# ALICE RISELY

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## EDUCATION

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| 2014 - 2019 | **Deakin University**, PhD, *"Migratory animals as vectors for disease"* |
| 2011 - 2012 | **University of East Anglia,** MSc, Applied Ecology and Conservation, pass with distinction |
| 2003 - 2006 | **University of Durham**, BSc, Zoology, 2.1 |

## EMPLOYMENT

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| Mar 2022 – Present | *Research Fellow in Zoology and Genomics,* **University of Salford**, Manchester, UK. 50/50 research/teaching |
| Oct – Dec 2022 | *Research assistant.* Department of Biological Sciences, **University of Wollongong**, Australia. Remote position. |
| Sep 2018 – Aug 2022 | *Postdoctoral researcher*, Institute for Evolutionary Ecology and Conservation Genomics, **Ulm University**, Germany. Duties: 80% research, 20% teaching. |
| May 2014 – Jul 2018 | *PhD candidate* at **Deakin University,** Australia**,** studying host-microbe dynamics in migratory shorebirds. Part-time teaching assistant. |
| Feb – Apr 2014 | *Independent research*. "Non-breeding ecology of the long-distance migrant, the Whinchat *Saxicola rubetra*", **APLORI,** Jos, Nigeria. |
| Apr 2013 – Jan 2014 | *Land management adviser* for **Natural England**, Norwich, UK. |
| Aug 2012 – Feb 2013 | *Conservation and Biodiversity Field Research Officer* for **CREES**. Manu biosphere reserve, Peru. |
| May – Jun 2011 | *Field technician* for **RSPB/Birdlife International:** Effects of habitat management of peat fens on Aquatic Warbler productivity. Poland. |
| Jan – May 2011 | *Field technician* for the **Smithsonian Institute/Tulane University:** Non-breeding ecology of the American Redstart *Setophaga ruticilla.* Jamaica. |
| Apr – Jul 2010 | *Field technician* for **University of Montana Wildlife Research Co-op Unit**: Effect of climate change on the avian breeding ecology. Arizona. |

## GRANTS AND AWARDS

**2023** £25,000, **NERC** bursary for shortlisted **Engaged Environmental Research** grant**.** Project: Urban gulls: Facilitating coexistence through engaged research. Role: PI.
**2023** £14,000, **University of Salford, Internal funding scheme.** Role: PI.
**2022** €1000 **Ulm University conference travel award.** *Role: recipient.*
**2019** €300,000 **German Research Foundation standard research grant**: TB, MHC and gut microbiome interactions in wild meerkats. *Role: Co-investigator. Wrote and developed microbiome themes.*
**2015** AUD $4,000 **Deakin University**, PhD research grant. *Role: Recipient.*
**2015** AUD $5,000 **Equity Trustees**, Holsworth Wildlife Grant. *Role: Recipient.*
**2014** AUD $2,500 **Birdlife Australia**, Stewart Leslie Bird Research Award. *Role: Recipient.*
**2014** GBP £1,000 **Linnean Society**, Percy Sladen Memorial Fund Grant. *Role: Recipient.*
**2014** GBP £800 **British Ornithological Union**, Early Career Bursary. *Role: Recipient.*

## CONFERENCE PARTICIPATION

Aug 2022: ESEB, Prague. Oral presentation.
Aug 2022: Wild Animal Microbiome Evolution seminar series. Invited seminar speaker.
June 2022: 13th Meerkat and Mongoose conference, Zurich. Oral presentation
Dec 2021: Ecology Across Borders, Liverpool. Oral presentation.
Nov 2021: Animal Microbiome Conference, virtual. Oral presentation.
June 2021: 12th Meerkat and Mongoose conference, virtual. Oral presentation.
June 2020: 11th Meerkat and Mongoose conference, Zurich. Oral presentation.
August 2017: European Ornithological Union conference, Turku. Oral presentation.
Feb 2017: Victorian Biodiversity Conference, Melbourne. Oral presentation.
Dec 2016: One Health EcoHealth Congress, Melbourne. Oral presentation.
Jan 2015: Australian Wildlife Disease Association Conference, Sunshine Coast. Poster.
June 2015: Australian Ornithological Union, Darwin. Poster.

