

Alex Lyndon Jordan

Postdoctoral Fellow in Integrative Biology

The University of Texas at Austin

lyndonjordan@utexas.edu

www.alexjordan.org

Education and Academic Positions

- 2015** **Principal Investigator**
Department of Collective Behaviour, Max Planck Institute for Ornithology Konstanz
- 2013** **Postdoctoral Fellow in Integrative Biology**
Department of Integrative Biology, The University of Texas at Austin.
- 2012** **Postdoctoral Fellow, Japanese Society for the Promotion of Science**
Lake Tanganyika Research Station, Mpulungu, and Osaka City University
- 2011** **PhD in Evolutionary Biology**, University of New South Wales, Sydney, Australia
Thesis: *Social environment and the evolution of male reproductive strategy*. Advisors:
Professor Robert Brooks and Associate Professor Ashley Ward
- 2007** **Bachelor of Science (Honours Class I)**, University of Sydney, Australia
Thesis: *Reproductive biology of South African honeybees*. Advisors: Professor
Madeleine Beekman and Professor Ben Oldroyd

Awards and Grants (Total \$700,414)

- 2016** Heineman Research Grant, Minerva Foundation. For Project "*How are cooperation and collective behaviour maintained as conflict increases? A study of the price of anarchy and conflict across social systems*" - **€ 234,000**
- 2015** Presidential Award for best paper appearing in *The American Naturalist* – **\$1000**
- 2014** NSF BEACON Center for Evolution in Action Research Grant. I conceived, wrote, and am leading the research for this NSF funded grant as Principal Investigator in collaboration with Dr Hans Hofmann and Dr Chris Adami – **\$109,575**
Ecolabs Texas Research Grant for work on learning in invasive fish species – **\$7895**
Don Abbott Postdoctoral Research Award for an outstanding contributed presentation by a current postdoc - Runner-up American Society of Naturalists conference, Asilomar.
- 2013** Integrative Biology Postdoctoral Fellowship, University of Texas at Austin – **\$80,000**
Integrative Biology Research Grant, University of Texas at Austin – **\$12,000**
- 2012** Japanese Society for the Promotion of Science Research Grant – **\$12,000**
Japanese Society for the Promotion of Science Postdoctoral Fellowship – **\$100,000**
- 2011** Crispin Rice Prize for Outreach and Communication in Evolution and Ecology – **\$1000**
EERC Writing and Skills Transfer Award, University of NSW – **\$6000**
- 2010** Fulbright People's Choice Award – Australia and Oceania 3MT Competition – **\$5000**
UNSW Faculty of Science Excellence in Postgraduate Research – **\$3000**
University of NSW Three-Minute Thesis Competition – **\$1000**
- 2009** Outstanding Evolution & Ecology Researcher of the Year (Postgraduate) - **\$500**

- Best Presentation, Evolution and Ecology Research Centre Research Forum - **\$100**
- 2008** UNSW SPSS Travel Grant for conference attendance – **\$3000**
Centre for Agriculture and Biosciences International Writing Grant – **\$500**
- 2007** Research Travel Grant to South Africa, University of Sydney – **\$1500**
Top-up Scholarship, The University of NSW – **\$17,500**
Australian Postgraduate Award, Australian Department of Science – **\$70,000**

