

# Francesca Gray

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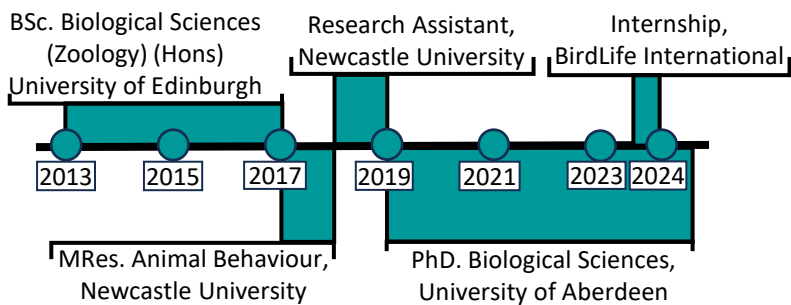
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“Avian ecotoxicologist with with broad research experience in avian ecology using geographical, temporal, migratory and life-history data”

## Research interests

- Welfare and **conservation** of wild animal populations
- Implications of environmental constraints for **wild animal populations**
- Behavioural adaptation in response to **changing environmental conditions**

## Research and education



**4** peer reviewed publications  
**2** first author publication

Full list: see bottom of resume

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## Funding

**Travel grant** (£300), British Ornithological Union, 2023

**QUADRAT PhD studentship** (~£80k, full time): using a long-distance migratory bird to assess exposure to POPs over two continents and their health consequences, 2019 - 2024

**Undergraduate summer studentship** (10 weeks, full time): parent-offspring competition in the burying beetle, follow-up experiment and publication of undergraduate project, University of Edinburgh 2017

## Teaching/supervision

Supervision of **2 undergraduate students** and **2 master's students**

Demonstrator/ Teaching Assistant: various courses including ArcGIS and Field Skills in Animal Behaviour

**Primary school engagement**, Aberdeen Biodiversity Centre

## Projects

- |                                 |   |
|---------------------------------|---|
| <b>Internship</b>               | Extinction analysis: formalising the Red List Classification for 'lost' bird species. (BirdLife International, Cambridge)   |
| <b>PhD</b>                      | Flying sentinels: using a long-distance migratory bird to assess exposure to POPs over two continents and their health consequences. (University of Aberdeen)       |
| <b>Research assistant</b>       | How food insecurity affects body weight trajectories in birds? A meta-analysis. (Newcastle University)  |
| <b>MRes/ Research assistant</b> | How do European starlings adjust daily patterns of body mass change and foraging behaviour in response to food insecurity? (Newcastle University)                   |
| <b>BSc</b>                      | Competition between parents and offspring over consumption of a shared food source in the burying beetle, <i>Nicrophorus vespilloides</i> (University of Edinburgh) |

## ○ Competencies

### Conference presentations

European Ornithological Union conference, Sweden 2023 (seminar talk)  
British Ecological Society conference, UK 2022 (talk)  
Whey Aye Welfare pre-conference, UK 2018 (stall)

### Advanced statistics and visualisation

Large dataset handling (R)  
Network meta-analysis (R)  
ArcGIS  
Data visualisation (R)  
Principle component analysis (R)

### Prizes and awards

Best Student Presentation – Annual Science meeting, QUADRAT 2022

### Other

Internship, BirdLife International: Extinction analysis, Sept-Dec 2023  
Interviewed by a journalist, The Guardian, 2023  
Chartered Management Institute Level 7: Strategic Management and Leadership qualification, 2021

## ○ References

### Dr. Davina Deros

*Primary PhD supervisor*  
Institute of Biological and Environmental Sciences  
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### Dr. Pierre Bize

*Secondary PhD supervisor*  
Anthropogenic Effects  
Switzerland Ornithological Institute (Vogelwarte)  
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### Prof. Melissa Bateson

*MRes and Research Assistant supervisor*  
Institute of Neuroscience  
Newcastle University  
Newcastle upon Tyne, NE2 4HH  
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## ○ Publications

1. **Gray, F.E.**, Deros, D., Bize, P., 2024. Is minimally-invasive sampling the future of persistent organic pollutant (POP) research in birds? A meta-analysis in tissue comparisons. *Chemosphere*, p.142591. [Available here.](#)
2. **Gray, F.E.**, Richardson, J., Ratz, T. and Smiseth, P.T., 2018. No evidence for parent–offspring competition in the burying beetle *Nicrophorus vespilloides*. *Behavioral Ecology*, 29(5), pp.1142-1149. [Available here.](#)
3. Colominas-Ciuró, R., **Gray, F.E.**, Arikian, K., Zahn, S., Meier, C., Massemin, S., Criscuolo, F., Bize, P., 2024. Effects of persistent organic pollutants on telomere dynamics are sex and age-specific in a wild long-lived bird. [Available here.](#)
4. Bateson, M., Andrews, C., Dunn, J., Egger, C.B., **Gray, F.**, Mchugh, M. and Nettle, D., 2021. Food insecurity increases energetic efficiency, not food consumption: an exploratory study in European starlings. *PeerJ*, 9, p.e11541. [Available here.](#)