## TEACHING

2023 – Present: Statistics and R (various BSc modules). Developed and taught. *Salford Uni.*
2018 – 2022: Microbial ecology and analysis (MSc module). Developed and taught. *Ulm Uni.*
2019 – 2022: Statistics in R for ecologists (MSc module). Co-developed and taught. *Ulm Uni.*
2019 – 2022: Field Ecology (BSc module). Taught field bird identification. *Ulm Uni.*
2018 – 2022: Lead supervisor for 4 BSc students, 2 MSc students, and 3 PhD students. *Ulm Uni.*
2014 – 2018: Part-time teaching assistant for following BSc modules: Animal Behaviour, Animal Physiology, Vertebrate Evolution. *Deakin Uni.*

## SKILLS

**R language:** Advanced practitioner and teacher.

**Bioinformatics:** Extensive experience processing 16S rRNA amplicon data in both R and QIIME2, as well as processing metagenome and Hi-C data with various python pipelines.

**Statistics:** Excellent understanding of a broad range of basic and advanced frequentist statistics. Extensive experience with GLMMs, GAMMs, ordinations, co-occurrence analysis, meta-analyses, social network analysis, cluster analysis, hierarchical partitioning. Experience with and good understanding of Bayesian methods.

**Fieldwork:** Experienced field worker and biodiversity surveyor. BTO C-permit for mistnetting and ringing birds (Trainer: Iain Barr). Valid drivers licence.

## SERVICE

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| 2023 – Present | Associate Editor for: J Animal Ecology, Microbiome, & Animal Microbiome |
| 2023 – Present | Meetings Committee member, British Ornithological Union |

## MEMBERSHIPS

British Ecological Society (CON-1044946)
British Trust for Ornithology (R251962)
British Ornithological Union (General Membership)
American Mammalian Society (General Membership)
ESEB (10701679)

# PUBLICATION LIST

## PEER REVIEWED PUBLICATIONS

* Denotes co-first or corresponding author for co-authorships.

**Risely, A*.,** Newbury, A*., Stalder, T., Simmons, B., Top, E. M., Buckling, A., & Sanders, D. Host- plasmid network structure in wastewater is linked to antimicrobial resistance genes. *Nat Comms* (2024)

**Risely, A.,** Byrne, P. G., Hoye, B. J., & Silla, A. J. Dietary carotenoid supplementation has long-term and community-wide effects on the amphibian skin microbiome. *Mol Ecol* (2023)

**Risely, A.,** Müller-Klein, N., Schmid, D. W., Wilhelm, K., Clutton-Brock, T. H., Manser, M. B., & Sommer, S. Climate change drives loss of bacterial gut mutualists at the expense of host survival in wild meerkats. *Global Change Biol* (2023).

Schmid, D. W., Capilla-Lasheras, P., Dominoni, D. M., Müller-Klein, N., Sommer, S., & **Risely, A.** Circadian rhythms of hosts and their gut microbiomes: Implications for animal physiology and ecology. *Fun Ecol* (2023)

Müller-Klein, N., **Risely, A.,** Schmid, D. W., Manser, M., Clutton-Brock, T., & Sommer, S. Two decades of tuberculosis surveillance reveal disease spread, high levels of exposure and mortality and marked variation in disease progression in wild meerkats. *Trans Emer Diseases* (2022)

**Risely, A.,** Schmid, D. W., Müller-Klein, N., Wilhelm, K., Clutton-Brock, T. H., Manser, M. B., & Sommer, S. Gut microbiota individuality is contingent on temporal scale and age in wild meerkats. *Proc Roy Soc B* (2022)

Müller-Klein, N., **Risely, A.,** Schmid, D., Manser, M., Clutton-Brock, T., & Sommer, S. Two decades of tuberculosis surveillance reveal disease spread, high levels of exposure and mortality, and marked variation in disease progression in wild meerkats. *Trans. Emerg. Diseases* (2022).

**Risely, A.,** Wilhelm, K., Clutton-Brock, T., Manser, M. B., & Sommer, S. Diurnal oscillations in gut bacterial load and composition eclipse seasonal and lifetime dynamics in wild meerkats. *Nat Comms* (2021).

**Risely, A.,** Gillingham, M., Béchet, A., Brändel, S., Heni, A., Heurich, M., Menke, S., Manser, M., Tschapka, M., Sommer, S. Phylogeny- and abundance-based metrics allow for the consistent comparison of core gut microbiome diversity indices across host species. *Front Microb* (2021).