Publications

Published / In press

26. **Jordan LA**, Maguire S, Hofmann, HA, Kohda M. 2016. The social and ecological consequences of an 'over-extended' phenotype. *Proceedings of the Royal Society B*. In press.
25. Bolnick DI, Hendrix K, **Jordan LA**, Veen T, Brock CD. 2016 Intruder colour and light environment jointly determine how nesting male stickleback respond to simulated territorial intrusions. *Biology Letters*. 12: 20160467
24. Ryan MJ, **Jordan LA**. 2016. Courtship and Mate Choice, In J Call (Ed) *APA Handbook of Comparative Psychology*
23. **Jordan LA**, Ryan MJ. 2015. The sensory ecology of adaptive landscapes. *Biology Letters* <http://dx.doi.org/10.1098/rsbl.2014.1054> pdf
22. Kohda M, **Jordan LA**, Kosaka N, Hotta T, Takeyama TT. 2015. Facial recognition in a group-living cichlid. *PLOS ONE*. In press.
21. Takashi H, **Jordan LA**, Takeyama T, Kohda M. 2015. Order effects in transitive inference: Does the presentation order of social information affect transitive inference in social animals? *Frontiers in Ecology and Evolution* <http://dx.doi.org/10.3389/fevo.2015.00059>
20. Hotta T, Takeyama T, Heg D, Awata S, **Jordan LA**, Kohda M. 2015. The use of multiple sources of social information in contest behaviour: testing the social cognitive abilities of a cichlid fish. *Frontiers in Ecology and Evolution* doi: 10.3389/fevo.2015.00085
19. Brooks RC, Shelly JP, **Jordan LA**, Dixon BJ. 2015. The multivariate evolution of female body shape in an artificial digital ecosystem. *Evolution and Human Behavior*
18. **Jordan LA**, Kokko H, Kasumovic MM. 2014. Reproductive foragers: Spider males choose mates by selecting among available competitive environments. *The American Naturalist* 183 (5): 638-649
17. Li N, Takeyama T, **Jordan LA**, Kohda M. 2014. Female control of paternity by spawning site choice in a cooperatively polyandrous cichlid. *Behaviour* doi 10.1163/1568539X-00003242
16. Takashi H, Takeyama T, **Jordan LA**, Kohda M. 2014. Duration of memory of dominance relationships in a group living cichlid. *Naturwissenschaften* 101(11): 533-541
15. **Jordan LA**, Herbert-Read, Ward A. 2013. Rising costs of alloparental care make spiny chromis discerning parents. *Behavioural Ecology and Sociobiology* doi 10.1007/s00265-012-1465-6.
14. Kasumovic MM, **Jordan LA**. 2013. The social factors driving settlement and relocation decisions in a solitary and aggregative spider. *The American Naturalist* 182 (4): 532-541
13. Mann RP, Herbert-Read JE, Ma Q, **Jordan LA**, Sumpter DJT, Ward AJW. 2013. A model comparison reveals dynamic social information drives the movements of humbug

damselfish. *Journal of the Royal Society Interface* 11 (90) doi:
10.1098/rsif.2013.0794

12. Ward AJWW, Herbert-Read JE, **Jordan LA**, James R, Krause J, Ma Q, Rubenstein DI, Sumpter DJT & LJ Morrell. 2013. Initiators, leaders and recruitment mechanisms in the collective movements of damselfish. *The American Naturalist* 181 (6):748-760.
11. **Jordan LA**, Brooks R. 2012. Recent social history alters male courtship preferences. *Evolution* 66(1): 280-287
10. Wong MYL, **Jordan LA**, Marsh-Rollo S, St-Cyr S, Reynolds J, Stiver K, Desjardins J, Fitzpatrick JL, Balshine S. 2012. Mating systems in cooperative breeders: the roles of resource dispersion and conflict mitigation. *Behavioral Ecology* doi:
10.1093/beheco/arr218
9. **Jordan LA**, Brooks R. 2010. The lifetime costs of increased male reproductive effort: Courtship, copulation, and the Coolidge Effect. *Journal of Evolutionary Biology* 23(11): 2403-2409
8. **Jordan LA**, Avolio C, Herbert-Read JE, Krause J, Rubenstein D, Ward A. 2010. Group structure in a restricted entry system is mediated by both resident and joiner preferences. *Behavioural Ecology and Sociobiology* 64(7): 1099-1117
7. **Jordan LA**, Wong MYL, Balshine S. 2010. The effects of familiarity and social hierarchy on group membership decisions in a social fish. *Biology Letters* 6(3): 301-303
6. Beekman M, Allsopp MH, **Jordan LA**, Lim J, Oldroyd BP. 2009. A quantitative study of worker reproduction in queenright colonies of the Cape honey bee, *Apis mellifera capensis* *Molecular Ecology* 18: 2722-2727
5. **Jordan LA**, Allsopp MH, Oldroyd BP, Wossler TH, Beekman M. 2008. Cheating honeybee workers produce royal offspring. *Proceedings of the Royal Society B*: 275(1632): 345-351
4. **Jordan LA**, Allsopp MH, Beekman M, Wossler, TC & Oldroyd BP 2008. Inheritance of traits associated with reproductive potential in *Apis mellifera capensis* and *A. m. scutellata* workers. *Journal of Heredity* 99(4): 376-381
3. Oldroyd BP, Allsopp MH, Gloag RS, Lim J, **Jordan LA**, Beekman M. 2008. Thelytokous parthenogenesis in unmated queen honey bees (*Apis mellifera capensis*): Central fusion and high recombination rates. *Genetics* 180:359-355
- **Jordan, LA**. CABI, 2008. *Poecilia reticulata*. In: *Invasive Species Compendium*, 2008 edition. Wallingford, UK: CABI
2. **Jordan LA**, Allsopp MH, Oldroyd BP, Wossler TH, Beekman M. 2008. A scientific note on the drone flight time of *Apis mellifera capensis* and *A. m. scutellata*. *Apidologie* 38(5): 436-437
1. Midgley DJ, **Jordan LA**, Saleeba J, McGee P. 2006. Utilisation of carbon substrates by orchid and ericoid mycorrhizal fungi from Australian dry sclerophyll forests. *Mycorrhiza* 16(3): 175-182

