling University, Scotland.
- 2016 Invited speaker. Department of Biological and Environmental Science, Univeristy of Jyväskylä, Finland.
- 2016 Poster presentation. Biology '16 meeting, Lausanne, Switzerland.
- 2015 Oral presentation. Finnish Centre of Excellence for Biological Interactions annual meeting, Lammi, Finland.
- 2015 Poster presentation. European Society for Evolutionary Biology meeting, Lausanne, Switzerland.
- 2014 Poster presentation. International Society for Behavioral Ecology meeting, New York, USA.
- 2013 Poster presentation. European Societ for Evolutionary Biology meeting, Lisbon, Portugal.
- 2012 Poster presentation. International Society for Behavioral Ecology meeting, Lund, Sweden.
- 2011 Oral presentation. Australasian Evolution Society meeting, Townsville, Australia.
- 2011 Poster presentation. European Society for Evolutionary Biology meeting, Tübingen, Germany.
- 2011 Oral presentation. Edward Grey Institute for Ornithological Research, Oxford University.
- 2011 Oral presentation. Australasian Society for the Study of Animal Behaviour meeting, Adelaide, Australia.
- 2009 Oral presentation. ANU Department of Botany and Zoology Postgraduate Student Conference.