Alpízar, P., **Risely, A.,** Tschapka, M., & Sommer, S. Agricultural fast food: Bats feeding in banana monocultures are heavier but have less diverse gut microbiomes. *Front Ecol Evol* (2021).

Donadio, J., **Risely, A.*,** Müller-Klein, N., Wilhelm, K., Clutton-Brock, T., Manser, M. B., & Sommer, S. Characterizing tuberculosis progression in wild meerkats (*Suricata suricatta*) from faecal samples and clinical signs. *J Wild Dis* (2021). *Corresponding author.

Cardilini, A. P., **Risely, A**.*, & Richardson, M. F. Supervising the PhD: identifying common mismatches in expectations between candidate and supervisor to improve research training outcomes. *Higher Ed Res & Dev* (2021). *Co-first author.

**Risely, A.** Applying the core microbiome to understand host–microbe systems. *J Anim Ecol* (2020).

Fleischer, R., **Risely, A.*,** Hoeck, P. E., Keller, L. F., & Sommer, S. Mechanisms governing avian phylosymbiosis: genetic dissimilarity based on neutral and MHC regions exhibits little relationship with gut microbiome distributions of Galápagos mockingbirds. *Ecol & Evol* (2020). *Corresponding author.

Wille, M., Lisovski, S., **Risely, A.,** Ferenczi, M., Roshier, D., Wong, F.Y., Breed, A.C., Klaassen, M. and Hurt, A.C. Serologic evidence of exposure to highly pathogenic avian influenza h5 viruses in migratory shorebirds, Australia. *Emerg Infect Dis* (2019).

Martin, L. B., Addison, B., Bean, A. G., Buchanan, K. L., Crino, O. L., Eastwood, J. R.*,et al.* **Risely, A***. et al.* & Grogan, L. Extreme competence: keystone hosts of infections. *TREE* (2019).

Blackburn, E., Burgess, M., Freeman, B., **Risely, A.,** Izang, A., Ivande, S., Hewson, C. and Cresswell, W. Spring migration strategies of Whinchat Saxicola rubetra when successfully crossing potential barriers of the Sahara and the Mediterranean Sea. *Ibis* (2019).

Blackburn, E., Burgess, M., Freeman, B., **Risely, A.,** Izang, A., Ivande, S., Hewson, C. and Cresswell, W. Light stalks increase the precision and accuracy of non-breeding locations calculated from geolocator tags: a field test from a long-distance migrant. *Bird Study* (2019).

**Risely, A.**, Klaassen, M., & Hoye, B. Migratory animals feel the cost of getting sick: a meta-analysis across species. *J Anim Ecol* (2018).

**Risely, A.,** Waite, D., Ujvari, B., Klaassen, M., & Hoye, B. Gut microbiota of a long-distance migrant demonstrates resistance against environmental microbe incursions. *Mol Ecol* (2017).

**Risely, A**., Waite, D., Ujvari, B., & Hoye, B., & Klaassen, M. Active migration is associated with specific and consistent changes to gut microbiota in shorebirds. *J Anim Ecol* (2017).

Blackburn, E., Burgess, M., Freeman, B., **Risely, A.,** Izang, A., Ivande, S., Hewson, C. and Cresswell, W. Low and annually variable migratory connectivity in a long-distance migrant: Whinchats Saxicola rubetra may show a bet-hedging strategy. *Ibis* (2017).

Blackburn E., Burgess M., Freeman B., **Risely A.,** Izang A., Ivande S., Hewson C., Cresswell W. Blackburn, E., Burgess, M., Freeman, B., Risely, A., Izang, A., Ivande, S., ... & Cresswell, W. An experimental evaluation of the effects of geolocator design and attachment method on between-year survival on whinchats Saxicola rubetra. *J Avian Biol* (2016).

**Risely, A**., Blackburn, E. & Cresswell, W. Patterns in departure phenology and mass gain on African non-breeding territories prior to the Sahara crossing in a long-distance migrant. *Ibis* (2015).

**Risely, A**., Nightingale, J., Richardson, D.S. & Barr, I. Wing length and age, but not tarsus or mass, independently determine spring arrival at breeding territories in a long-distance migrant the Common Whitethroat, *Sylvia communis*. *Bird Study* (2013).