In review / revision

- (27) **Jordan LA**, Maguire S, Hofmann, HA, Kohda M. Territory size depends on social context but not maintenance costs in the social cichlid *Neolamprologus multifasciatus* (In review)
- (28) Kohda M, Hotta T, Takeyama T, Yoshimura N, **Jordan LA**. Mirror self-recognition in fish: the cleaner wrasse passes the mark test (*Current Biology* submitted)

In preparation

- (29) **Jordan LA**, Garza S, Garrison LK, Harris RM, Ryan MJ, Hofmann H. Dissociating phenotype and alternative reproductive tactics from *mc4r* genotype with social manipulations in *Xiphophorus nigrensis* (In preparation)

(30) **Jordan LA**, Garrison LK, Ward AJW, Hofmann H. Information flow through hierarchical systems depends on social position of the informed individual (In preparation)

(31) Maguire S, Dijkstra P, **Jordan LA**, Hofmann HA. Social interaction networks of the highly social African Cichlid fish, *Astatotilapia burtoni* (In preparation)

Professional and Teaching Service

Lecturer

For course *Animal Behaviour* at The University of Konstanz

Lecturer

For course *Research Methods*, UTeach program, University of Texas, 2013 and 2014. This course teaches junior and senior undergraduate students, in training to be high school science teachers, about the scientific method with an emphasis on statistical and mathematical modeling. I received a 4.8 out of 5 in instructor evaluations.

Reviewer for Journals

Science, Proceedings B, Evolution, Biology Letters, The American Naturalist, J Evolutionary Biology, Animal Behaviour, Behavioral Ecology, Behavioural Ecology and Sociobiology, Oikos, Behaviour, J Experimental Zoology, Ethology, Journal of Neuroscience, Frontiers in Ecology and Evolution

Science Dialogue Educator

Japanese Society for the Promotion Of Science 2012. Lecturing and workshop presentation for high school biology students

Outreach Educator

University of Sydney 2007-2011. Design and delivery of university biology education programs for talented high school students

Teaching Assistant / Guest Lecturer

University of NSW 2007-2011. Teaching and supervision of major research projects for 2nd and 3rd year undergraduate courses *Animal Behavior* and *Evolution*.

Research Assistant

Social Insects Lab, University of Sydney 2006-2007. Microsatellite and behavioral analysis, genotyping, DNA extraction and lab stock management

Invited Lectures and Seminars

- 2014** Biological Foundations of Decision Making (UT Austin Graduate Course NEU385). *Alternative reproductive tactics*
- Animal Behavior (UT Austin Undergraduate Course by Mike Ryan). *How social animals communicate*
- Brain, Behavior, and Evolution Center. Department of Integrative Biology, University of Texas at Austin. *Social information transfer and why it matters in animal behavior*
- 2013** Animal Communication (UT Austin Graduate Course by Mike Ryan). *Communication in animal social networks*
- Brain, Behavior, and Evolution Center. Department of Integrative Biology, University of Texas at Austin. *Too big for your britches – the dangers of an over-extended phenotype*
- Department of Biology, Osaka City University, Japan. *Writing abstracts for conferences*
- 2012** Taborsky Lab, The Hasli, University of Bern, Switzerland. *Social and sexual behavior of Lake Tanganyikan cichlids*

Osaka City University, Osaka, Japan. *Optimality theory in your own research – how to manage your time during your graduate studies*

