

Dr Zac Wylde

Evolutionary Ecologist



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🏠 Zachariah Wylde 🌐 Dr Zac Wylde

Profile

By trade I am an evolutionary biologist, a field that is strongly underpinned by complex statistical reasoning and experimental design. I have a wealth of experience in writing formal scientific publications but am also passionate about data science. My research and teaching background has armed me with a thorough and data driven approach to conducting science in whatever capacity that might be. I am currently a postdoctoral researcher at UNSW working with Professor Russell Bonduriansky on nongenetic effects in *Folsomia candida*.

- Skilled in data cleaning, transformation and complex statistical analysis using R with over 8 years experience. During my professional career I have worked with interdisciplinary teams to wrangle, analyse, and visualise many different types of large experimental datasets. I have particularly strong experience in multi-level mixed models but have also worked with R markdown (created my own website) and online repositories (i.e., github).
- R programming course: Advanced, University of Sydney 2022.
- Well-developed organisational and written communication skills, demonstrated through the management of six interdisciplinary projects that have all resulted in quality publications.
- Strong oral communication skills with experience presenting at national and international conferences but also in science outreach to the public.
- Strong interpersonal skills having worked with diverse teams and stakeholders in academia but also in industry and hospitality (experience for hospitality not listed here but available upon request).

Professional Experience

Postdoctoral Fellow, *University of New South Wales*

03/2023 – present | Sydney, Australia

- Examining potential for nongenetic effects to accumulate over generations.
- Potential for rescue of negative maternal effects over multiple generations.
- Co supervision of two honours students.

Experimentalist, *Scimita Ventures* 📄

01/2022 – present | Sydney, Australia

- Responsible for the research, design, and implementation of experiments supporting the teams' efforts to rigorously test the feasibility and efficacy of solutions within our development pipeline.
- Collate, organise, and analyse data from experimental findings to communicate within our team and to external clients.
- Manage projects and time independently.

Postdoctoral Researcher, *Western Sydney University* 📄

07/2021 – 01/2022 | Sydney, Australia

- Data analyses
- Preparation and writing of scientific publications
- Co-supervision of a Masters student

Experimentalist (fixed term contract),

Scimita Ventures 📄

02/2021 – 07/2021 | Sydney, Australia

- Experience in agile operations
- Collaboration with various stakeholders including engineers, data scientists, and entrepreneurs.
- Technology research and development
- Experimental design, implementation & statistical analyses

Postdoctoral Researcher, *University of New South Wales*

12/2019 – 12/2020 | Sydney, Australia

- Employed by my PhD supervisor to conduct further experiments.
- Write up publications that were extensions from my PhD studies.

Tutor & Lab demonstrator,

University of New South Wales

02/2015 – 08/2019 | Sydney, Australia

- Taught several courses at multiple levels within the Biological Sciences:
 - Ecology, sustainability & environmental science
 - Evolutionary and physiological ecology
 - Ecology & sustainability
 - Field course & research techniques for Evolution

Publications

A comparison of two methods for estimating measurement repeatability in morphometric studies,

Ecology & Evolution 📄

06/01/2021

An essay and comparison of repeatability for morphometric studies.

Skills

Experimental design and implementation,
Complex statistical analyses in R language,
Scientific peer review, Strong interpersonal skills,
Google cloud computing, Regression modelling,
Data visualisation, Agile practices,
Formal scientific publication, Writing of grant proposals,
Scientific outreach, Computer Aided Design, 3D printing

Education

PhD in Evolutionary Biology,

University of New South Wales

01/2015 – 02/2020 | Sydney, Australia

*Thesis: The role of the environment in the evolution of reproductive strategies

Master of Science in Biology (First Class Honours),

University of Auckland

01/2013 – 05/2014 | Auckland, New Zealand

*Thesis: The community ecology, behaviour and biology of New Zealand carrion flies

Postgraduate Diploma Biological Sciences (Merit),

University of Auckland

02/2012 – 02/2013 | Auckland, New Zealand

Advanced study and specialisation in biological sciences

Bachelor of Science (Major in Biology),

University of Auckland

02/2007 – 03/2012 | Auckland, New Zealand

References

Available Upon Request

Condition dependence of phenotypic integration and the evolvability of genital traits in a neriid fly,

Biology Letters [↗](#)

26/02/2020

An analyses of morphological integration and the evolvability of traits.

Effects of condition and sperm competition risk on sperm allocation and storage in neriid flies,

Behavioural Ecology [↗](#)

01/02/2020

An assay of reproductive allocation strategies and the description of a new technique using confocal microscopy to track the competing ejaculates in a fly.

Perceived dominance status affects chemical signalling in the neriid fly *Telostylinus angusticollis*,

Animal Behaviour [↗](#)

01/12/2019

A manipulation of male perceived social status and the chemical analysis of signalling pheromones.

Parental breeding age effects on descendants' longevity interact over 2 generations in matriline and patriline, *PLOS Biology* [↗](#)

25/11/2019

A landmark study examining the nongenetic inheritance patterns of lifespan over multiple generations

Ontogenetic timing as a condition-dependent life history trait: High-condition males develop quickly, peak early, and age fast, *Evolution* [↗](#)

09/01/2017

A collaboration looking at developmental timing and life-history.

Scientific Outreach

Boiling point podcast; “Fun with bedbugs.” [↗](#)

Boiling point podcast; “First generation academics and studying on a budget – We need to talk!” [↗](#)

Registered expert on the panel for Metafact, *Platform where the public can ask experts to verify facts or claims to help stop the spread of misinformation* [↗](#)

Boiling point podcast; August 9th 2020. “Age is a bitch.” [↗](#)

The Conversation; August 11th 2020. “Can ageing really be 'treated' or 'cured'? An evolutionary biologist explains.” [↗](#)

Australasian Evolution Society blog; April 11th 2016. “The ties that bind; Grand-parental qualities affect the lifespan of descendants.” [↗](#)