Kurashiki High School, Okayama, Japan. *Evolution of social behavior in animals*

Takefu High School, Gifu, Japan. *Reproduction and mate choice in fishes*

Cichlid Society of NSW, Sydney, Australia. *Diving the Rift Lakes*

- 2011** Graduate Research School, University of NSW, Sydney, Australia. *Effective communication of your research to public and scientific audiences* (3 seminar workshop)
- 2010** Evolution and Ecology Research Centre, University of NSW, Sydney, Australia. *Having fun with science and surviving a PhD*
- 2010** Cichlid Society of NSW, Sydney, Australia. *Field work in Lake Tanganyika*
- 2009** Ehwa Women's University, Seoul, South Korea. *Interactions between South African honey bees in a hybrid zone*
- School of Biological Sciences, The University of Sydney, Sydney, Australia. *Reproductive Foraging Theory*
- Seoul National University, Seoul, South Korea. *Reproductive strategy of socially parasitic honey bees*

Conference Presentations

- 2014** Invited participant. **National Academies Keck Futures Initiative Conference - Collective Behavior, From Cells to Societies.** Irvine, California
- Oral Presentation. **BEACON Congress**, East Lansing, Michigan. *Information transfer through hierarchical social systems.*
- Oral Presentation. **International Society for Behavioral Ecology Congress**, New York, New York. *The over-extended phenotype: social and ecological costs of increasing male attractiveness in a cichlid*
- Oral Presentation. **21st Century Naturalists (A conference of the American Society of Naturalists)**, Asilomar. *Reproductive Foraging Theory: spider males choose mates by selecting among competitive environments*
- Oral Presentation. **Society for Integrative and Comparative Biology congress**, Austin. *The dangers of an over-extended phenotype: social and ecological costs of increasing male attractiveness*
- 2013** Oral Presentation. **Poeciliid Conference, Austin.** *The evolutionary pathway between genotype, social environment, and reproductive strategy: an examination of alternative reproductive tactics and the mc4r pathway in Xiphophorus nigrensis*
- 2012** Oral Presentation. **International Society for Behavioral Ecology Congress**, Lund. *Mirror self recognition in cleaner wrasse*
- Oral Presentation. **International Society for Behavioral Ecology Congress**, Lund. *Reproductive foraging in spiders*
- 2010** Oral Presentation. **International Society for Behavioral Ecology Congress**, Perth. *Courtship strategy as an optimal foraging game*
- 2009** Oral Presentation. **Australasian Evolution Society Conference**, Canberra. *The Coolidge Effect on male behavior and longevity*
- 2008** Oral presentation. **International Society for Behavioral Ecology Congress**, Cornell. *Cheating honeybees workers produce royal offspring*

- 2007** Oral presentation. **Australasian Evolution Society conference**, Sydney. *Reproductive biology in the South African honeybee hybrid zone*
- Oral presentation. **International Union for the Study of Social Insects** Australian Chapter conference, Canberra. *Drone flight times within the South African honeybee hybrid zone*

Media and Outreach

I am an author for The Conversation, an online independent source of analysis, commentary and news from the university and research sector viewed by 2 million readers each month. I also frequently share my expertise with interest groups, writing a monthly column for the 'Ask an Expert' section of Practical Fishkeeping magazine, the highest selling aquarium magazine in the world, and presenting talks at local hobbyist societies. I am a successful public speaker, having given numerous presentations to general audiences on biological and research themes. The 3 Minute Thesis competition (3MT) is an international contest designed to encourage young scientists to communicate their work effectively to a non-specialist audience, and is judged by television presenters, politicians, and prominent scientists. I competed in 2010, winning my faculty, then university level competitions, and going on to compete at the 3MT final, where I was awarded the People's Choice Prize. My YouTube channel of videos of research in Lake Tanganyika ("Tanganyika Travels by Alex Jordan") has over 130,000 views.

References

Professor Michael Ryan (Postdoctoral Advisor)

+1 512 554 2433

mryan@mail.utexas.edu

Professor Rob Brooks (PhD Advisor)

+61 2 9385 2587

rob.brooks@unsw.edu.au

Professor Madeleine Beekman (Honours Advisor)

+61 2 9351 8779

madeleine.beekman@sydney.edu.au